

General Purpose US Fuses



General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® AJT (Class J TD)



SMARTSPOT® with Maximum circuit protection

Amp-trap 2000® SmartSpot® AJT fuses now provide a visual open fuse indicator. With advanced material technology added to the existing product line the AJT fuse provides IEC Type "2" (No Damage) protection to main, feeder, and branch circuits, for all types of loads — yet, they require only half the mounting space needed for 600VAC Class RK fuses. AJTs time delay characteristics for handling typical in-rush currents, its current limiting ability.

Features /Benefits

- Solid State SmartSpot Indicator
- Time delay for motor starting and transformer inrush
- 300kA interrupting rating - self-certified, UL witnessed tests
- Extremely current limiting for low peak let-thru current
- Most current limiting UL class fuse
- Small footprint requires less mounting space and allows smaller, more economical fuse blocks
- Easy 2-to-1 selectivity for prevention of nuisance shutdowns
- Unique Class J dimensions prevent replacement errors
- High-visibility orange label gives instant recognition
- Metal-embossed date and catalog number for traceability and lasting identification
- Fiberglass body provides dimensional stability in harsh industrial settings
- High-grade silica filler ensures fast arc quenching
- Optional EI Indicator/Switch mount for AJT70 to 600 open fuse indication

Ratings

AC: 1 to 600A

600VAC, 200kA I.R. (self certified for 600VAC, 300kA I.R., UL witnessed)

DC: 1 to 600A

500VDC, 100kA I.R.

Highlights

- Smart Spot Indicator
- Time Delay
- Highly Current Limiting
- DC Ratings
- Optional Mechanical Indicator (70 to 600A fuses)

Applications

- Motor Circuits
- Mains
- Feeders
- Branch Circuits
- Lighting, Heating and General Loads
- Transformers
- Control Panels
- Circuit Breaker Back-up
- Bus Duct
- Load Centers

Approvals



AJT (1-600):

- UL Listed to Standard 248-8
- DC Listed to UL Standard 198L
- CSA Certified to Standard C22.2 No. 248.8
- IEC 269-2-1

AJT (70-600) EI:

- UL Component Recognized
- DC Tested to UL Standard 198L

General Purpose US Fuses



American Power Fuses

AMP-TRAP 2000®

AJT (Class J TD)

Standard Fuse Ampere Ratings, Catalog Numbers and Ref Numbers

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
1	AJT1	X214748	25	AJT25	X211160
1-1/4	AJT1-1/4	C215765	30	AJT30	W213229
1-1/2	AJT1-1/2	B215258	35	AJT35	M213727
1-6/10	AJT1-6/10	G216275	40	AJT40	C215259
1-8/10	AJT1-8/10	H216782	45	AJT45	D215766
2	AJT2	P219364	50	AJT50	Z217303
2-1/4	AJT2-1/4	A200882	60	AJT60	B218846
2-1/2	AJT2-1/2	T223094	70	AJT70*	L201421*
2-8/10	AJT2-8/10	M201422	80	AJT80*	W211159*
3	AJT3	Q211683	90	AJT90*	V212193*
3-2/10	AJT3-2/10	L212714	100	AJT100*	B215764*
3-1/2	AJT3-1/2	W212194	110	AJT110*	F216780*
4	AJT4	W214241	125	AJT125*	A217810*
4-1/2	AJT4-1/2	Y214749	150	AJT150*	Y218843*
5	AJT5	H216276	175	AJT175*	K219889*
5-6/10	AJT5-6/10	J216783	200	AJT200*	Y200880*
6	AJT6	D217813	225	AJT225*	V211158*
6-1/4	AJT6-1/4	P218329	250	AJT250*	K212713*
7	AJT7	Q219365	300	AJT300*	L213726*
8	AJT8	M219891	350	AJT350*	W214747*
9	AJT9	D222574	400	AJT400*	G216781*
10	AJT10	Y217302	450	AJT450*	M218327*
12	AJT12	C217812	500	AJT500*	N219363*
15	AJT15	N218328	600	AJT600*	C222573*
17-1/2	AJT17-1/2	A218845			
20	AJT20	Z201939			

*For optional indicator/switch mount add EI. For Example: AJT100EI. See table below

Note: Indicator not available for rating 1A to 7A.

Recommended Fuse Blocks With Box Connectors for Amp-trap® Class J Fuses

Fuse Ampere Rating	600V OR LESS			
	1 Pole		3 pole	
	Catalog Number	Reference Number	Catalog Number	Reference Number
0-30	US3J1I	M212922	US3J3I	K214967
31-60	US6J1I	F222047	US6J3I	M211381
61-100	61036J	Z201640	61038J	G212917
101-200	62001J	D214455	62003J	E214962
201-400	64031J	X218543	64033J	S219068
401-600	6631J	P201125	6633J	A201641

A variety of pole configurations and termination provisions is available.

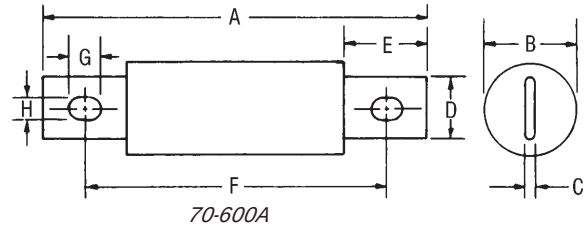
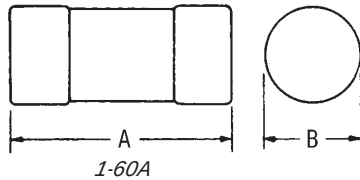


General Purpose US Fuses

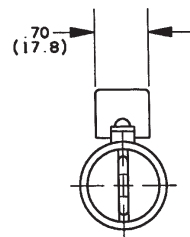
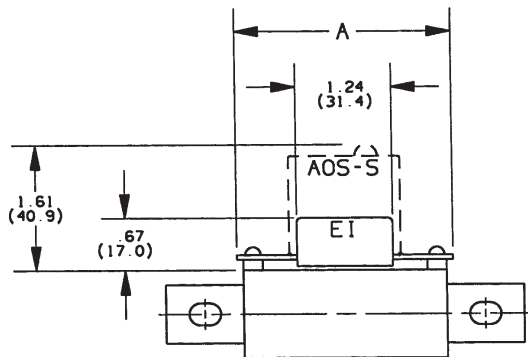
American Power Fuses AMP-TRAP 2000® AJT (Class J TD)

Dimensions

AMPERE RATING	A		B		C		D		E		F		G		H	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
1-30	2-1/4	57	13/16	21	-	-	-	-	-	-	-	-	-	-	-	-
31-60	2-3/8	60	1-1/16	27	-	-	-	-	-	-	-	-	-	-	-	-
61-100	4-5/8	117	1-1/8	29	1/8	3.2	3/4	19	1	25	3-5/8	92	3/8	10	9/32	7
101-200	5-3/4	146	1-5/8	41	3/16	4.8	1-1/8	29	1-3/8	35	4-3/8	111	3/8	10	9/32	7
201-400	7-1/8	181	2-1/8	54	1/4	6.3	1-5/8	41	1-7/8	48	5-1/4	133	17/32	14	13/32	10
401-600	8	203	2-1/2	64	3/8	9.5	2	51	2-1/8	54	6	152	11/16	18	17/32	13



Optional Indicator/Microswitch Mount (EI) dimensions:



Note: Fuses with the EI option will receive the AOS-S or AOS-Q Add-On-Switch which is ordered separately.

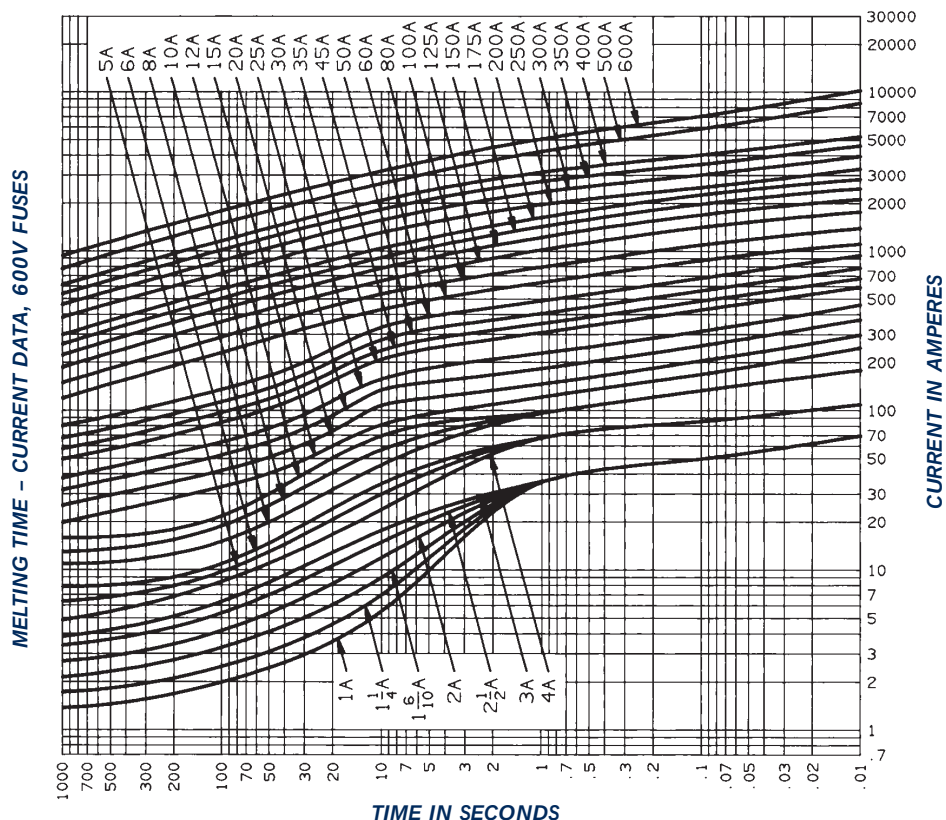
Catalog Number	Reference Number	A
AJT70EI	Y201938	2.80 (71.0)
AJT80EI	P211682	
AJT90EI	V214240	
AJT100EI	F216274	
AJT110EI	W217300	
AJT125EI	L218326	3.22 (81.8)
AJT150EI	M219362	
AJT175EI	R223092	
AJT200EI	K201420	
AJT225EI	N211681	
AJT250EI	V213228	3.24 (82.2)
AJT300EI	T214239	
AJT350EI	A215257	
AJT400EI	X217301	
AJT450EI	Z218844	
AJT500EI	L219890	3.61 (91.8)
AJT600EI	S223093	

General Purpose US Fuses

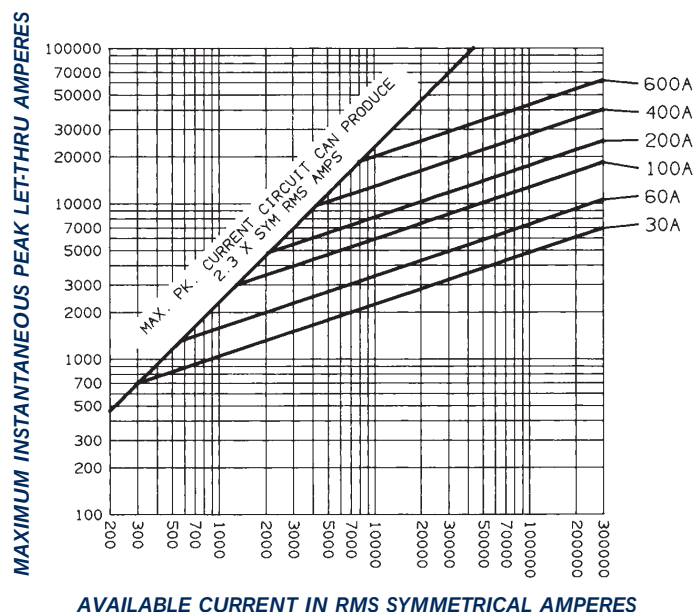


American Power Fuses AMP-TRAP 2000® AJT (Class J TD)

AJT 1 to 600



Peak Let-Thru Current Data AJT 30 to 600, 600 Volts AC



Three Phase Motor Fuse Selection

230 Volt Three Phase Class J AJT Fuses

Motor HP	Full Load Amperes at 230V	Recommended Fuse Ampere Rating Motor Acceleration Times		
		Minimum 2 sec.	Typical 5 sec.	Heavy Load Over 5 sec.
1/2	2.2	3	3-1/2	4
3/4	3.2	4	5	6
1	4.2	5	6-1/4	8
1-1/2	6	8	9	10
2	6.8	8	10	12
3	9.6	12	15	17-1/2
5	15.2	20	25	30
7-1/2	22	30	35	40
10	28	35	40	50
15	42	50	60	80
20	54	70	80	100
25	68	80	100	125
30	80	100	125	150
40	104	125	150	200
50	130	175	200	250
60	154	200	225	300
75	192	250	300	350
100	248	300	350	450
125	312	400	450	600
150	360	450	500	600
200	480	600	-	-



General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® AJT (Class J TD)

Three Phase Motor Fuse Selection

380 Volt Three Phase Class J AJT Fuses

Motor HP	Full Load Amperes at 380V	Recommended Fuse Ampere Rating		
		Motor Acceleration Times		
		Minimum 2 sec.	Typical 5 sec.	Heavy Load Over 5 sec.
1/2	1.3	1-6/10	2	2-1/4
3/4	1.9	2-1/2	2-8/10	3-1/2
1	2.5	3-2/10	4	4-1/2
1-1/2	3.6	4-1/2	5-6/10	6
2	4.1	5	6	7
3	5.8	8	8	10
5	9.2	12	15	17-1/2
7-1/2	13.3	17-1/2	20	25
10	17	20	25	30
15	25	30	40	45
20	33	40	50	60
25	41	50	60	70
30	48	60	80	90
40	68	80	100	125
50	79	90	125	150
60	93	110	150	175
75	116	150	175	200
100	150	175	225	250
125	189	250	300	350
150	218	300	350	400
200	291	350	450	500

460 Volt Three Phase Class J AJT Fuses

Motor HP	Full Load Amperes at 460V	Recommended Fuse Ampere Rating		
		Motor Acceleration Times		
		Minimum 2 sec.	Typical 5 sec.	Heavy Load Over 5 sec.
1/2	1.1	1-1/2	1-6/10	2
3/4	1.6	2	2-1/4	3
1	2.1	2-1/2	3-2/10	4
1-1/2	3	3-1/2	4-1/2	5-6/10
2	3.4	4	5	6
3	4.8	6	8	9
5	7.6	10	12	15
7-1/2	11	15	15	20
10	14	17-1/2	20	25
15	21	25	30	40
20	27	35	40	50
25	34	40	50	60
30	40	50	60	70
40	52	70	80	90
50	65	80	100	125
60	77	100	125	150
75	96	125	150	175
100	124	175	200	250
125	156	200	225	300
150	180	225	250	350
200	240	300	350	450
250	302	400	450	600
300	361	450	600	-

Three Phase Motor Fuse Selection

575 Volt Three Phase Class J AJT Fuses

Motor HP	Full Load Amperes at 575V	Recommended Fuse Ampere Rating		
		Motor Acceleration Times		
		Minimum 2 sec.	Typical 5 sec.	Heavy Load Over 5 sec.
1/2	.9	1-1/4	1-1/2	1-6/10
3/4	1.3	1-6/10	2	1-1/2
1	1.7	2-1/4	2-1/2	3
1-1/2	2.4	3	3-1/2	4-1/2
2	2.7	3-2/10	4	5
3	3.9	5	6	7
5	6.1	8	9	12
7-1/2	9	12	15	17-1/2
10	11	15	17-1/2	20
15	17	20	25	30
20	22	30	35	35
25	27	35	40	50
30	32	40	50	60
40	41	50	60	70
50	52	70	80	90
60	62	80	90	110
75	77	100	125	150
100	99	125	150	175
125	125	150	200	225
150	144	175	225	250
200	192	250	300	350
250	240	300	350	400
300	289	350	450	500

Minimum - Minimum sizing may not be heavy enough for motors with code letter G or higher.

Typical - Suggested for most applications. Will coordinate with NEMA Class 20 overload relays. Suitable for motor acceleration times up to 5 seconds.

Heavy Load - In accordance with Table 430-152. If this fuse is not sufficient to start the load, it may be increased to a maximum of 225% of full-load amperes (430-52 Exc. 2b). Use this column for Design E Motors.



General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® A4BQ (Class L TD)



**Put the highest current-limitation...
at your service.**

Amp-trap 2000® A4BQ fuses are 20% more current limiting than any other Class L fuse on the market. When correctly coordinated, they bring a superior level of protection to service entrance equipment. Downstream circuit components have maximum protection against short circuit let-thru current. A4BQ's built-in, 4-second time delay characteristic (at 500% of rated current) accommodates harmless inrush currents with no nuisance opening.

Features /Benefits

- Fastest operation under short circuit conditions: Let-thru currents are typically 20% lower, with a corresponding let-thru energy (clearing I²t) up to 40% lower than the next fastest Class L fuse
- Time delay for high inrush loads such as motors and transformers, without nuisance opening
- 300kA interrupting rating - self-certified, UL witnessed tests
- Most current limiting for lowest peak let-thru current; even at fault currents up to 300kA
- Pure silver links ensure lowest let-thru current and longer fuse life
- Easy 2-to-1 selectivity for prevention of nuisance shutdowns and "blackouts"
- Rejection-style design prevents replacement errors
- High-visibility orange label gives instant recognition
- Reduced inventory because A4BQ can replace all older types of Class L fuses now in service
- Metal-embossed date and catalog number for traceability and lasting identification
- Fiberglass body provides dimensional stability in harsh industrial settings
- High-grade silica filler ensures fast arc quenching

Ratings

AC: 100 to 6000A 600VAC, 200k A I.R. (self certified for 600VAC, 300k A I.R., UL witnessed) 4-second delay at 500% rating

Note: 100-600A ratings are non-listed

DC: 601 to 3000A 600VDC, 100kA I.R.

Highlights

- Time Delay
- Industry's Most Current-Limiting Class L Fuse
- Pure Silver Elements
- AC & DC Rated

Applications

- Mains, Feeders
- Large Motors
- Lighting, Heating and General Loads
- Circuit Breaker Back-up
- DC Rated: UPS DC Links, Battery Disconnects, Other DC Applications

Approvals

- UL Listed to Standard 248-10 (601-6000A)
- DC Listed to UL Standard 198L (601-3000A)
- CSA Certified to Standard C22.2 No. 248.10 (601-6000A)

**Please contact factory for special trigger actuator*

A4BQ (Class L TD)

Ampere Rating	Catalog Number	Reference Number
100	A4BQ100	J215771
150	A4BQ150	X218336
200	A4BQ200	L222581
250	A4BQ250	H200889
300	A4BQ300	F201945
350	A4BQ350	Y211690
400	A4BQ400	E213237
450	A4BQ450	D214248
500	A4BQ500	F214756
600	A4BQ600	K215772
601	A4BQ601	H217311
650	A4BQ650	M217821
700	A4BQ700	Y218337
750	A4BQ750	K218854
800	A4BQ800	Z219373
900	A4BQ900	W219899
1000	A4BQ1000	P216282
1200	A4BQ1200	R216790
1350	A4BQ1350	G217310
1400	A4BQ1400	L217820
1500	A4BQ1500	J218853
1600	A4BQ1600	Y219372
1800	A4BQ1800	V219898
2000	A4BQ2000	B223101
2500	A4BQ2500	V201429
3000	A4BQ3000	F211168
3500	A4BQ3500	E212202
4000	A4BQ4000	W213735
5000	A4BQ5000	K215266
6000	A4BQ6000	Q216283



Dimensions

AMPERE RATING	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
100-600	8-5/8	219	2	51	5/16	8	1-5/8	41	2-13/32	61
601-800	8-5/8	219	2-1/2	63	3/8	9	2	51	2-13/32	61
801-1200	10-3/4	273	2-1/2	63	3/8	9	2	51	3-15/32	88
1201-1600	10-3/4	273	3	76	7/16	11	2-3/8	60	3-15/32	88
1601-2000	10-3/4	273	3-1/2	89	1/2	12	2-3/4	70	3-15/32	88
2001-2500	10-3/4	273	4-1/2	114	3/4	19	3-1/2	89	3-15/32	88
2501-3000	10-3/4	273	5	127	3/4	19	4	102	3-15/32	88
3001-4000	10-3/4	273	5-3/4	146	3/4	19	4-3/4	121	3-15/32	88
4001-5000	10-3/4	273	6-1/4	159	1	25	5-1/4	133	3-15/32	88
5001-6000	10-3/4	273	7-1/8	181	1	25	5-3/4	146	3-15/32	88



General Purpose US Fuses

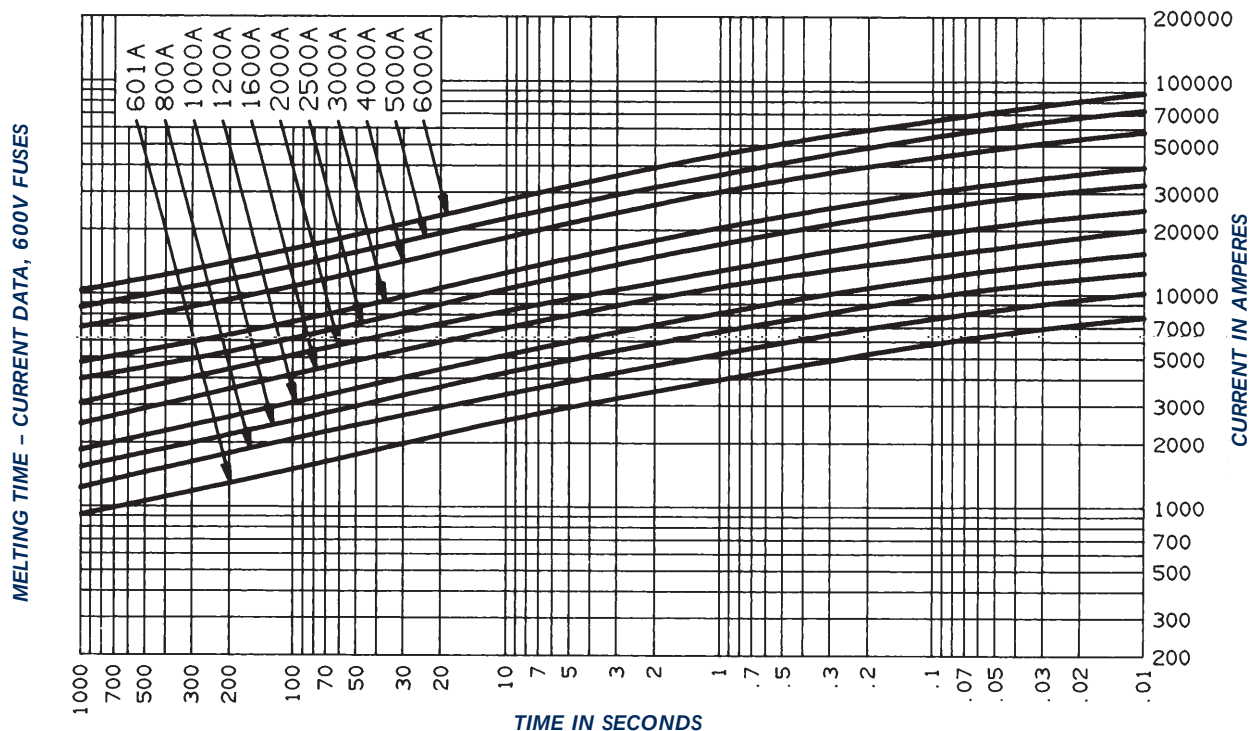
American Power Fuses AMP-TRAP 2000® A4BQ (Class L TD)

A4BQ (601 to 6000) Let-Thru Current in kilo-Amperes

Available Fault RMS AMPS	601		800		1000		1200		1600		2000		2500		3000		4000		5000		6000	
	RMS	IP	RMS	IP	RMS	IP	RMS	IP	RMS	IP	RMS	IP	RMS	IP	RMS	IP	RMS	IP	RMS	IP	RMS	IP
10,000	7.4	17	8.7	20	10	23	10	23	10	23	10	23	10	23	10	23	10	23	10	23	10	23
15,000	8.3	19	10	23	12	27	13	30	15	35	15	35	15	35	15	35	15	35	15	35	15	35
20,000	9.1	21	11	25	13	29	14	33	17	39	20	46	20	46	20	46	20	46	20	46	20	46
25,000	9.8	23	12	27	13	31	15	35	18	42	22	50	25	58	25	58	25	58	25	58	25	58
30,000	10	24	13	29	14	33	16	37	20	45	23	53	29	66	30	69	30	69	30	69	30	69
35,000	11	25	13	30	15	35	17	39	20	47	24	56	30	69	35	81	35	81	35	81	35	81
40,000	12	27	14	32	16	37	18	41	21	49	25	58	31	72	36	83	40	92	40	92	40	92
50,000	13	29	15	34	17	40	19	44	23	53	27	63	34	78	39	89	48	111	50	115	50	115
60,000	13	30	16	36	18	42	20	47	25	57	29	67	36	83	41	94	51	118	60	138	60	138
80,000	14	33	17	40	20	46	23	52	27	62	32	73	40	91	45	104	57	130	67	153	77	176
100,000	16	36	19	43	22	50	24	56	29	67	34	79	43	98	49	112	61	140	72	165	83	190
150,000	18	41	21	49	25	57	28	64	33	77	39	90	49	112	56	128	70	160	82	189	94	217
200,000	20	45	24	54	27	63	31	71	37	84	43	100	53	123	61	141	77	176	90	208	104	239

The current limiting effect of A4BQ Class L fuses is presented in the table above. This table correlates actual fuse peak let-thru currents with equal value peak currents reached in the first half cycle (worst case) of short circuits in unfused circuits. The let-thru current is expressed as "Apparent RMS Symmetrical Amperes" in order to be more useful for practical applications. The currents are based on an assumed 15% power factor. Example: An A4BQ1200, when applied in a circuit with 40,000 RMS symmetrical amperes available, will limit that current during a short circuit, to an apparent 18,000 RMS symmetrical amperes. Under this condition, any equipment being protected would be subjected to only 18,000 RMS amperes.

A4BQ 601 to 6000



General Purpose US Fuses

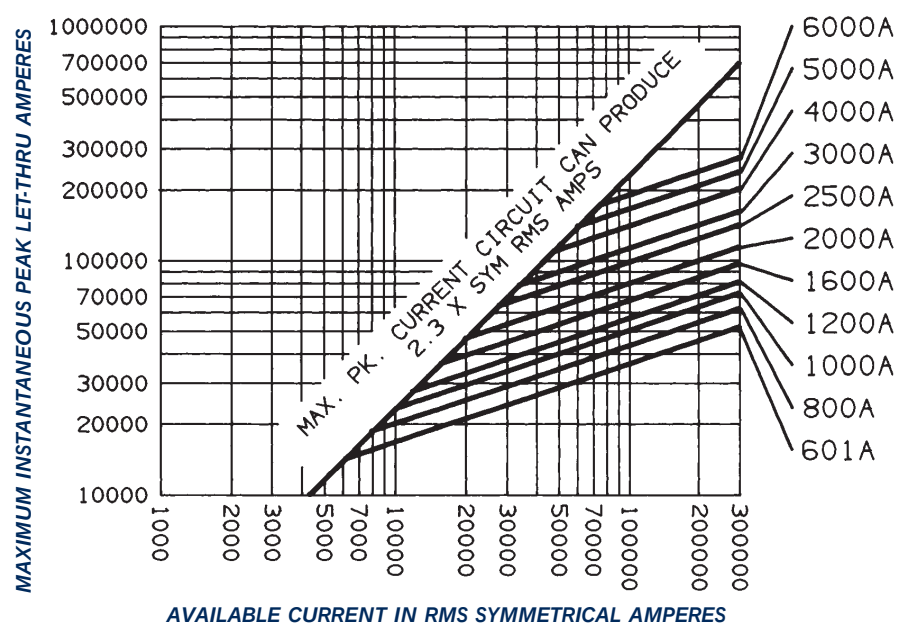


American Power Fuses

AMP-TRAP 2000®

A4BQ (Class L TD)

Peak Let-Thru Current Data – A4BQ 601 to 6000, 600 Volts AC





General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® A2D and A6D (Class RK1 TD)



Upgrade yesterday's circuits to today's Type 2 protection

Amp-trap 2000® SmartSpot® A2D, A6D fuses now provide a visual open fuse indicator. With advanced material technology added to the existing product line the A2D, A6D fuses provide IEC Type "2" (No Damage) protection to main, feeder, and branch circuits, for all types of loads — A2D, A6D's time delay characteristics for handling harmless in-rush currents, its current limiting ability and wide range of ratings (from 1 to 600 Amperes) — give excellent protection for all your applications.

Features /Benefits

- Solid State SmartSpot Indicator
- Time delay for motor starting and transformer inrush currents without nuisance opening
- 300kA interrupting rating - self-certified, UL witnessed tests
- Extremely Current Limiting for low peak let-thru current
- Easy 2-to-1 selectivity for prevention of nuisance shut downs and "black outs"
- Rejection-style design prevents replacement errors (when used with recommended fuse blocks)
- High-visibility orange label gives instant recognition
- Reduced inventory by taking the place of RK5, K, and H fuses
- Metal-embossed date and catalog number for easier traceability and lasting identification
- Fiberglass body provides dimensional stability in harsh industrial settings
- Brass end-caps (blade-style) for cooler operation and superior performance

Ratings

A2D AC: 1/10 to 600A 250VAC, 200kA I.R.
(self certified for 250VAC, 300kA I.R.,
UL witnessed)

A6D AC: 1/10 to 600A 600VAC, 200kA I.R.
(self certified for 600VAC, 300kA I.R.)

Highlights

- SmartSpot Indicator
- Time Delay
- Current Limiting
- Plated Terminals

Applications

- Motors
- Safety Switches
- Transformers
- Branch Circuit Protection
- Disconnects
- Control Panels
- All General-purpose Circuits

Approvals



- UL Listed to Standard 248-12
- CSA Certified to Standard
C22.2 No. 248.12

General Purpose US Fuses



American Power Fuses

AMP-TRAP 2000®

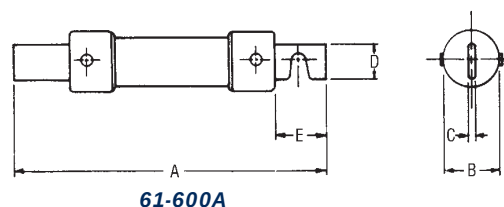
A2D and A6D (Class RK1 TD)

Standard Fuse Ampere Ratings

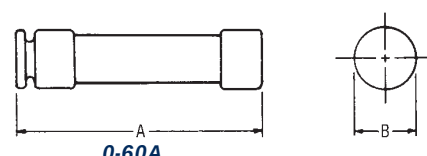
Ampere Rating	Cat. Number		Ref. Number		Amp. Rating	Cat. Number		Ref. Number	
	250V	600V	250V	600V		250V	600V	250V	600V
1/10	A2D1/10R	A6D1/10R	Q215248	R201932	10	A2D10R	A6D10R	Z216268	G211675
15/100	A2D15/100R	A6D15/100R	M217292	D212707	12	A2D12R	A6D12R	Z216774	M212186
2/10	A2D2/10R	A6D2/10R	J223085	C216271	15	A2D15R	A6D15R	R217802	N213222
3/10	A2D3/10R	A6D3/10R	K212184	G219357	17-1/2	A2D17-1/2R	A6D17-1/2R	C218318	E213720
4/10	A2D4/10R	A6D4/10R	N214740	E201415	20	A2D20R	A6D20R	P200872	C216777
1/2	A2D1/2R	A6D1/2R	T215757	P211153	25	A2D25R	A6D25R	B201412	Q217295
6/10	A2D6/10R	A6D6/10R	R218837	N214234	30	A2D30R	A6D30R	B212705	E219884
8/10	A2D8/10R	A6D8/10R	Q200873	D216778	35	A2D35R	A6D35R	L213220	W222567
1	A2D1R	A6D1R	Q218836	M214233	40	A2D40R	A6D40R	R215249	S2201933
1-1/8	A2D1-1/8R	A6D1-1/8R	K213219	V222566	45	A2D45R	A6D45R	V215758	Q211154
1-1/4	A2D1-1/4R	A6D1-1/4R	A212704	D219883	50	A2D50R	A6D50R	N217293	E212708
1-4/10	A2D1-4/10R	A6D1-4/10R	B213717	L223087	60	A2D60R	A6D60R	E219355	R214743
1-6/10	A2D1-6/10R	A6D1-6/10R	J214230	R200874	70	A2D70R	A6D70R	N201929	E218320
1-8/10	A2D1-8/10R	A6D1-8/10R	M214739	D201414	75	A2D75R	-	L211150	-
2	A2D2R	A6D2R	P201930	V217805	80	A2D80R	A6D80R	D211672	S218838
2-1/4	A2D2-1/4R	A6D2-1/4R	C219882	T215251	90	A2D90R	A6D90R	J212183	F219356
2-1/2	A2D2-1/2R	A6D2-1/2R	D219354	Q214742	100	A2D100R	A6D100R	P215247	N211152
2-8/10	A2D2-8/10R	A6D2-8/10R	S222564	X215760	110	A2D110R	A6D110R	S215756	F211674
3	A2D3R	A6D3R	C213718	M223088	125	A2D125R	A6D125R	Y216267	L212185
3-2/10	A2D3-2/10R	A6D3-2/10R	E211673	T218839	150	A2D150R	A6D150R	Y216773	C212706
3-1/2	A2D3-1/2R	A6D3-1/2R	M211151	F218321	175	A2D175R	A6D175R	L217291	M213221
4	A2D4R	A6D4R	A216269	H211676	200	A2D200R	A6D200R	Q217801	D213719
4-1/2	A2D4-1/2R	A6D4-1/2R	K214231	S200875	225	A2D225R	A6D225R	B218317	L214232
5	A2D5R	A6D5R	S217803	P213223	250	A2D250R	A6D250R	P218835	P214741
5-6/10	A2D5-6/10R	A6D5-6/10R	A216775	N212187	300	A2D300R	A6D300R	C219353	S215250
6	A2D6R	A6D6R	T222565	V215252	350	A2D350R	A6D350R	B219881	W215759
6-1/4	A2D6-1/4R	A6D6-1/4R	D218319	F213721	400	A2D400R	A6D400R	R222563	B216270
7	A2D7R	A6D7R	K223086	Y215761	450	A2D450R	A6D450R	H223084	B216776
8	A2D8R	A6D8R	C201413	R217296	500	A2D500R	A6D500R	N200871	P217294
9	A2D9R	A6D9R	Q201931	W217806	600	A2D600R	A6D600R	A201411	T217804

Dimensions

Ampere Rating	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
250V-A2D										
0-30	2	51	9/16	14	-	-	-	-	-	-
31-60	3	76	13/16	21	-	-	-	-	-	-
61-100	5-8	149	1-1/16	27	1/8	3	3/4	19	1	25
101-200	7-1/8	181	1-9/16	40	3/16	5	1-1/8	28	1-3/8	35
201-400	8-5/8	219	2-1/16	53	1/4	6	1-5/8	41	1-7/8	48
401-600	10-3/8	264	2-9/16	66	1/4	6	2	51	2-1/4	57
600V-A6D										
0-30	5	127	13/16	21	-	-	-	-	-	-
31-60	5-1/2	139	1-1/16	27	-	-	-	-	-	-
61-100	7-7/8	200	1-5/16	34	1/8	3	3/4	19	1	25
101-200	9-5/8	244	1-13/16	46	3/16	5	1-1/8	28	1-3/8	35
201-400	11-5/8	295	2-9/16	66	1/4	6	1-5/8	41	1-7/8	48
401-600	13-3/8	340	3-1/8	80	1/4	6	2	51	2-1/4	57



61-600A



0-60A



General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® A2D and A6D (Class RK1 TD)

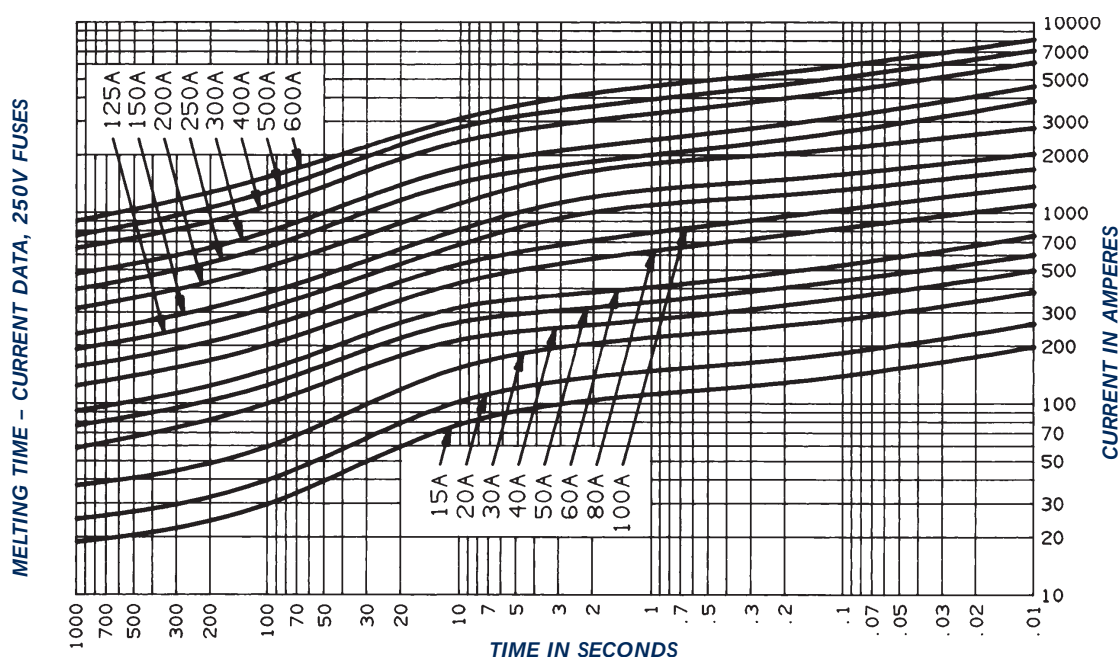
Recommended Fuse Blocks with Box Connectors for Amp-trap® Class RK1 Fuses

Fuse Ampere Rating	Catalog Number		Reference Number	
	250V		250V	
	1 Pole	3 pole	1 pole	3 pole
0-30	20306R	20308R	T213411	K215956
31-60	20606R	20608R	B212383	E214939
61-100	21036R	21038R	D201621	M212899
101-200	22001R	22003R	R213915	G214941
201-400	24001R	24003R	J219566	D222022
401-600	2631R	2633R	H214942	P215960

Fuse Ampere Rating	Catalog Number		Ref. Number	
	600V		600V	
	1 Pole	3 pole	1 pole	3 pole
0-30	60306R	60308R	H212389	K214438
31-60	60606R	60608R	K212391	M214440
61-100	61036R	61038R	W204788	Z211875
101-200	62001R	62003R	V212906	B213924
201-400	64001R	64003R	D219055	M222030
401-600	6631R	6633R	J216990	E218021

A variety of pole configurations and termination provisions is available.

A2D 15 to 600



General Purpose US Fuses

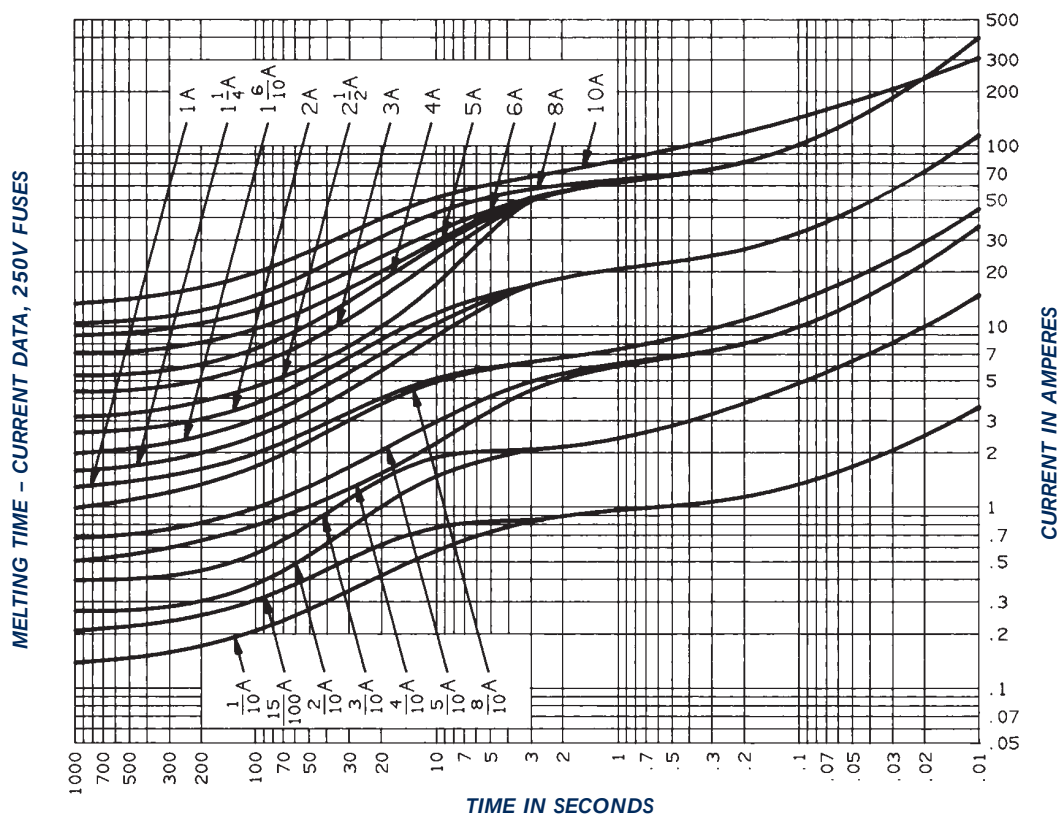


American Power Fuses

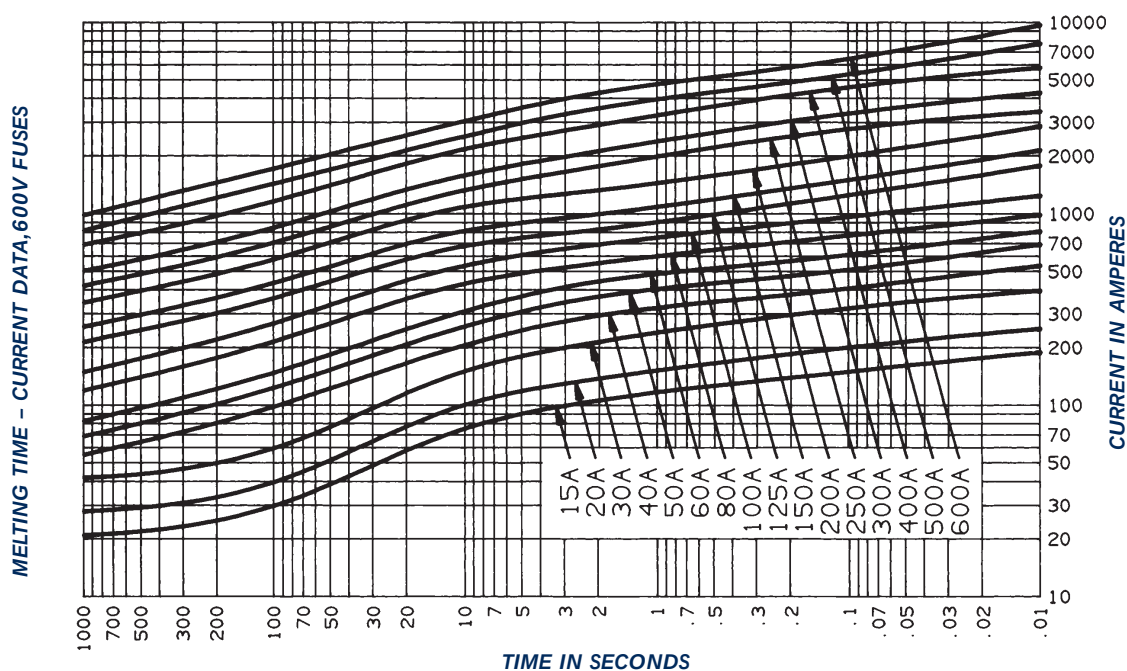
AMP-TRAP 2000®

A2D and A6D (Class RK1 TD)

A2D 1/10 to 10



A6D 15 to 600

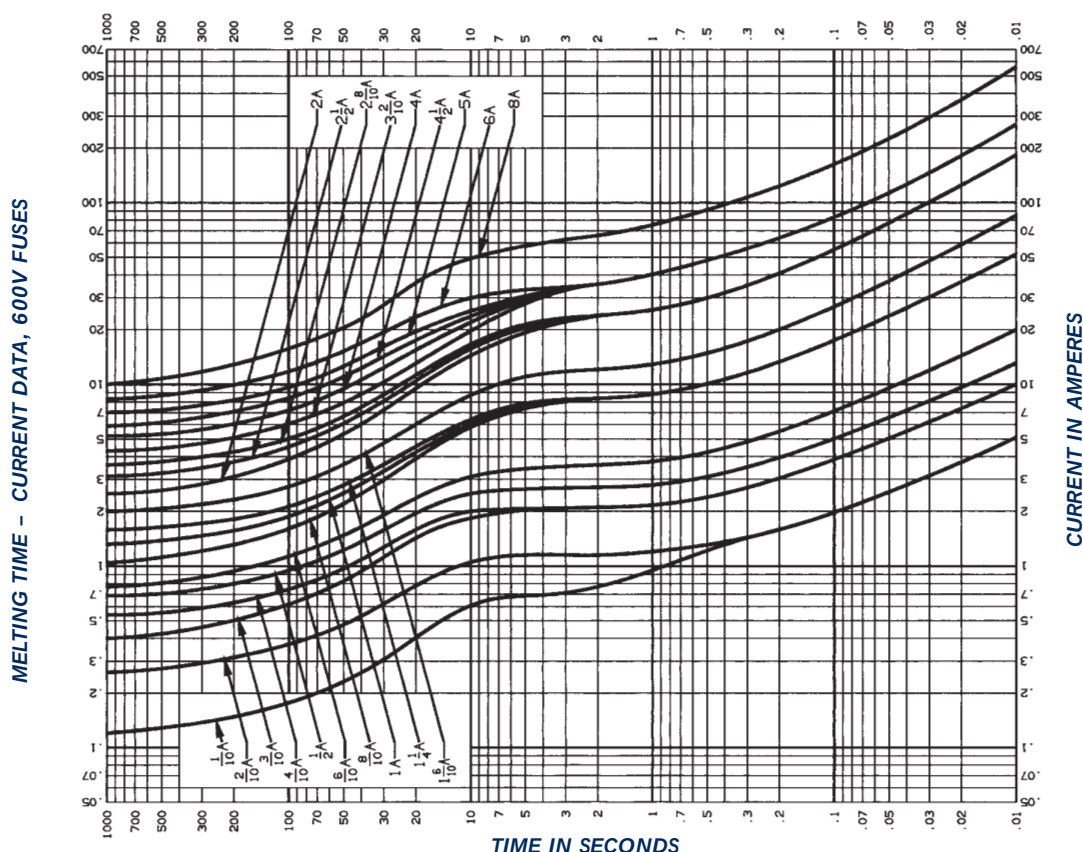




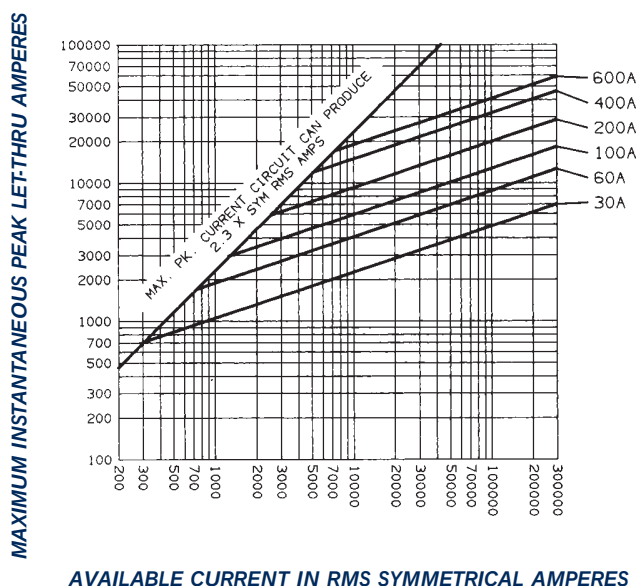
General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® A2D and A6D (Class RK1 TD)

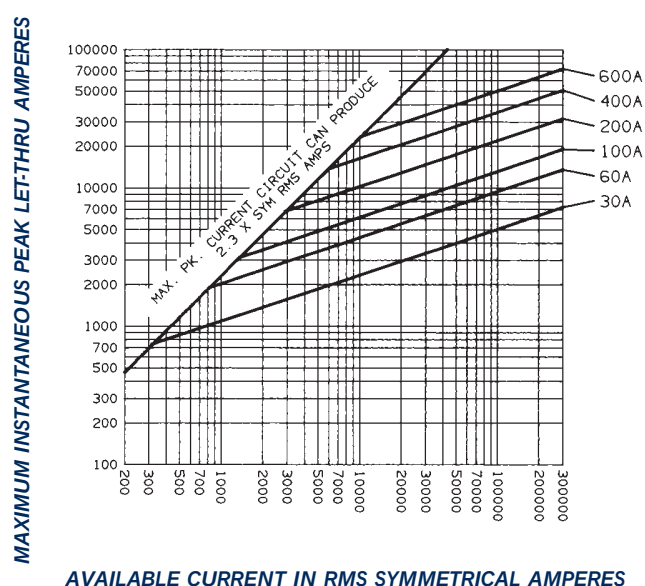
A6D 1/10 to 8



Peak Let-Thru Current Data A2D 30 to 600, 250 Volts AC



Peak Let-Thru Current Data A6D 30 to 600, 600 Volts AC



NOTE: SEE APPLICATION INFORMATION SECTION OF CATALOG (LOW VOLTAGE FUSES FOR MOTOR PROTECTION) FOR GUIDELINES ON THREE PHASE MOTOR FUSE SELECTION, CLASS RK1 A2D & RK1 A6D FUSES



General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® ATDR (Class CC TD)



**The best protection for
today's small motors**

Amp-trap 2000® ATDR small-dimension fuses can provide IEC Type 2 “no damage” protection to your facility's increasingly sensitive branch circuit components and small motors – minimizing the risk of fault-related damage. ATDR Class CC fuses deliver the best time delay characteristics in their class with excellent cycling ability for small motor loads.

Features /Benefits

- Time delay for motor starting inrush currents without nuisance opening
- Highly current limiting for low peak let-thru current
- Improved cycling ability for frequent motor starts/stops without nuisance fuse opening
- Rejection-style design prevents replacement errors (when used with recommended fuse blocks)
- High-visibility orange label ensures instant recognition, simplifies replacement
- Metal-embossed date and catalog number for traceability and lasting identification
- Fiberglass body provides dimensional stability in harsh industrial settings
- High-grade silica filler ensures fast arc quenching and optimum current limitation

Ratings

AC: 1/4 to 30A 600VAC, 200kA I.R.

DC: 1/4 to 30A 300VDC, 100kA I.R.

Highlights

- Time Delay
- Best Choice for Small Motor Protection
- Highly Current-Limiting
- AC & DC Rated

Applications

- Small Motors
- Contactors
- Lighting, Heating and General Loads
- Branch Circuit Protector

Approvals



- UL Listed to Standard 248-4
- CSA Certified to Standard C22.2 No. 248.4
- DC Listed to UL Standard 198L

General Purpose US Fuses



American Power Fuses

AMP-TRAP 2000®

ATDR (Class CC TD)

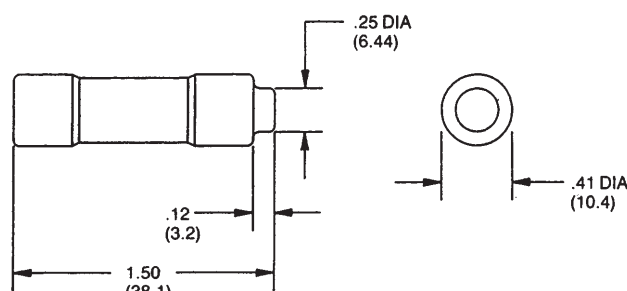
Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
1/4	ATDR1/4	W200855	4	ATDR4	V217276
1/2	ATDR1/2	Q223068	4-1/2	ATDR4-1/2	Z217786
8/10	ATDR8/10	K201397	5	ATDR5	K218302
1	ATDR1	T217275	5-6/10	ATDR5-6/10	Z218821
1-1/8	ATDR1-1/8	Y218820	6	ATDR6	L219338
1-1/4	ATDR1-1/4	J218301	6-1/4	ATDR6-1/4	L219867
1-4/10	ATDR1-4/10	K219337	7	ATDR7	A222548
1-1/2	ATDR1-1/2	Y217785	7-1/2	ATDR7-1/2	R223069
1-6/10	ATDR1-6/10	K219866	8	ATDR8	X200856
1-8/10	ATDR1-8/10	Z222547	9	ATDR9	Y201915
2	ATDR2	S212168	10	ATDR10	J201396
2-1/4	ATDR2-1/4	T213204	12	ATDR12	X201914
2-1/2	ATDR2-1/2	J212689	15	ATDR15	V211135
2-8/10	ATDR2-8/10	L213703	7-1/2	ATDR17-1/2	L211656
3	ATDR3	Y215232	20	ATDR20	R214214
3-2/10	ATDR3-2/10	J216254	25	ATDR25	V214723
3-1/2	ATDR3-1/2	C215742	30	ATDR30	G216758

Small Motor Fuse Protection, 600 Volts AC or Less

Dimensions

Motor Full load Amperes	ATDR	Rating*
	Minimum Duty	Normal Duty
.71 - .89	1-1/4	1-6/10
.90 - 1.19	1-6/10	2
1.20 - 1.34	2	2-1/2
1.35 - 1.79	2-1/2	3
1.80 - 2.25	3	4
2.26 - 2.69	4	5
2.70 - 2.90	4	6
2.91 - 3.20	5	6
3.21 - 3.75	5	7
3.76 - 4.50	6	8
4.51 - 5.34	8	10
5.35 - 5.69	10	12
5.70 - 6.70	12	12
6.71 - 7.79	12	15
7.80 - 8.88	15	17-1/2
8.89 - 11.1	17-1/2	20
11.2 - 13.3	20	25
13.4 - 15.2	25	30



* The 1996 National Electrical Code allows time-delay Class CC fuses to be sized at up to 400% (maximum) of motor FLA, if needed.

Recommended Fuse Blocks for Class CC Fuses

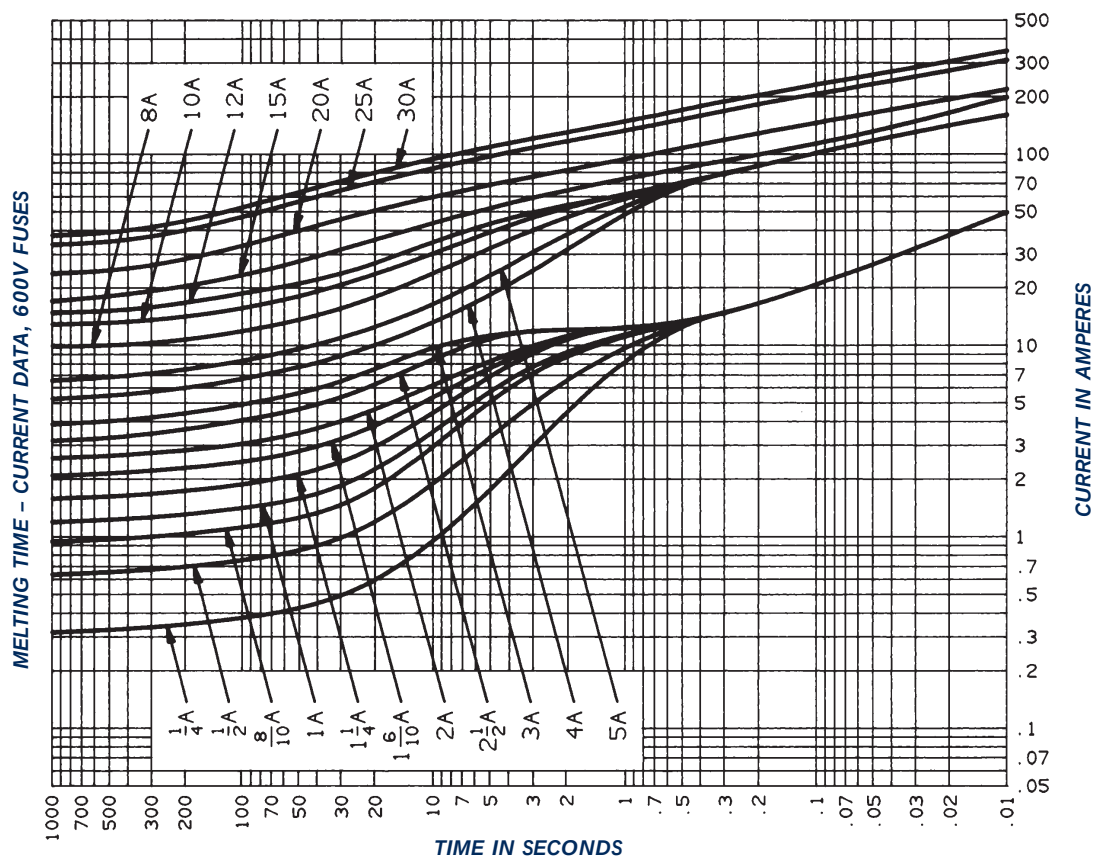
Number of Poles	Catalog Number				Reference number			
	Ultrasafe Indicating Fuse Holder	Screw Connector w/ Double Quick Connects	Pressure Plate Connector w/ Double Quick Connects	Copper Box Connector	Ultrasafe Indicating Fuse Holder	Screw Connector w/ Double Quick Connects	Pressure Plate Connector w/ Double Quick Connects	Copper Box Connector
ADDER		30310R	30320R	30350R		W204857	Z217510	N213429
1	USCC1I	30311R	30321R	30351R	X213943	R212397	M218534	G213929
2	USCC2I	30312R	30322R	30352R	D217008	Z212910	Y219579	V214447
3	USCC3I	30313R	30323R	30353R	Y218038	M213428	B222779	X214955



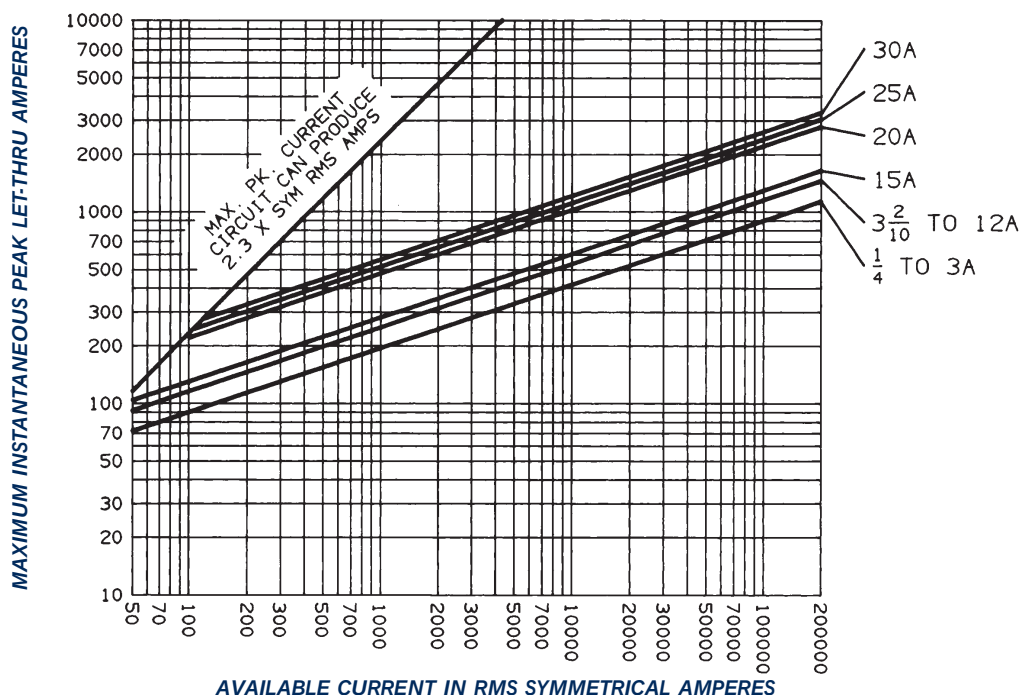
General Purpose US Fuses

American Power Fuses
AMP-TRAP 2000®
ATDR (Class CC TD)

ATDR 1/4 to 30



Peak Let-Thru Current Data - ATDR 1/4 to 30, 600 Volts AC





General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® ATQR (Class CC TD)



Take control of fault currents headed for your control transformer

ATQR small-dimension fuses feature time delay characteristics ideally suited for the high inrush currents of control transformers, solenoids, and similar inductive loads. The newest member of our Amp-trap 2000® family of fuses - ATQR fuses provide superior protection for the branch circuits of electrical distribution systems.

Features /Benefits

- Time delay for control transformer inrush loads without nuisance opening
- Highly current limiting for low peak let-thru current
- Rejection-style design prevents replacement errors (when used with recommended fuse blocks)
- High-visibility orange label ensures instant recognition, and simplifies replacement
- Metal-embossed date and catalog number for traceability and lasting identification
- Fiberglass body provides dimensional stability in harsh industrial settings
- High-grade silica filler ensures fast arc quenching and high current limitation

Ratings

AC: 1/10 to 30A 600VAC, 200kA I.R.

Highlights

- Time Delay
- Best Choice for Small Transformer Protection
- Most Current-Limiting

Applications

- Control Transformers
- Solenoids
- Inductive Loads
- Lighting, Heating and General-purpose Loads

Approvals



- UL Listed to Standard 248-4
- CSA Certified to Standard C22.2 No. 248.4

General Purpose US Fuses



American Power Fuses

AMP-TRAP 2000®

ATQR (Class CC TD)

Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
1/10	ATQR1/10	E201921	2-8/10	ATQR2-8/10	Q216260
1/8	ATQR1/8	A212175	3	ATQR3	T218310
15/100	ATQR15/100	S223507	3-2/10	ATQR3-2/10	V219346
3/16	ATQR3/16	J222556	3-1/2	ATQR3-1/2	G218828
2/10	ATQR2/10	Q216766	4	ATQR4	S201404
1/4	ATQR1/4	V211664	4-1/2	ATQR4-1/2	F201922
3/10	ATQR3/10	V219875	5	ATQR5	W211665
4/10	ATQR4/10	D211143	5-6/10	ATQR5-6/10	B212176
1/2	ATQR1/2	C211142	6	ATQR6	T212698
6/10	ATQR6/10	V213711	6-1/4	ATQR6-1/4	D213213
3/4	ATQR3/4	A223077	7	ATQR7	B214223
8/10	ATQR8/10	L215750	7-1/2	ATQR7-1/2	E214732
1	ATQR1	F218827	8	ATQR8	H215241
1-1/8	ATQR1-1/8	H222555	9	ATQR9	R216261
1-1/4	ATQR1-1/4	T219874	10	ATQR10	S212697
1-4/10	ATQR1-4/10	Z223076	12	ATQR12	C213212
1-1/2	ATQR1-1/2	T219345	15	ATQR15	T213710
1-6/10	ATQR1-6/10	E200863	17-1/2	ATQR17-1/2	A214222
1-8/10	ATQR1-8/10	R201403	20	ATQR20	D217284
2	ATQR2	D214731	25	ATQR25	H217794
2-1/4	ATQR2-1/4	K215749	30	ATQR30	F200864
2-1/2	ATQR2-1/2	G215240			

Recommended ATQR Class CC Primary Fuses For Single Phase Control Transformers

Trans VA	Primary		ATQR AMPS
	Volts	Fla	
25	600	0.04	1/10
	480	0.05	1/10
	240	0.10	2/10
	208	0.12	1/4
	120	0.21	4/10
50	600	0.08	1/4
	480	0.10	1/4
	240	0.21	4/10
	208	0.24	1/2
	120	0.42	6/10
75	600	0.13	1/4
	480	0.16	3/10
	240	0.31	1/2
	208	0.36	3/4
	120	0.63	1
100	600	0.17	3/10
	480	0.21	4/10
	240	0.42	6/10
	208	0.48	1
	120	0.83	1-1/2
150	600	0.25	1/2
	480	0.31	1/2
	240	0.63	1
	208	0.72	1-1/2
	120	1.25	2-1/2
200	600	0.33	1/2
	480	0.42	6/10
	240	0.83	1-1/2
	208	0.96	2
	120	1.67	3
250	600	0.42	6/10
	480	0.52	1-1/8
	240	1.04	2
	208	1.2	3
	120	2.08	4*

* Secondary protection is required for these ratings.

+ Fuse will withstand 30 x FLA for .01 second

++ Fuse will withstand 25 x FLA for .01 second

Trans VA	Primary		ATQR AMPS
	Volts	Fla	
300	600	0.50	1-1/8
	480	0.63	1-1/2
	240	1.25	2-1/2
	208	1.44	3
	120	2.5	5*
500	600	0.83	1-1/2
	480	1.04	2
	240	2.08	4*
	208	2.40	6*
	120	4.17	10*
750	600	1.25	2-1/2
	480	1.56	3
	240	3.13	7*
	208	3.61	8*
	120	6.25	15*
1000	600	1.67	3
	480	2.08	4*
	240	4.16	10*
	208	4.81	12*
	120	8.33	20*
1500	600	2.50	5*
	480	3.13	7*
	240	6.25	10
	208	7.21	20*
	120	12.5	25*
2000	600	3.33	8*
	480	4.17	10*
	240	8.33	20++*
	208	9.62	20++*
	600	5.00	12+*
3000	480	6.25	15+*
	240	12.5	30++*
	600	8.33	20++*
5000	480	10.4	25+*



General Purpose US Fuses

American Power Fuses AMP-TRAP 2000® ATQR (Class CC TD)



Recommended Fuse Blocks for Class CC Fuses

Catalog Number

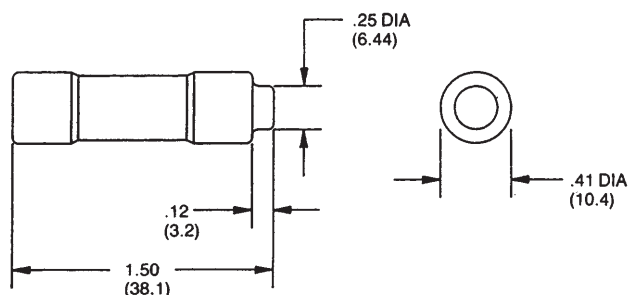
Number of Poles	Ultrasafe Indicating Fuse Holder	Screw with Double Quick Connects	Pressure Plate with Double Quick Connects	Copper Box Connector
ADDER		30310R	30320R	30350R
1	USCC1I	30311R	30321R	30351R
2	USCC2I	30312R	30322R	30352R
3	USCC3I	30313R	30323R	30353R

Reference Number

Number of Poles	Ultrasafe Indicating Fuse Holder	Screw with Double Quick Connects	Pressure Plate with Double Quick Connects	Copper Box Connector
ADDER		W204857	Z217510	N213429
1	X213943	R212397	M218534	G213929
2	D217008	Z212910	Y219579	V214447
3	Y218038	M213428	B222779	X214955

Primary fuses - If primary FLA is less than 2 amps, fuse may be 300% max. (500% for motor control). If primary FLA exceeds 2 amps but is less than 9 amps, fuse may not exceed 167% of primary FLA unless secondary protection is used, when it may be increased to 250%. Fuse sizes shown are based on approx. 40 x FLA for .01 sec.

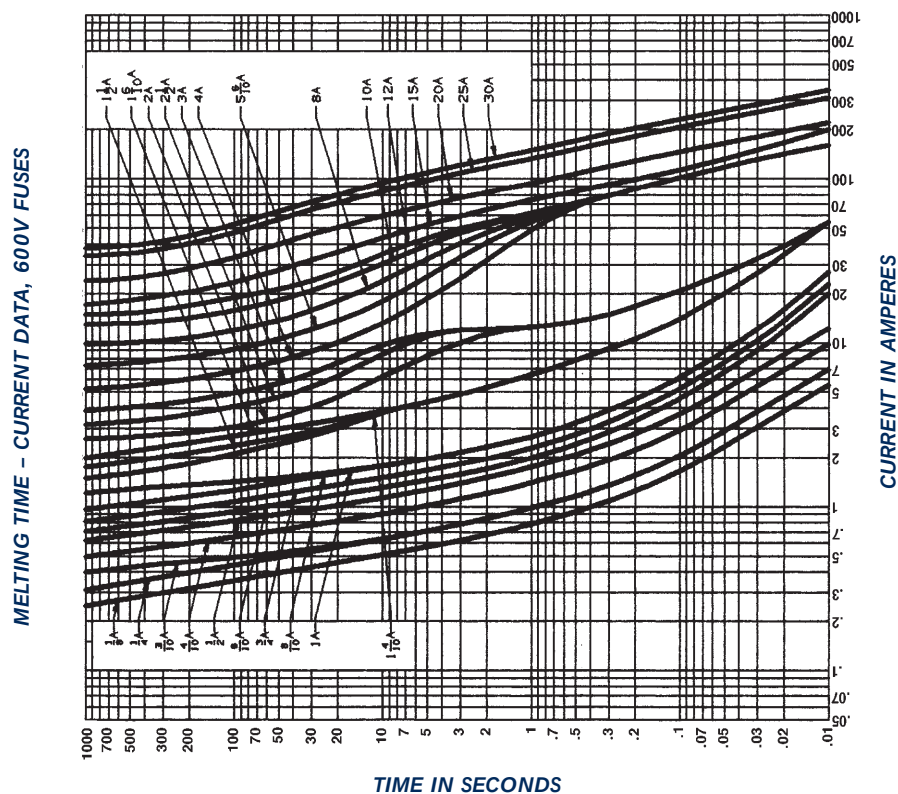
Dimensions



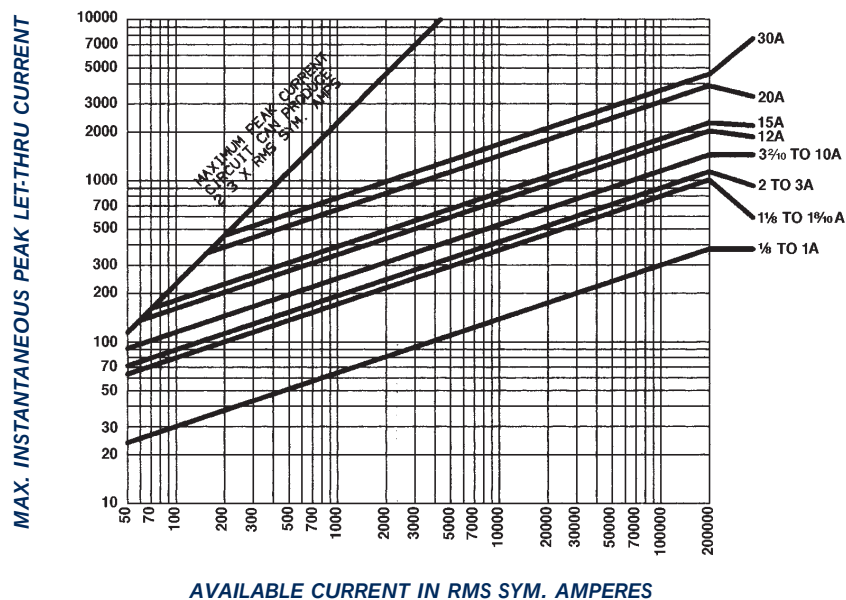
General Purpose US Fuses

American Power Fuses
AMP-TRAP 2000®
ATQR (Class CC TD)

ATQR 1/8 to 30



Peak Let-Thru Current Data - ATQR 1/8 to 30, 600 Volts AC





General Purpose US Fuses

American Power Fuses TRI-ONIC® TR and TRS (Class RK5 TD)



The industry's Most popular fuse for Motor circuit protection.

Tri-onic® SmartSpot® fuses now provide a visual open fuse indicator. With advanced material technology added to the existing product the TR and TRS current limiting time delay fuses are engineered for overcurrent protection of motors and transformers, service entrance equipment, feeder and branch circuits. Tri-onic proven time delay characteristic safely handles harmless starting currents and inrush currents associated with today's motors and transformers.

Features /Benefits

- Solid State SmartSpot Indicator
- Time delay for motor start-ups and transformer inrush currents without nuisance opening
- Current limiting for low peak let-thru current
- Rejection-style design prevents replacement errors (when used with recommended fuse blocks)
- Easy-to-read label for quick recognition and replacement
- Metal-embossed date and catalog number for traceability and lasting identification
- Fiberglass body provides dimensional stability in harsh industrial settings
- Brass end-caps (blade-style) for cooler operation and superior performance
- High-grade silica filler ensures fast arc quenching and high current limitation

Ratings

TR

AC: 1/10 to 600A 250VAC, 200kA I.R.

DC: 1/10 to 2 8/10A and 35 to 400A, 250VD, 20 A.I.R
3 to 30A & 450 to 600A,
160VDC, 20kA I.R.

TRS

AC: 1/10 to 600A, 600VAC, 200kA I.R.

DC: 1/10 to 12A, 600VDC, 20kA I.R.
70 to 600A, 600VDC, 100kA I.R.
15 to 60A, 300VDC, 20kA I.R.

Highlights

- Time Delay
- Current Limiting
- AC & DC Rated

Applications

- Motor Circuits
- Mains
- Feeders
- Branch Circuits
- Transformers
- Service Entrance Equipment
- General-purpose Protection

Approvals

- UL Listed to Standard 248-12
- CSA Certified to Standard C22.2 No. 248.12
- DC Listed to UL Standard 198L



General Purpose US Fuses

American Power Fuses

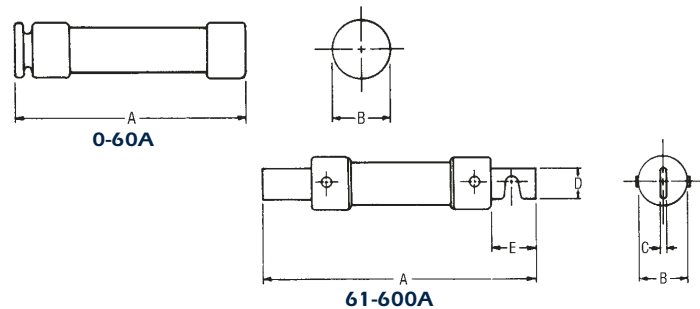
TRI-ONIC®

TR and TRS (Class RK5 TD)

Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number		Reference Number		Ampere Rating	Catalog Number		Reference Number	
	250V	600V	250V	600V		250V	600V	250V	600V
1/10	TR1/10R	TRS1/10R	F222530	W216748	10	TR10R	TRS10R	D200839	N218811
15/100	TR15/100R	TRS15/100R	E201898	F223059	12	TR12R	TRS12R	S201381	B219858
2/10	TR2/10R	TRS2/10R	Z214198	X216749	15	TR15R	TRS15R	D211120	B201389
3/10	TR3/10R	TRS3/10R	C217260	J212160	17-1/2	TR17-1/2R	TRS17-1/2R	S211639	K211126
4/10	TR4/10R	TRS4/10R	Z223053	Y216750	20	TR20R	TRS20R	D214708	P217777
1/2	TR1/2R	TRS1/2R	Y223052	N217776	25	TR25R	TRS25R	G215217	B219329
6/10	TR6/10R	TRS6/10R	R216238	L213197	30	TR30R	TRS30R	F217769	K213196
8/10	TR8/10R	TRS8/10R	T219322	R217779	35	TR35R	TRS35R	F218804	J214207
1	TR1R	TRS1R	Z212151	H212159	40	TR40R	TRS40R	E200840	Q217778
1-1/8	TR1-1/8R	TRS1-1/8R	Q218284	G212158	45	TR45R	TRS45R	F201899	Q218813
1-1/4	TR1-1/4R	TRS1-1/4R	E217768	J211125	50	TR50R	TRS50R	B213188	D201391
1-4/10	TR1-4/10R	TRS1-4/10R	E218803	H213194	60	TR60R	TRS60R	P216742	M214716
1-6/10	TR1-6/10R	TRS1-6/10R	R219320	G214205	70	TR70R	TRS70R	Q219848	Y213691
1-8/10	TR1-8/10R	TRS1-8/10R	S219850	R215732	75	TR75R	TRS75R	E222529	P215730
2	TR2R	TRS2R	J215725	Q222539	80	TR80R	TRS80R	W223050	W216242
2-1/4	TR2-1/4R	TRS2-1/4R	A213187	H214206	90	TR90R	TRS90R	B200837	L217774
2-1/2	TR2-1/2R	TRS2-1/2R	Q212672	J213195	100	TR100R	TRS100R	K216738	D214202
2-8/10	TR2-8/10R	TRS2-8/10R	S213686	S215733	110	TR110R	TRS110R	B218800	K215220
3	TR3R	TRS3R	T219851	P215224	125	TR125R	TRS125R	N219317	N215729
3-2/10	TR3-2/10R	TRS3-2/10R	N216741	N201906	150	TR150R	TRS150R	P219847	S216745
3-1/2	TR3-1/2R	TRS3-1/2R	Q216237	M200847	175	TR175R	TRS175R	D222528	K217773
4	TR4R	TRS4R	A212152	D219860	200	TR200R	TRS200R	V223049	K218808
4-1/2	TR4-1/2R	TRS4-1/2R	G222531	A216246	225	TR225R	TRS225R	A200836	Y219855
5	TR5R	TRS5R	E214709	M211128	250	TR250R	TRS250R	P201378	L222535
5-6/10	TR5-6/10R	TRS5-6/10R	R212673	H223061	300	TR300R	TRS300R	B201895	J200844
6	TR6R	TRS6R	S218286	V215735	350	TR350R	TRS350R	A211117	J201902
6-1/4	TR6-1/4R	TRS6-1/4R	S218286	K212161	400	TR400R	TRS400R	P211636	G211123
7	TR7R	TRS7R	G218805	Z216751	450	TR450R	TRS450R	N218282	E212156
8	TR8R	TRS8R	V219852	R218814	500	TR500R	TRS500R	C218801	W212677
9	TR9R	TRS9R	H222532	S222541	600	TR600R	TRS600R	P219318	F213192

Note: Indicator not available (1/10-7) Amps



Recommended Fuse Blocks With Box Connectors For Tri-onic® Class RK5 Fuses

Fuse Ampere Rating	Catalog Number		Ref. Number	
	250V		250V	
	1 Pole	3 pole	1 pole	3 pole
0-30	20306R	20308R	T213411	K215956
31-60	20606R	20608R	B212383	E214939
61-100	21036R	21038R	D201621	M212899
101-200	22001R	22003R	R213915	G214941
201-400	24001R	24003R	J219566	D222022
401-600	2631R	2633R	H214942	P215960

Dimensions

Ampere Rating	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm

250V-TR Fuses

0-30	2	51	9/16	14	-	-	-	-	-	-
31-60	3	76	13/16	21	-	-	-	-	-	-
61-100	5-7/8	149	1-1/16	27	1/8	3	3/4	19	1	25
101-200	7-1/8	181	1-9/16	40	3/16	5	1-1/8	28	1-3/8	35
201-400	8-5/8	219	2-1/16	53	1/4	6	1-5/8	41	1-7/8	48
401-600	10-3/8	264	2-9/16	66	1/4	6	2	51	2-1/4	57

600V-TRS Fuses

0-30	5	127	13/16	21	-	-	-	-	-	-
31-60	5-1/2	139	1-1/16	27	-	-	-	-	-	-
61-100	7-7/8	200	1-5/16	34	1/8	3	3/4	19	1	25
101-200	9-5/8	244	1-13/16	46	3/16	5	1-1/8	28	1-3/8	35
201-400	11-5/8	295	2-9/16	66	1/4	6	1-5/8	41	1-7/8	48
401-600	13-3/8	340	3-1/8	80	1/4	6	2	51	2-1/4	57

Fuse Ampere Rating	Catalog Number		Ref. Number	
	600V		600V	
	1 Pole	3 pole	1 pole	3 pole
0-30	60306R	60308R	H212389	K214438
31-60	60606R	60608R	K212391	M214440
61-100	61036R	61038R	W204788	Z211875
101-200	62001R	62003R	V212906	B213924
201-400	64001R	64003R	D219055	M222030
401-600	6631R	6633R	J216990	E218021

A variety of pole configurations and termination provisions is available.



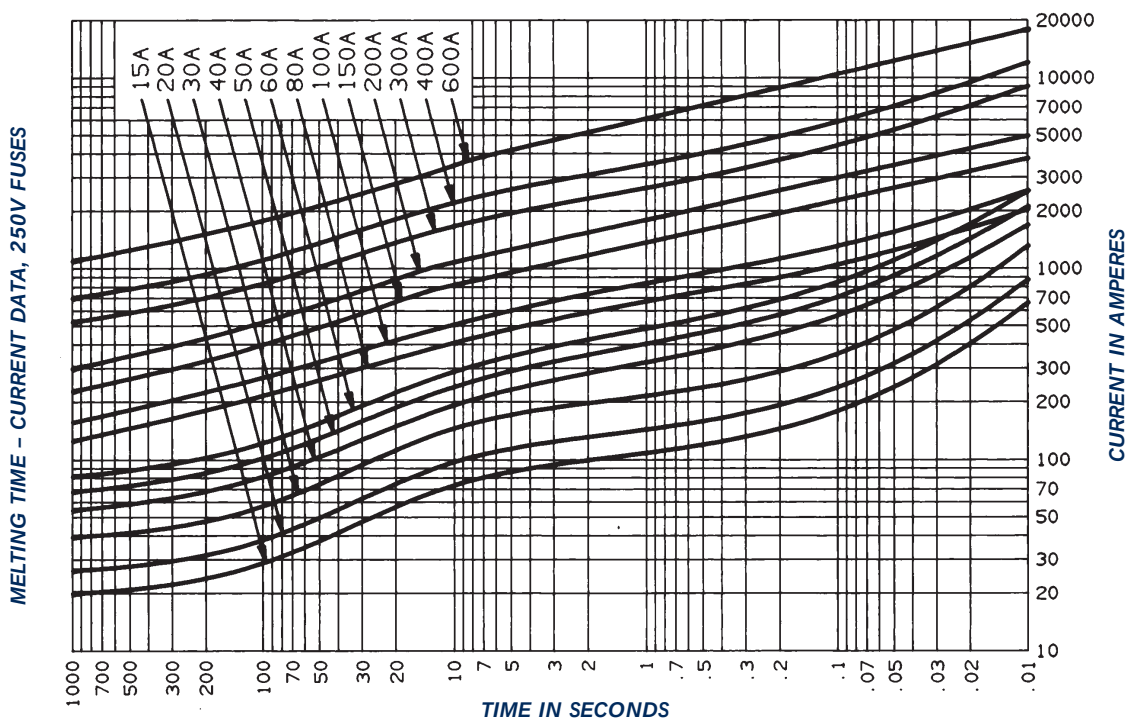
General Purpose US Fuses

American Power Fuses

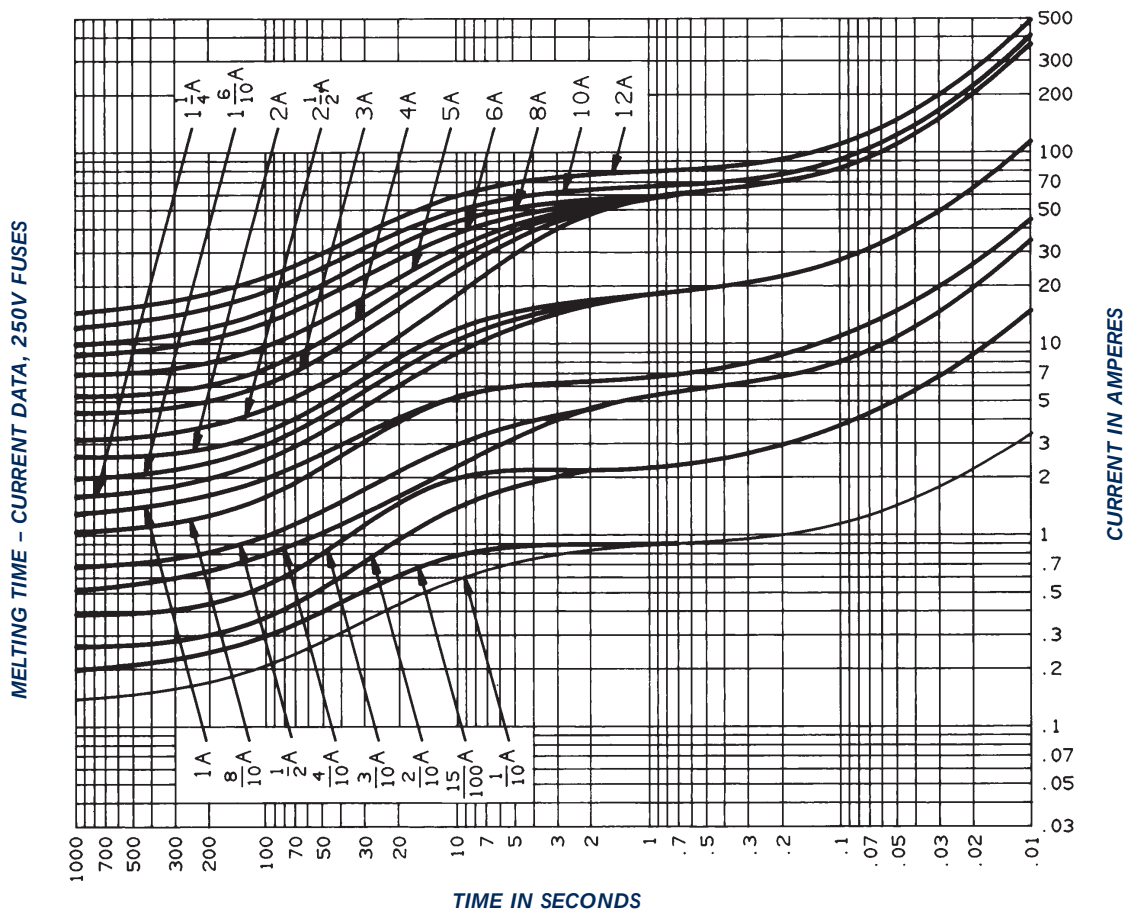
TRI-ONIC®

TR and TRS (Class RK5 TD)

TR 15 to 600



TR 1/10 to 12



General Purpose US Fuses

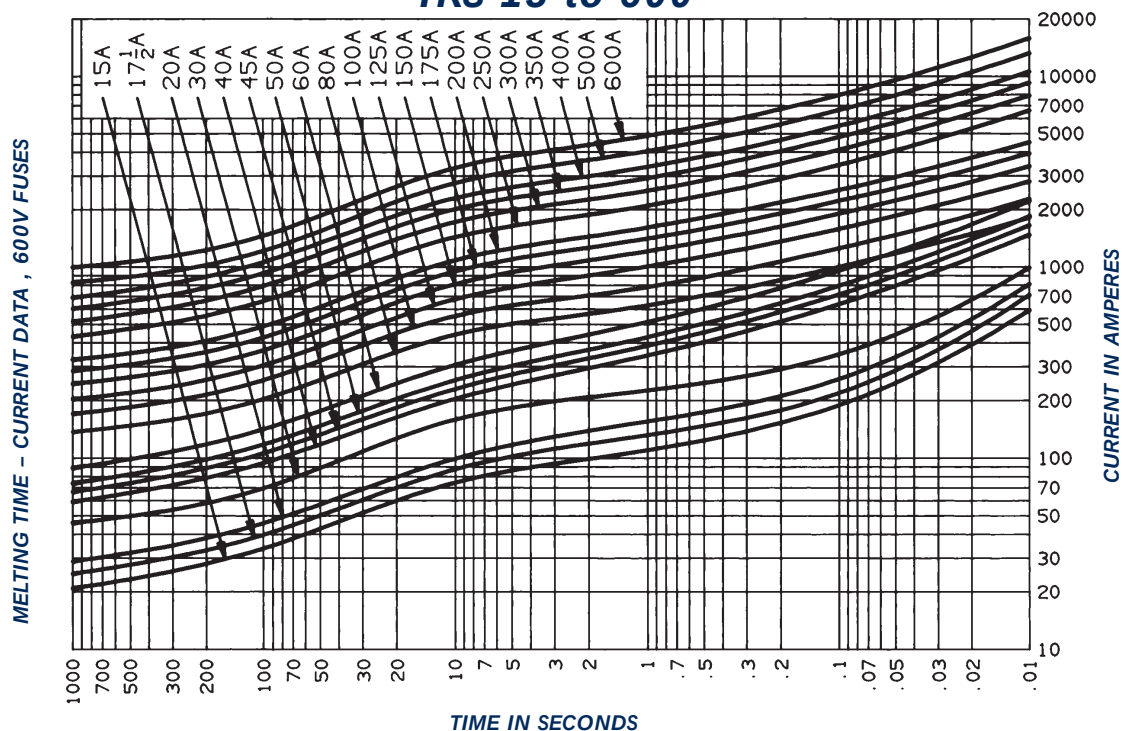
American Power Fuses

TRI-ONIC®

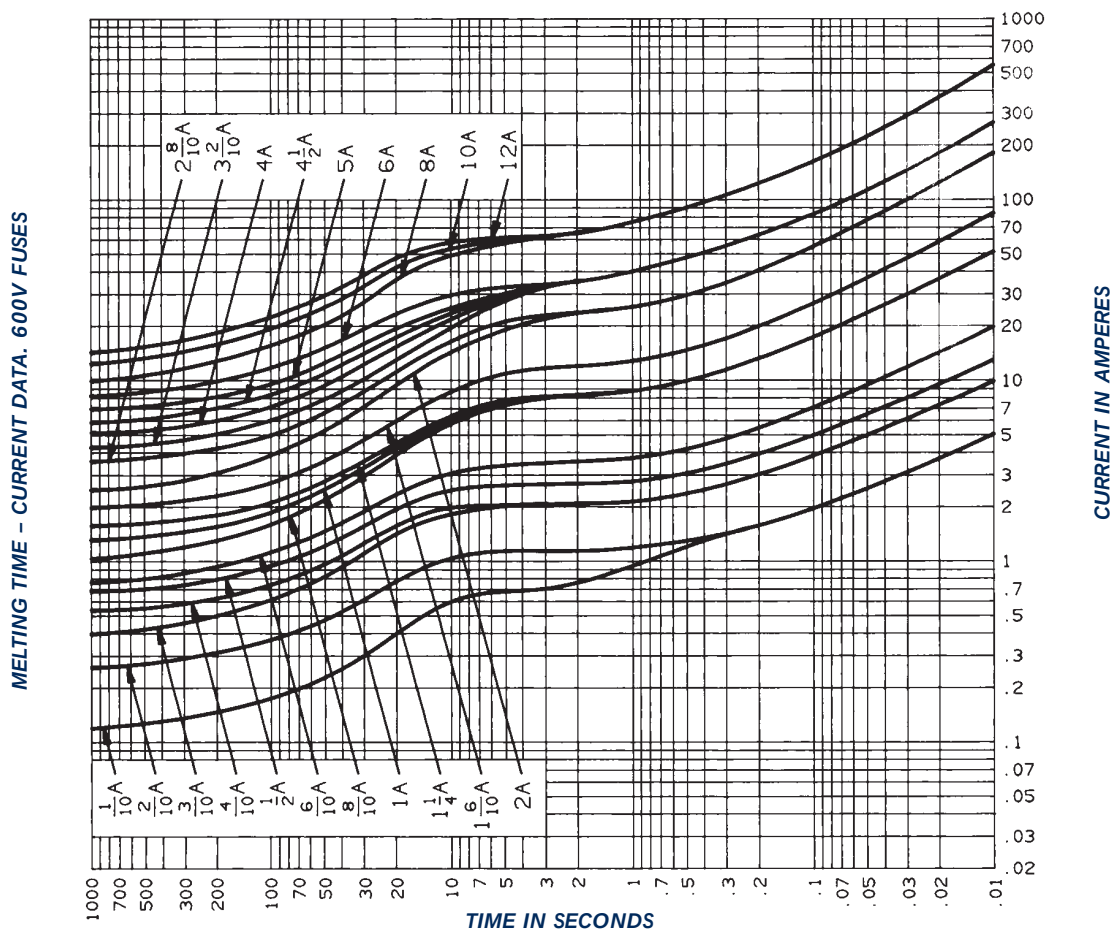
TR and TRS (Class RK5 TD)



TRS 15 to 600



TRS 1/10 to 12

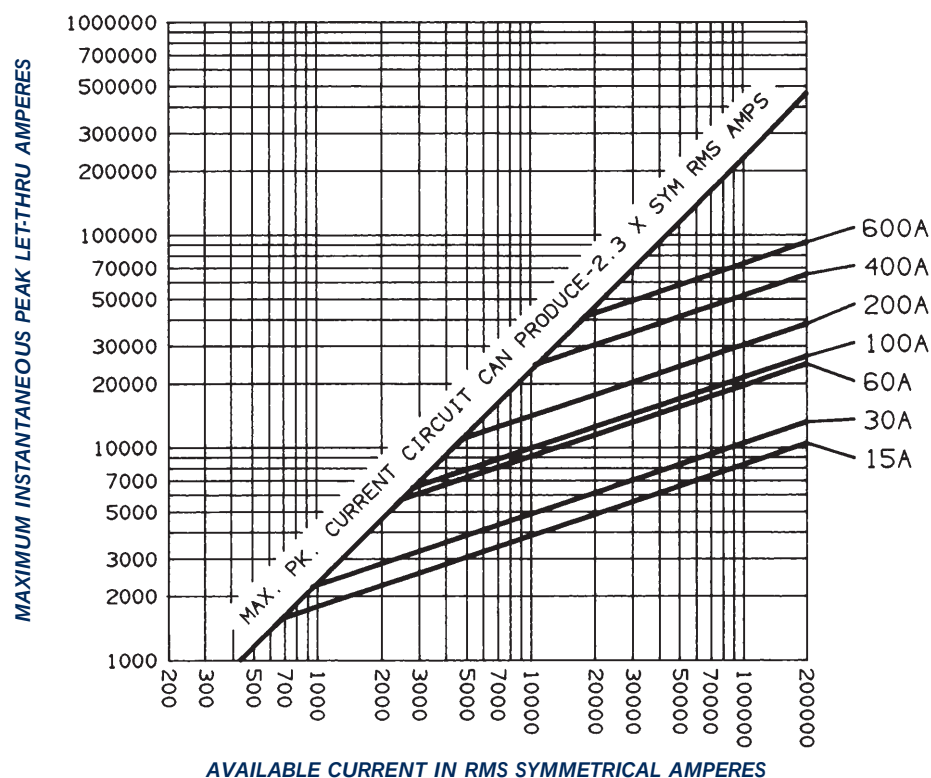




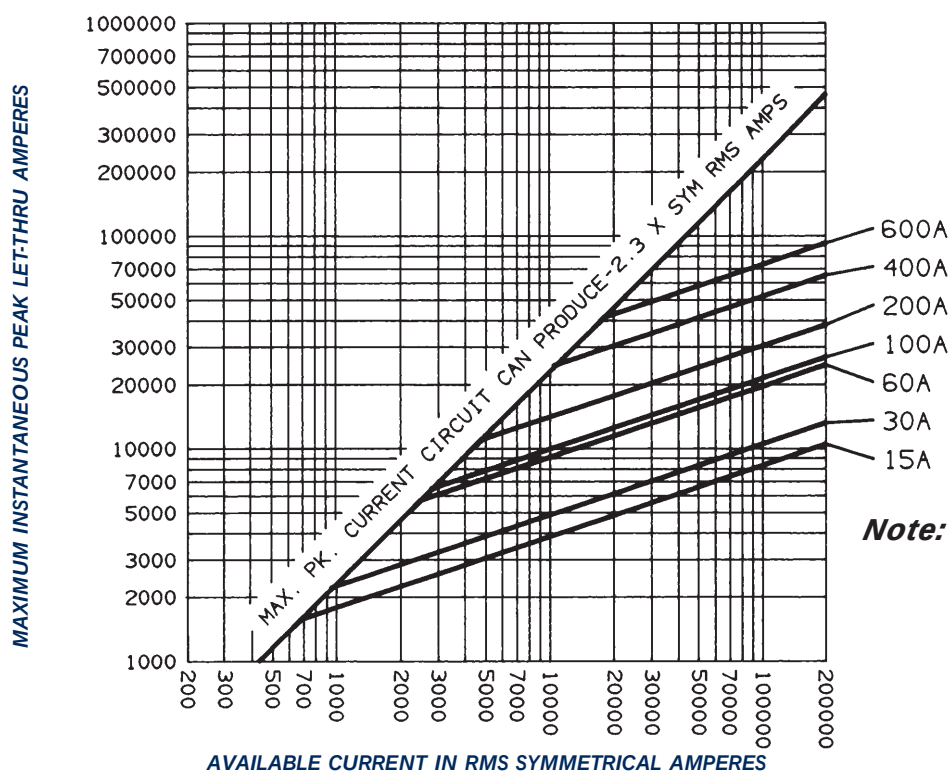
General Purpose US Fuses

American Power Fuses TRI-ONIC® TR and TRS (Class RK5 TD)

Peak Let-Thru Current Data – TR 30 to 600, 250 Volts AC



Peak Let-Thru Current Data – TRS 15 to 600, 600 Volts AC



Note: See Application Information page L9 for All Motor and Transformer Tables.



General Purpose US Fuses

American Power Fuses TRI-ONIC® TRS - RDC (DC Rated TD)



DC RATED FOR TOUGH DC APPLICATIONS

The Tri-onic DC fuse series is designed for DC circuit protection in surface and underground mines. The TRS-RDC is MSHA approved and meets the industry's most severe third party requirements for 600VDC rated fuses. The TRS-RDC is a time-delay fuse with essentially the same time-current characteristic as the standard Tri-onic.

Features /Benefits

- DC rated for mine duty and other long time-constant applications
- Time delay for motor start-ups and high inrush loads without nuisance opening
- Rugged glass melamine body for superior reliability in harsh environments

Ratings

DC: 1 to 30A 300VDC, 20kA.I.R.
(Consult Factory for Availability)

DC: 35 to 400A 600VDC, 20kA I.R.

Highlights

- Time Delay
- DC Rated

Applications

- Mine Circuits
- Trailing Cables
- Pump Motors
- Rail Heaters

Approvals

- MSHA Approval No. 28-26-0

General Purpose US Fuses



American Power Fuses

TRI-ONIC®

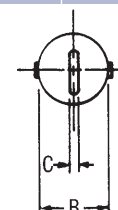
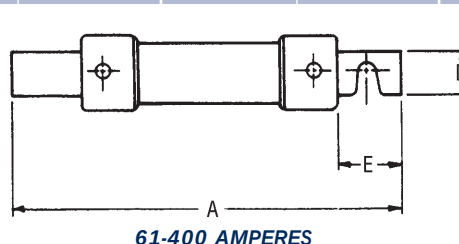
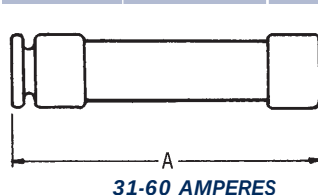
TRS - RDC (DC Rated TD)

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number
1	TRS1RDC	10	TRS10RDC	40	TRS40RDC	90	TRS90RDC	200	TRS200RDC
2	TRS2RDC	12	TRS12RDC	45	TRS45RDC	100	TRS100RDC	250	TRS250RDC
3	TRS3RDC	15	TRS15RDC	50	TRS50RDC	125	TRS125RDC	300	TRS300RDC
5	TRS5RDC	20	TRS20RDC	60	TRS60RDC	150	TRS150RDC	400	TRS400RDC
6	TRS6RDC	30	TRS30RDC	70	TRS70RDC	175	TRS175RDC		
8	TRS8RDC	35	TRS35RDC	80	TRS80RDC				

Standard Fuse Ampere Ratings, Reference Numbers

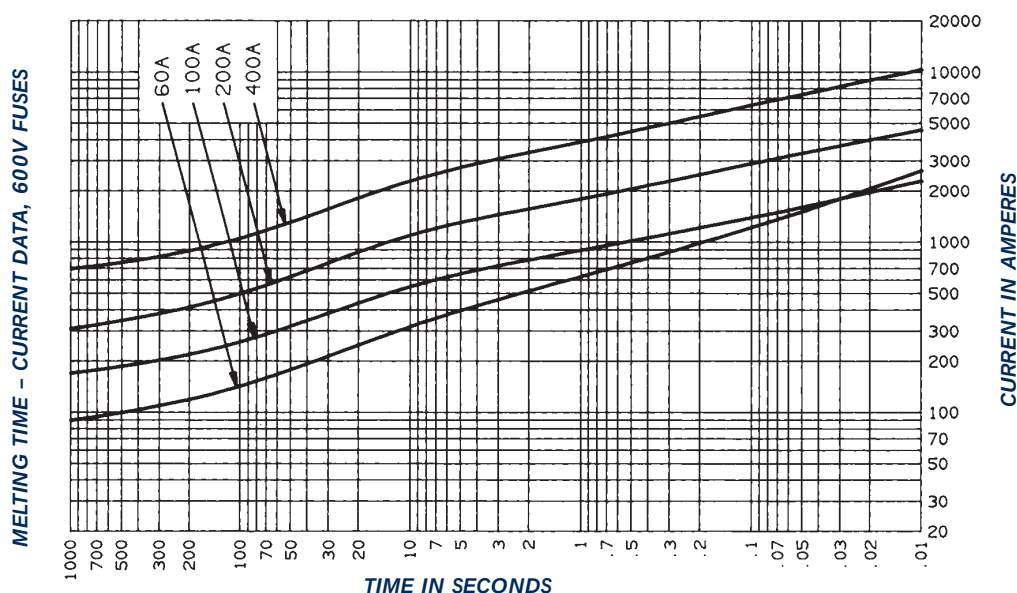
Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number
1	Z212680	10	A219328	40	B218294	90	X218290	200	X219325
2	G223060	12	P222538	45	C219330	100	G214711	250	D223057
3	T215734	15	M201905	50	P201907	125	V216241	300	Y201386
5	D211649	20	P218812	60	Q215225	150	G217264	400	Y211644
6	B216247	30	C213695	70	E214203	175	W218289		
8	E219861	35	L214715	80	H217265				



Dimensions

AMPERE RATING	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
1-30	5	127	13/16	21	-	-	-	-	-	-
31-60	5-1/2	139	1-1/16	27	-	-	-	-	-	-
61-100	7-7/8	200	1-5/16	34	1/8	3	3/4	19	1	25
101-200	9-5/8	244	1-13/16	46	3/16	5	1-1/8	28	1-3/8	35
201-400	11-5/8	295	2-9/16	66	1/4	6	1-5/8	41	1-7/8	48

TRS-RDC 60 to 400





General Purpose US Fuses

American Power Fuses AMP-TRAP® A4J (Class J FA)



FOR EXCELLENT CURRENT LIMITING PROTECTION

A4J Class J fuses deliver excellent current-limiting protection to a wide variety of applications. Their unique dimensions prevent the substitution of other fuses with lower voltage ratings, interrupting ratings, or current-limiting capability.

Features /Benefits

- High current limitation for low peak let-thru current
- Unique dimensions prevent replacement by other fuseclasses
- Fiberglass body provides dimensional stability in harsh industrial environments

** Easy-to-read imprint label for quick recognition and replacement*

Ratings

AC: 1 to 600A
600VAC, 200kA I.R.

DC: 1 to 600A
300VDC, 20kA I.R.

Highlights

- Fast Acting
- Very Current-Limiting
- DC Ratings

Applications

- Capacitors
- Loadcenters
- Panelboards
- Switchboards
- Bus Duct
- Feeder Circuits
- Circuit Breakers
- Lighting, Heating, and General Loads

Approvals



- UL Listed to Standard 248-8.
- CSA Certified to Standard C22.2 No. 248.8
- DC Tested to UL198L limits
- EC 269-2-1

General Purpose US Fuses



American Power Fuses

AMP-TRAP®

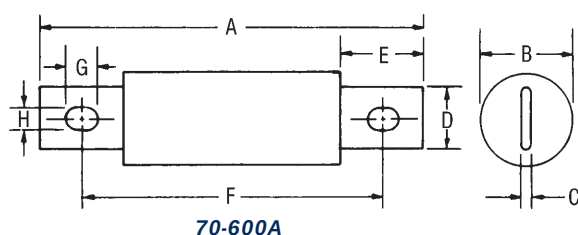
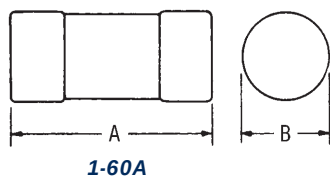
A4J (Class J FA)



Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
1	A4J1	V217299	45	A4J45	J201419	175	A4J175	Q212189
3	A4J3	J219888	50	A4J50	X201937	200	A4J200	G212710
6	A4J6	T211157	60	A4J60	M211680	225	A4J225	X215254
10	A4J10	Z217809	70	A4J70	H212711	250	A4J250	T217298
15	A4J15	K218325	80	A4J80	J213724	300	A4J300	K219360
20	A4J20	X218842	90	A4J90	R214237	350	A4J350	H219887
25	A4J25	L219361	100	A4J100	N223089	400	A4J400	Z222570
30	A4J30	A222571	110	A4J110	V200877	450	A4J450	W200878
35	A4J35	Q223091	125	A4J125	V201935	500	A4J500	W201936
40	A4J40	X200879	150	A4J150	R211155	600	A4J600	S211156

Recommended Fuse Blocks With Box Connectors for Amp-trap Class J Fuses



Fuse Ampere Rating	600V OR LESS			
	1 Pole		3 pole	
	Cat N°	Ref N°	Cat N°	Ref N°
0-30	US3J1I	M212922	US3J3I	K214967
31-60	US6J1I	F222047	US6J3I	M211381
61-100	61036J	Z201640	61038J	G212917
101-200	62001J	D214455	62003J	E214962
201-400	64031J	X218543	64033J	S219068
401-600	6631J	P201125	6633J	A201641

A variety of pole configurations and termination provisions is available. Refer to the fuse block section of this catalog for details.

Dimensions

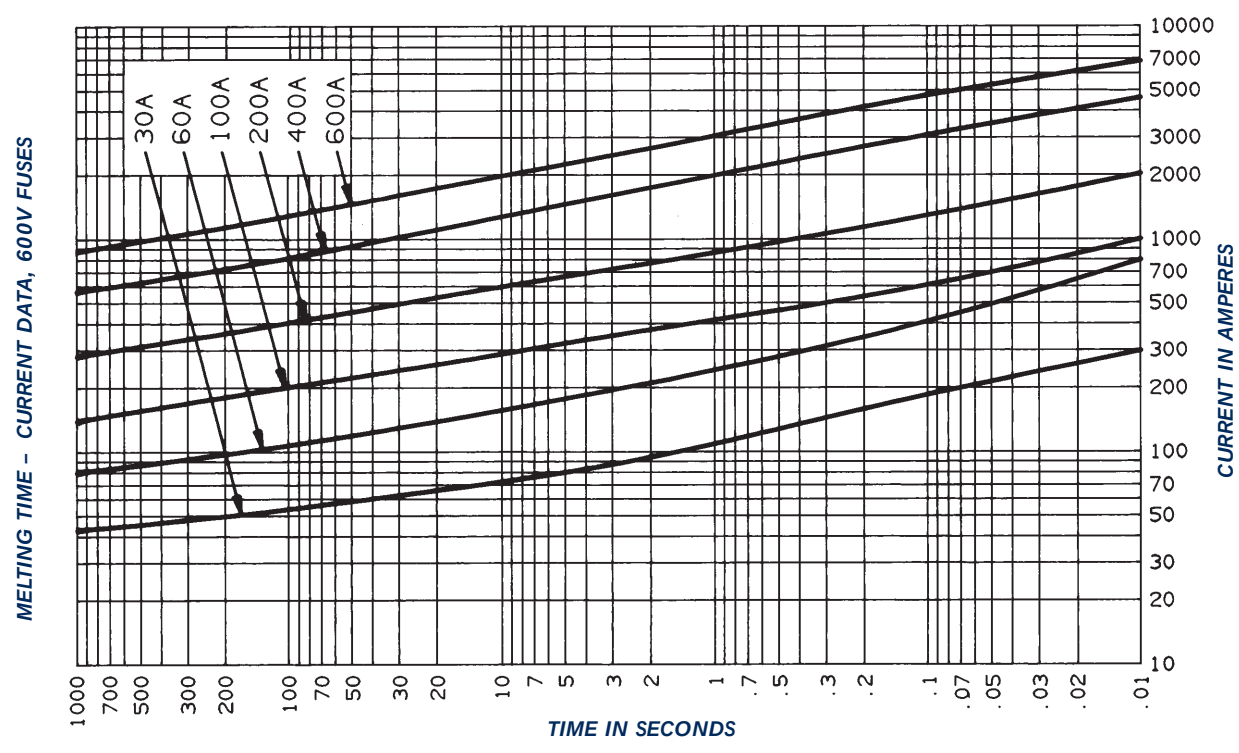
Ampere Rating	A		B		C		D		E		F		G		H	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
1-30	2-1/4	57	13/16	21	-	-	-	-	-	-	-	-	-	-	-	-
31-60	2-3/8	60	1-1/16	27	-	-	-	-	-	-	-	-	-	-	-	-
61-100	4-5/8	117	1-1/8	29	1/8	3.2	3/4	19	1	25	3-5/8	92	3/8	10	9/32	7
101-200	5-3/4	146	1-5/8	41	3/16	4.8	1-1/8	29	1-3/8	35	4-3/8	111	3/8	10	9/32	7
201-400	7-1/8	181	2-1/8	54	1/4	6.3	1-5/8	41	1-7/8	48	5-1/4	133	17/32	13	13/32	10
401-600	8	203	2-1/2	64	3/8	9.5	2	51	2-1/8	54	6	152	11/16	18	17/32	13



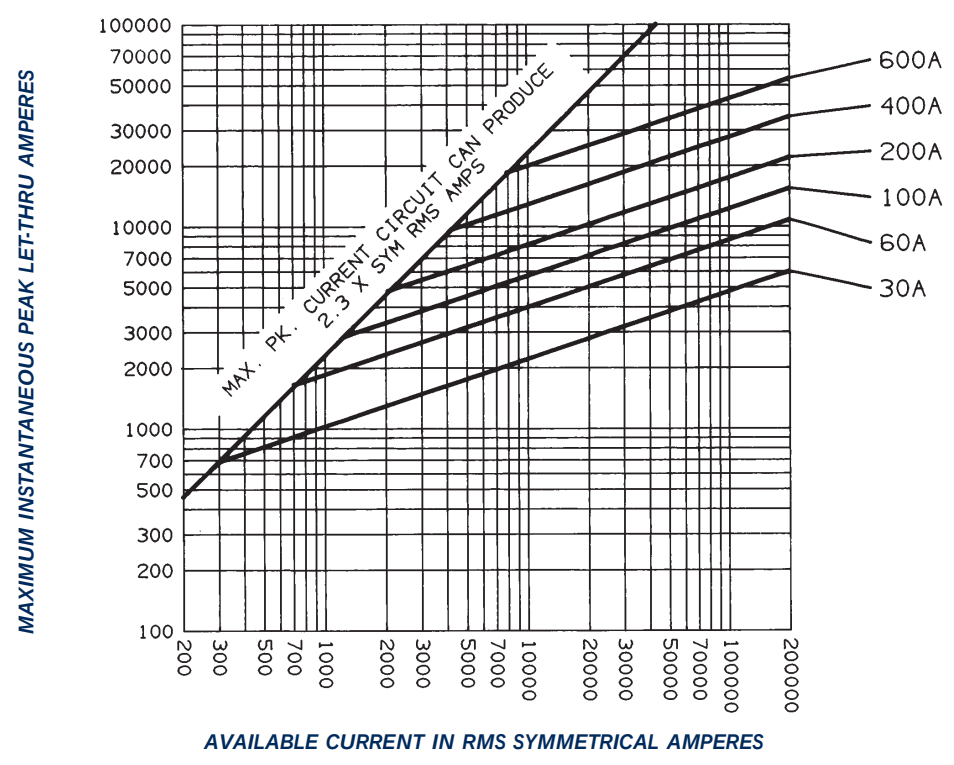
General Purpose US Fuses

American Power Fuses
AMP-TRAP®
A4J (Class J FA)

A4J 30 to 600



Peak Let-Thru Current Data - 30 to 600, 600 Volts AC





General Purpose US Fuses

American Power Fuses AMP-TRAP® A4BY (Class L)



Count on the high interrupting rating of our most widely-used class L fuse

When it comes to protecting service entrance equipment, feeder circuits, and circuit breakers, A4BY fuses have been the industry's favorite. The A4BY is a 100% rated device and may be applied at continuous currents up to its ampere rating. A 4-second minimum time delay at 500% rating allows the A4BY to pass normal current surges and to coordinate with ground fault relays.

Features /Benefits

- Unique dimensions prevent replacement by other fuse classes
- Blade stamped catalog numbers for permanent identification
- Glass melamine body and plated terminals provide superior reliability in harsh environments

Ratings

AC: 200 to 6,000A
600VAC, 200kA I.R.

DC: 200 to 2500A
300VDC, 100kA I.R.

Highlights

- Current-Limiting
- 4-Second Time Delay
- DC Ratings
- Uniform Characteristics in all Ampere Ratings

Applications

- Mains, Feeders
- Circuit Breakers
- Loadcenters
- Panelboards
- Switchboards
- Metering Centers

Approvals



- UL Listed to Standard 248-10 (601-6000A)
- CSA Certified to Standard C22.2 No. 248.10 (601-6000A)
- DC Tested to UL 198L limits (601-6000A)

Indicators:

Optional built-in fuse indicators (-TI) are available. Consult factory.

General Purpose US Fuses



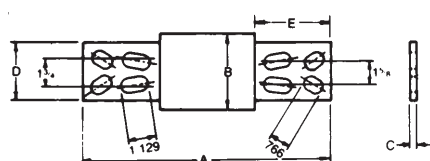
American Power Fuses

AMP-TRAP®

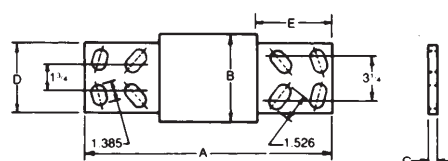
A4BY (Class L)

Standard Fuse Ampere Ratings

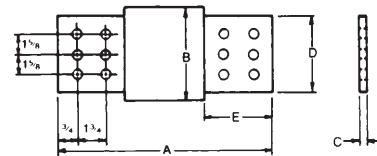
Ampere Rating	Catalog Number	Ref. Number	Ampere Rating	Catalog Number	Ref. Number	Ampere Rating	Catalog Number	Ref. Number
200	A4BY200	P217823	801	A4BY801	K211172	2000	A4BY2000	A218339
250	A4BY250	P222584	900	A4BY900	C211694	2001	A4BY2001	M218856
300	A4BY300	J201948	1000	A4BY1000	X201431	2500	A4BY2500	L200892
350	A4BY350	Y212725	1100	A4BY1100	H211170	3000	A4BY3000	J211171
400	A4BY400	Z213738	1200	A4BY1200	A211692	3001	A4BY3001	H212205
500	A4BY500	T216286	1201	A4BY1201	X212724	3500	A4BY3500	H213240
600	A4BY600	Q217824	1350	A4BY1350	G213239	4000	A4BY4000	G214251
601	A4BY601	C219376	1400	A4BY1400	Y213737	4001	A4BY4001	J214759
650	A4BY650	Z219902	1500	A4BY1500	H214758	5000	A4BY5000	V216793
700	A4BY700	Q222585	1600	A4BY1600	L215267	6000	A4BY6000	N218857
750	A4BY750	M200893	1601	A4BY1601	T216792			
800	A4BY800	Z201433	1800	A4BY1800	K217313			



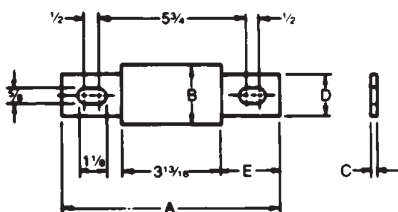
2001-3000A



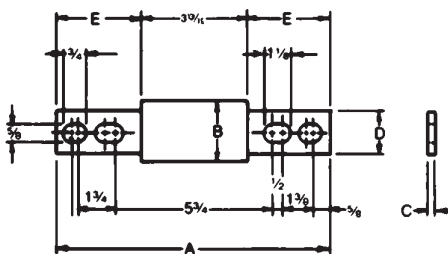
3001-4000A



4001-6000A



200-800A



801-2000A

Dimensions

Ampere Rating	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
200-600*	8-5/8	219	2	51	5/16	8	1-5/8	41	2-13/32	61
601-800	8-5/8	219	2-1/2	63	3/8	9	2	51	2-13/32	61
801-1200	10-3/4	273	2-1/2	63	3/8	9	2	51	3-15/32	88
1201-1600	10-3/4	273	3	76	7/16	11	2-3/8	60	3-15/32	88
1601-2000	10-3/4	273	3-1/2	89	1/2	13	2-3/4	70	3-15/32	88
2001-2500	10-3/4	273	4-1/2	114	3/4	19	3-1/2	89	3-15/32	88
2501-3000	10-3/4	273	5	127	3/4	19	4	102	3-15/32	88
3001-4000	10-3/4	273	5-3/4	146	3/4	19	4-3/4	121	3-15/32	88
4001-5000	10-3/4	273	6-1/4	159	1	25	5-1/4	133	3-15/32	88
5001-6000	10-3/4	273	7-1/8	181	1	25	5-3/4	146	3-15/32	88

Safety Note: Class L fuses are dimensioned for one-way interchangeability.

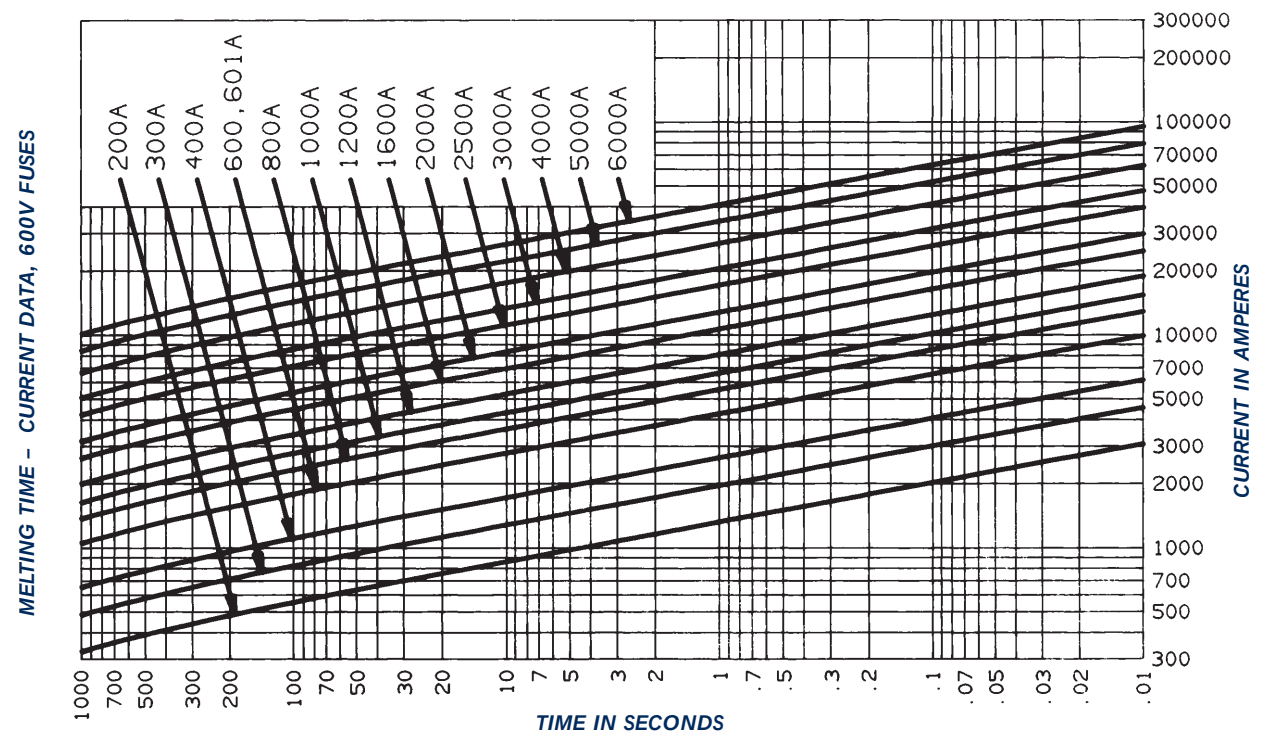
A Class L fuse of any lower ampere rating can be substituted for a given Class L fuse.



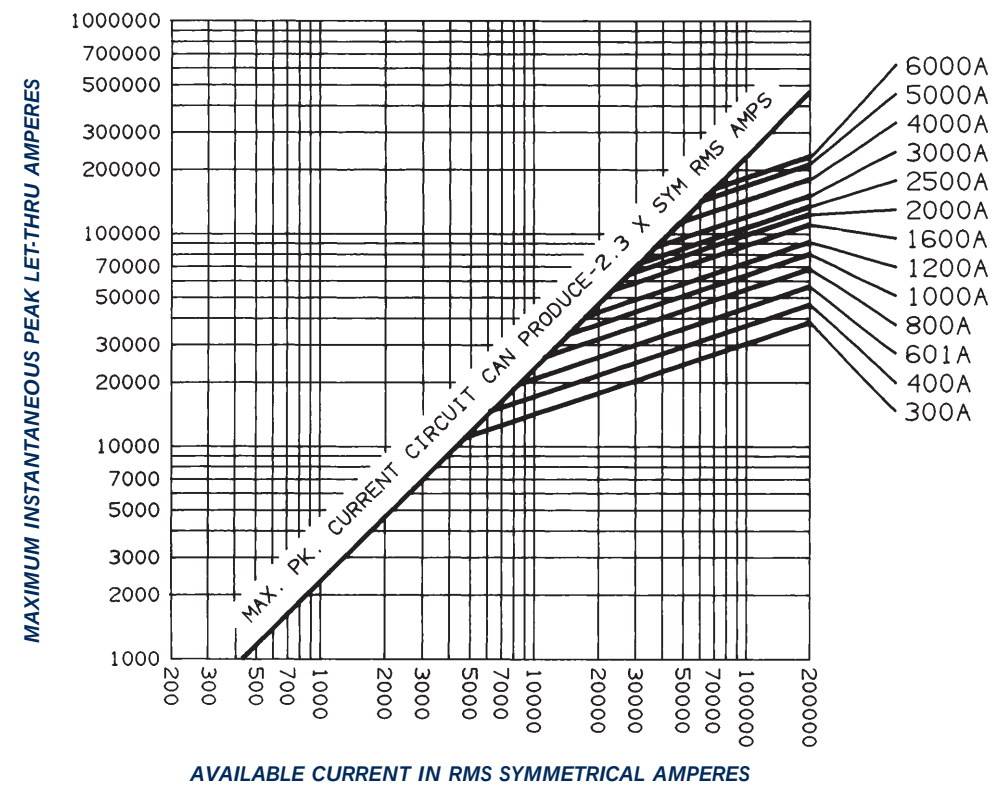
General Purpose US Fuses

American Power Fuses
AMP-TRAP®
A4BY (Class L)

A4BY 200 to 6000



Peak Let-Thru Current Data - A4BY 300 to 6000, 600 Volts AC





General Purpose US Fuses

American Power Fuses AMP-TRAP® A4BT (Class L TD)

**when your heavier loads need
protection A4BT fuses
won't let you down**

The high interrupting rating of A4BT current limiting fuses is ideally suited for protecting mains, feeders, and general circuits. The 10-second time delay at 500% of fuse rating is ideal for large motors and other loads with a high inrush. A4BT fuses are suitable for DC applications up to 500VDC. An A4BT fuse can be applied to normal loads up to its full ampere rating to allow 100% rating of equipment.



Features /Benefits

- Unique dimensions prevent replacement by other fuse classes.
- Blade-stamped catalog numbers for permanent identification
- Glass melamine body and plated terminal provide superior reliability in harsh environments

Ratings

AC: 200 to 2,000A
600VAC, 200kA I.R.

DC: 200 to 2,000A
500VDC, 100kA I.R.

Highlights

- Current-Limiting
- Full 10-Second Delay
- DC Ratings
- Uniform Characteristics in all Ampere Ratings

Applications

- Motors
- Motor Controllers
- Transformers
- Panelboards
- Mains
- Feeders

Approvals



- UL Listed to Standard 248-10 (601-2000A)
- CSA Certified to Standard C22.2 No. 248.10 (601-2000A)
- DC Tested to UL 198L limits (601-2000A)

General Purpose US Fuses



American Power Fuses

AMP-TRAP®

A4BT (Class L TD)

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number
200	A4BT200	601	A4BT601	1100	A4BT1100
250	A4BT250	650	A4BT650	1200	A4BT1200
300	A4BT300	700	A4BT700	1400	A4BT1400
350	A4BT350	750	A4BT750	1500	A4BT1500
400	A4BT400	800	A4BT800	1600	A4BT1600
500	A4BT500	900	A4BT900	1800	A4BT1800
600	A4BT600	1000	A4BT1000	2000	A4BT2000

Standard Fuse Ampere Ratings, Reference Numbers

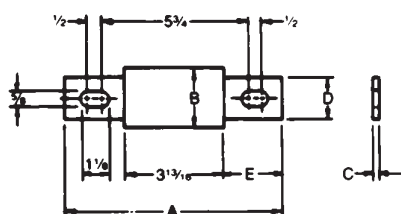
Ampere Rating	Ref. Number	Ampere Rating	Ref. Number	Ampere Rating	Ref. Number
200	W212723	601	Z218338	1100	J200890
250	E214249	650	L218855	1200	W201430
300	G214757	700	A219374	1400	G201946
350	L215773	750	X219900	1500	G211169
400	R216284	800	N222583	1600	Z211691
500	J217312	900	K200891	1800	F212203
600	N217822	1000	M222582	2000	F213238

Three Phase Motor Fuse Selection 460 Volt Three Phase Motors

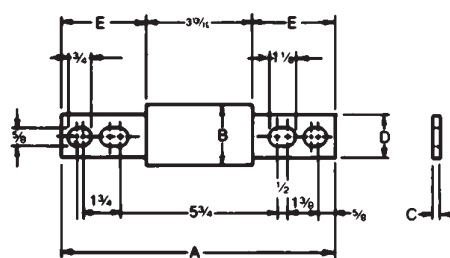
Motor	Full Load	Recommended A4BT Ampere Rating	
		Motor Acceleration Times	
		HP Amperes	Typical
Heavy Load			
	at 460V	5 seconds	Over 5 seconds
300	360	601	700

575 Volt Three Phase Motors

400	382	601	700
500	472	700	1000



200-800A



801-2000A

Dimensions

Ampere Rating	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
200-600	8-5/8	219	2	51	5/16	8	1-5/8	41	2-13/32	61
601-800	8-5/8	219	2-1/2	63	3/8	9	2	51	2-13/32	61
801-1200	10-3/4	273	2-1/2	63	3/8	9	2	51	3-15/32	88
1201-1600	10-3/4	273	3	76	7/16	11	2-3/8	60	3-15/32	88
1601-2000	10-3/4	273	3-1/2	89	1/2	13	2-3/4	70	3-15/32	88

Safety Note: Class L fuses are dimensioned for one-way interchangeability.

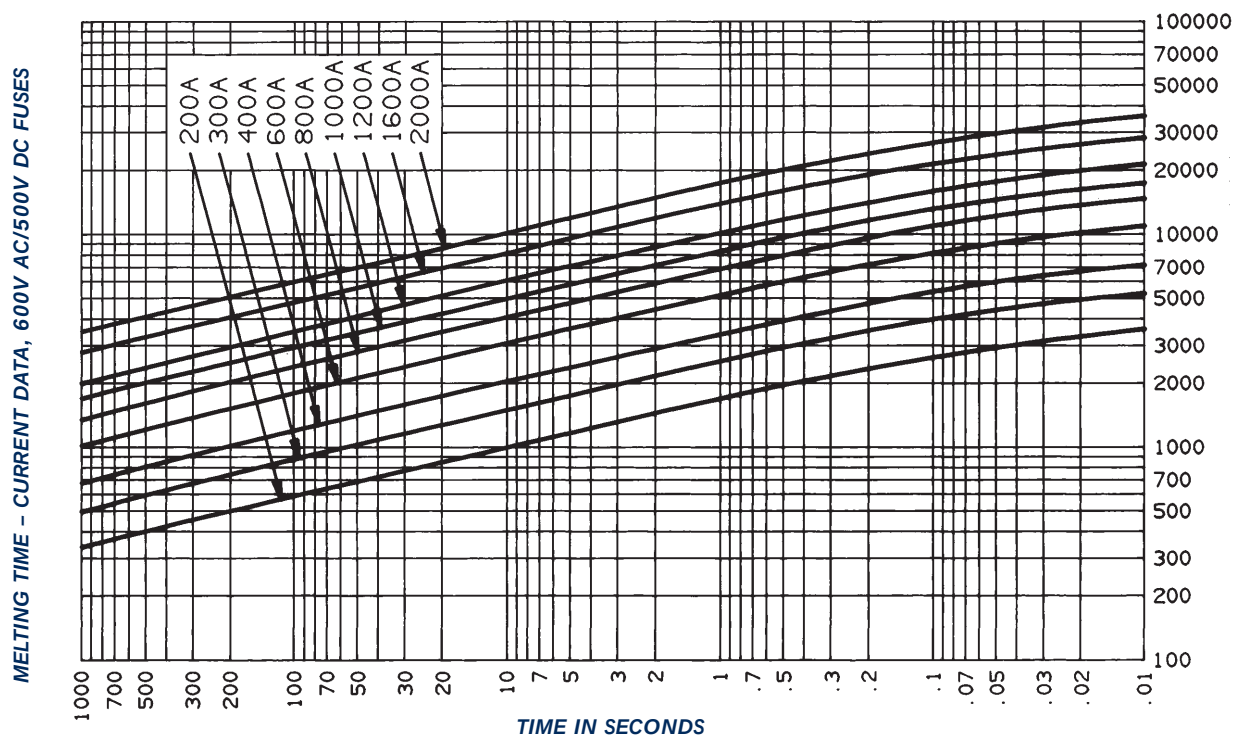
A Class L fuse of any lower ampere rating can be substituted for a given Class L fuse.



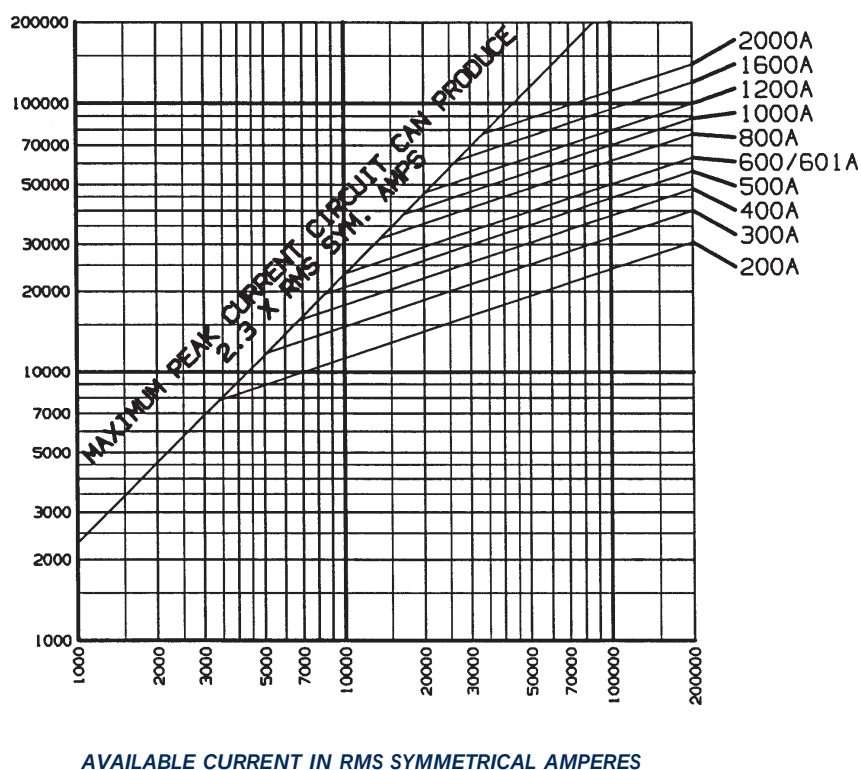
General Purpose US Fuses

American Power Fuses AMP-TRAP® A4BT (Class L TD)

A4BT 200 to 2000



Peak Let-Thru Current Data - A4BT 300 to 2000, 600 Volts AC



American Power Fuses AMP-TRAP® A3T and A6T (Class T FA)

***These small dimension fuses
are the right fit... for a tight fit***



Fast acting A3T and A6T Class T fuses combine two highly desirable features -- high current limitation and a small physical size. Their unique dimensions prevent the substitution of other fuses with lower voltage ratings or current limiting capability. These fuses have glass melamine bodies for superior dimensional stability and catalog numbers stamped into the blades for permanent identification.

Features /Benefits

- Extremely current limiting for low peak let-thru current
- Unique dimensions prevent replacement by other fuse classes
- Blade-stamped catalog numbers for permanent identification
- Small physical size for greater design flexibility

Ratings

A3T

AC: 1 to 1200A 300VAC,
200kA I.R.

DC: 1 to 1200A 160VDC,
50kA I.R.

A6T

AC: 1 to 800A 600VAC,
200kA I.R.

DC: 1 to 800A 300VDC,
100kA I.R.

Highlights

- Fast Acting
- Extremely Current Limiting
- Small Physical Size
- DC Ratings

Applications

- Loadcenters
- Panelboards
- Switchboards
- Circuit Breakers
- Metering Centers

Approvals



- UL Listed to Standard 248-15
- CSA Certified to Standard C22.2
No. 248.15
- DC Tested to UL Standard 198L

General Purpose US Fuses



American Power Fuses

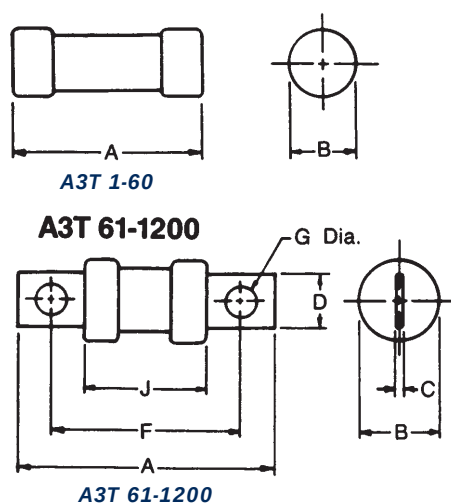
AMP-TRAP®

A3T and A6T (Class T FA)

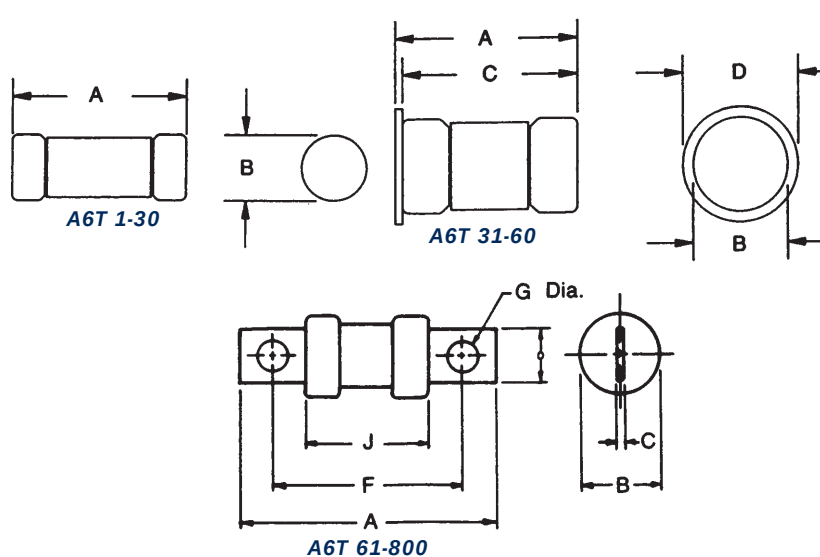
Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number		Reference Number		Ampere Rating	Catalog Number		Reference Number	
	300V	600V	300V	600V		300V	600V	300V	600V
1	A3T1	A6T1	Q212212	L219384	110	A3T110	A6T110	G218345	K219383
3	A3T3	A6T3	R214766	H201441	125	A3T125	A6T125	H219381	F219908
6	A3T6	A6T6	Y217831	S213249	150	A3T150	A6T150	D219906	Y222592
10	A3T10	A6T10	E212731	G219909	175	A3T175	A6T175	W222590	N223112
15	A3T15	A6T15	Q213247	Z222593	200	A3T200	A6T200	L223110	V200900
20	A3T20	A6T20	G213745	P223113	225	A3T225	A6T225	S200898	G201440
25	A3T25	A6T25	P214258	W200901	250	A3T250	A6T250	E201438	Q201954
30	A3T30	A6T30	V215275	R201955	300	A3T300	A6T300	N201952	S211179
35	A3T35	A6T35	W215782	T211180	350	A3T350	A6T350	Q211177	K211701
40	A3T40	A6T40	B216293	L211702	400	A3T400	A6T400	H211699	R212213
45	A3T45	A6T45	C216800	S212214	450	A3T450	A6T450	P212211	F212732
50	A3T50	A6T50	T217321	G212733	500	A3T500	A6T500	D212730	R213248
60	A3T60	A6T60	J218347	J213747	600	A3T600	A6T600	P213246	H213746
70	A3T70	A6T70	F213744	Q214259	700	A3T700	A6T700	N214257	S214767
80	A3T80	A6T80	Q214765	W215276	800	A3T800	A6T800	T215274	D216801
90	A3T90	A6T90	V215781	V217322	1000	A3T1000	-	W217829	-
100	A3T100	A6T100	R217319	W218864	1200	A3T1200	-	T218862	-

A3T



A6T



Dimensions

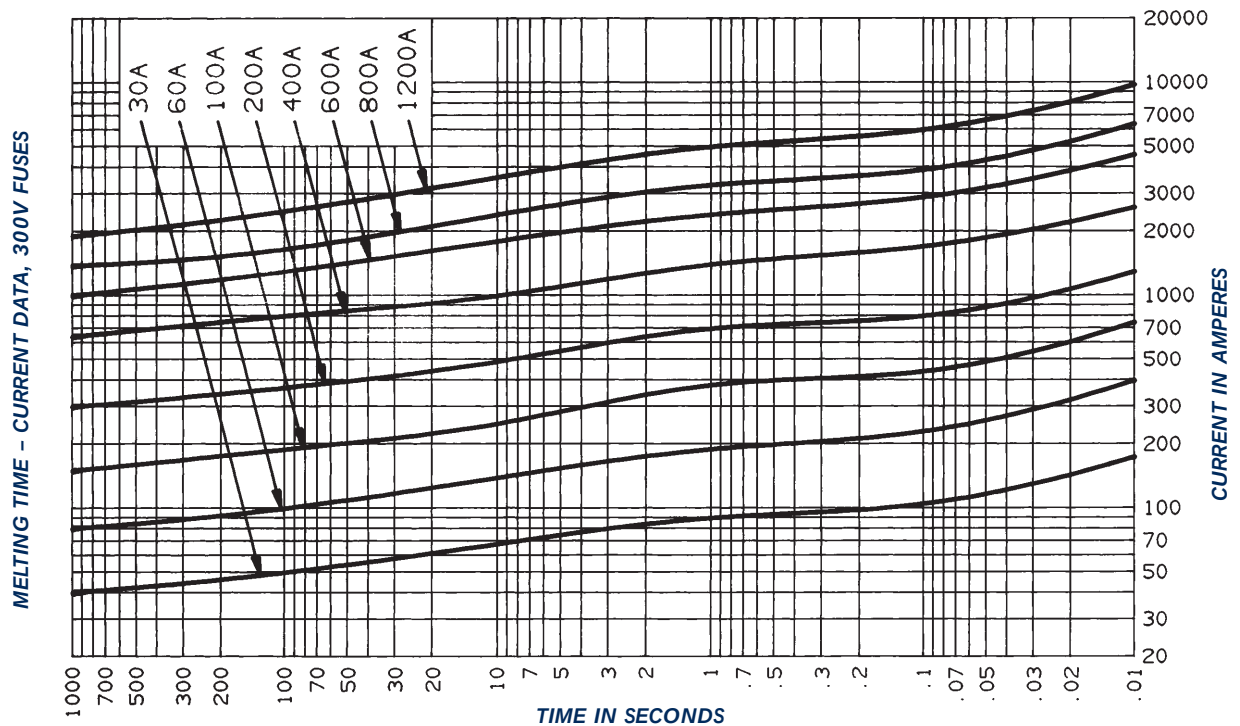
Ampere Rating	A		B		C		D		F		G		J	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
A3T														
1-30	.88	22.4	.41	10.3	-	-	-	-	-	-	-	-	-	-
31-60	.88	22.4	.56	14.1	-	-	-	-	-	-	-	-	-	-
61-100	2.16	54.9	.81	20.6	.12	3.2	.75	19.0	1.56	39.6	.28	7.1	.82	20.8
101-200	2.44	62.0	1.06	26.9	.19	4.8	.88	22.4	1.70	43.2	.34	8.6	.83	21.1
201-400	2.75	69.8	1.33	33.8	.25	6.4	1.00	25.4	1.84	46.7	.41	10.4	.84	21.3
401-600	3.06	77.7	1.62	41.1	.31	7.8	1.25	31.8	2.03	51.6	.48	12.2	.84	21.3
601-800	3.38	85.8	2.08	52.8	.38	9.7	1.75	44.4	2.22	56.4	.55	14.0	.88	22.4
801-1200	4.00	102	2.52	64.0	.44	11.2	2.00	50.8	2.53	64.3	.61	15.5	1.03	26.2
A6T														
1-30	1.50	38.1	.57	14.5	-	-	-	-	-	-	-	-	-	-
31-60	1.57	39.9	.81	20.6	1.51	38.4	1.00	25.4	-	-	-	-	-	-
61-100	2.95	74.9	.82	20.8	.12	3.2	.75	19.1	2.35	59.7	.28	7.1	1.58	40.1
101-200	3.26	82.8	1.07	27.2	.19	4.8	.88	22.4	2.51	63.7	.34	8.6	1.61	41.0
201-400	3.62	92.1	1.62	41.3	.25	6.4	1.00	25.4	2.72	69.1	.41	10.4	1.70	43.2
401-600	3.98	101.2	2.06	52.4	.31	7.9	1.25	31.8	2.95	75.0	.48	12.2	1.70	43.2
601-800	4.33	110.0	2.50	63.5	.37	9.5	1.75	44.4	3.17	80.5	.56	14.1	1.70	43.2



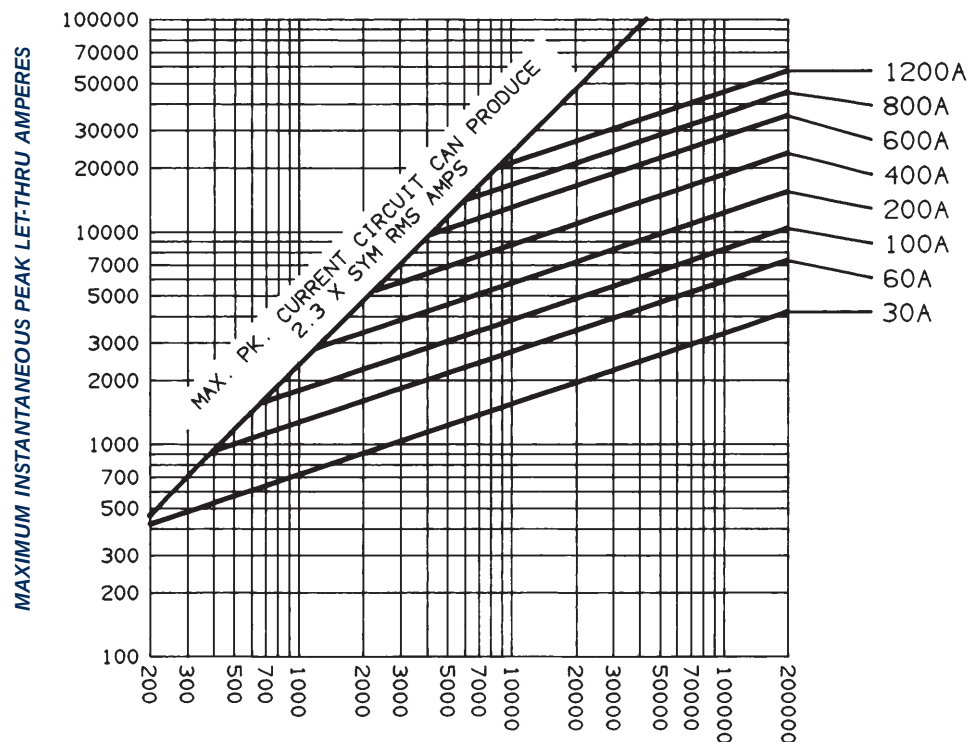
General Purpose US Fuses

American Power Fuses AMP-TRAP® A3T and A6T (Class T FA)

A3T 30 to 1200



Peak Let-Thru Current Data - A3T 30 to 1200, 300 Volts AC



General Purpose US Fuses

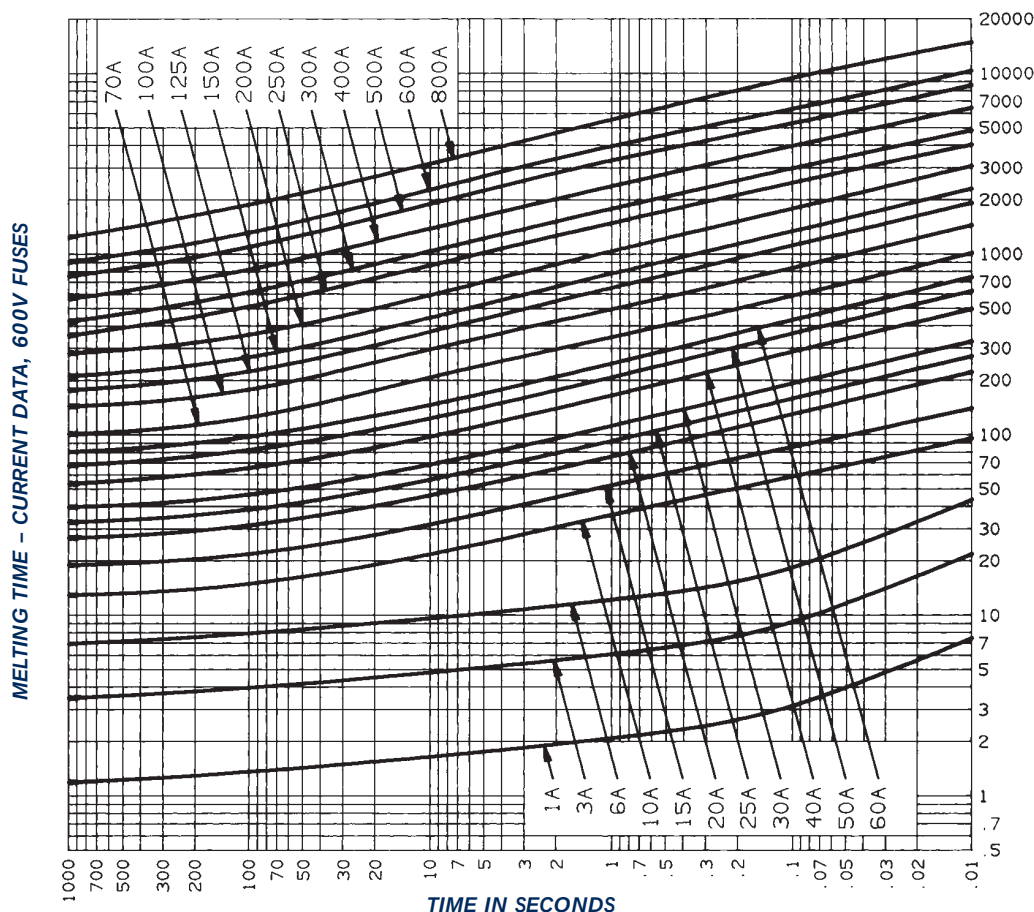


American Power Fuses

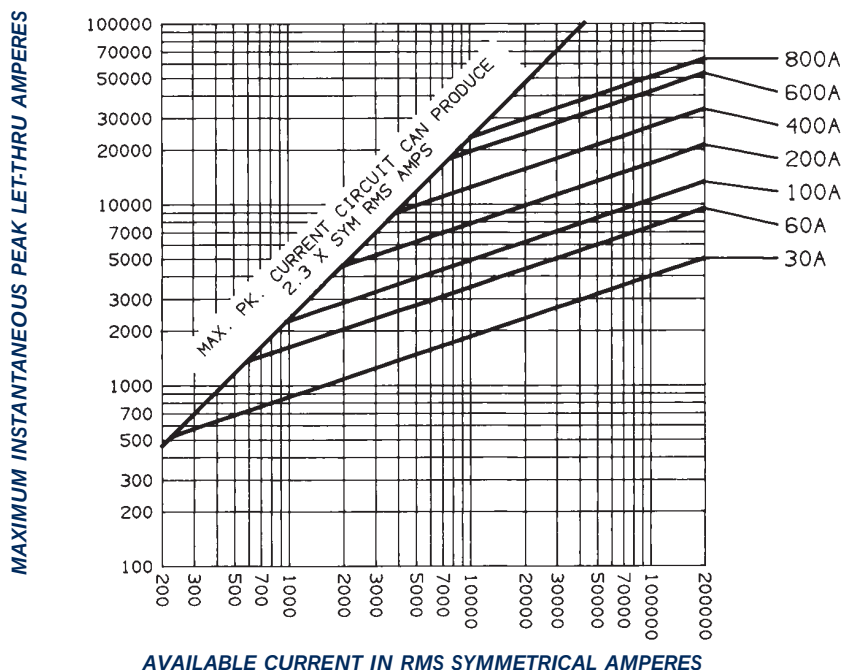
AMP-TRAP®

A3T and A6T (Class T FA)

A6T 1 to 800



Peak Let-Thru Current Data - A6T 30 to 800, 600 Volts AC





General Purpose US Fuses

American Power Fuses AMP-TRAP® A2K and A6K (Class RK1FA)



These fast-acting fuses deliver a high degree of current limitation where

Current-limiting A2K and A6K fuses provide excellent protection where high available short circuit currents exist. These fast-acting fuses are particularly good for branch/feeder circuits and back-up protection.

Features /Benefits

- Rejection style design prevents replacement by other fuse classes
- Fiberglass body provides dimensional stability in harsh industrial environments
- Easy-to-read imprint label for quick recognition and replacement
- High degree of current limitation for low peak let-thru current

Ratings

A2K

AC: 1 to 600A 250VAC,
200kA I.R.

DC: 1 to 600A 250VDC,
200kA I.R.

A6K

AC: 1 to 600A 600VAC,
200kA I.R.

DC: 1 to 600A 300VDC,
200kA I.R.

Highlights

- Highly Current-Limiting
- Fast Acting
- Rejection Style

Applications

- Loadcenters
- Panelboards
- Switchboards
- Bus Duct
- Feeder Circuits
- Non-inductive Loads
- Lighting Circuits

Approvals



- UL Listed to Standard 248-12
- CSA Certified to Standard C22.2 No. 248.12
- DC tested to UL Standard 198L

General Purpose US Fuses



American Power Fuses

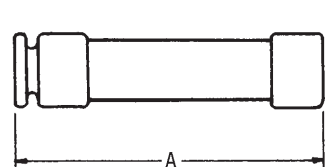
AMP-TRAP®

A2K and A6K (Class RK1FA)

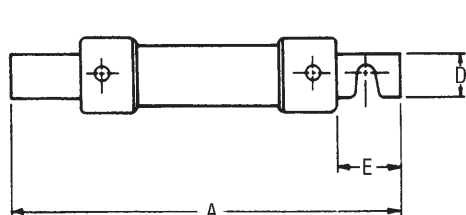
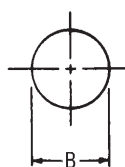
Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number		Reference Number		Ampere Rating	Catalog Number		Reference Number	
	250V	600V	250V	600V		250V	600V	250V	600V
1	A2K1R	A6K1R	M215245	A219880	70	A2K70R	A6K70R	H211147	K217290
3	A2K3R	A6K3R	N217799	M201928	80	A2K80R	A6K80R	A211669	P217800
4	-	A6K4R	-	H212182	90	A2K90R	A6K90R	F212180	A218316
5	A2K5R	A6K5R	P222561	J213218	100	A2K100R	A6K100R	L215244	Y201409
6	A2K6R	A6K6R	L200869	H214229	110	A2K110R	A6K110R	V216264	L201927
8	-	A6K8R	-	L214738	125	A2K125R	A6K125R	V216770	J211148
10	A2K10R	A6K10R	G213216	N218834	150	A2K150R	A6K150R	H217288	B211670
12	A2K12R	-	F214227	-	175	A2K175R	A6K175R	M217798	G212181
15	A2K15R	A6K15R	J214736	B219352	200	A2K200R	A6K200R	Y218314	Y212702
20	A2K20R	A6K20R	Q215754	Q222562	225	A2K225R	A6K225R	L218832	H213217
25	A2K25R	A6K25R	W216265	G223083	250	A2K250R	A6K250R	Z219350	Z213715
30	A2K30R	A6K30R	W216771	M200870	300	A2K300R	A6K300R	Y219878	G214228
35	A2K35R	A6K35R	J217289	Z201410	350	A2K350R	A6K350R	N222560	K214737
40	A2K40R	A6K40R	Z218315	K211149	400	A2K400R	A6K400R	E223081	N215246
45	A2K45R	A6K45R	M218833	C211671	450	A2K450R	A6K450R	K200868	R215755
50	A2K50R	A6K50R	Z219879	Z212703	500	A2K500R	A6K500R	X201408	X216266
60	A2K60R	A6K60R	F223082	A213716	600	A2K600R	A6K600R	K201926	X216772

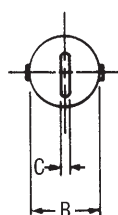
Recommended Fuse Blocks With Box Connectors For Amp-trap Class RK1Fuses



0-60A



61-600A



Fuse Ampere Rating	Catalog Number		Ref. Number	
	250 V		250 V	
	1 Pole	3 Pole	1 Pole	3 Pole
0-30	20306R	20308R	T213411	K215956
31-60	20606R	20608R	B212383	E214939
61-100	21036R	21038R	D201621	M212899
101-200	22001R	22003R	R213915	G214941
201-400	24001R	24003R	J219566	D222022
401-600	2631R	2633R	H214942	P215960

Fuse Ampere Rating	Catalog Number		Ref. Number	
	600 V		600 V	
	1 Pole	3 Pole	1 Pole	3 Pole
0-30	60306R	60308R	H212389	K214438
31-60	60606R	60608R	K212391	M214440
61-100	61036R	61038R	W204788	Z211875
101-200	62001R	62003R	V212906	B213924
201-400	64001R	64003R	D219055	M222030
401-600	6631R	6633R	J216990	E218021

Dimensions

Ampere Rating	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm

250V-A2K Fuses

0-30	2	51	9/16	14	-	-	-	-	-	-
31-60	3	76	13/16	21	-	-	-	-	-	-
61-100	5-7/8	149	1-1/16	27	1/8	3	3/4	19	1	25
101-200	7-1/8	181	1-9/16	40	3/16	5	1-1/8	28	1-3/8	35
201-400	8-5/8	219	2-1/16	53	1/4	6	1-5/8	41	1-7/8	48
401-600	10-3/8	264	2-9/16	66	1/4	6	2	51	2-1/4	57

600V-A6K Fuses

0-30	5	127	13/16	21	-	-	-	-	-	-
31-60	5-1/2	139	1-1/16	27	-	-	-	-	-	-
61-100	7-7/8	200	1-5/16	34	1/8	3	3/4	19	1	25
101-200	9-5/8	244	1-13/16	46	3/16	5	1-1/8	28	1-3/8	35
201-400	11-5/8	295	2-9/16	66	1/4	6	1-5/8	41	1-7/8	48
401-600	13-3/8	340	3-1/8	80	1/4	6	2	51	2-1/4	57

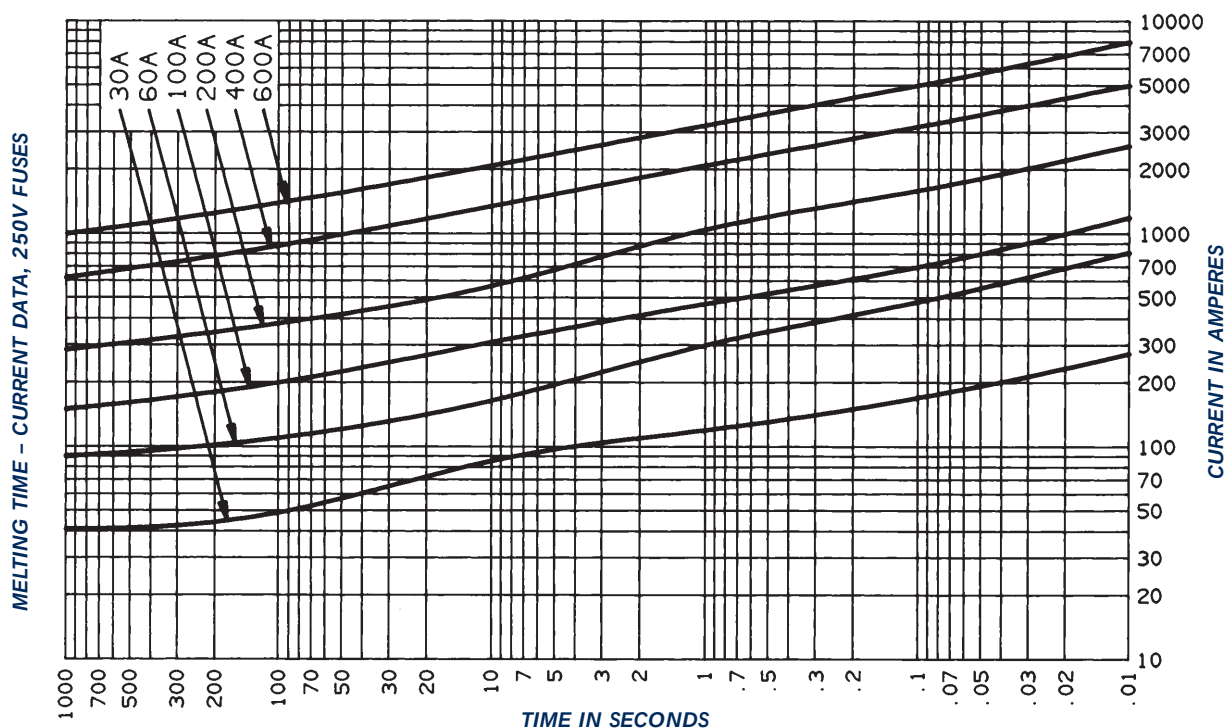
A variety of pole configurations and termination provisions is available. Refer to the fuse block section of this catalog for details.



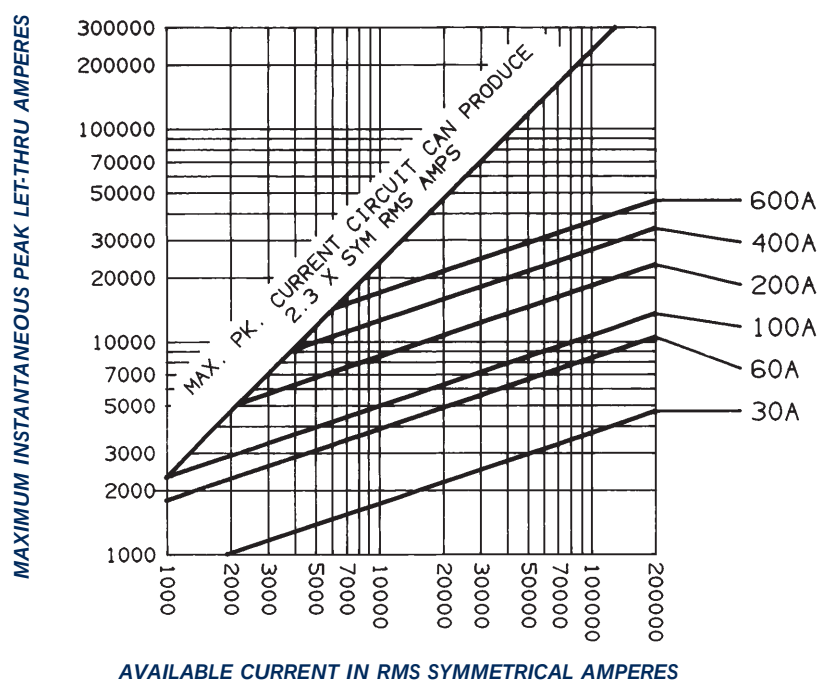
General Purpose US Fuses

American Power Fuses AMP-TRAP® A2K and A6K (Class RK1FA)

A2K30 to 600



Peak Let-Thru Current Data - A2K30 to 600, 250 Volts AC



General Purpose US Fuses

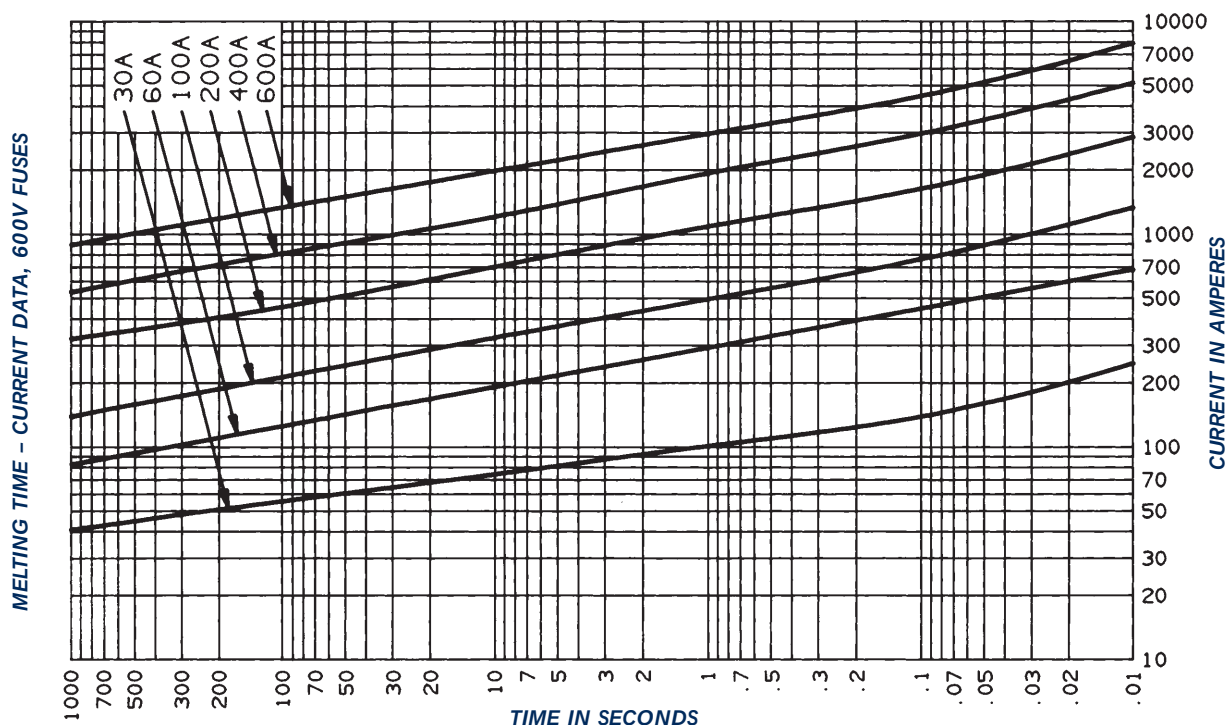


American Power Fuses

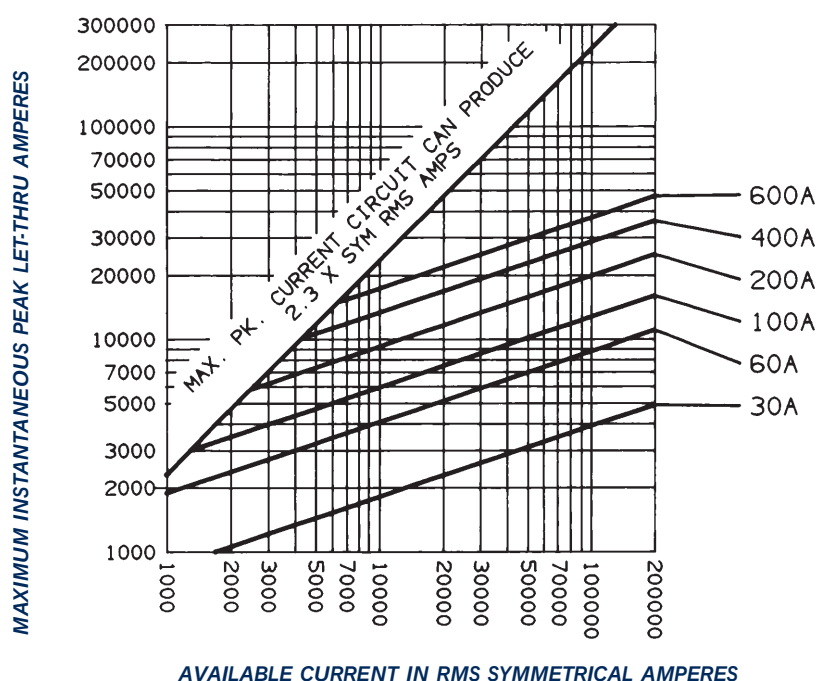
AMP-TRAP®

A2K and A6K (Class RK1FA)

A6K 30 to 600



Peak Let-Thru Current Data - A6K 30 to 600, 600 Volts AC





General Purpose US Fuses

American Power Fuses AMP-TRAP® AG (Class G)



AMP-TRAP AG Fuses fit right in to a wide variety of industrial applications

The Ferraz Shawmut Amp-trap AG fuse series is a complete line of Class G fuses. AG fuses safely fit a wide variety of applications. Class G fuses are made in four physical sizes and provide good branch-circuit protection for lighting, heating, and appliance circuits.

Features /Benefits

- Four unique sizes from 1-60 amperes do not allow inter-changeability with other fuse classes
- Fiberglass bodies provide dimensional stability in harsh industrial settings

Applications

- Lighting
- Heating*
- Appliances
- Branch Circuits

** Except in Canada where fuses must be "P" or "D" type.*

Approvals



- UL Listed to Standard 248-5
- CSA Certified to Standard C22.2No. 248.5

Ratings

AC: 1/2 to 20A 600VAC, 100K A I.R.
25 to 60A, 480VAC, 100k A I.R.

Highlights

- Current-Limiting
- Time Delay (above 5A)

Standard Fuse Ampere Ratings

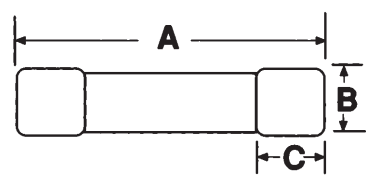
Ampere Rating	Catalog Number	Ref. Number
1/2	AG1/2	P201470
1	AG1	T223140
1-1/2	AG1-1/2	B200929
2	AG2	R211730
3	AG3	Y213277
4	AG4	B215304
5	AG5	L216831
6	AG6	H217863
8	AG8	F218896
10	AG10	Z201985
15	AG15	A211209
20	AG20	Z212243
25	AG25	L212760
30	AG30	P213775
35	AG35	Y214289
40	AG40	D215812
45	AG45	H216322
50	AG50	A217350
60	AG60	R218377

Dimensions

AMPERE RATING	In.	A mm	In.	B mm	In.	C mm
1/2-15A	1.31	33.3	.406	10.3	.28	7.1
20A	1.41	35.8	.406	10.3	.28	7.1
25, 30A	1.62	41.2	.406	10.3	.28	7.1
35-60A	2.25	57.2	.406	10.3	.50	12.7

Cross Reference:

AG will replace the following fuses: Bussmann SC, Littelfuse SLC



General Purpose US Fuses

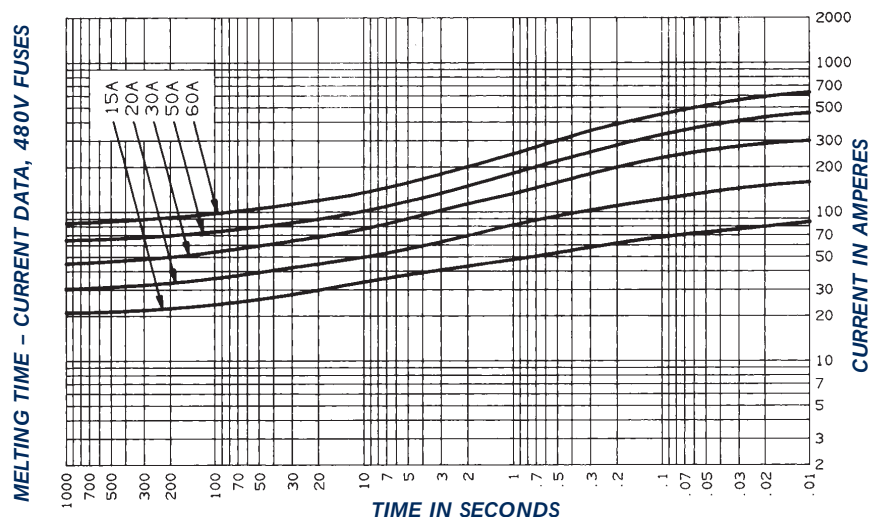


American Power Fuses

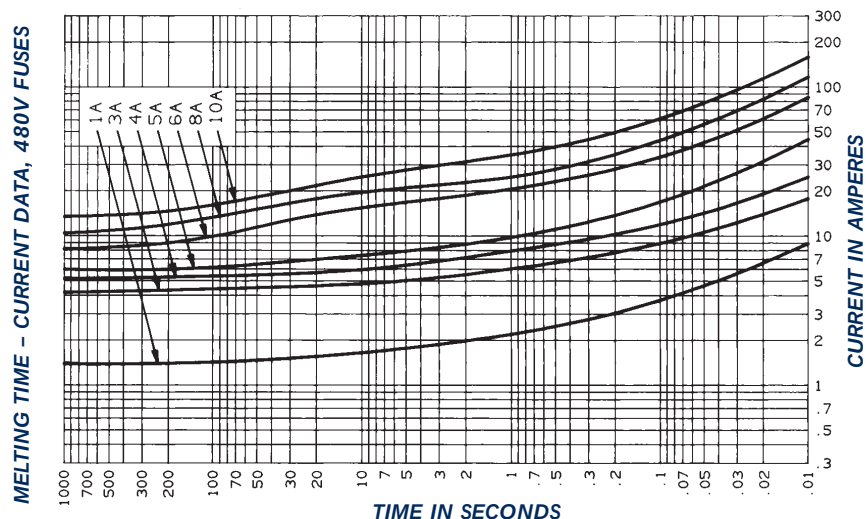
AMP-TRAP®

AG (Class G)

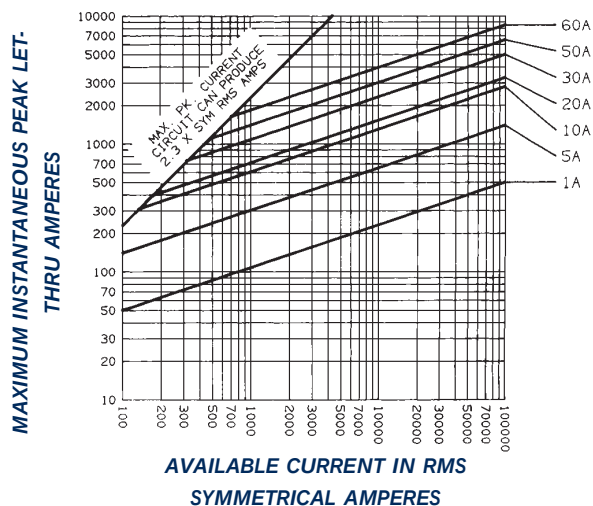
AG 15 to 60



AG 1 to 10



Peak Let-Thru Current Data - AG 1 to 60, 480 Volts AC





American Power Fuses AMP-TRAP® ATMR (Class CC)

Small Fuse - Big protection for general circuits



Amp-trap ATMR fuses, in the Class CC family, are the smallest dimension 600V fuses suitable for branch circuit protection. The ATMR is a popular choice for economical protection of control circuits and control circuit transformers where available short circuit currents exceed 10,000 amperes. ATMR's rejection dimensions prevent substitution by lesser rated fuses. These fast acting fuses give current limiting protection to general circuits.

Features/Benefits

- Rejection style design prevents replacement errors when used with recommended fuse blocks
- Fiberglass body provides dimensional stability in harsh industrial environments
- Versatile design for individual component and branch circuit protection

Applications

- Control Circuits
- Lighting
- General Loads
- Branch Circuit Protection

Approvals



- UL Listed to Standard 248-4
- CSA Certified to Standard C22.2No. 248.4

Ratings

AC: 1/10 to 30A 600VAC,
200kA I.R.

Highlights

- Fast Acting
- Very Current-Limiting

Primary Fuse Sizing for Control Transformer

Transformer Volt-Amperes	ATMR Rating	
	480V primary	600V primary
50	1/2*	3/10*
75	3/4*	1/2*
100	1	3/4*
150	1-1/2	1*
200	2	1-1/2*
250	2	2
300	3	2
350	3-1/2	2
500	5	4
750	7	6
1000	-	8

All rating will withstand inrush currents of 40 times transformer full load for 1/2 cycle unless otherwise noted.

* These ratings will withstand inrush currents of 35 times transformer full load for 1/2 cycle.

Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
1/10	ATMR1/10	C217789	3-1/2	ATMR3-1/2	Y213208
1/8	ATMR1/8	P219341	4	ATMR4	G215746
2/10	ATMR2/10	B201918	5	ATMR5	M216257
1/4	ATMR1/4	C218824	6	ATMR6	L216762
3/10	ATMR3/10	W214218	7	ATMR7	Z217280
1/2	ATMR1/2	N218305	8	ATMR8	D217790
3/4	ATMR3/4	Z214727	9	ATMR9	P218306
1	ATMR1	L216256	10	ATMR10	P219870
1-1/4	ATMR1-1/4	Y217279	12	ATMR12	D222551
1-1/2	ATMR1-1/2	K216761	15	ATMR15	V223072
2	ATMR2	A200859	20	ATMR20	Z211139
2-1/2	ATMR2-1/2	N201400	25	ATMR25	Q211660
3	ATMR3	N212693	30	ATMR30	C215236

General Purpose US Fuses



American Power Fuses

AMP-TRAP®

ATMR (Class CC)

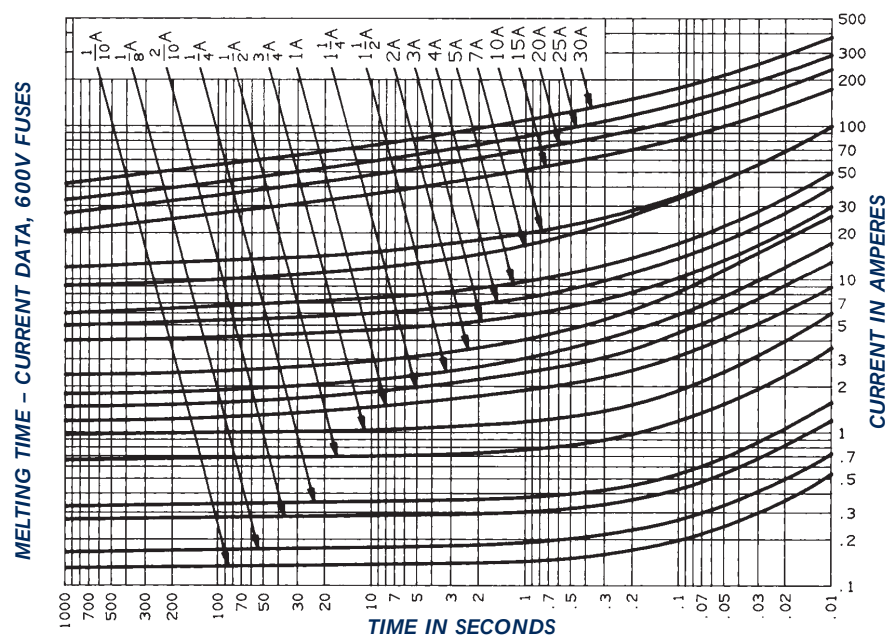


Recommended Fuse Blocks For Amp-Trap® Class CC Fuses

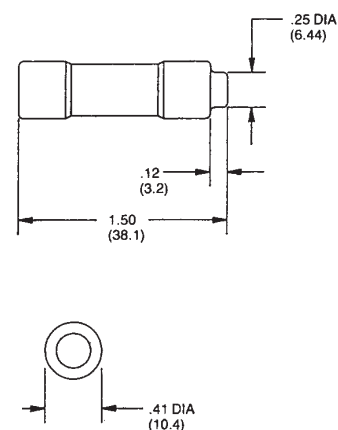
Number of Poles	Catalog Number				Reference Number			
	ULTRA-SAFE Indicating Fuse Holder	Screw Connector w/ Double Quick Connects	Pressure Plate Connector w/ Double Quick Connects	Copper Box Connector	ULTRA-SAFE Indicating Fuse Holder	Screw Connector w/ Double Quick Connects	Pressure Plate Connector w/ Double Quick Connects	Copper Box Connector
ADDER		30310R	30320R	30350R		W204857	Z217510	N213429
1	USCC1/	30311R	30321R	30351R	X213943	R212397	M218534	G213929
2	USCC2/	30312R	30322R	30352R	D217008	Z212910	Y219579	V214447
3	USCC3/	30313R	30323R	30353R	Y218038	M213428	B222779	X214955

Refer to the Class CC Fuse Block section of this catalog for other details.

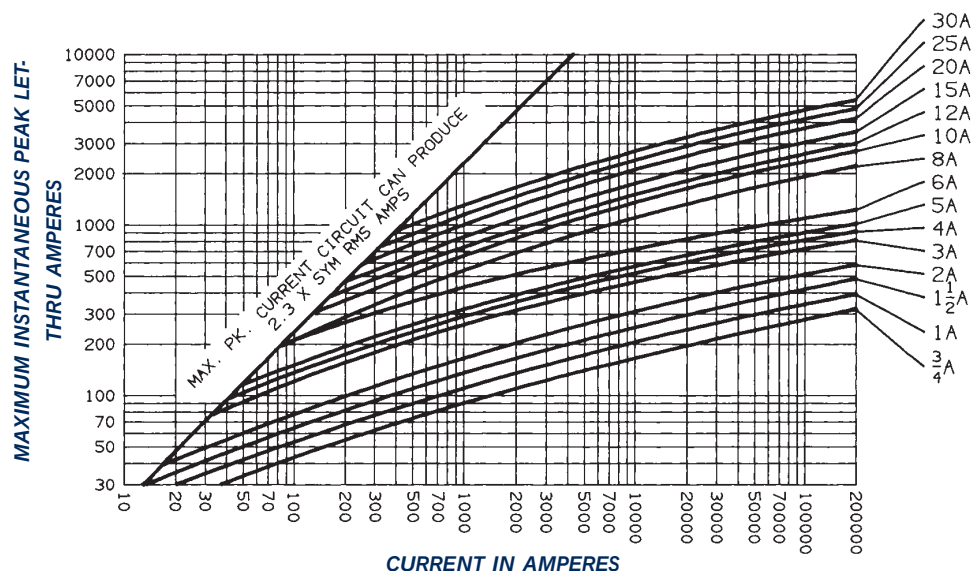
ATMR 1/10 to 30



Dimensions



Peak Let-Thru Current Data - ATMR 3/4 to 30, 600 Volts AC





General Purpose US Fuses

American Power Fuses One-Time OT, OTN, OTS (Class K-5)

For versatility and economy, these general purpose fuses are hard to beat



OT, OTN and OTS general purpose fuses provide low cost protection for feeder and branch circuits serving lighting, heating, and other non-motor loads. OT, OTN and OTS fuses will safely interrupt available short circuit currents up to 50,000 amperes in all ratings.

OT, OTN and OTS fuses are not rejection fuses – care should be taken to ensure that replacement fuses do not have lower interrupting ratings than original fuses. OTN 15 through 60 satisfy the Canadian electrical code requirement for Type “P,” low melting-point, non-time delay fuses.

Features/Benefits

- Easy to read imprint label for quick recognition and replacement
- Low cost for high protection value

Ratings

OT

AC: 1 to 600A 250VAC,
50kA I.R.
DC: 1 to 600A 250VDC,
20kA I.R.

OTN (Canada)

AC: 15 to 60A
250VAC, 50kA I.R.

OTS

AC: 1 to 600A 600VAC,
50kA I.R.
DC: 1 to 600A 300VDC,
20kA I.R.

Highlights

- Versatile
- Lowest cost protection for circuits serving non-inductive loads

Applications

- Feeders
- Branch Circuits
- Resistive Heating
- Residential and Small Commercial Installations

Approvals



- UL Listed to Standard 248-9
- CSA Certified to Standard C22.2 No. 248.9*
- DC Tested to UL Standard 198L

* The Canadian Electrical Code requires these fuses in ratings 15 through 60A to be of the low melting point design use OTN 15-60.

General Purpose US Fuses



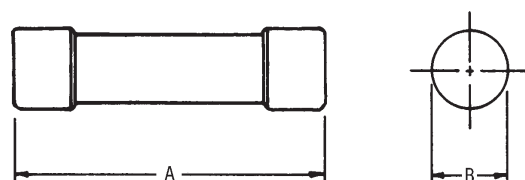
American Power Fuses One-Time OT, OTN, OTS (Class K-5)

Standard Fuse Ampere Ratings

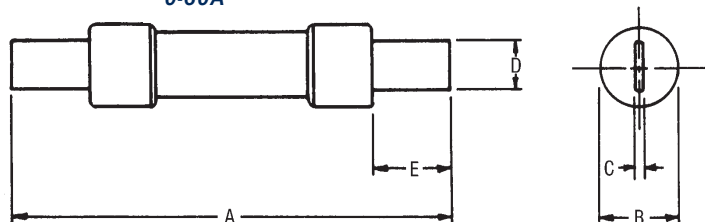
Ampere Rating	Catalog Number		Reference Number		Ampere Rating	Catalog Number		Reference Number	
	250V	600V	250V	600V		250V	600V	250V	600V
1	OT1	OTS1	H218277	D215720	65	OT65	OTS65	V201889	-
2	OT2	OTS2	Y222523	L218280	70	OT70	OTS70	T211111	A222525
3	OT3	OTS3	K201374	M219845	75	OT75	OTS75	H211630	R223046
4	OT4	OTS4	Q212143	Y200834	80	OT80	OTS80	P212142	X200833
5	OT5	OTS5	W214701	Y211115	90	OT90	OTS90	G212664	M201376
6	OT6	OTS6	H216230	T212146	100	OT100	OTS100	Y215209	T213181
7	OT7	OTS7	Z217763	R223506	110	OT110	OTS110	Z215716	L213680
8	OT8	OTS8	J218278	W213183	125	OT125	OTS125	F216228	S214192
10	OT10	OTS10	X218796	K216232	150	OT150	OTS150	D216732	X214702
12	OT12	OTS12	H219312	H216736	175	OT175	OTS175	S217251	B215212
15	OT15	OTS15	J219842	X217255	200	OT200	OTS200	X217761	C215719
20	OT20	OTS20	P223044	Z218798	225	OT225	OTS225	G218276	J216231
25	OT25	OTS25	V200831	L219315	250	OT250	OTS250	W218795	G216735
30	OT30	OTS30	W201890	B222526	300	OT300	OTS300	G219311	W217254
35	OT35	OTS35	J211631	S223047	350	OT350	OTS350	H219841	A217764
40	OT40	OTS40	H212665	N201377	400	OT400	OTS400	X222522	K218279
45	OT45	OTS45	K213679	Z201893	450	OT450	OTS450	N223043	Y218797
50	OT50	OTS50	A215211	M211634	500	OT500	OTS500	T200830	K219314
60	OT60	OTS60	F216734	L212668	600	OT600	OTS600	J201373	L219844

OTN 15 to 60A: consult us.

Recommended Fuse Blocks With Box Connectors For One-Time Class K-5 Fuses



0-60A



61-600A

Fuse Ampere Rating	Catalog Number		Ref. Number	
	250 V		250 V	
	1 Pole	3 Pole	1 Pole	3 Pole
0-30	20306	20308	Z212381	F215446
31-60	20606	20608	N211865	C214431
61-100	21036	21038	S201105	Q211867
101-200	22001	22003	Y213415	E214433
201-400	24001	24003	T219046	-
401-600	2631	2633	F214434	K215450

Fuse Ampere Rating	Catalog Number		Ref. Number	
	600 V		600 V	
	1 Pole	3 Pole	1 Pole	3 Pole
0-30	60306	60308	V211871	X213920
31-60	60606	60608	X211873	Z213922
61-100	61036	61038	K201627	S211363
101-200	62001	62003	M212393	H213424
201-400	64001	64003	H218530	T219575
401-600	6631	6633	Z216475	W217507

Dimensions

Ampere Rating	A		B		C		D		E	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
250V-OT, OTN FUSES										
0-30	2	51	9/16	14	-	-	-	-	-	-
31-60	3	76	13/16	21	-	-	-	-	-	-
61-100	5-7/8	149	1-1/16	27	1/8	3	3/4	19	1	25
101-200	7-1/8	181	1-9/16	40	3/16	5	1-1/8	28	1-3/8	35
201-400	8-5/8	219	2-1/16	53	1/4	6	1-5/8	41	1-7/8	48
401-600	10-3/8	264	2-9/16	66	1/4	6	2	51	2-1/4	57
600V-OTS FUSES										
0-30	5	127	13/16	21	-	-	-	-	-	-
31-60	5-1/2	139	1-1/16	27	-	-	-	-	-	-
61-100	7-7/8	200	1-5/16	34	1/8	3	3/4	19	1	25
101-200	9-5/8	244	1-13/16	46	3/16	5	1-1/8	28	1-3/8	35
201-400	11-5/8	295	2-9/16	66	1/4	6	1-5/8	41	1-7/8	48
401-600	13-3/8	340	3-1/8	80	1/4	6	2	51	2-1/4	57

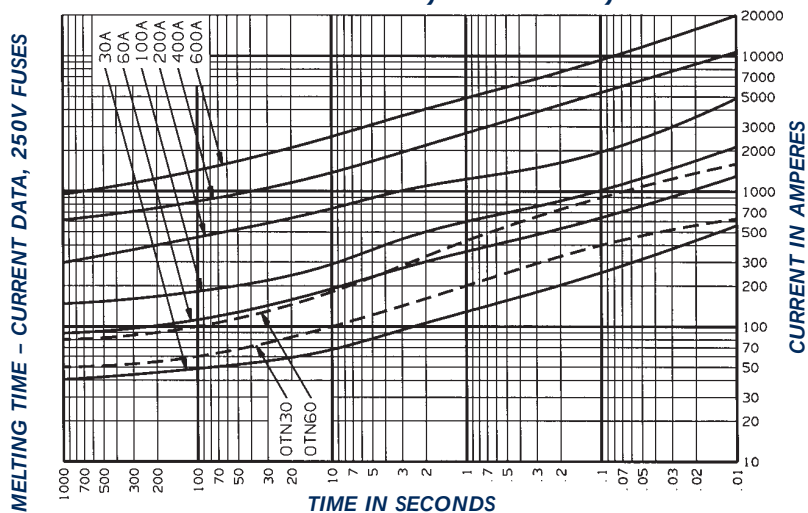
A variety of pole configurations and termination provisions is available. Refer to the fuse block section of this catalog for details.



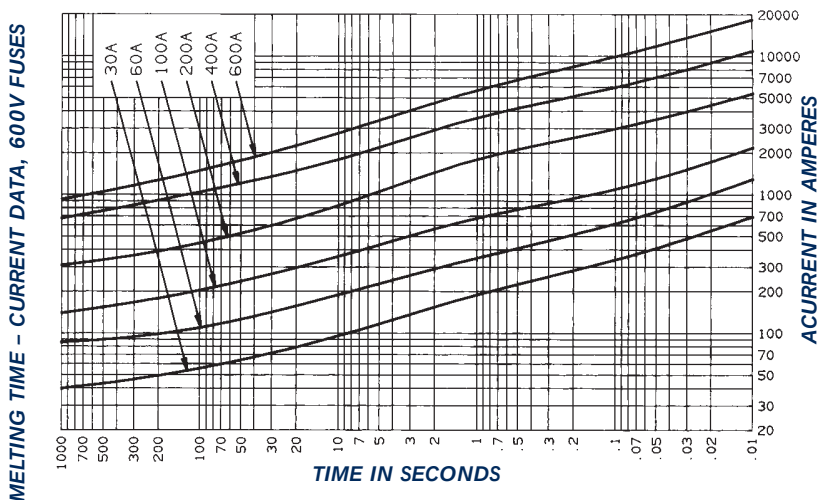
General Purpose US Fuses

American Power Fuses One-Time OT, OTN, OTS (Class K-5)

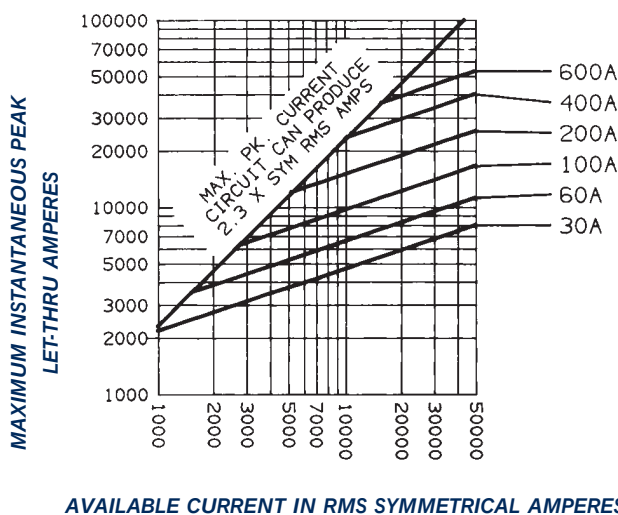
OT 30 to 600; OTN 30, 60



OTS 30 to 600



Peak Let-Thru Current Data - OT, OTN & OTS 30 to 600, 250 and 600 Volts AC





General Purpose US Fuses

American Power Fuses Renewable RF/RFS and RL/RLS (Class H)

Traditional protection for circuits with less than 10,000A Short circuit current

RF and RFS general purpose fuses are suitable for application where available short circuit currents do not exceed 10,000 amperes. RF and RFS renewable fuses use matched RL and RLS die-cut zinc links from 1 to 600 amperes in 32 ratings.



**Note: To be replaced by TR
(250V) and TRS (600V)
compatible class RK5**

Features/Benefits

- Knurled bushings for ease of disassembly
- Rugged construction for maximum service life
- Precision die-cut renewal links renew quickly and give repeatable performance

Ratings

RF

AC: 1 to 600A 250VAC,
10kA I.R.

RFS

AC: 1 to 600A 600VAC,
10kA I.R.

Highlights

- Renewable
- 32 Renewal Link Ratings

Applications

- General purpose loads
where short circuits are
10,000 amperes or less

Approvals



- UL Listed to Standard 248-7
- CSA Certified to Standard C22.2
No. 248.7



General Purpose US Fuses

Midget Fuses (10x38 US) Time Delay ATQ 500VAC (TD)



Amp-trap® ATQ midget time-delay fuses are rated a full 500 volts AC with 42 ampere ratings from 1/10 to 30A. They are an excellent choice for supplemental protection of circuits up to 30A where the available short circuit current does not exceed 10,000A. (Not for Branch Circuit Protection).

Features /Benefits

- Numerous ratings for a wide variety of applications up to 500VAC
- Time delay (12 seconds at 200% rating) for circuits with high inrush current
- UltraSafe™ fuse holder: refer to Fuse Blocks and Fuse Holders section for details, Catalog Number and Reference Number

Ratings

- AC: 1/10 to 30A 500VAC, 10kA I.R.

Highlights

- Time Delay

Applications

- Supplemental protection of lighting, solenoid, motor, and transformer circuits
- Transformers
- Control Panels
- Circuit Breaker Back-up
- Bus Duct
- Load Centers

Approvals



- UL Listed to Standard 248-14
- CSA Certified to Standard C22.2 No. 248.14

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number
1/10	ATQ1/10	3/10	ATQ3/10	1-1/8	ATQ1-1/8	2	ATQ2	3-2/10	ATQ3-2/10	6	ATQ6	12	ATQ12
1/8	ATQ1/8	4/10	ATQ4/10	1-1/4	ATQ1-1/4	2-1/8	ATQ2-1/8	3-1/2	ATQ3-1/2	6-1/4	ATQ6-1/4	14	ATQ14
15/100	ATQ15/100	1/2	ATQ1/2	1-4/10	ATQ1-4/10	2-1/4	ATQ2-1/4	4	ATQ4	7	ATQ7	15	ATQ15
3/16	ATQ3/16	6/10	ATQ6/10	1-1/2	ATQ1-1/2	2-1/2	ATQ2-1/2	4-1/2	ATQ4-1/2	8	ATQ8	20	ATQ20
2/10	ATQ2/10	8/10	ATQ8/10	1-6/10	ATQ1-6/10	2-8/10	ATQ2-8/10	5	ATQ5	9	ATQ9	25	ATQ25
1/4	ATQ1/4	1	ATQ1	1-8/10	ATQ1-8/10	3	ATQ3	5-6/10	ATQ5-6/10	10	ATQ10	30	ATQ30

Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number
1/10	S211662	3/10	Q201402	1-1/8	R219872	2	P216259	3-2/10	D200862	6	Z214221	12	Y214220
1/8	A213210	4/10	R212696	1-1/4	R219343	2-1/8	F217792	3-1/2	Y223075	6-1/4	C214730	14	B214729
15/100	J215748	1/2	Y212173	1-4/10	F222553	2-1/4	B217282	4	T211663	7	P216765	15	E215238
3/16	D201920	6/10	F215239	1-1/2	Q218307	2-1/2	N216764	4-1/2	Z212174	8	C217283	20	S219344
2/10	E218826	8/10	G217793	1-6/10	X223074	2-8/10	R218308	5	B213211	9	S218309	25	S219873
1/4	Q212695	1	E217791	1-8/10	C200861	3	G222554	5-6/10	S213709	10	R213708	30	B211141

General Purpose US Fuses

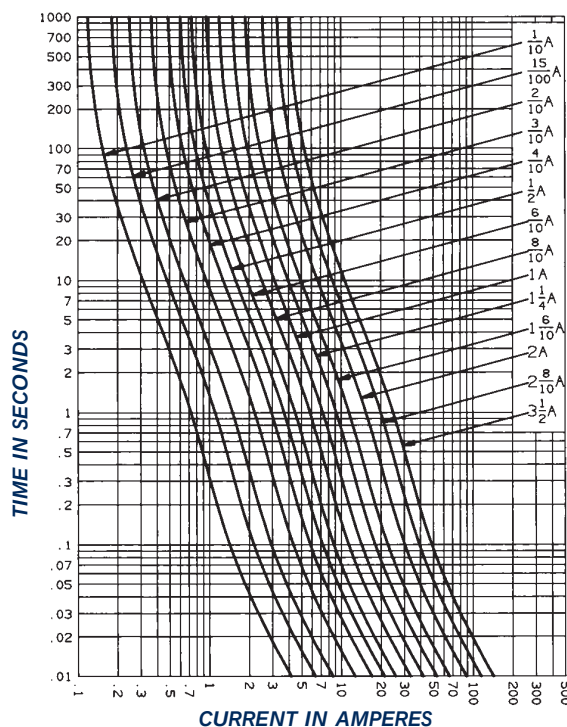


Midget Fuses (10x38 US)

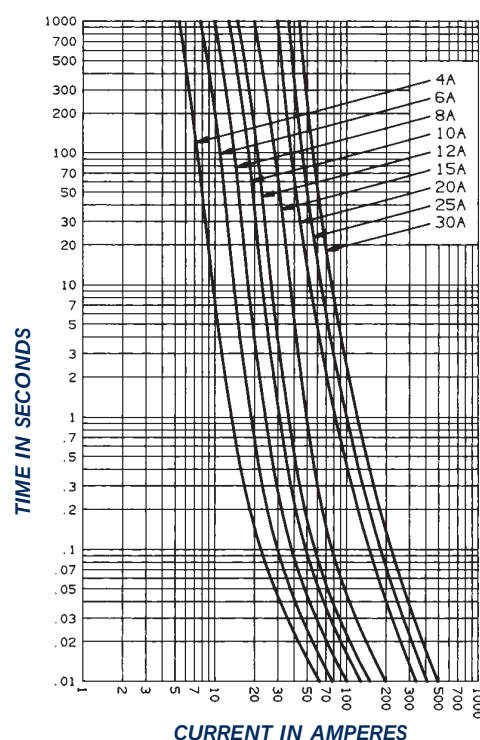
Time Delay

ATQ 500VAC (TD)

Melting Time – Current Data 1/10 - 3-1/2 Amperes, 500 Volts AC



Melting Time – Current Data 4 - 30 Amperes, 500 Volts AC





General Purpose US Fuses

Midget Fuses (10x38 US) Time Delay TRM



Tri-onic® TRM time-delay midget fuses are rated 250 volts AC and are offered in 36 ampere ratings from 1/10A to 30A. They have 12 seconds time delay at 200% rating to provide supplemental protection of small motors, small transformers and other high inrush loads, plus many other 250 volt applications. (Not for Branch Circuit Protection).

Features /Benefits

- Numerous ratings for a wide variety of applications
- 250VAC rating in all sizes up to 30A
- Time delay for circuits with high inrush current
- UltraSafe™ fuse holder: refer to Fuse Blocks and Fuse Holders section for details, Catalog Number and Reference Number

Ratings

- AC: 1/10 to 30A
250VAC, 10kA I.R.

Highlights

- Time Delay
- 250 VAC Rated

Applications

- Small Motors
- Small Transformers
- Lighting Circuits
- Control Circuits

Approvals



- UL Listed to Standard 248-14
- CSA Certified to Standard C22.2 No. 248.14

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number	Ampere Rating	Catalog Number
1/10	TRM1/10	6/10	TRM6/10	1-6/10	TRM1-6/10	3	TRM3	5-6/10	TRM5-6/10	10	TRM10
15/100	TRM15/100	8/10	TRM8/10	1-8/10	TRM1-8/10	3-2/10	TRM3-2/10	6	TRM6	12	TRM12
2/10	TRM2/10	1	TRM1	2	TRM2	3-1/2	TRM3-1/2	6-1/4	TRM6-1/4	15	TRM15
3/10	TRM3/10	1-1/8	TRM1-1/8	2-1/4	TRM2-1/4	4	TRM4	7	TRM7	20	TRM20
4/10	TRM4/10	1-1/4	TRM1-1/4	2-1/2	TRM2-1/2	4-1/2	TRM4-1/2	8	TRM8	25	TRM25
1/2	TRM1/2	1-4/10	TRM1-4/10	2-8/10	TRM2-8/10	5	TRM5	9	TRM9	30	TRM30

Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number	Ampere Rating	Reference Number
1/10	R217273	6/10	X222545	1-6/10	E216250	3	H213700	5-6/10	W218818	10	V218817
15/100	M223065	8/10	G201394	1-8/10	C216754	3-2/10	R214720	6	H219335	12	G219334
2/10	P212165	1	M214210	2	S200852	3-1/2	N214211	6-1/4	H219864	15	W222544
3/10	V215229	1-1/8	T215228	2-1/4	R211132	4	F216251	7	N223066	20	F212686
4/10	W217783	1-1/4	Q214719	2-1/2	T201911	4-1/2	D216755	8	T200853	25	Q213201
1/2	V217782	1-4/10	Y215738	2-8/10	H211653	5	G218299	9	V201912	30	Z215739

General Purpose US Fuses



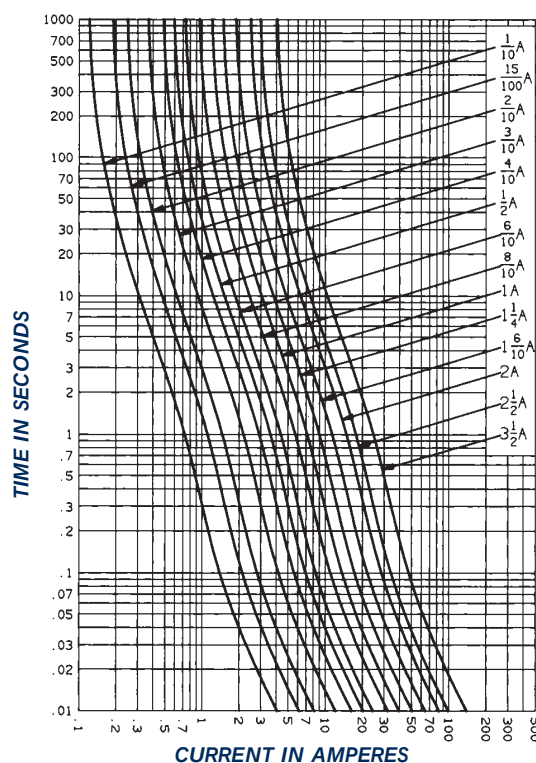
Midget Fuses (10x38 US)

Time Delay

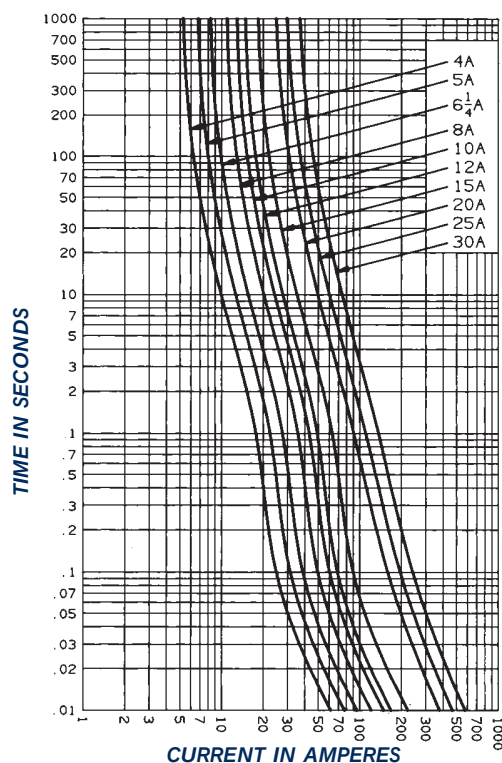
TRM



Melting Time - Current Data 1/10 - 3-1/2 Amperes, 250 Volts AC



Melting Time - Current Data 4 - 30 Amperes, 250 Volts AC





General Purpose US Fuses

Midget Fuses (10x38 US) Time Delay GFN



GFN midget indicating fuses are available in 34 ratings from 1/10A through 30A. These time-delay fuses have built-in blown fuse indicators which pop out at the end of the fuse to visually indicate when the fuse has operated to open the circuit. Indicators may be used to trip a switch for remote as well as visual indication. (Not for Branch Circuit Protection).

Features /Benefits

- Pin indicator provides visual indication of open fuse or actuates switch for remote signaling
- Numerous ratings for a wide variety of applications
- 12 second time delay at 200% rating
- UltraSafe™ fuse holder: refer to Fuse Blocks and Fuse Holders section for details, Catalog Number and Reference Number

Ratings

- AC: 1/10 to 10A 250VAC, 200A I.R., 125VAC, 10kA I.R.;
- 12 to 15A 125VAC, 10kA I.R.;
- 20 to 30A 32VAC, 10kA I.R.

Highlights

- Pin Indicating
- Time Delay

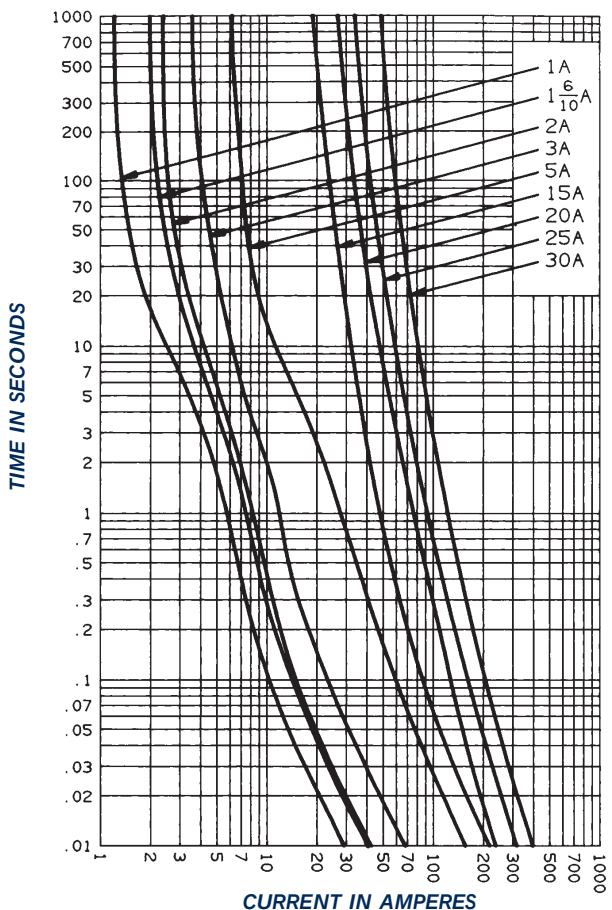
Applications

- For supplemental protection of circuits where time delay and blown fuse indication are required, such as solenoid circuits or control circuits.

Approvals

- UL Listed to Standard 248-14 (1/10 to 15A)
- CSA Certified to Standard C22.2 No.248.14 (1/10 to 15A)

Melting Time – Current Data 1 - 30 Amperes, 250 Volts AC



Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
1/10	GFN1/10	K222557	2	GFN2	V212699
1/8	GFN1/8	T201405	2-1/4	GFN2-1/4	W213712
15/100	GFN15/100	C212177	2-1/2	GFN2-1/2	E213214
2/10	GFN2/10	C214224	3	GFN3	M215751
1/4	GFN1/4	G200865	3-2/10	GFN3-2/10	S216768
3/10	GFN3/10	F217286	3-1/2	GFN3-1/2	S216262
4/10	GFN4/10	X219348	4	GFN4	W218312
1/2	GFN1/2	B223078	4-1/2	GFN4-1/2	J218830
6/10	GFN6/10	H201924	5	GFN5	L222558
8/10	GFN8/10	Y211667	6-1/4	GFN6-1/4	V201406
1	GFN1	R216767	8	GFN8	F211145
1-1/8	GFN1-1/8	V218311	10	GFN10	G201923
1-1/4	GFN1-1/4	J217795	12	GFN12	E211144
1-4/10	GFN1-4/10	H218829	15	GFN15	X211666
1-1/2	GFN1-1/2	E217285	20	GFN20	F214733
1-6/10	GFN1-6/10	W219347	25	GFN25	J215242
1-8/10	GFN1-8/10	W219876	30	GFN30	J215242

General Purpose US Fuses



Midget Fuses (10x38 US) Fast Acting A6Y-2B



A6Y "Type 2B" Amp-trap® midget fuses are fast acting on short circuits, yet have sufficient time delay to offer supplemental protection for small motors, transformers, and control circuits.
(Not for Branch Circuit Protection).



Features /Benefits

- Moderate amount of time delay for circuits with inrush characteristics
- Fast acting on short circuits
- UltraSafe™ fuse holder: refer to Fuse Blocks and Fuse Holders section for details, Catalog Number and Reference Number

Ratings

- AC: 1/4 to 3A 600VAC, 10kA I.R.
3-2/10 to 15A
500VAC, 10kA I.R.

Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number	Reference Number
1/4	A6Y1/4-2B	Y222546
1/2	A6Y1/2-2B	J219865
6/10	A6Y6/10-2B	T214722
3/4	A6Y3/4-2B	-
1	A6Y1-2B	X218819
1-1/4	A6Y1-1/4-2B	H218300
1-1/2	A6Y1-1/2-2B	X217784
1-6/10	A6Y1-6/10-2B	J219336
2	A6Y2-2B	T211134
2-1/2	A6Y2-1/2-2B	W201913
3	A6Y3-2B	H212688
3-2/10	A6Y3-2/10-2B	R212167
3-1/2	A6Y3-1/2-2B	K211655
4	A6Y4-2B	S213203
5	A6Y5-2B	K213702
6	A6Y6-2B	Q214213
7	A6Y7-2B	X215231
8	A6Y8-2B	B215741
9	A6Y9-2B	F216757
10	A6Y10-2B	P223067
12	A6Y12-2B	V200854
15	A6Y15-2B	H201395

Highlights

- Fast Acting

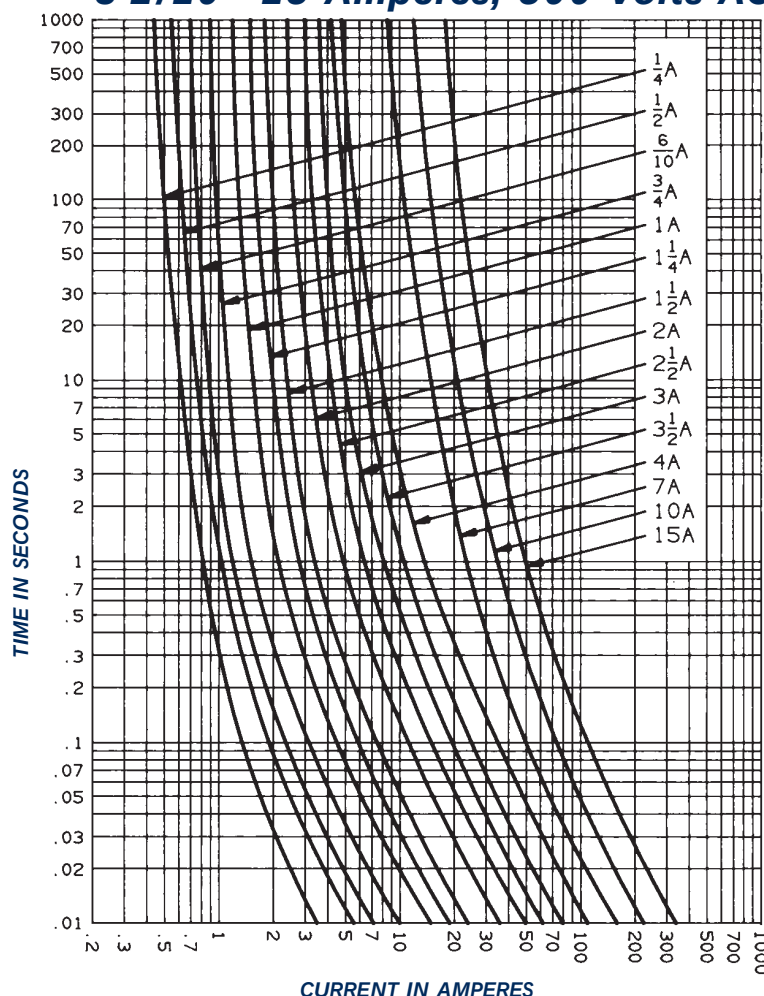
Applications

- Supplemental protection of 600V (up to 3A) and 500V (3-2/10-15A) AC circuits
- Small motors, transformers, and control circuits

Approvals

- Ferraz Shawmut Certified

Melting Time – Current Data 1/4 - 3 Amperes, 600 Volts AC 3-2/10 - 15 Amperes, 500 Volts AC





General Purpose US Fuses



Midget Fuses (10x38 US) Fast Acting ATM

Amp-trap® midget fast-acting ATM fuses are rated 600 volts AC, with a 100kA interrupting rating. These ratings give the ATM a wide range of applications not covered by other midget fuses. In addition, ratings of 30/35, 30/40 and 30/50 amperes are offered for specific applications such as capacitor protection. These ATM fuses must still be considered 30A fuses because of their dimensions, but are able to withstand much higher inrush currents and tougher duty cycles. (Not for Branch Circuit Protection).

Features/Benefits

- For supplemental protection of small motors and transformers
- Extended ratings for special protection of capacitors and circuits with high inrush currents
- 500VDC ratings for a wide variety of applications
- UltraSafe™ fuse holder: refer to Fuse Blocks and Fuse Holders section for details, Catalog Number and Reference Number

Ratings

- AC: 1/10 to 30A 600VAC, 100kA I.R.;
35 to 50A 600VAC, 10kA I.R.
- DC: 1/10 to 30A 500VDC, 100kA I.R.

Highlights

- Fast Acting
- Special Ratings (above 30A)

Applications

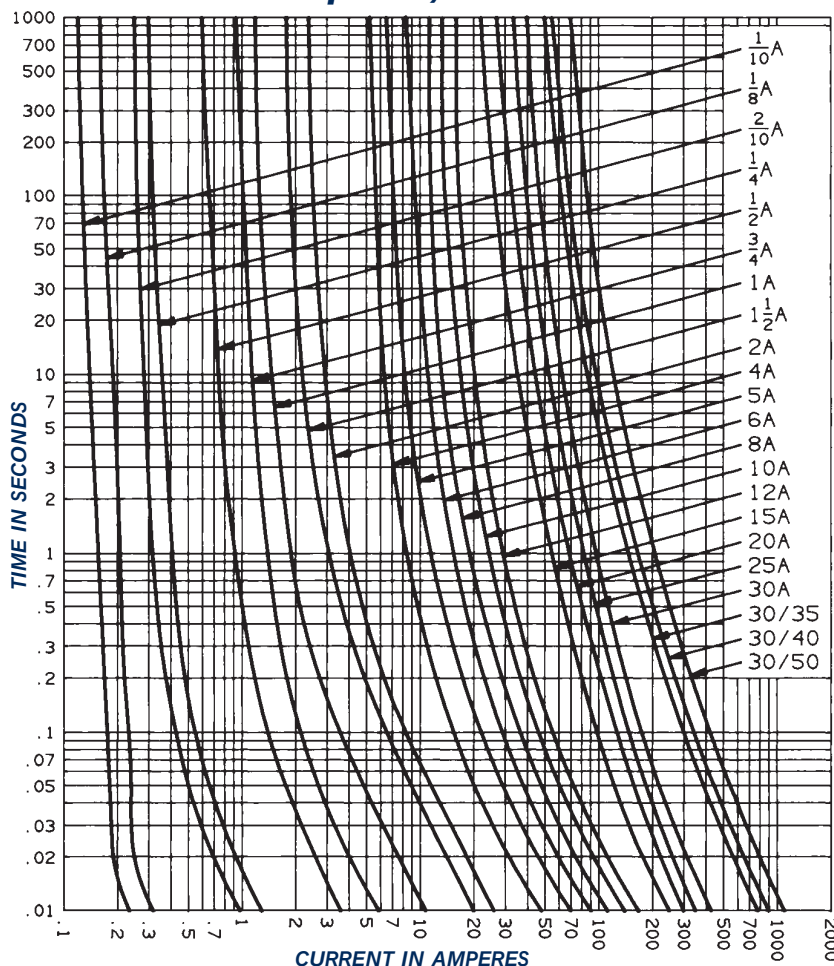
- Supplemental protection of a wide variety of circuits up to 600VAC and 500VDC with 100kA I.R.

Approvals



- UL Listed to Standard 248-14 (1/10 to 30A)
- DC listed to UL Standard 248-14 (1/10 to 30A)
- CSA Certified to Standard C22.2 No. 248.14 (1/10 to 30A)

Melting Time – Current Data 1/10 30/50 Amperes, 600 Volts AC



Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Catalog Number	Reference Number
1/10	ATM1/10	L218303
1/8	ATM1/8	M219868
2/10	ATM2/10	X211137
1/4	ATM1/4	M219339
1/2	ATM1/2	A218822
3/4	ATM3/4	W213206
1	ATM1	W217277
1-1/2	ATM1-1/2	A217787
2	ATM2	Z201916
3	ATM3	L212691
4	ATM4	E215744
5	ATM5	K216255
6	ATM6	J216760
8	ATM8	B217788
10	ATM10	B222549
12	ATM12	Y200857
15	ATM15	L201398
20	ATM20	N211658
25	ATM25	V212170
30	ATM30	N213705
30/35	ATM30/35*	T214216*
30/40	ATM30/40*	X214725*
30/50	ATM30/50*	A215234*

*Not continuous current rated devices

General Purpose US Fuses



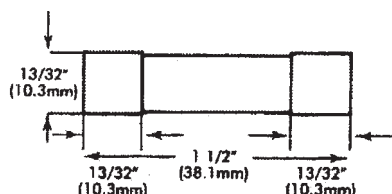
Midget Fuses (10x38 US) Fast Acting 6JX

600VAC - 500VDC
100000 A.I.R
Current limiting

Ferraz Shawmut 6JX Midget Fuses are recommended for applications requiring very precise operating characteristics and where high available fault currents demand high interrupting capacities. Typical applications include control circuit, lighting circuit, small motor and control transformer protection.



Dimensions



6JX fuses can be mounted in the UltraSafe™ fuse holder. Refer to Fuse Blocks and Fuse Holders section for details, Reference Number and Catalog Number.

Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Reference Number	Catalog Number	Ampere Rating	Reference Number	Catalog Number
0,100	C079651J	6JX0,1	4	E083471J	6JX4
0,125	D079652J	6JX0,125	5	X089398J	6JX5
0,200	K079681J	6JX0,2	6	B082686J	6JX6
0,250	L079682J	6JX0,25	7	W079783J	6JX7
0,300	T082334J	6JX0,3	8	B080294J	6JX8
0,500	R083068J	6JX0,5	9	R079848J	6JX9
0,750	Q079686J	6JX0,75	10	E082689J	6JX10
1	S083069J	6JX1	12	W089397J	6JX12
1,5	S080838J	6JX1,5	15	F082805J	6JX15
2	K082326J	6JX2	20	S079849J	6JX20
2,5	A080293J	6JX2,5	25	K079865J	6JX25
3	F082690J	6JX3	30	S079895J	6JX30
3,5	E079745J	6JX3,5			

Test specifications

$$I_{NF} = 110\% I_N t \leq 4 \text{ Hours}$$

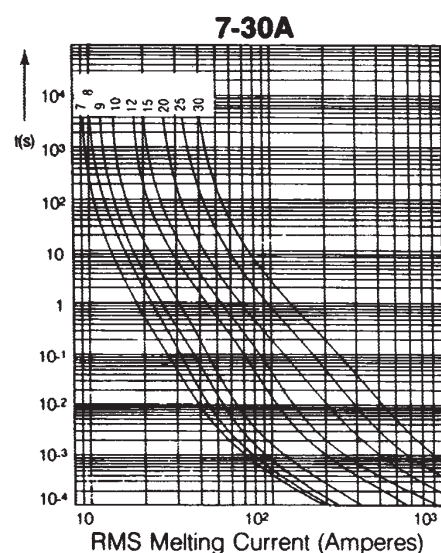
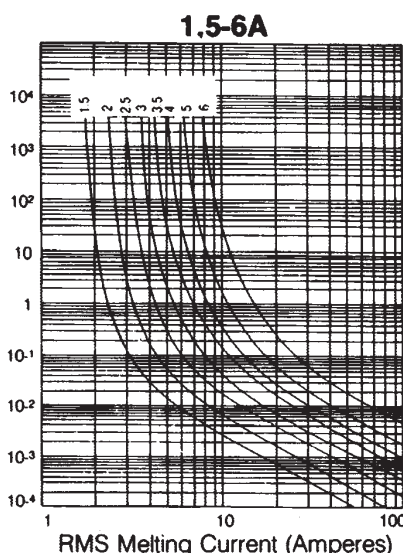
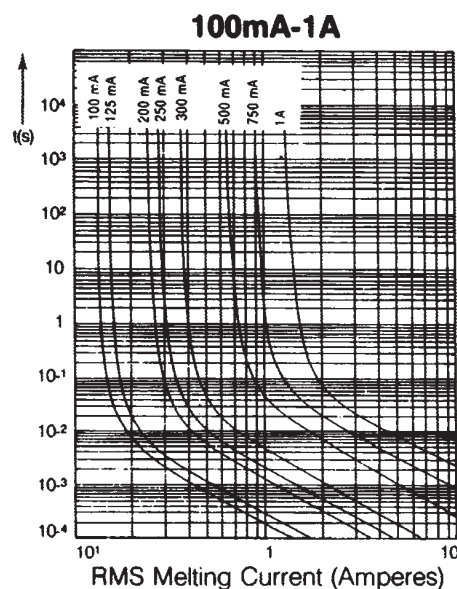
$$I_F = 135\% I_N t \leq 1 \text{ Hour}$$

$$I_F = 200\% I_N t \leq 120 \text{ Sec.}$$

UL LISTED
CSA CERTIFIED



Melting Time-current Data





General Purpose US Fuses

Midget Fuses (10x38 US) Fast Acting OTM



One-time OTM midget fuses provide low-cost protection for 250 volt AC general purpose lighting, heating, control circuits, etc. where time delay is not required.
(Not for Branch Circuit Protection).

Features /Benefits

- Low cost and fully rated for economy without compromise
- UltraSafe™ fuse holder: refer to Fuse Blocks and Fuse Holders section for details, Catalog Number and Reference Number

Ratings

- AC: 1 to 30A 250VAC, 10kA I.R.

Highlights

- Fast Acting
- 250 VAC Rated

Applications

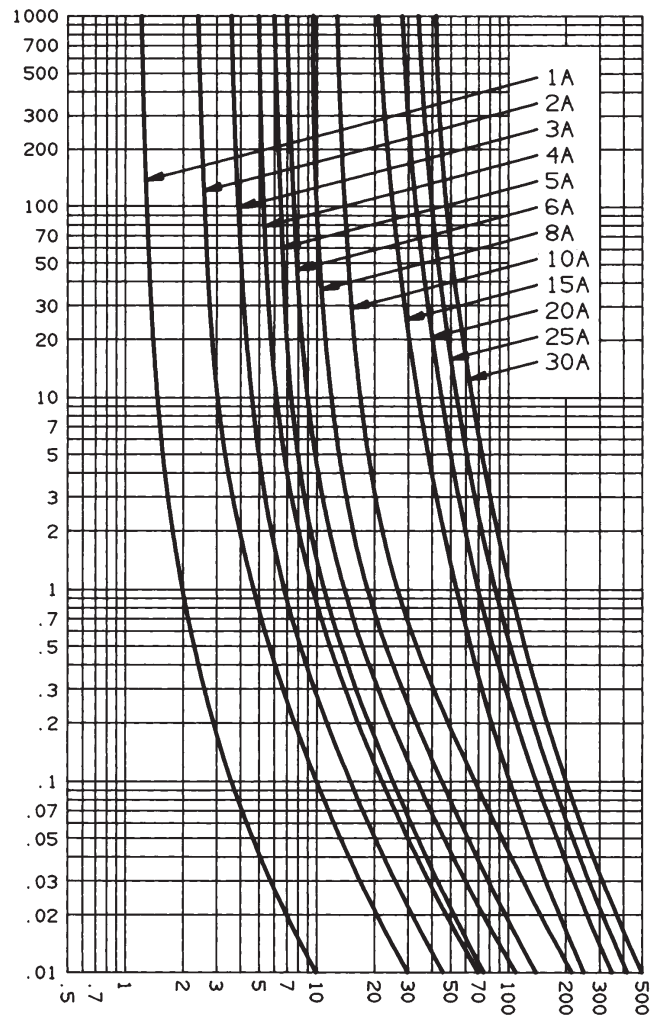
- Supplemental protection of circuits up to 250VAC and 10kA

Approvals



- UL Listed to Standard 248-14
- CSA Certified to Standard C22.2 No. 248.14

Melting Time - Current Data 1-30 Amperes, 250 Volts AC



Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Catalog Number	Reference Number
1	OTM1	E215721
2	OTM2	Y217256
3	OTM3	A218799
4	OTM4	N219846
5	OTM5	C222527
6	OTM6	T223048
8	OTM8	Z200835
10	OTM10	L216233
15	OTM15	J216737
20	OTM20	B217765
25	OTM25	M218281
30	OTM30	M219316

General Purpose US Fuses



Midget Fuses (10x38 US) Fast Acting GGU

125 volt AC rated GGU fuses have midget fuse dimensions (1-1/2" long x 13/32" diameter). Ratings 3 through 15 amperes have glass bodies for easy checking of fuse link status. Ratings 20, 25, and 30 amperes have ceramic bodies, allowing use in higher ambient temperature conditions than other similar fuses. (Not for Branch Circuit Protection).



Features/Benefits

- Glass body on 3-15A makes status of fusible element clearly visible
- All ratings 125VAC - higher than competitors
- Ceramic body on 20-30A allows use in higher temperature applications
- Fast acting for protection of circuits up to 30A and 125VAC
- UltraSafe™ fuse holder: refer to Fuse Blocks and Fuse Holders section for details, Catalog Number and Reference Number

Ratings

- AC: 3 to 30A 125VAC, 10kA I.R

Highlights

- Fast Acting

Applications

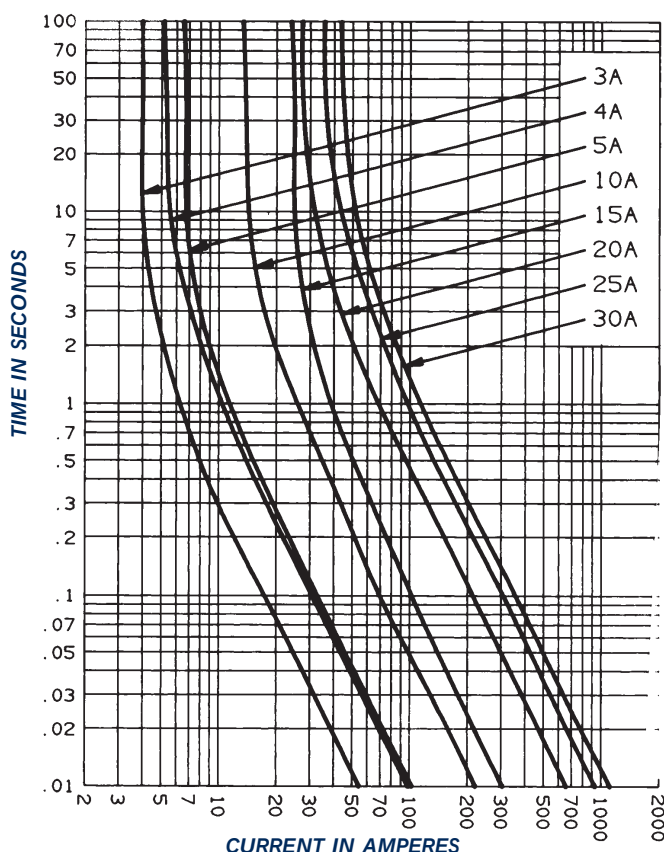
- General Purpose
- 125 Volt AC Circuits
- Supplemental Protection

Approvals



- UL Listed to Standard 248-14 (3 to 15A)
- UL Recognized Component Guide No. JDYX2 (20 to 30A)

Melting Time - Current Data 3-30 Amperes, 125 Volts AC



Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Catalog Number	Reference Number
3	GGU3	Q212442
4	GGU4	K213472
5	GGU5	E213973
8	GGU8	Q214489
10	GGU10	K201673
15	GGU15	S205475
20	GGU20	A211416
25	GGU25	C211924
30	GGU30	A212957



General Purpose US Fuses

Midget Fuses (10x35 US) Fast Acting SBS



Unique dimensions for today's smaller equipment and components

Fast-acting general purpose SBS fuses were developed in response to the industry's demand for smaller equipment and components. They are the only fuses in their size with a full 600 volt AC rating for all ampere ratings by

Underwriters Laboratories standard 198G and CSA No. 59.2, and are the only fuses of this size with an interrupting rating of 100kA RMS, compared to 10kA on other brands.

SBS fuses are 1-3/8" long, smaller by 1/8" than most standard midget fuses and are available in 22 ampere ratings, from 2/10A to 30A.

(Not for Branch Circuit Protection).

Features/Benefits

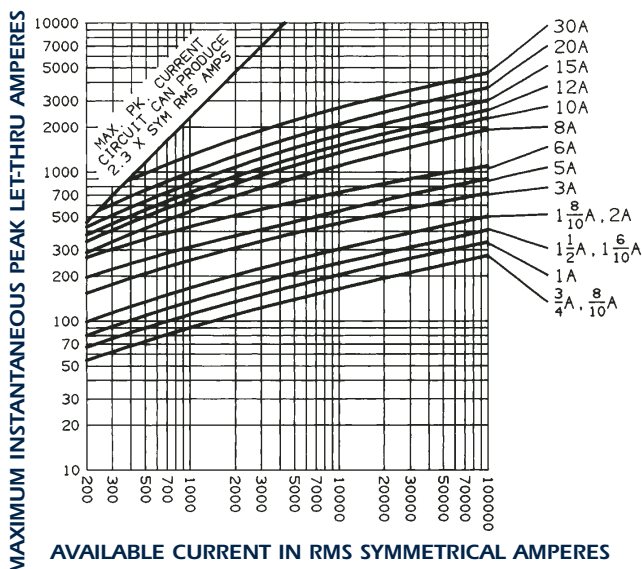
- Small unique physical size for maximum design flexibility and non-interchangeability with ther fuse classes
- Fiberglass body provides dimensional stability in harsh industrial environments
- UltraSafe™ fuse holder: refer to Gear and Fuse Gear section for details, Catalog Number and Reference Number

Standard Fuse Ampere Ratings, Reference Numbers

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
2/10	SBS2/10	Y219349	4	SBS4	J201925
4/10	SBS4/10	G211146	5	SBS5	Z211668
1/2	SBS1/2	T216769	6	SBS6	E212179
3/4	SBS3/4	J200867	7	SBS7	X212701
8/10	SBS8/10	H214735	8	SBS8	E214226
1	SBS1	G214734	10	SBS10	G217287
1-1/2	SBS1-1/2	K215243	12	SBS12	G217287
1-6/10	SBS1-6/10	N215752	15	SBS15	X218313
1-8/10	SBS1-8/10	T216263	20	SBS20	X219877
2	SBS2	K218831	25	SBS25	M222559
3	SBS3	D223080	30	SBS30	W201407

Cross Reference: SBS will replace Bussmann BBS, Littelfuse BLS fuses

Peak Let-thru Current Data 3/4 - 30 Amperes, 600 Volts AC



Ratings

- AC: 2/10 to 30A
600VAC,
100kA I.R.

Highlights

- Fast Acting
- General Purpose
- Unique Dimensions

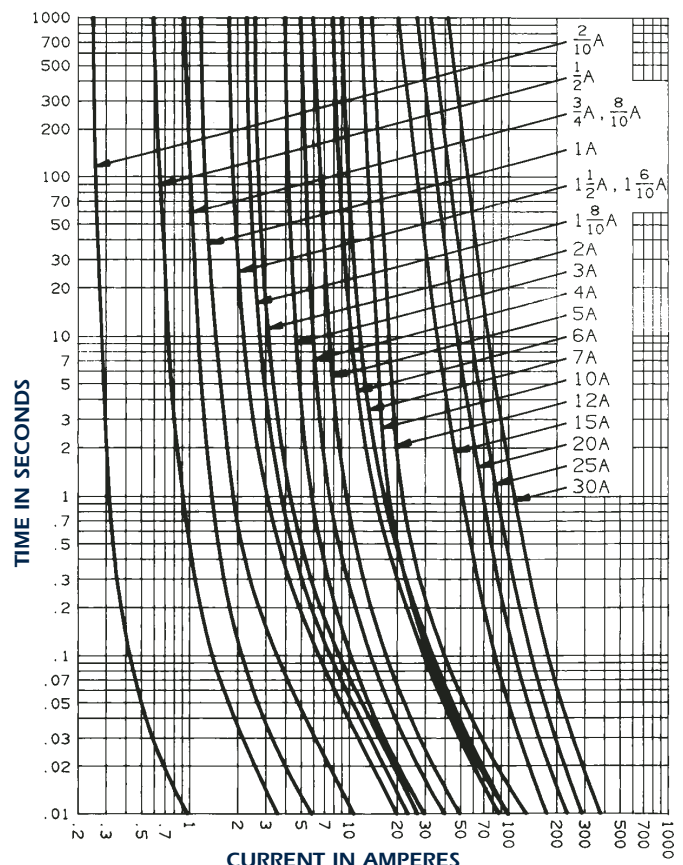
Applications

- Control Circuits
- Lighting Ballasts
- Meter Circuits
- Electronic Circuits

Approvals

- UL Listed to Standard 248-14
- CSA Certified to Standard C22.2 No. 248.14

Melting Time - Current Data 2/10 - 30 Amperes, 600 Volts AC



General Purpose US Fuses



Midget Fuses (10x38 US)

PC Mount

PCF

Fast acting fuses for direct mounting on printed circuit boards

Ferraz Shawmut's new PCF series of fast-acting direct-mountable fuses addresses the increasing need for electrical protection at the PC board as current and voltage requirements push higher. These fuses help printed circuit board manufacturers reduce parts by eliminating clips and fuse blocks and allowing automated assembly. PCF fuses can be used for the protection of main frame power boards, small circuit breakers with low interrupting ratings and other critical components. PCF fuses bring greatly increased ampere, voltage and interrupting ratings to the board itself and are UL Component Recognized.



Ratings

- AC: 1 to 30A 600VAC, 100kA I.R.
- DC: 1 to 30A 500VDC, 100kA I.R. L/R ≤10ms

Highlights

- Fast Acting
- PC Board Mount
- Three Mounting Styles

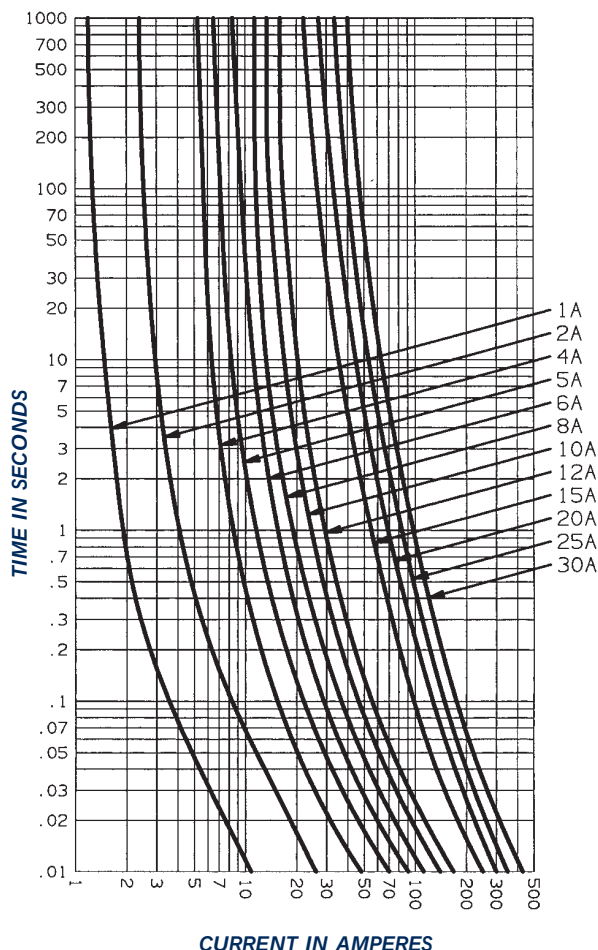
Applications

- Protection of main frame power boards, circuit breakers, components

Approvals

- UL Recognized Components

Melting Time – Current Data



Standard Fuse Ampere Ratings, Ref. Numbers

Ampere Rating	Catalog Number	Reference Number
1	PCF1-R	N212256
2	PCF2-R	V218909
3	PCF3-R	P212257
4	PCF4-R	F218390
5	PCF5-R	D219952
6	PCF6-R	G201486
7	PCF7-R	G211744

Slot Mount

1	PCF1-H	E211742
2	PCF2-H	E218389
3	PCF3-H	F211743
4	PCF4-H	Z217878
5	PCF5-H	K219429
6	PCF6-H	Q200942
7	PCF7-H	R211224

Surface Mount

1	PCF1-S	A212773
2	PCF2-S	J219428
3	PCF3-S	B212774
4	PCF4-S	W218910
5	PCF5-S	W222636
6	PCF6-S	T202026
7	PCF7-S	Q212258

Ampere Rating	Catalog Number	Reference Number
8	PCF8-R	P213292
10	PCF10-R	E213789
12	PCF12-R	T215826
15	PCF15-R	Q217364
20	PCF20-R	V222635
25	PCF25-R	F201485
30	PCF30-R	Q215317

8	PCF8-H	C212775
10	PCF10-H	N213291
12	PCF12-H	N214809
15	PCF15-H	B216845
20	PCF20-H	C219951
25	PCF25-H	P200941
30	PCF30-H	F213790

8	PCF8-S	G213791
10	PCF10-S	N214303
12	PCF12-S	Y216336
15	PCF15-S	Y217877
20	PCF20-S	J223154
25	PCF25-S	Q211223
30	PCF30-S	V215827



General Purpose US Fuses

Midget Fuses (10x38 US) PC Mount PCS



Semiconductor protection fuses for direct mounting on printed circuit boards

Ferraz Shawmut's new PCS series of extremely fast-acting, direct-mountable fuses addresses the increasing need for electrical protection at the PC board as current and voltage requirements push higher. These fuses help printed circuit board manufacturers reduce parts by eliminating clips and fuse blocks and allowing automated assembly. PCS fuses are AC and DC rated and are extremely current-limiting. They will protect semiconductors, main frame boards, circuit breakers with low interrupting rating and other critical components. PCS fuses bring I²t protection, higher voltage and interrupting ratings to the board itself and are UL Component Recognized.

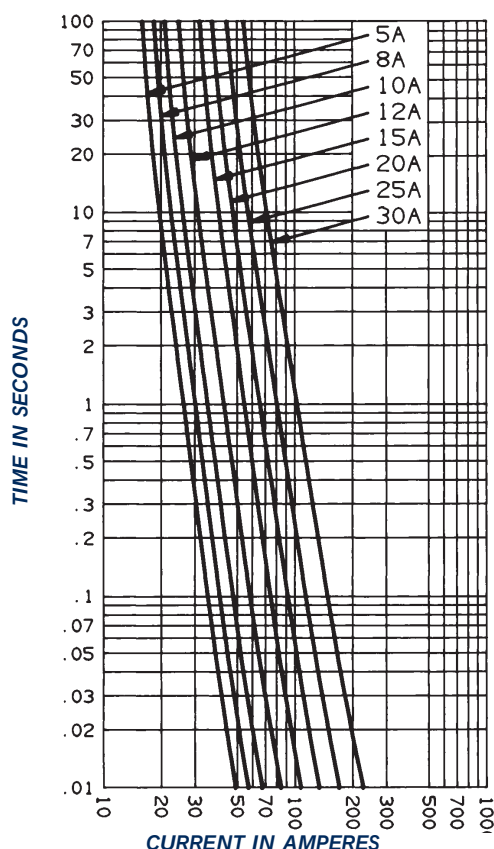
Ratings

- AC: 5 to 30A 600VAC, 200kA I.R.
- DC: 5 to 30A 600VAC, 100kA I.R.
L/R ≤ 10 ms

Highlights

- Extremely Fast Acting
- PC Board Mount
- Three Mounting Styles

Melting Time – Current Data



Applications

- Protection of semiconductors, circuit breakers, critical components

Approvals

- UL Recognized Components

Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number	Reference Number
---------------	----------------	------------------

Slot Mount

5	PCS5-R	B217880
8	PCS8-R	M219431
10	PCS10-R	Z216337
12	PCS12-R	A217879
15	PCS15-R	L219430
20	PCS20-R	K223155
25	PCS25-R	V202027
30	PCS30-R	R212259

Double Hole Mount

5	PCS5-H	S217366
8	PCS8-H	Y218912
10	PCS10-H	P214304
12	PCS12-H	R217365
15	PCS15-H	X218911
20	PCS20-H	X222637
25	PCS25-H	H201487
30	PCS30-H	H211745

Surface Mount

5	PCS5-S	H218392
8	PCS8-S	F219954
10	PCS10-S	C216846
12	PCS12-S	G218391
15	PCS15-S	E219953
20	PCS20-S	R200943
25	PCS25-S	S211225
30	PCS30-S	D212776

General Purpose US Fuses



Midget Fuses (10x38 US) PC Mount PCS



I^2t at 600VDC, 100kA, L/R = 10 ms

Ampere Rating	Clearing I^2t (A ² s)
5	40
8	42
10	70
12	90
15	110
20	200
25	260
30	520

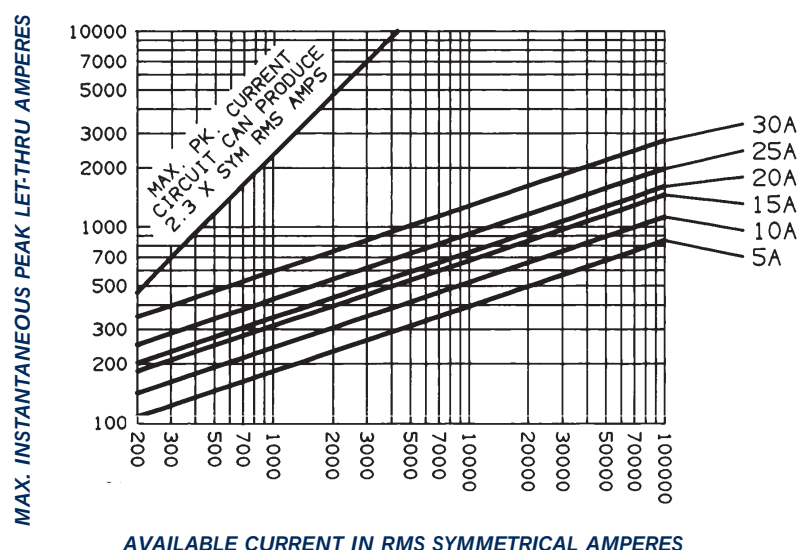
I^2t at 600VAC, 100kA

Ampere Rating	Melting I^2t (A ² s)	Clearing I^2t (A ² s)
5	5	60
8	6.5	70
10	10	110
12	17	150
15	26	180
20	41	330
25	69	440
30	132	860

Watts Loss Data

Ampere Rating	Watts Loss @ 80% Rating (w)	Watts Loss @ 100% Rating (w)
5	0.5	0.7
10	0.9	1.5
15	1.9	3.0
20	2.6	4.4
25	2.9	5.3
30	3.0	5.8

Peak Let-Thru Current Data – PCS5 to 30-R, H or S, 600 Volts AC





General Purpose US Fuses

Midget Fuses (10x38 US) PC Mount PCT



TIME DELAY FUSES FOR DIRECT MOUNTING ON PRINTED CIRCUIT BOARDS

Ferraz Shawmut's new PCT series of time-delay, direct-mountable fuses addresses the increasing need for electrical protection at the PC board as current and voltage requirements push higher. These fuses help printed circuit board manufacturers reduce parts by eliminating clips and fuse blocks and allowing automated assembly. PCT fuses can be used for the protection of main frame power boards, small circuit breakers with low interrupting ratings and other components. PCT fuses bring protection with time delay, greatly increased ampere, voltage and interrupting ratings to the board itself and are UL Component Recognized

Ratings

- AC: 1 to 30A 500VAC, 100kA

Highlights

- Time Delay
- PC Board Mount
- Three Mounting Styles

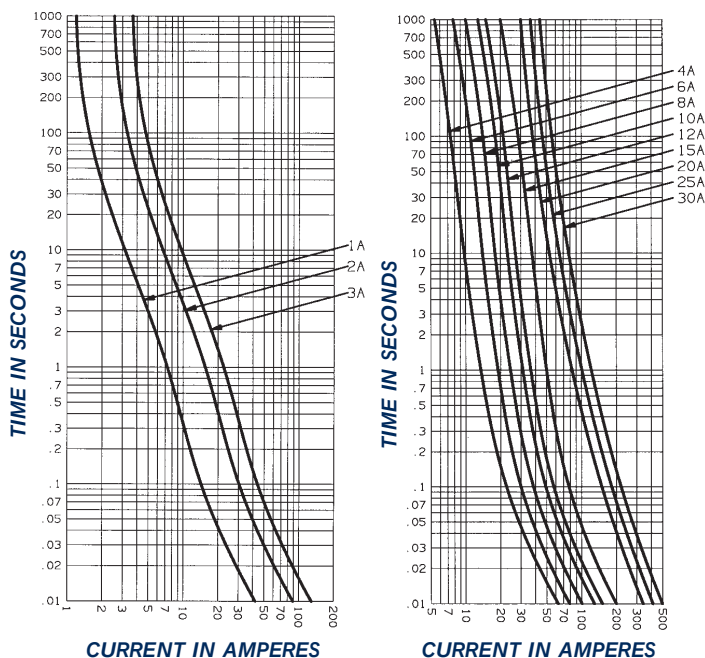
Applications

- Protection of main frame power boards, circuit breakers, components

Approvals

- UL Recognized Components

Melting Time – Current Data



Standard Fuse Ampere Ratings, Ref. Numbers

Ampere Rating	Catalog Number	Reference Number
1	PCT1-R	L223156
2	PCT2-R	S215319
3	PCT3-R	Z222639
4	PCT4-R	K211747
5	PCT5-R	S213295
6	PCT6-R	Q214811
7	PCT7-R	C216340

Slot Mount

Ampere Rating	Catalog Number	Reference Number
8	PCT8-R	D217882
10	PCT10-R	D202081
12	PCT12-R	S212260
15	PCT15-R	J213793
20	PCT20-R	T217367
25	PCT25-R	Z218913
30	PCT30-R	K201489

Double Hole Mount

1	PCT1-H	Y222638
2	PCT2-H	P214810
3	PCT3-H	G219955
4	PCT4-H	V211227
5	PCT5-H	F212778
6	PCT6-H	S214307
7	PCT7-H	X215829

8	PCT8-H	V217368
10	PCT10-H	J201488
12	PCT12-H	J211746
15	PCT15-H	R213294
20	PCT20-H	D216847
25	PCT25-H	J218393
30	PCT30-H	T200945

Surface Mount

1	PCT1-S	S200944
2	PCT2-S	B216339
3	PCT3-S	M223157
4	PCT4-S	T212261
5	PCT5-S	K213794
6	PCT6-S	T215320
7	PCT7-S	E216848

8	PCT8-S	K218394
10	PCT10-S	T211226
12	PCT12-S	E212777
15	PCT15-S	R214306
20	PCT20-S	C217881
25	PCT25-S	N219432
30	PCT30-S	N202090

General Purpose US Fuses

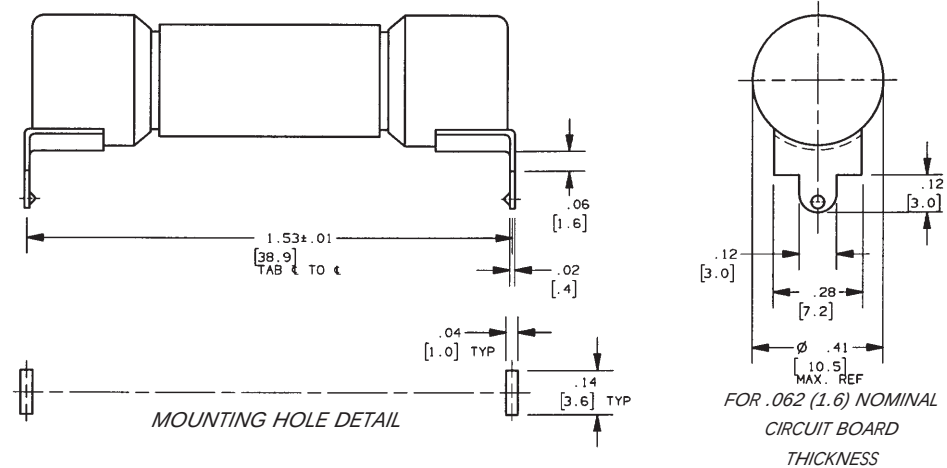


Midget Fuses (10x38 US)

PC Mount

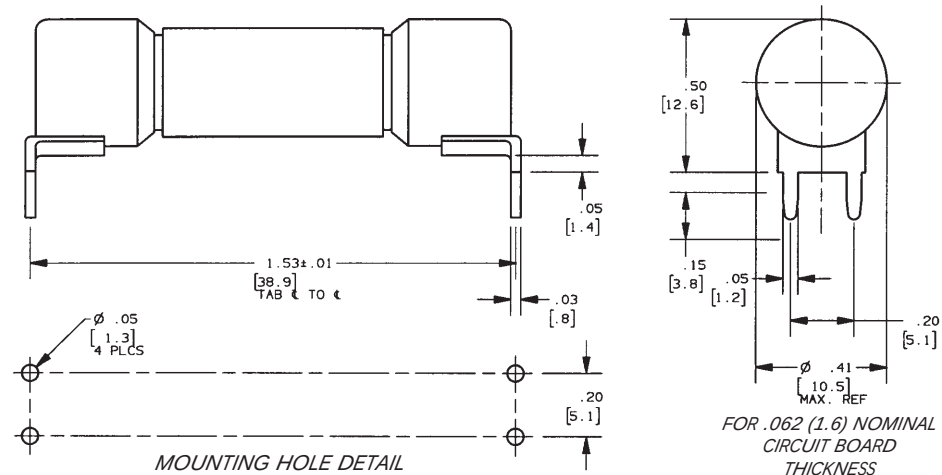
Mechanics PCx

PCF1-R thru PCF30-R
PCS5-R thru PCS30-R
PCT1-R thru PCT30-R



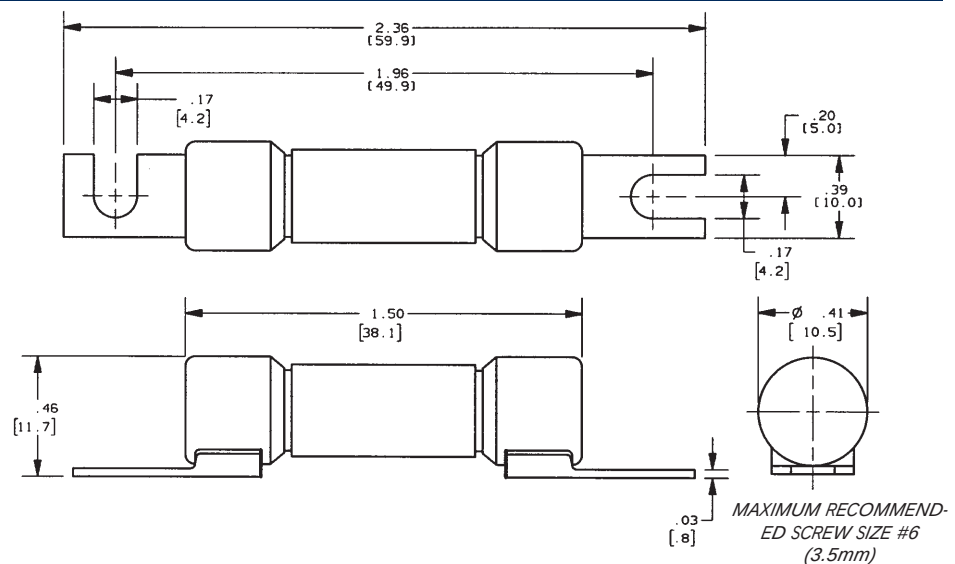
Double Hole Mount (Round Holes) "H" terminal

PCF1-H thru PCF30-H
PCS5-H thru PCS30-H
PCT1-H thru PCT30-H



Surface (Screw) Mount "S" terminal

PCF1-S thru PCF30-S
PCS5-S thru PCS30-S
PCT1-S thru PCT30-S



General Purpose Fuses IEC



Ferrule Fuses aM & gG 400V to 690V with/without Striker aM & gG 8x32, 10x38, 14x51, 22x58

Residential and Industrial Cylindrical Fuse-links

Ferraz Shawmut gF/gG-gG and aM fuse-links cover a wide range of physical sizes and ampere ratings for 250, 380*/ 400, 500, and 660* 690volts AC. gF/gG fuse-links are for residential use. gG and aM fuse-links are for industrial applications. Most ratings are available with an optional indicator. All industrial fuse-links have the option of a built-in striker. All cylindrical fuse-links have ceramic bodies and silver-plated ferrules.

** Fuse-links marked 380V (gF/gG) and 660V (gG-aM) will be re-marked (and safely used at) 400V AC and 690V AC in compliance with changes in IEC Standard 269, but should not be used above 418V AC or 726V AC.*

gF/gG

Residential Full Range Protection

- 7 physical sizes from 6.3 x 23mm to 10.3 x 38 mm
- 250 and 380 Volt ratings - 0.5A through 32A
- Most ratings available with indicator
- Meet IEC, NFC, UNE standards
- See residential fuse-links, Special Purpose section

gG

Full Range Protection

- 4 physical sizes from 8 x 31mm to 22 x 58 mm
- 400, 500 and 690 Volt ratings -0.5A through 125A
- Most ratings available with indicator
- Meet IEC, NFC and UNE standards
- Approved by Lloyds Register of Shipping and Bureau Veritas

gG

Full Range Protection

Fuse-links with striker

- 2 sizes- 14 x 51mm and 22 x 58 mm
- 400, 500 and 690 Volt ratings 4A through 125A
- All ratings include striker
- Meet IEC, NFC and UNE standards
- Approved by Lloyds Register of Shipping and Bureau Veritas

aM

Short Circuit Protection

Fuse-links with striker

- 4 physical sizes from 8 x 31 mm to 22 x 58 mm
- 400, 500 and 690 Volt ratings- 0.16A through 125A
- Most ratings available with indicator
- Meet IEC, NFC and UNE standards
- Approved by Lloyds Register of Shipping and Bureau Veritas

aM

Short Circuit Protection

Fuse-links with striker

- 2 sizes - 14 x 51mm and 22 x 58mm
- 400, 500 and 690 Volt ratings - 2A through 125A
- All ratings include striker
- Meet IEC, NFC and UNE standards
- Approved by Lloyds Register of Shipping and Bureau Veritas

General Purpose Fuses IEC

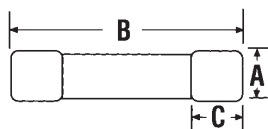
Ferrule Fuses gG 400V to 690V with/without Striker gG 8x32, 10x38, 14x51, 22x58

Ratings - gG (Optional Blown-Fuse Indicator)

Size	Rated In Current (A)	Rated Voltage	Previous References		Reference Number		Breaking Capacity	Catalog Number	
			w/o Indicator	w Indicator	w/o Indicator	w Indicator		w/o Indicator	w Indicator
8 x 31	0.5	400V	15009	-	P218191	-	20kA - 400V	FR8GG40V0.5	
	1		15011	-	C218709			FR8GG40V1	
	2		15013	15213	Q219227	B222204		FR8GG40V2	FR8GG40V2I
	4		15019	15219	W222958	X222959		FR8GG40V4	FR8GG40V4I
	6		15023	15223	A211025	V201291		FR8GG40V6	FR8GG40V6I
	8		15027	15227	B213096	B211026		FR8GG40V8	FR8GG40V8I
	10		15031	15231	A214613	A212060		FR8GG40V10	FR8GG40V10I
	12		15033	15233	R216146	C213097		FR8GG40V12	FR8GG40V12I
	16		15035	15235	P216650	Y214105		FR8GG40V16	FR8GG40V16I
	20		15037	15237	F217677	J215127		FR8GG40V20	FR8GG40V20I
10 X 38	25	500V	15039	15239	D218710	S216147	120kA - 500V	FR8GG40V25	FR8GG40V25I
	0.5		16009	-	C211027	-		FR10GG50V0.5	FR10GG50V2I
	1		16011	-	B212061	-		FR10GG50V1	FR10GG50V4I
	2		16013	16213	D213098	S216653		FR10GG50V2	FR10GG50V6I
	4		16019	16219	X213598	E217170		FR10GG50V4	FR10GG50V10I
	6		16023	16223	K215128	T218195		FR10GG50V6	FR10GG50V10I
	8		16027	16227	D217169	V219231		FR10GG50V10	FR10GG50V12I
	10		16031	16231	S218194	E222207		FR10GG50V10	FR10GG50V16I
	12		16033	16233	W219761	H200751		FR10GG50V12	FR10GG50V20I
	16		16035	16235	G200750	H201809		FR10GG50V16	FR10GG50V25I
14 X 51	20	500V	16037	16237	D211028	X211551	120kA - 400V	FR10GG50V20	FR10GG50V32I
	25		16039	16239	E213099	W212585		FR10GG50V25	FR10GG50V2I
	32		16043	16243	A214107	Z213600		FR10GG40V32	FR10GG40V32I
	1	690V	17011	-	K218716	-		FR14GG69V1	
	2		17013	17213	Y219234	C201298		FR14GG69V2	FR14GG69V2I
	4		17019	17219	A219765	H211032		FR14GG69V4	FR14GG69V4I
	6		17023	17223	H222210	G212066		FR14GG69V6	FR14GG69V6I
	8		17027	17227	D222965	K213104		FR14GG69V8	FR14GG69V8I
	10		17031	17231	L200754	H214620		FR14GG69V10	FR14GG69V10I
	12		17033	17233	L201812	R215640		FR14GG69V12	FR14GG69V12I
	16		17035	17235	A211554	X216657		FR14GG69V16	FR14GG69V16I
	20		17037	17237	Z212588	N217684		FR14GG69V20	FR14GG69V20I
	25		17039	17239	C213603	M218718		FR14GG69V25	FR14GG69V25I
22 x 58	32	500V	17043	17243	W216656	C219767	120kA - 500V	FR14GG50V32	FR14GG50V32I
	40		17047	17247	X218198	F222967		FR14GG50V40	FR14GG50V40I
	50		17051	17251	Z219235	D201299		FR14GG40V50	FR14GG40V50I
	2	690V	18013	-	F219241	-		FR22GG69V2	
	4		18019	18219	H219772	Q211039		FR22GG69V4	FR22GG69V4I
	6		18023	18223	P222216	P212073		FR22GG69V6	FR22GG69V6I
	8		18027	18227	L222972	R213110		FR22GG69V8	FR22GG69V8I
	10		18031	18231	T200761	N214119		FR22GG69V10	FR22GG69V10I
	12		18033	18233	J201304	Y215140		FR22GG69V12	FR22GG69V12I
	16		18035	18235	S201818	D216157		FR22GG69V16	FR22GG69V16I
	20		18037	18237	P211038	R217181		FR22GG69V20	FR22GG69V20I
	25		18039	18239	N212072	F218206		FR22GG69V25	FR22GG69V25I
	32		18043	18243	F212594	H219243		FR22GG69V32	FR22GG69V32I
22 x 58	40	500V	18047	18247	J213609	R222218	80kA - 690V	FR22GG69V40	FR22GG69V40I
	50		18051	18251	P214626	W200763		FR22GG69V50	FR22GG69V50I
	63		18055	18255	Y215646	V201820		FR22GG69V63	FR22GG69V63I
	80		18059	18259	Q217180	K211563		FR22GG69V80	FR22GG69V80I
	100		18063	18263	E218205	H212596		FR22GG50V100	FR22GG50V100I
	125		18065	18265	J219773	L213611		FR22GG40V125	FR22GG40V125I

Packaging 10

Blown-Fuse Indicator



Dimensions

Fuse Size	A	B	C
8 x 31	8.5	31.5	6.3
10 x 38	10.3	38	10.5
14 x 51	14.3	51	13.8
22 x 58	22.2	58	16.2

General Purpose Fuses IEC

Ferrule Fuses gG 400V to 690V with/without Striker gG 8x32, 10x38, 14x51, 22x58

Ratings – gl-gG with Striker



P201815



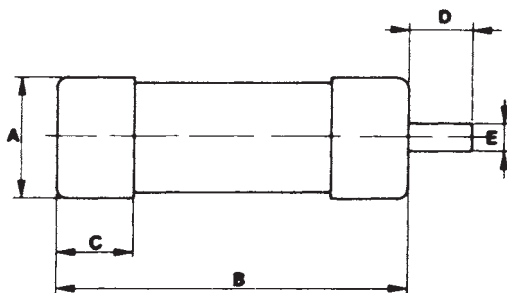
R212075

Size (mm x mm)	Rated Current In (A)	Rated Voltage	Previous Reference	Reference Number	Breaking Capacity	Catalog Number
14 X 51	2	500V	17413	J211033	120kA - 500V	FR14GG50V2P
	4		17419	H212067		FR14GG50V4P
	6		17423	G214113		FR14GG50V6P
	8		17427	R215134		FR14GG50V8P
	10		17431	Z216153		FR14GG50V10P
	12		17433	L217176		FR14GG50V12P
	16		17435	Z218200		FR14GG50V16P
	20		17437	B219237		FR14GG50V20P
	25		17439	L222213		FR14GG50V25P
	32		17443	P200757		FR14GG50V32P
	40		17447	P201815		FR14GG50V40P
	50		17451	D211557		FR14GG50V50P
22 X 58	4	690V	18419	R214628	80kA - 690V	FR22GG69V4P
	6		18423	A215648		FR22GG69V6P
	8		18427	F216665		FR22GG69V8P
	10		18431	W217691		FR22GG69V10P
	12		18433	W218726		FR22GG69V12P
	16		18435	L219775		FR22GG69V16P
	20		18437	P222975		FR22GG69V20P
	25		18439	M201307		FR22GG69V25P
	32		18443	S211041		FR22GG69V32P
	40		18447	R212075		FR22GG69V40P
	50		18451	M213612		FR22GG69V50P
	63		18455	S214629		FR22GG69V63P
	80		18459	F216159		FR22GG69V80P
	100	500V	18463	T217183	120kA - 500V	FR22GG69V100P
	125	400V	18465	H218208	120kA - 400V	FR22GG69V125P

Packaging 10

Dimensions

Fuse Size	A	B	C	D	E
14 x 51	14.3	51	13.8	7.5	3.8
22 x 58	22.2	58	16.2	7.5	3.8



Striker

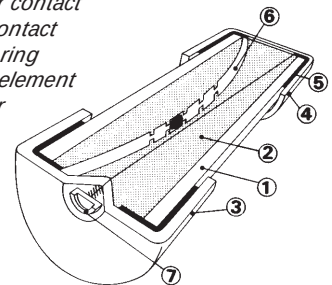


BEFORE



AFTER

- 1 Ceramic body
- 2 Sand
- 3 Indicator contact
- 4 Lower contact
- 5 Contact ring
- 6 Melting element
- 7 Indicator



Neutral

Size (mm x mm)	Previous Reference	Reference Number	Standard Pack/CTN	Catalog Number
10 x 38	19100	R211569	10	FRN1038
14 x 51	19200	M212600		FRN1451
22 x 58	19300	R213616		FRN2258

General Purpose Fuses IEC

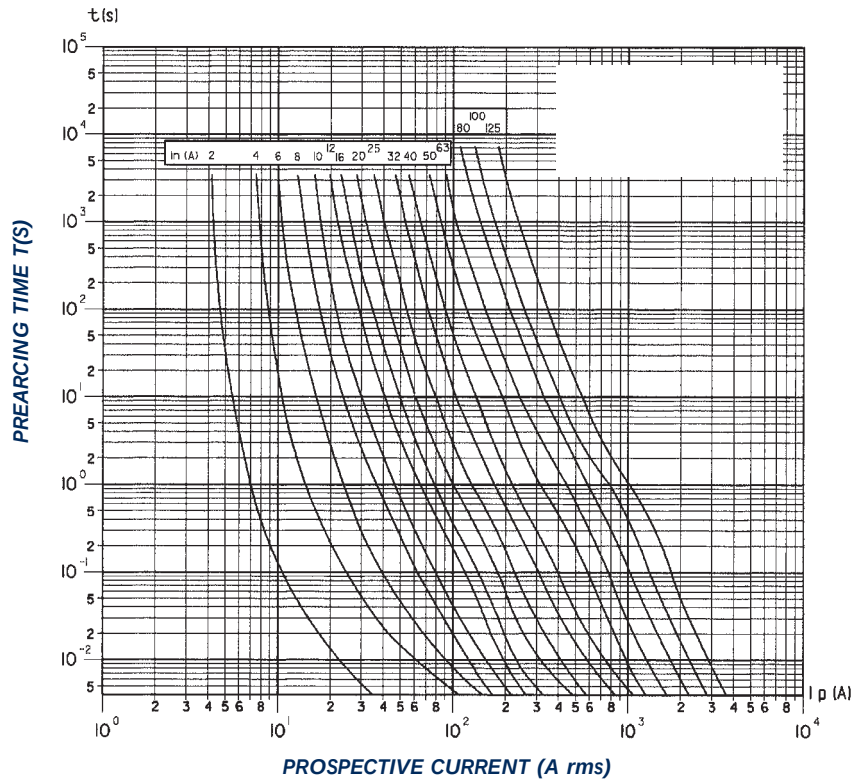
Ferrule Fuses

gG 400V to 690V

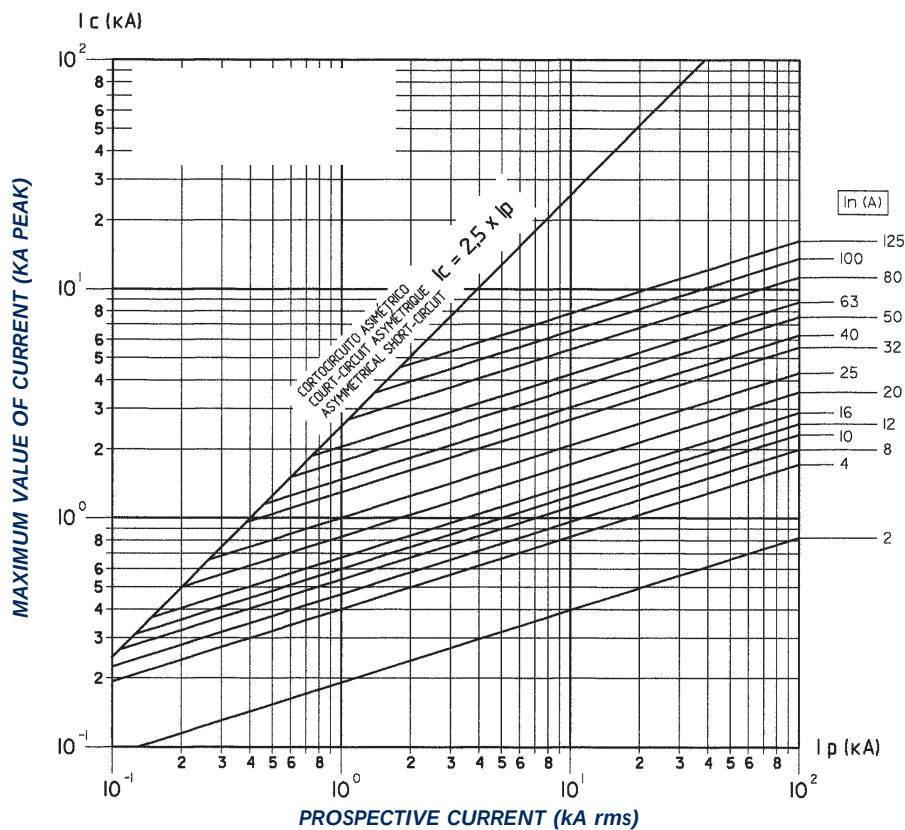
with/without Striker

gG 8x32, 10x38, 14x51, 22x58

Characteristics t-I



Cut-off characteristics



General Purpose Fuses IEC

Ferrule Fuses
gG 400V to 690V
with/without Striker
gG 8x32, 10x38, 14x51, 22x58

Characteristics I2t

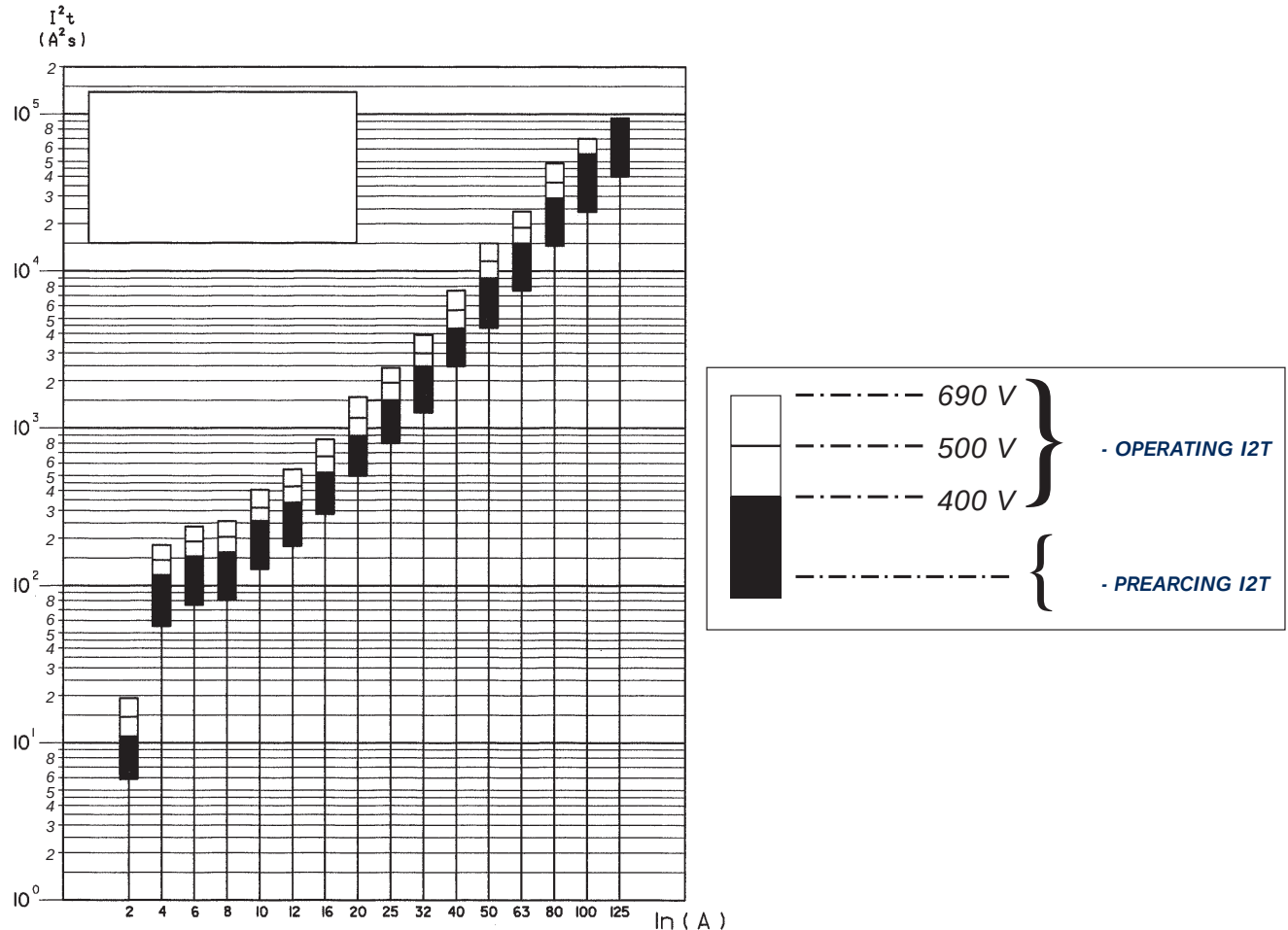
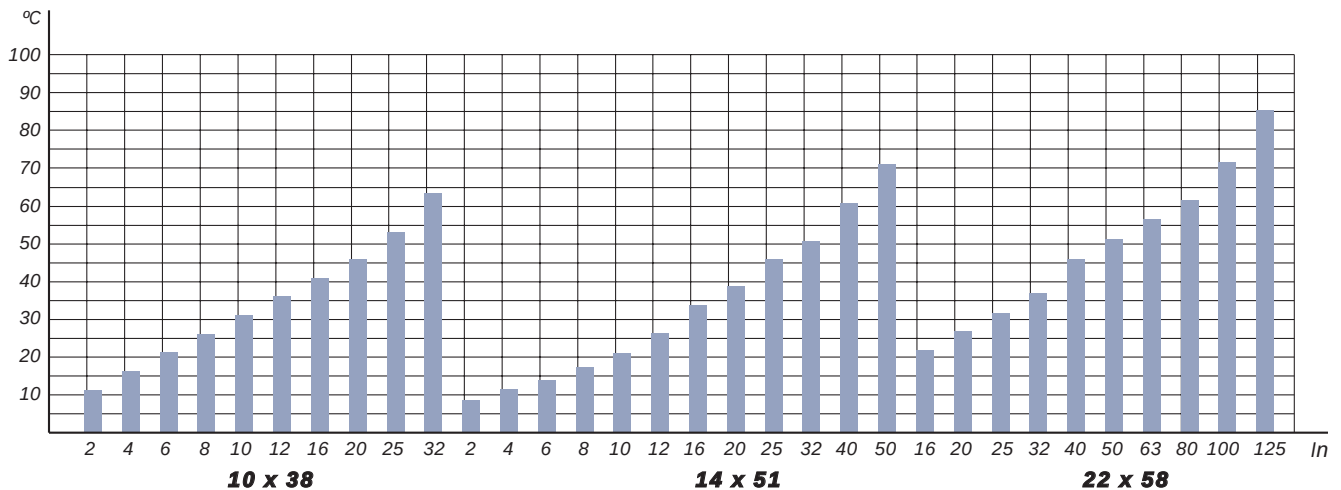


Table temperature increase (testing in superior contact)



General Purpose Fuses IEC

Ferrule Fuses gG 400V to 690V with/without Striker gG 8x32, 10x38, 14x51, 22x58

Power loss table

In	Size		
	10 x 38	14 x 51	22 x 58
0,5 A	2 W		
1 A	2,5 W	3,4 W	
2 A	0,70 W	1 W	1,20 W
4 A	0,80 W	1,10 W	1,30 W
6 A	0,90 W	1,20 W	1,40 W
8 A	1,10 W	1,50 W	1,65 W
10 A	1,35 W	1,80 W	2 W
12 A	1,55 W	2,10 W	2,40 W
16 A	1,90 W	2,55 W	3 W
20 A	2,30 W	3 W	3,40 W
25 A	2,80 W	3,50 W	3,80 W
32 A	3 W	3,80 W	4,30 W
40 A		4,40 W	5,10 W
50 A		4,7 W	5,50 W
63 A			6,70 W
80 A			8 W
100 A			9 W
125 A			12,5 W

Maximum standardized power low.

IEC 269-2-1 NFC 63.213 UNE 21.103-2-1	10 x 38	14 x 51	22 x 58
	25 A	40 A	100 A
	3 W	5 W	9,5 W

Table of maximum length of network in function of In and conductor section.
Maximum standardized power low.

gG Class Fuses

Copper conductor section (mm²)	Rated Current (In) OF gG Fuses (in A)									
	16	20	25	32	40	50	63	80	100	125
1,5	99/113	86/87	40/59	21/29	13/16	7/9				
2,5		134	110/122	67/84	41/51	25/33	13/20	8/11		
4			183	139	108/119	67/84	46/58	24/32	14/17	7,3/10
6				214	165	139	94/113	55/70	33/41	20/27
10					275	226	172	130	90/108	57/70
16							283	217	168	128
25								336	257	197
35									367	283
50										379

* 99/118:

- 99: Cond. PVC / 118: Cond. PRC
03/06

General Purpose Fuses IEC

Ferrule Fuses aM 400V to 690V with/without Striker aM 8x32, 10x38, 14x51, 22x58

Ratings – aM (Optional Blown-Fuse Indicator)



S219229



F214618



Q217686

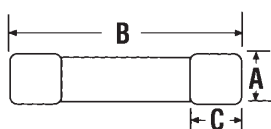


C215650

Size (mm x mm)	Rated In Current (A)	Rated Voltage	Previous Reference		Reference Number		Breaking Capacity	Catalog Number	
			w/o Indicator	w Indicator	w/o Indicator	w Indicator		w/o Indicator	w Indicator
8 x 31	2	400V	15511	-	C217168	-	20kA - 400V	FR8AM40V1	
	4		15513	-	R218193	-		FR8AM40V2	
	6		15519	-	S219229	-		FR8AM40V4	
	8		15523	-	C222205	-		FR8AM40V6	
	10		15527	-	F200749	-		FR8AM40V8	
10 X 38	0.16	500V	15531	-	W201292	-	120kA - 500V	FR8AM40V10	
	0.25		16503	-	E214617	-		FR10AM50V0.16	
	0.5		16507	-	M215130	-		FR10AM50V0.25	
	1		16509	-	W216150	-		FR10AM50V0.5	
	2		16511	16711	F217171	X219233		FR10AM50V1	FR10AM50V1I
	4	400V	16513	16713	H218714	G222209	120kA - 400V	FR10AM50V2	FR10AM50V2I
	6		16519	16719	W219232	K200753		FR10AM50V4	FR10AM50V4I
	8		16523	16723	F222208	K201811		FR10AM50V6	FR10AM50V6I
	10		16527	16727	Z201295	Z211553		FR10AM50V10	FR10AM50V10I
	12		16531	16731	Y211552	H213102		FR10AM50V10	FR10AM50V10I
14 X 51	16	400V	16533	16733	A213601	D214110	120kA - 400V	FR10AM50V12	FR10AM50V12I
	20		16535	16735	F214618	P215132		FR10AM50V16	FR10AM50V16I
	25		16537	16737	X216151	V216655		FR10AM50V20	FR10AM50V20I
	32		16539	16739	G217172	L217682		FR10AM50V25	FR10AM50V25I
	40		16543	-	J218715	-		FR10AM50V32	
	0.25	690V	17507	-	B212590	-	80kA - 690V	FR14AM69V0.25	
	0.5		17509	-	L213105	-		FR14AM69V0.5	
	1		17511	17711	E213605	C212591		FR14AM69V1	FR14AM69V1I
	2		17513	17713	H214114	M213106		FR14AM69V2	FR14AM69V2I
	4		17519	17719	K214622	J214115		FR14AM69V4	FR14AM69V4I
22 x 58	6	500V	17523	17723	S215135	T215136	120kA - 500V	FR14AM69V6	FR14AM69V6I
	8		17527	17727	T215642	A216660		FR14AM69V8	FR14AM69V8I
	10		17531	17731	Z216659	R217687		FR14AM69V10	FR14AM69V10I
	12		17533	17733	M217177	Q218721		FR14AM69V12	FR14AM69V12I
	16		17535	17735	Q217686	F219770		FR14AM69V16	FR14AM69V16I
	20	400V	17537	17737	P218720	R200759	120kA - 400V	FR14AM69V20	FR14AM69V20I
	25		17539	17739	E219769	Q201816		FR14AM69V25	FR14AM69V25I
	32		17543	17743	M222214	F211559		FR14AM69V32	FR14AM69V32I
	40		17547	17747	Q200758	D212592		FR14AM69V40	FR14AM69V40I
	45		17549	17749	L211035	G213607		FR14AM69V45	FR14AM69V45I
22 x 58	50	690V	17551	17751	E211558	M214624	80kA - 690V	FR14AM69V50	FR14AM69V50I
	1		18511	-	M219776	-		FR22AM69V1	
	2		18513	-	T222220	-		FR22AM69V2	
	4		18519	18719	Q222976	L219246		FR22AM69V4	FR22AM69V4I
	6		18523	18723	Y200765	V222221		FR22AM69V6	FR22AM69V6I
22 x 58	8	500V	18527	18727	N201308	Y201823	120kA - 500V	FR22AM69V8	FR22AM69V8I
	10		18531	18731	X201822	N211566		FR22AM69V10	FR22AM69V10I
	12		18533	18731	T211042	K212598		FR22AM69V12	FR22AM69V12I
	16		18535	18735	M211565	P213614		FR22AM69V16	FR22AM69V16I
	20		18537	18737	S212076	V214631		FR22AM69V20	FR22AM69V20I
22 x 58	25	690V	18539	18739	J212597	D215651	80kA - 690V	FR22AM69V25	FR22AM69V25I
	32		18543	18743	V213113	J216668		FR22AM69V32	FR22AM69V32I
	40		18547	18747	N213613	Z217694		FR22AM69V40	FR22AM69V40I
	50		18551	18751	R214122	P219778		FR22AM69V50	FR22AM69V50I
	63		18555	18755	C215650	Z200766		FR22AM69V63	FR22AM69V63I
22 x 58	80	500V	18559	18759	H216667	P211567	120kA - 500V	FR22AM69V80	FR22AM69V80I
	100		18563	18763	Y217693	L212599		FR22AM69V100	FR22AM69V100I
	125		18565	18765	J218209	W214632		FR22AM69V125	FR22AM69V125I

Packaging 10

Blown-Fuse Indicator



Dimensions

FUSE SIZE	A	B	C
8 x 31	8.5	31.5	6.3
10 x 38	10.3	38	10.5
14 x 51	14.3	51	13.8
22 x 58	22.2	58	16.2

General Purpose Fuses IEC

Ferrule Fuses aM 400V to 690V with/without Striker aM 8x32, 10x38, 14x51, 22x58

Ratings – aM with Striker



X215645



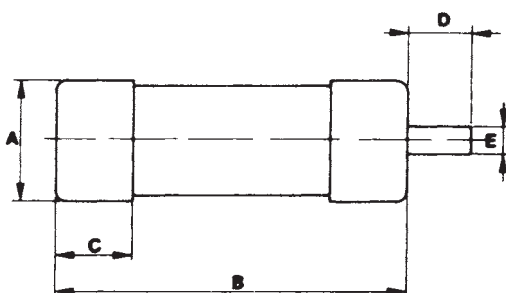
K216669

Size (mm x mm)	Rated Current In (A)	Rated Voltage	Previous Reference	Reference Number	Breaking Capacity	Catalog Number
14 X 51	1	500V	17911	W215644	120kA 500V	FR14AM69V1P
	2		17913	B216661		FR14AM69V2P
	4		17919	C218203		FR14AM69V4P
	6		17923	E219240		FR14AM69V6P
	8		17927	N222215		FR14AM69V8P
	10		17931	S200760		FR14AM69V10P
	12		17933	R201817		FR14AM69V12P
	16		17935	G211560		FR14AM69V16P
	20		17937	E212593		FR14AM69V20P
	25		17939	H213608		FR14AM69V25P
	32		17943	N214625		FR14AM69V32P
	40		17947	X215645		FR14AM69V40P
	45		17949	C216662		FR14AM69V45P
	50		17951	D218204		FR14AM69V50P
22 X 58	1	690V	18911	E215652	80kA - 690V	FR22AM69V1P
	2		18913	J216162		FR22AM69V2P
	4		18919	A217695		FR22AM69V4P
	6		18923	Y218728		FR22AM69V6P
	8		18927	Q219779		FR22AM69V8P
	10		18931	S222978		FR22AM69V10P
	12		18933	R201311		FR22AM69V12P
	16		18935	W211044		FR22AM69V16P
	20		18937	W212079		FR22AM69V20P
	25		18939	Q213615		FR22AM69V25P
	32		18943	X214633		FR22AM69V32P
	40		18947	F215653		FR22AM69V40P
	50		18951	K216669		FR22AM69V50P
	63		18955	B217696		FR22AM69V63P
	80	500V	18959	Z218729	120kA - 500V	FR22AM69V80P
	100		18963	T222979		FR22AM69V100P
	125	400V	18965	S201312	120kA - 400V	FR22AM69V125P

Packaging 10

Dimensions

Fuse Size	A	B	C	D	E
14 x 51	14.3	51	13.8	7.5	3.8
22 x 58	22.2	58	16.2	7.5	3.8



Striker



BEFORE



AFTER

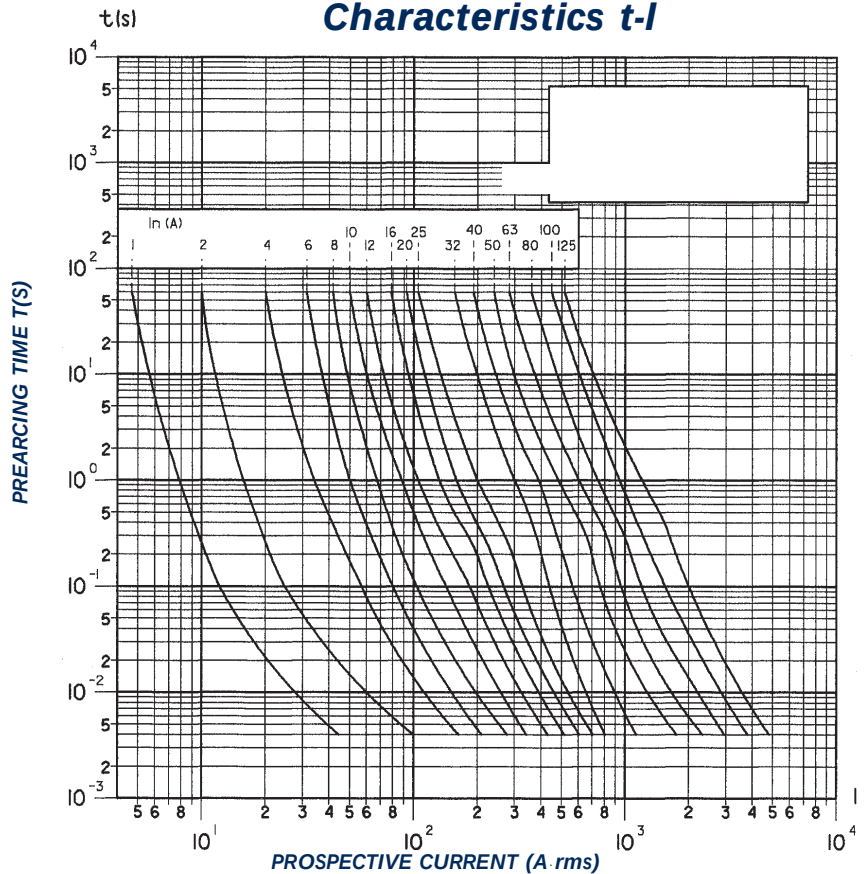
Neutral

Size (mm x mm)	Previous Reference	Reference Number	Standard Pack/CTN	Catalog Number
10 x 38	19100	R211569	10	FRN1038
14 x 51	19200	M212600		FRN1451
22 x 58	19300	R213616		FRN2258

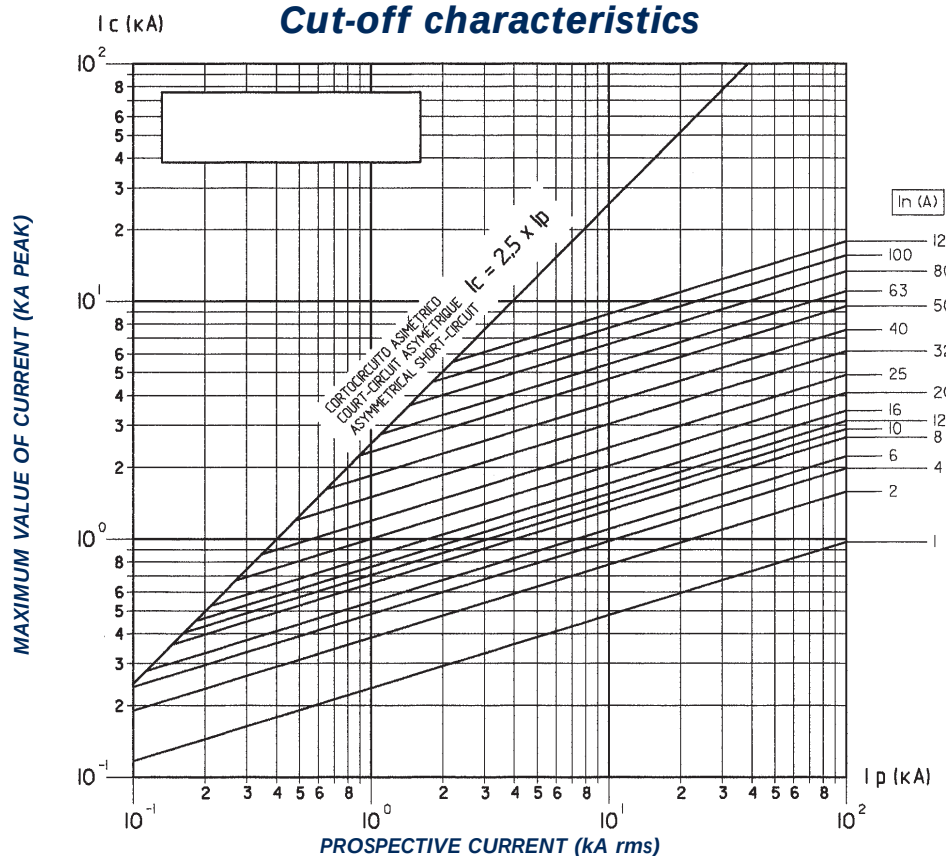
General Purpose Fuses IEC

Ferrule Fuses
aM 400V to 690V
with/without Striker
aM 8x32, 10x38, 14x51, 22x58

Characteristics t-I



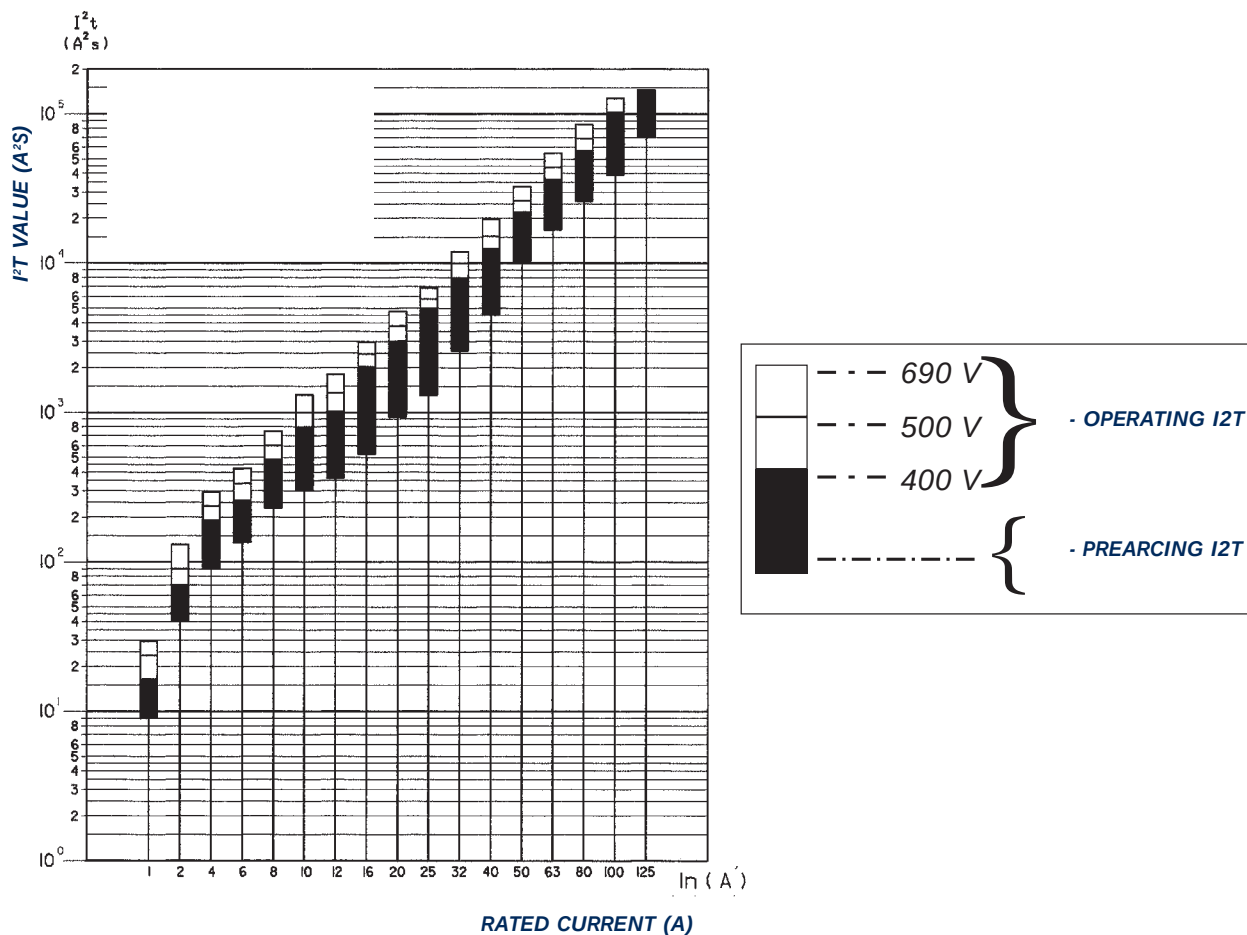
Cut-off characteristics



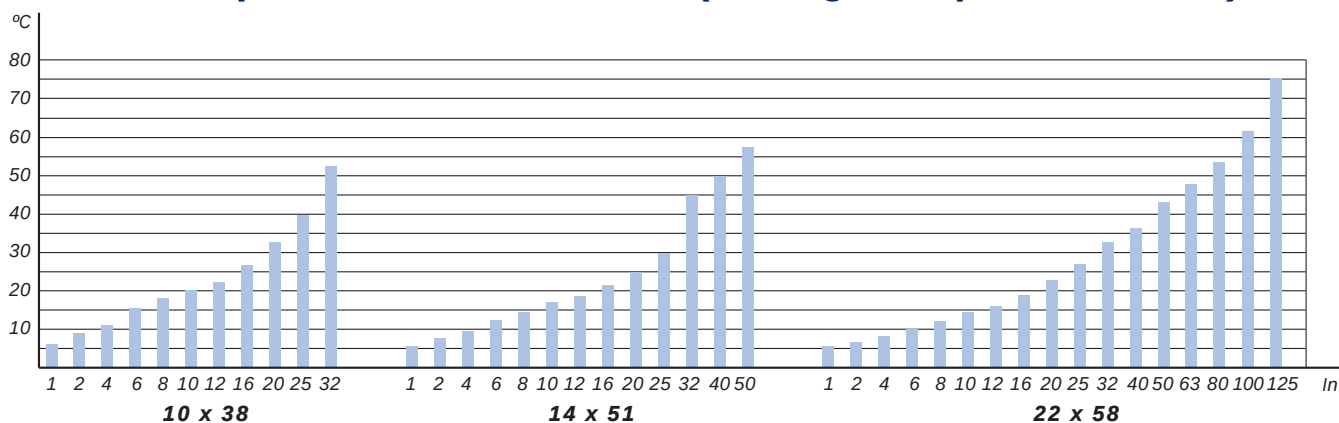
General Purpose Fuses IEC

Ferrule Fuses
gG 400V to 690V
with/without Striker
aM 8x32, 10x38, 14x51, 22x58

Characteristics I²t



Temperature increase table (testing in superior contact)



General Purpose Fuses IEC

Ferrule Fuses
aM 400V to 690V
with/without Striker
aM 8x32, 10x38, 14x51, 22x58

Power loss table

In	Size		
	10 x 38	14 x 51	22 x 58
0,16 A	0,35 W		
0,25 A	0,50 W	0,70 W	
0,5 A	0,50 W	0,75 W	
1 A	0,13 W	0,18 W	0,20 W
2 A	0,20 W	0,25 W	0,30 W
4 A	0,30 W	0,40 W	0,50 W
6 A	0,45 W	0,55 W	0,65 W
8 A	0,55 W	0,65 W	0,75 W
10 A	0,65 W	0,75 W	0,85 W
12 A	0,75 W	0,85 W	1 W
16 A	0,90 W	1,20 W	1,40 W
20 A	1,10 W	1,50 W	1,70 W
25 A	1,40 W	1,80 W	2 W
32 A	2 W	2,10 W	2,60 W
40 A		2,60 W	3,20 W
45 A		2,80 W	
50 A		2,90 W	3,90 W
63 A			4,60 W
80 A			5,60 W
100 A			6,50 W
125 A			9,50 W

Maximum standardized power low.

IEC 269-2-1 NFC 63.213 UNE 21.103-2-1	10 x 38	14 x 51	22 x 58
	16 A	50 A	100 A
	1,2 W	3 W	7 W

Table of maximum length of network in function of In and conductor section.
 Maximum standardized power low.

aM Class Fuses

Copper conductor section (mm²)	Rated Current (In) OF aM Fuses (in A)									
	16	20	25	32	40	50	63	80	100	125
1,5	55/64	37/45	25/30	15/20						
2,5	116	84/94	58/68	40/49	26/32	17/20				
4	181	147	118	84/95	58/68	42/48	28/33	18/23		
6	273	223	178	139	105/117	79/89	55/64	37/42	26/31	14/20
10				227	181	147	113/125	80/94	57/69	40/47
16						236	189	151	120	83/97
25								231	185	147
35									262	210

General Purpose IEC Fuses



NH Fuses (Plain Blades)

gG 400V, 500V, 690V
aM 500V, 690V

NH Fuse System



DIN 57 636/VDE 0636 Parts 1, 10, 21, 22, 201

IEC 60269-2

DIN 43 620 Parts 1 to 4 (Standard dimensions)

The use category is identified by two letters, the first indicating the operational class and the second the object to be protected. The Ferraz shawmut range includes fuse-links to DIN VDE 0636 standard for the following uses categories:

- gG: general purpose cable and line protection
- aM: Partial purpose, motor circuit protection
- gTr: general purpose, transformer protection
- gR: general purpose, fast acting
- aR: partial purpose, fast acting

Classification

The NH system is classed among plug-in fuse systems and is comprised of:

- fuse-base, (possibly including terminal covers and phase barriers)
- fuse-link with blade contact
- fuse-link replacement device (LV HRC fuse puller)

Since the design of this system cannot guarantee non-interchangeability of rated current, it must be handled by a qualified professional.

Approval symbols



Germany



Austria



Switzerland



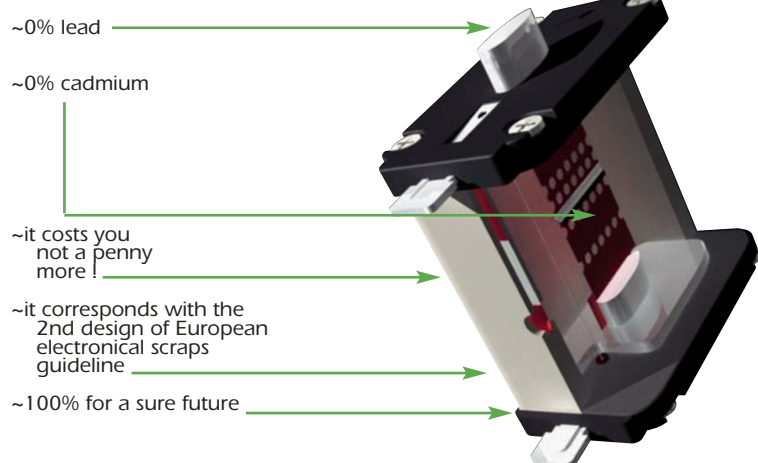
Netherlands

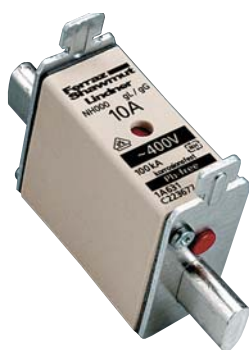


Beige melted



Red non melted





Pb-free

NH Fuses (Plain Blades) gG 400V, 500V, 690V gG 400V Size 000 to 3

NH-fuses, 400VAC gG

with non-isolated gripping
lugs, double indicator,
contact blades, complying
with DIN VDE 0636Part 201
and IEC 60269-2-1

Size	Rated current I_N (A)	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
000	2	3,3	Z223674	1A613.	Y	0,12	3	NH000GG40V2
000	4	1,35	A223675	1A619.	Y	0,12	3	NH000GG40V4
000	6	1,7	B223676	1A623.	Y	0,12	3	NH000GG40V6
000	10	1,0	C223677	1A631.	Y	0,12	3	NH000GG40V10
000	16	1,8	D223678	1A635.	Y	0,12	9	NH000GG40V16
000	20	2,0	E223679	1A637.	Y	0,12	9	NH000GG40V20
000	25	2,4	F223680	1A639.	Y	0,12	9	NH000GG40V25
000	32	2,6	G223681	1A643.	Y	0,12	9	NH000GG40V32
000	35	3,2	H223682	1A645.	Y	0,12	9	NH000GG40V35
000	40	3,1	J223683	1A647.	Y	0,12	9	NH000GG40V45
000	50	3,5	K223684	1A651.	Y	0,12	9	NH000GG40V50
000	63	4,6	L223685	1A655.	Y	0,12	9	NH000GG40V63
000	80	5,0	M223686	1A659.	Y	0,12	9	NH000GG40V80
000	100	5,5	N223687	1A663.	Y	0,12	9	NH000GG40V100
00	125	8,6	E223702	1A765.	Y	0,18	3	NH00GG40V125
00	160	9,6	F223703	1A769.	Y	0,18	3	NH00GG40V160
1	35	3,9	J223706	1A145.	N	0,28	3	NH1GG40V35
1	50	4,5	K223707	1A151.	N	0,28	3	NH1GG40V50
1	63	5,7	L223708	1A155.	N	0,28	3	NH1GG40V63
1	80	5,5	M223709	1A159.	N	0,28	3	NH1GG40V80
1	100	7,0	N223710	1A163.	N	0,28	3	NH1GG40V100
1	125	9,1	P223711	1A165.	N	0,30	3	NH1GG40V125
1	160	13,0	Q223712	1A169.	Y	0,30	3	NH1GG40V160
1	200	13,1	R223713	1A171.	Y	0,30	3	NH1GG40V200
1	224	15,1	S223714	1A173.	Y	0,30	3	NH1GG40V224
1	250	16,9	T223715	1A175.	Y	0,30	3	NH1GG40V250
2	35	3,9	T227257	1A245.	N	1,87	3	NH2GG40V35
2	50	4,5	V227258	1A251.	N	1,87	3	NH2GG40V50
2	63	5,7	W227259	1A255.	N	1,87	3	NH2GG40V63
2	80	6,1	F223726	1A259.	N	0,32	3	NH2GG40V80
2	100	7,3	G223727	1A263.	N	0,32	3	NH2GG40V100
2	125	9,1	H223728	1A265.	N	0,32	3	NH2GG40V125
2	160	13,0	J223729	1A269.	N	0,32	3	NH2GG40V160
2	200	13,5	K223730	1A271.	N	0,32	3	NH2GG40V200
2	224	15,1	L223731	1A273.	N	0,32	3	NH2GG40V224
2	250	18,0	M223732	1A275.	N	0,32	3	NH2GG40V250
2	315	19,9	N223733	1A279.	Y	0,40	3	NH2GG40V315
2	355	22,7	P223734	1A281.	Y	0,40	3	NH2GG40V355
2	400	28,0	Q223735	1A283.	Y	0,40	3	NH2GG40V400
3	250	19,9	R223736	1A375.	N	0,45	1	NH3GG40V250
3	315	22,7	S223737	1A379.	N	0,45	1	NH3GG40V315
3	400	28,0	T223738	1A383.	Y	0,45	1	NH3GG40V400
3	500	30,8	V223739	1A387.	Y	0,60	1	NH3GG40V500
3	630	43,0	W223740	1A389.	Y	0,60	1	NH3GG40V630

(1) Suitable for Microswitch describes gG/aM Mechanics for Ceramic body Section page GPEU34

General Purpose IEC Fuses



NH Fuses (Plain Blades) gG 400V, 500V, 690V gG 400V Size 000 to 3 - Isolated Lug



NH-fuses, 400VAC gG

with isolated metal gripping
lugs (SGL), double indicator,
contact blades, complying
with DIN VDE 0636 Part 201
and IEC 60269-2-1

Pb-free

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	weight kg/pce	pack.	Catalog Number
000	2	3,3	P223688	1E613.	0,12	3	NH000GG40V2-1
000	4	1,35	Q223689	1E619.	0,12	3	NH000GG40V4-1
000	6	1,7	R223690	1E623.	0,12	3	NH000GG40V6-1
000	10	1,0	S223691	1E631.	0,12	3	NH000GG40V10-1
000	16	1,8	T223692	1E635.	0,12	9	NH000GG40V16-1
000	20	2,0	V223693	1E637.	0,12	9	NH000GG40V20-1
000	25	2,4	W223694	1E639.	0,12	9	NH000GG40V25-1
000	32	2,6	X223695	1E643.	0,12	9	NH000GG40V32-1
000	35	3,2	Y223696	1E645.	0,12	9	NH000GG40V35-1
000	40	3,1	Z223697	1E647.	0,12	9	NH000GG40V40-1
000	50	3,5	A223698	1E651.	0,12	9	NH000GG40V50-1
000	63	4,6	B223699	1E655.	0,12	9	NH000GG40V63-1
000	80	5,0	C223700	1E659.	0,12	9	NH000GG40V80-1
000	100	5,5	D223701	1E663.	0,12	9	NH000GG40V100-1
00	125	8,6	G223704	1E765.	0,18	3	NH00GG40V125-1
00	160	9,6	H223705	1E769.	0,18	3	NH00GG40V160-1
1	35	3,9	V223716	1E145.	0,28	3	NH1GG40V35-1
1	50	4,5	W223717	1E151.	0,28	3	NH1GG40V50-1
1	63	5,7	X223718	1E155.	0,28	3	NH1GG40V63-1
1	80	5,5	Y223719	1E159.	0,28	3	NH1GG40V80-1
1	100	7,0	Z223720	1E163.	0,28	3	NH1GG40V100-1
1	125	9,1	A223721	1E165.	0,30	3	NH1GG40V125-1
1	160	13,0	B223722	1E169.	0,30	3	NH1GG40V160-1
1	200	13,1	C223723	1E171.	0,30	3	NH1GG40V200-1
1	224	15,1	D223724	1E173.	0,30	3	NH1GG40V224-1
1	250	16,9	E223725	1E175.	0,30	3	NH1GG40V250-1
2	35	3,9	L227250	1E245.	2,65	3	NH2GG40V35-1
2	50	4,5	M227251	1E251.	2,65	3	NH2GG40V50-1
2	63	5,7	N227252	1E255.	2,65	3	NH2GG40V63-1
2	80	6,1	X223741	1E259.	0,32	3	NH2GG40V80-1
2	100	7,3	Y223742	1E263.	0,32	3	NH2GG40V100-1
2	125	9,1	Z223743	1E265.	0,32	3	NH2GG40V125-1
2	160	13,0	A223744	1E269.	0,32	3	NH2GG40V160-1
2	200	13,5	B223745	1E271.	0,32	3	NH2GG40V200-1
2	224	15,1	C223746	1E273.	0,32	3	NH2GG40V224-1
2	250	18,0	D223747	1E275.	0,32	3	NH2GG40V250-1
2	315	19,9	E223748	1E279.	0,40	3	NH2GG40V315-1
2	355	22,7	F223749	1E281.	0,40	3	NH2GG40V355-1
2	400	28,0	G223750	1E283.	0,40	3	NH2GG40V400-1
3	250	19,9	H223751	1E375.	0,45	1	NH3GG40V250-1
3	315	22,7	J223752	1E379.	0,45	1	NH3GG40V315-1
3	400	28,0	K223753	1E383.	0,45	1	NH3GG40V400-1
3	500	30,8	L223754	1E387.	0,60	1	NH3GG40V500-1
3	630	43,0	M223755	1E389.	0,60	1	NH3GG40V630-1

Non suitable for Microswitch.

General Purpose IEC Fuses



Cd/Pb-free

with non-isolated gripping lugs, double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1

NH Fuses (Plain Blades)
gG 400V, 500V, 690V
gG 500V Size 000 to 4a

NH-fuses, 500VAC gG

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
000	2	1,9	B211946	1B613.	Y	0,13	3	NH000GG50V2
000	4	1,5	M212462	1B619.	Y	0,13	3	NH000GG50V4
000	6	1,6	D213995	1B623.	Y	0,13	3	NH000GG50V6
000	10	1,1	B219651	1B631.	Y	0,13	3	NH000GG50V10
000	16	1,8	K222097	1B635.	Y	0,13	9	NH000GG50V16
000	20	2,3	A222847	1B637.	Y	0,13	9	NH000GG50V20
000	25	2,4	E201185	1B639.	Y	0,13	9	NH000GG50V25
000	32	3,1	Z211438	1B643.	Y	0,13	9	NH000GG50V32
000	35	3,0	C211947	1B645.	Y	0,13	9	NH000GG50V35
000	40	3,7	N212463	1B647.	Y	0,13	9	NH000GG50V40
000	50	4,1	T212974	1B651.	Y	0,13	9	NH000GG50V50
000	63	5,4	E213996	1B655.	Y	0,13	9	NH000GG50V63
000	80	6,5	Y216543	1B659.	Y	0,13	9	NH000GG50V80
000	100	7,5	B219122	1B663.	Y	0,13	9	NH000GG50V100
00	125	10,0	R201863	1B765.	Y	0,20	3	NH00GG50V125
00	160	12,3	P211084	1B769.	Y	0,20	3	NH00GG50V160
0	6	1,6	H213148	1B023.	Y	0,27	3	NH0GG50V6
0	10	1,1	G214159	1B031.	Y	0,27	3	NH0GG50V10
0	16	1,8	Q215179	1B035.	Y	0,27	3	NH0GG50V16
0	20	2,3	R215686	1B037.	Y	0,27	3	NH0GG50V20
0	25	2,4	Y216198	1B039.	Y	0,27	3	NH0GG50V25
0	32	3,1	W216702	1B043.	Y	0,27	3	NH0GG50V32
0	35	3,0	J217220	1B045.	Y	0,27	3	NH0GG50V35
0	40	3,7	P217731	1B047.	Y	0,27	3	NH0GG50V40
0	50	4,1	Z218246	1B051.	Y	0,27	3	NH0GG50V50
0	63	6,6	N218765	1B055.	Y	0,27	3	NH0GG50V63
0	80	8,0	C219284	1B059.	Y	0,27	3	NH0GG50V80
0	100	9,4	D219814	1B063.	Y	0,27	3	NH0GG50V100
0	125	11,8	P222492	1B065.	Y	0,27	3	NH0GG50V125
0	160	14,6	F223013	1B069.	Y	0,27	3	NH0GG50V160
0	200	18,1	C229611	1B071.	Y	0,27	3	NH0GG50V200
0	224	19,2	D229612	1B073.	Y	0,27	3	NH0GG50V224
0	250	20,3	E229613	1B075.	Y	0,27	3	NH0GG50V250
1	16	1,8	M200801	1B135.	N	0,28	3	NH1GG50V16
1	20	2,3	C201344	1B137.	N	0,28	3	NH1GG50V20
1	25	2,4	N201860	1B139.	N	0,28	3	NH1GG50V25
1	32	3,1	L211081	1B143.	N	0,28	3	NH1GG50V32
1	35	3,0	A211600	1B145.	N	0,28	3	NH1GG50V35
1	40	3,7	Y212633	1B147.	N	0,28	3	NH1GG50V40
1	50	4,1	B213648	1B151.	N	0,28	3	NH1GG50V50
1	63	6,6	L214669	1B155.	N	0,28	3	NH1GG50V63
1	80	8,0	S215687	1B159.	N	0,28	3	NH1GG50V80
1	100	9,4	X216703	1B163.	N	0,28	3	NH1GG50V100
1	125	11,8	Q217732	1B165.	Y	0,30	3	NH1GG50V125
1	160	14,6	A218247	1B169.	Y	0,30	3	NH1GG50V160
1	200	18,0	P218766	1B171.	Y	0,30	3	NH1GG50V200
1	224	19,0	D219285	1B173.	Y	0,30	3	NH1GG50V224
1	250	20,0	E219815	1B175.	Y	0,30	3	NH1GG50V250
1	315	20,5	Q228519	1B179.	Y	0,42	3	NH1GG50V315
1	355	23,7	R228520	1B181.	Y	0,42	3	NH1GG50V355

(1) Suitable for Microswitch describes page 106

General Purpose IEC Fuses



NH Fuses (Plain Blades) gG 400V, 500V, 690V gG 500V Size 000 to 4a



NH-fuses, 500VAC gG

with non-isolated gripping lugs, double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1

Cd/Pb-free

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
2	25	2,4	N200802	1B239.	N	0,42	3	NH2GG50V25
2	32	3,1	D201345	1B243.	N	0,42	3	NH2GG50V32
2	35	3,0	P201861	1B245.	N	0,42	3	NH2GG50V35
2	40	3,7	M211082	1B247.	N	0,42	3	NH2GG50V40
2	50	4,1	B211601	1B251.	N	0,42	3	NH2GG50V50
2	63	6,8	Z212634	1B255.	N	0,42	3	NH2GG50V63
2	80	8,3	C213649	1B259.	N	0,42	3	NH2GG50V80
2	100	10,7	M214670	1B263.	N	0,42	3	NH2GG50V100
2	125	12,2	T215688	1B265.	N	0,42	3	NH2GG50V125
2	160	15,0	Y216704	1B269.	N	0,42	3	NH2GG50V160
2	200	18,5	R217733	1B271.	N	0,42	3	NH2GG50V200
2	224	19,2	Q218767	1B273.	N	0,42	3	NH2GG50V224
2	250	20,6	R222494	1B275.	N	0,42	3	NH2GG50V250
2	300	21,0	P200803	1B277.	Y	0,64	3	NH2GG50V300
2	315	25,0	E201346	1B279.	Y	0,64	3	NH2GG50V315
2	355	31,5	Q201862	1B281.	Y	0,64	3	NH2GG50V355
2	400	28,5	N211083	1B283.	Y	0,64	3	NH2GG50V400
2	425	29,2	S228521	1B285.	Y	0,64	3	NH2GG50V425
2	500	35,6	T228522	1B287.	Y	0,64	3	NH2GG50V500
3	250	21,1	C211602	1B375.	N	0,65	1	NH3GG50V250
3	300	20,0	A212635	1B377.	N	0,65	1	NH3GG50V300
3	315	25,0	L213151	1B379.	N	0,65	1	NH3GG50V315
3	355	32,0	K214162	1B381.	N	0,65	1	NH3GG50V355
3	400	34,0	T215182	1B383.	N	1,05	1	NH3GG50V400
3	425	34,0	B216201	1B385.	Y	1,05	1	NH3GG50V425
3	450	38,0	Z216705	1B386.	Y	1,05	1	NH3GG50V450
3	500	43,0	M217223	1B387.	Y	1,05	1	NH3GG50V500
3	630	43,1	S217734	1B389.	Y	1,05	1	NH3GG50V630
3	800	53,2	V228523	1B391.	Y	1,05	1	NH3GG50V800

with screw contact

4	400	31,0	*)	A216039	8004.4007	N	2,00	1	NH4GG50V400-8
4	500	35,0	*)	X216542	8004.5007	N	2,00	1	NH4GG50V500-8
4	630	46,6	*)	W217576	8004.6307	N	2,00	1	NH4GG50V630-8
4	800	70,0	*)	E218090	8004.8007	N	2,00	1	NH4GG50V800-8
4	1000	83,3	*)	H201694	8004.1007	N	2,00	1	NH4GG50V1000-8
4	1250	110,0	*)	C213994	8004.1257	N	2,00	1	NH4GG50V1250-8

contact blades for NH-bottom size 4a with swivel unit

4a	500	35,0	*)	D201184	8014.5007	N	1,95	1	NH4AGG50V500-8
4a	630	46,6	*)	T205752	8014.6307	N	1,95	1	NH4AGG50V630-8
4a	800	70,0	*)	Y211437	8014.8007	N	1,95	1	NH4AGG50V800-8
4a	1000	83,3	*)	A219650	8014.1007	N	1,95	1	NH4AGG50V1000-8
4a	1250	110,0	*)	J200637	8014.1257	N	1,95	1	NH4AGG50V1250-8

*) with indicator on top

(1) Suitable for Microswitch describes page 106

General Purpose IEC Fuses



Cd/Pb-free

NH Fuses (Plain Blades) gG 400V, 500V, 690V gG 500V Size 000 to 3 - Isolated Lug

NH-fuses, 500VAC gG

with isolated metal gripping lugs (SGL), double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	weight kg/pce	pack.	Catalog Number
000	2	1,9	C219652	1F613.	0,14	3	NH000GG50V2-1
000	4	1,5	N205770	1F619.	0,14	3	NH000GG50V4-1
000	6	1,6	P212464	1F623.	0,14	3	NH000GG50V6-1
000	10	1,1	V215528	1F631.	0,14	3	NH000GG50V10-1
000	16	1,8	F213997	1F635.	0,14	9	NH000GG50V16-1
000	20	2,3	F218091	1F637.	0,14	9	NH000GG50V20-1
000	25	2,4	K200638	1F639.	0,14	9	NH000GG50V25-1
000	32	3,1	D213489	1F643.	0,14	9	NH000GG50V32-1
000	35	3,0	G201187	1F645.	0,14	9	NH000GG50V35-1
000	40	3,7	D219653	1F647.	0,14	9	NH000GG50V40-1
000	50	4,1	C222849	1F651.	0,14	9	NH000GG50V50-1
000	63	5,4	R212466	1F655.	0,14	9	NH000GG50V63-1
000	80	6,5	N215016	1F659.	0,14	9	NH000GG50V80-1
000	100	7,5	J201189	1F663.	0,14	9	NH000GG50V100-1
00	125	10,0	V200808	1F765.	0,20	3	NH00GG50V125-1
00	160	12,3	W201867	1F769.	0,20	3	NH00GG50V160-1
0	6	1,6	B212636	1F023.	0,26	3	NH0GG50V6-1
0	10	1,1	M213152	1F031.	0,26	3	NH0GG50V10-1
0	16	1,8	E213651	1F035.	0,26	3	NH0GG50V16-1
0	20	2,3	L214163	1F037.	0,26	3	NH0GG50V20-1
0	25	2,4	P214672	1F039.	0,26	3	NH0GG50V25-1
0	32	3,1	V215183	1F043.	0,26	3	NH0GG50V32-1
0	35	3,0	W215690	1F045.	0,26	3	NH0GG50V35-1
0	40	3,7	C216202	1F047.	0,26	3	NH0GG50V40-1
0	50	4,1	A216706	1F051.	0,26	3	NH0GG50V50-1
0	63	6,6	N217224	1F055.	0,26	3	NH0GG50V63-1
0	80	8,0	T217735	1F059.	0,26	3	NH0GG50V80-1
0	100	9,4	D218250	1F063.	0,26	3	NH0GG50V100-1
0	125	11,8	S218769	1F065.	0,26	3	NH0GG50V125-1
0	160	14,6	F219287	1F069.	0,26	3	NH0GG50V160-1
1	16	1,8	H219818	1F135.	0,29	3	NH1GG50V16-1
1	20	2,3	T222496	1F137.	0,29	3	NH1GG50V20-1
1	25	2,4	K223017	1F139.	0,29	3	NH1GG50V25-1
1	32	3,1	R200805	1F143.	0,29	3	NH1GG50V32-1
1	35	3,0	G201348	1F145.	0,29	3	NH1GG50V35-1
1	40	3,7	Q211085	1F147.	0,29	3	NH1GG50V40-1
1	50	4,1	L212116	1F151.	0,29	3	NH1GG50V50-1
1	63	6,6	N213153	1F155.	0,29	3	NH1GG50V63-1
1	80	8,0	M214164	1F159.	0,29	3	NH1GG50V80-1
1	100	9,4	W215184	1F163.	0,29	3	NH1GG50V100-1
1	125	11,8	D216203	1F165.	0,42	3	NH1GG50V125-1
1	160	14,6	B216707	1F169.	0,42	3	NH1GG50V160-1
1	200	18,0	P217225	1F171.	0,42	3	NH1GG50V200-1
1	224	19,0	V217736	1F173.	0,42	3	NH1GG50V224-1
1	250	20,0	E218251	1F175.	0,42	3	NH1GG50V250-1

Non suitable for Microswitch.

General Purpose IEC Fuses



NH Fuses (Plain Blades) gG 400V, 500V, 690V gG 500V Size 000 to 3 - Isolated Lug



NH-fuses, 500VAC gG

with isolated metal gripping lugs (SGL), double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1



Cd/Pb-free

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	weight kg/pce	pack.	Catalog Number
2	25	2,4	J219819	1F239.	0,42	3	NH2GG50V25-1
2	32	3,1	V222497	1F243.	0,42	3	NH2GG50V32-1
2	35	3,0	L223018	1F245.	0,42	3	NH2GG50V35-1
2	40	3,7	S200806	1F247.	0,42	3	NH2GG50V40-1
2	50	4,1	H201349	1F251.	0,42	3	NH2GG50V50-1
2	63	6,8	T201865	1F255.	0,42	3	NH2GG50V63-1
2	80	8,3	F211605	1F259.	0,42	3	NH2GG50V80-1
2	100	10,7	P213154	1F263.	0,42	3	NH2GG50V100-1
2	125	12,2	N214165	1F265.	0,42	3	NH2GG50V125-1
2	160	15,0	X215185	1F269.	0,42	3	NH2GG50V160-1
2	200	18,5	E216204	1F271.	0,42	3	NH2GG50V200-1
2	224	19,2	Q217226	1F273.	0,42	3	NH2GG50V224-1
2	250	20,6	F218252	1F275.	0,42	3	NH2GG50V250-1
2	300	21,0	H219289	1F277.	0,64	3	NH2GG50V300-1
2	315	25,0	K219820	1F279.	0,64	3	NH2GG50V315-1
2	355	31,5	M223019	1F281.	0,64	3	NH2GG50V355-1
2	400	28,5	T200807	1F283.	0,64	3	NH2GG50V400-1
3	250	21,1	J201350	1F375.	0,65	1	NH3GG50V250-1
3	300	20,0	S211087	1F377.	0,65	1	NH3GG50V300-1
3	315	25,0	G211606	1F379.	0,65	1	NH3GG50V315-1
3	355	32,0	E212639	1F381.	0,65	1	NH3GG50V355-1
3	400	34,0	H213654	1F383.	1,05	1	NH3GG50V400-1
3	425	34,0	S214675	1F385.	1,05	1	NH3GG50V425-1
3	450	38,0	Z215693	1F386.	1,05	1	NH3GG50V450-1
3	500	43,0	F216205	1F387.	1,05	1	NH3GG50V500-1
3	630	43,1	D216709	1F389.	1,05	1	NH3GG50V630-1

Non suitable for Microswitch.

General Purpose IEC Fuses



Cd/Pb-free

NH Fuses (Plain Blades)
gG 400V, 500V, 690V
gG 690V Size 000 to 4a

NH-fuses, 690VAC gG

with non-isolated gripping lugs, double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
000	2	1,9	E228440	1C613.	Y	0,13	3	NH000GG69V2
000	4	1,5	F228441	1C619.	Y	0,13	3	NH000GG69V4
000	6	1,6	G228442	1C623.	Y	0,13	3	NH000GG69V6
000	10	1,1	J228444	1C631.	Y	0,13	3	NH000GG69V10
000	16	1,8	K228445	1C635.	Y	0,13	3	NH000GG69V16
000	20	2,3	L228446	1C637.	Y	0,13	3	NH000GG69V20
000	25	2,4	M228447	1C639.	Y	0,13	3	NH000GG69V25
000	32	3,1	N228448	1C643.	Y	0,13	3	NH000GG69V32
000	35	3,0	P228449	1C645.	Y	0,13	3	NH000GG69V35
000	40	3,7	Q228450	1C647.	Y	0,13	3	NH000GG69V40
000	50	4,1	R228451	1C651.	Y	0,13	3	NH000GG69V50
000	63	5,4	S228452	1C655.	Y	0,13	3	NH000GG69V63
000	80	6,5	T228453	1C659.	Y	0,13	3	NH000GG69V80
00	32	3,1	V228454	1C743.	Y	0,20	3	NH00GG69V32
00	35	3,0	W228455	1C745.	Y	0,20	3	NH00GG69V35
00	40	3,7	X228456	1C747.	Y	0,20	3	NH00GG69V40
00	50	4,1	Y228457	1C751.	Y	0,20	3	NH00GG69V50
00	63	5,6	Z228458	1C755.	Y	0,20	3	NH00GG69V63
00	80	6,8	A228459	1C759.	Y	0,20	3	NH00GG69V80
00	100	7,5	B228460	1C763.	Y	0,20	3	NH00GG69V100
00	125	10,0	C228461	1C765.	Y	0,20	3	NH00GG69V125
0	6	1,6	D228462	1C023.	Y	0,27	3	NH0GG69V6
0	10	1,1	E228463	1C031.	Y	0,27	3	NH0GG69V10
0	16	1,8	F228464	1C035.	Y	0,27	3	NH0GG69V16
0	20	2,3	G228465	1C037.	Y	0,27	3	NH0GG69V20
0	25	2,4	H228466	1C039.	Y	0,27	3	NH0GG69V25
0	32	3,1	J228467	1C043.	Y	0,27	3	NH0GG69V32
0	35	3,0	K228468	1C045.	Y	0,27	3	NH0GG69V35
0	40	3,7	L228469	1C047.	Y	0,27	3	NH0GG69V40
0	50	4,1	M228470	1C051.	Y	0,27	3	NH0GG69V50
0	63	6,6	N228471	1C055.	Y	0,27	3	NH0GG69V63
0	80	8,0	P228472	1C059.	Y	0,27	3	NH0GG69V80
0	100	9,4	Q228473	1C063.	Y	0,27	3	NH0GG69V100
0	125	11,8	R228474	1C065.	Y	0,27	3	NH0GG69V125
0	160	14,6	S228475	1C069.	Y	0,27	3	NH0GG69V160
1	16	1,8	T228476	1C135.	N	0,26	3	NH1GG69V16
1	20	2,3	V228477	1C137.	N	0,26	3	NH1GG69V20
1	25	2,4	W228478	1C139.	N	0,26	3	NH1GG69V25
1	32	3,1	X228479	1C143.	N	0,26	3	NH1GG69V32
1	35	3,0	Y228480	1C145.	N	0,26	3	NH1GG69V35
1	40	3,7	Z228481	1C147.	N	0,26	3	NH1GG69V40
1	50	4,1	A228482	1C151.	N	0,26	3	NH1GG69V50
1	63	6,6	B228483	1C155.	N	0,26	3	NH1GG69V63
1	80	8,0	C228484	1C159.	N	0,26	3	NH1GG69V80
1	100	9,4	D228485	1C163.	N	0,26	3	NH1GG69V100
1	125	11,8	E228486	1C165.	N	0,42	3	NH1GG69V125
1	160	14,6	F228487	1C169.	N	0,42	3	NH1GG69V160
1	200	18,0	G228488	1C171.	Y	0,42	3	NH1GG69V200
1	224	19,0	V233261	1C173.	Y	0,42	3	NH1GG69V224
1	250	20,0	W233262	1C175.	Y	0,42	3	NH1GG69V250

(1) Suitable for Microswitch describes page 106

General Purpose IEC Fuses



NH Fuses (Plain Blades) gG 400V, 500V, 690V gG 690V Size 000 to 4a



NH-fuses, 690VAC gG

with non-isolated gripping lugs, double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1

Cd/Pb-free

Size	Rated current I_N (A)	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
2	32	3,1	H228489	1C243.	N	0,42	3	NH2GG69V32
2	35	3,0	J228490	1C245.	N	0,42	3	NH2GG69V35
2	40	3,7	K228491	1C247.	N	0,42	3	NH2GG69V40
2	50	4,1	L228492	1C251.	N	0,42	3	NH2GG69V50
2	63	6,8	M228493	1C255.	N	0,42	3	NH2GG69V63
2	80	8,3	N228494	1C259.	N	0,42	3	NH2GG69V80
2	100	10,7	P228495	1C263.	N	0,42	3	NH2GG69V100
2	125	12,2	Q228496	1C265.	Y	0,42	3	NH2GG69V125
2	160	15,0	R228497	1C269.	Y	0,42	3	NH2GG69V160
2	200	18,5	S228498	1C271.	Y	0,42	3	NH2GG69V200
2	224	19,2	T228499	1C273.	Y	0,42	3	NH2GG69V224
2	250	20,6	V228500	1C275.	Y	0,42	3	NH2GG69V250
2	300	21,0	W228501	1C277.	Y	0,64	3	NH2GG69V300
2	315	25,0	X228502	1C279.	Y	0,65	3	NH2GG69V315
2	355	31,5	Y228503	1C281.	Y	0,65	3	NH2GG69V355
3	250	21,1	Z228504	1C375.	N	0,65	1	NH3GG69V250
3	300	22,6	A228505	1C377.	N	0,65	1	NH3GG69V300
3	315	25,0	B228506	1C379.	Y	0,65	1	NH3GG69V315
3	355	32,0	C228507	1C381.	Y	0,65	1	NH3GG69V355
3	400	34,0	D228508	1C383.	Y	1,05	1	NH3GG69V400
3	425	34,0	E228509	1C385.	Y	1,05	1	NH3GG69V425
3	500	43,0	F228510	1C387.	Y	1,05	1	NH3GG69V500

with screw contact

4	400	31,0	*)	N214004	8004.400765	N	2,00	1	NH4GG69V400-8
4	500	35,0	*)	Y215025	8004.500765	N	2,00	1	NH4GG69V500-8
4	630	46,6	*)	E215537	8004.630765	N	2,00	1	NH4GG69V630-8
4	800	70,0	*)	K216554	8004.800765	N	2,00	1	NH4GG69V800-8

contact blades for NH-bottom size 4a with swivel unit

4a	400	31,0	*)	W217070	8014.400765	N	1,95	1	NH4AGG69V400-8
4a	500	35,0	*)	H217587	8014.500765	N	1,95	1	NH4AGG69V500-8
4a	630	46,6	*)	W222107	8014.630765	N	1,95	1	NH4AGG69V630-8
4a	800	70,0	*)	M222858	8014.800765	N	1,95	1	NH4AGG69V800-8

*) with indicator on top

(1) Suitable for Microswitch describes page 106

General Purpose IEC Fuses



Cd/Pb-free

with isolated metal gripping lugs (SGL), double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1

NH Fuses (Plain Blades) gG 400V, 500V, 690V gG 400V Size 000 to 3 - Isolated Lug

NH-fuses, 690VAC gG

Size	Rated current I _N (A)	Power dissipation (W)	FS ref.-no.	Previous ref.	weight kg/pce	pack.	Catalog Number
000	2	1,9	D229704	1G613.	0,14	3	NH000GG69V2-1
000	4	1,5	E229705	1G619.	0,14	3	NH000GG69V4-1
000	6	1,6	F229706	1G623.	0,14	3	NH000GG69V6-1
000	10	1,1	H229708	1G631.	0,14	3	NH000GG69V10-1
000	16	1,8	J229709	1G635.	0,14	3	NH000GG69V16-1
000	20	2,3	K229710	1G637.	0,14	3	NH000GG69V20-1
000	25	2,4	L229711	1G639.	0,14	3	NH000GG69V25-1
000	32	3,1	M229712	1G643.	0,14	3	NH000GG69V32-1
000	35	3,0	N229713	1G645.	0,14	3	NH000GG69V35-1
000	40	3,7	P229714	1G647.	0,14	3	NH000GG69V40-1
000	50	4,1	Q229715	1G651.	0,14	3	NH000GG69V50-1
000	63	5,4	R229716	1G655.	0,14	3	NH000GG69V63-1
000	80	6,5	S229717	1G659.	0,14	3	NH000GG69V80-1
00	32	3,1	T229718	1G743.	0,20	3	NH00GG69V32-1
00	35	3,0	V229719	1G745.	0,20	3	NH00GG69V35-1
00	40	3,7	W229720	1G747.	0,20	3	NH00GG69V40-1
00	50	4,1	X229721	1G751.	0,20	3	NH00GG69V50-1
00	63	5,6	Y229722	1G755.	0,20	3	NH00GG69V63-1
00	80	6,8	Z229723	1G759.	0,20	3	NH00GG69V80-1
00	100	7,5	A229724	1G763.	0,20	3	NH00GG69V100-1
00	125	10,0	B229725	1G765.	0,20	3	NH00GG69V125-1
0	6	1,6	C229726	1G023.	0,26	3	NH0GG69V6-1
0	10	1,1	D229727	1G031.	0,26	3	NH0GG69V10-1
0	16	1,8	E229728	1G035.	0,26	3	NH0GG69V16-1
0	20	2,3	F229729	1G037.	0,26	3	NH0GG69V20-1
0	25	2,4	G229730	1G039.	0,26	3	NH0GG69V25-1
0	32	3,1	H229731	1G043.	0,26	3	NH0GG69V32-1
0	35	3,0	J229732	1G045.	0,26	3	NH0GG69V35-1
0	40	3,7	K229733	1G047.	0,26	3	NH0GG69V40-1
0	50	4,1	L229734	1G051.	0,26	3	NH0GG69V50-1
0	63	6,6	M229735	1G055.	0,26	3	NH0GG69V63-1
0	80	8,0	N229736	1G059.	0,26	3	NH0GG69V80-1
0	100	9,4	P229737	1G063.	0,26	3	NH0GG69V100-1
0	125	11,8	Q229738	1G065.	0,26	3	NH0GG69V125-1
0	160	14,6	R229739	1G069.	0,26	3	NH0GG69V160-1
1	16	1,8	S229740	1G135.	0,29	1	NH1GG69V16-1
1	20	2,3	T229741	1G137.	0,29	1	NH1GG69V20-1
1	25	2,4	V229742	1G139.	0,29	1	NH1GG69V25-1
1	32	3,1	W229743	1G143.	0,29	1	NH1GG69V32-1
1	35	3,0	X229744	1G145.	0,29	1	NH1GG69V35-1
1	40	3,7	Y229745	1G147.	0,29	1	NH1GG69V40-1
1	50	4,1	Z229746	1G151.	0,29	1	NH1GG69V50-1
1	63	6,6	A229747	1G155.	0,29	1	NH1GG69V63-1
1	80	8,0	B229748	1G159.	0,29	1	NH1GG69V80-1
1	100	9,4	C229749	1G163.	0,29	1	NH1GG69V100-1
1	125	11,8	D229750	1G165.	0,42	1	NH1GG69V125-1
1	160	14,6	E229751	1G169.	0,42	1	NH1GG69V160-1
1	200	18,0	F229752	1G171.	0,42	1	NH1GG69V200-1
1	224	19,0	G229753	1G173.	0,42	1	NH1GG69V224-1
2	32	3,1	J229755	1G243.	0,43	1	NH2GG69V32-1
2	35	3,0	K229756	1G245.	0,43	1	NH2GG69V35-1
2	40	3,7	L229757	1G247.	0,43	1	NH2GG69V40-1
2	50	4,1	M229758	1G251.	0,43	1	NH2GG69V50-1
2	63	6,8	N229759	1G255.	0,43	1	NH2GG69V63-1
2	80	8,3	P229760	1G259.	0,43	1	NH2GG69V80-1
2	100	10,7	Q229761	1G263.	0,43	1	NH2GG69V100-1
2	125	12,2	R229762	1G265.	0,43	1	NH2GG69V125-1
2	160	15,0	S229763	1G269.	0,43	1	NH2GG69V160-1
2	200	18,5	T229764	1G271.	0,43	1	NH2GG69V200-1
2	224	19,2	V229765	1G273.	0,43	1	NH2GG69V224-1
2	250	20,6	D233729	1G275.	0,43	1	NH2GG69V250-1
2	300	21,0	X229767	1G277.	0,43	1	NH2GG69V300-1
2	315	25,0	Y229768	1G279.	0,65	1	NH2GG69V315-1
2	355	31,5	Z229769	1G281.	0,65	1	NH2GG69V355-1
3	250	21,1	A229770	1G375.	0,65	1	NH3GG69V250-1
3	300	22,6	B229771	1G377.	1,01	1	NH3GG69V300-1
3	315	25,0	C229772	1G379.	1,01	1	NH3GG69V315-1
3	355	32,0	D229773	1G381.	1,01	1	NH3GG69V355-1
3	400	34,0	E229774	1G383.	1,01	1	NH3GG69V400-1
3	425	34,0	F229775	1G385.	1,01	1	NH3GG69V425-1

Non suitable for Microswitch.

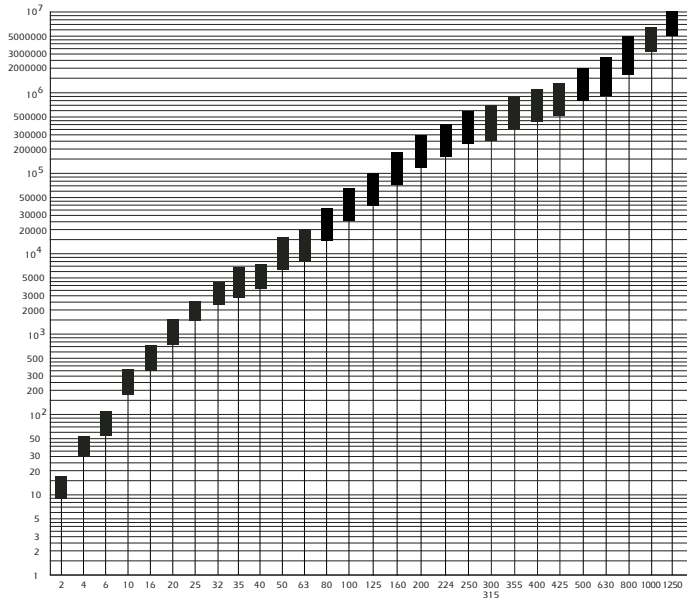
General Purpose IEC Fuses



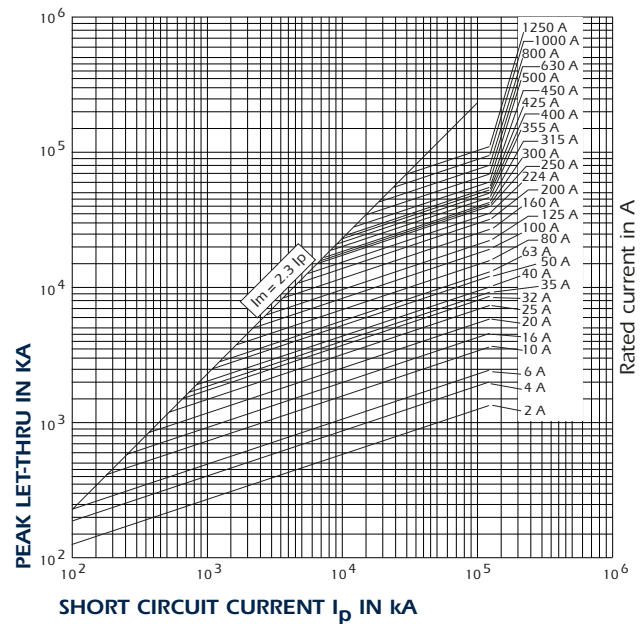
NH Fuses (Plain Blades)
gG 400V, 500V, 690V
gG Curves Set

NH-fuses, 400VAC, 500VAC gG

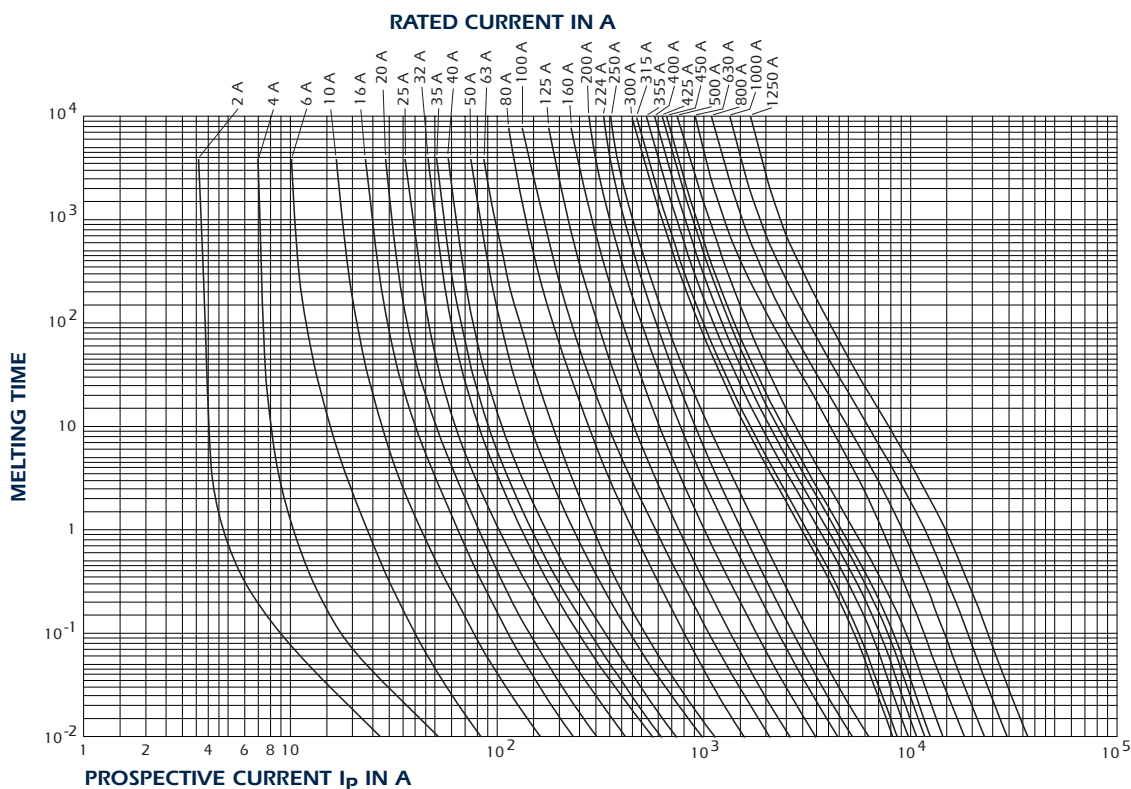
Total Clearing I^2t



Current Limitation Curves



Time VS. Current Characteristics

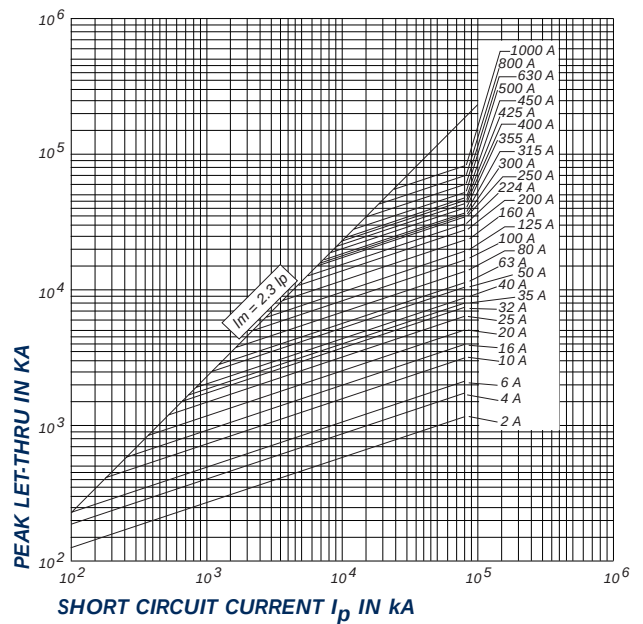
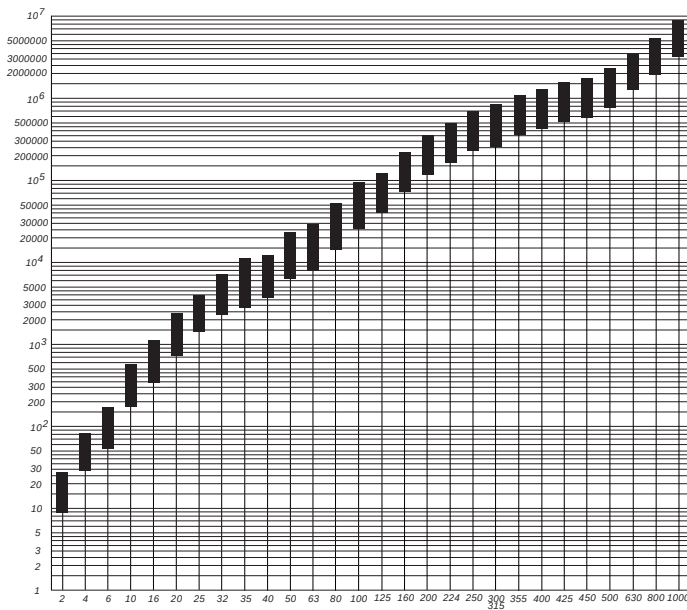


General Purpose IEC Fuses

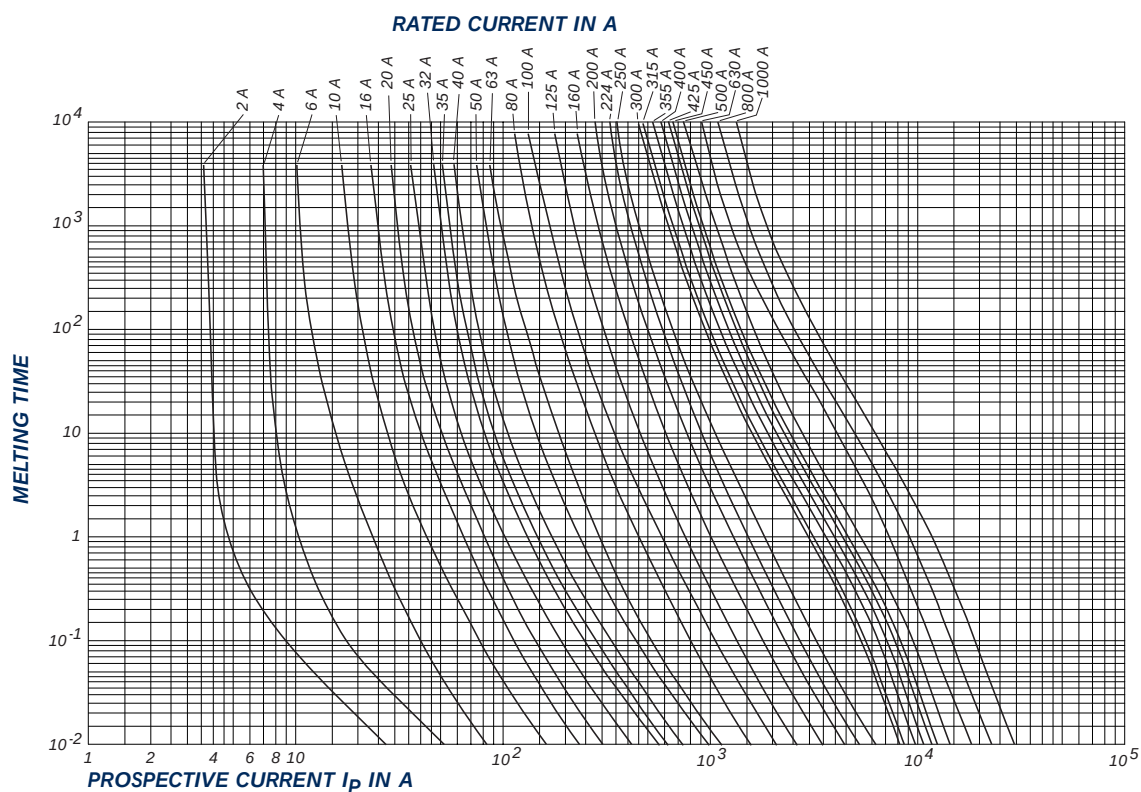
NH Fuses (Plain Blades)
gG 400V, 500V, 690V
gG Curves Set

NH-fuses, 690VAC gG
Current Limitation Curves

Total Clearing I^2t



Time VS. Current



General Purpose IEC Fuses



NH Fuses (Plain Blades) aM 500V, 690V aM 500V Size 000 to 4a



NH-fuses, 500VAC aM

with non-isolated gripping lugs, double indicator, contact blades,
complying with DIN VDE 0636 Part 201 and IEC 60269-2-1



Cd/Pb-free

Size	Rated current I_N (A)	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
000	2	0,1	K232493	2B613.	Y	0,13	3	NH000AM50V2
000	4	0,2	L232494	2B619.	Y	0,13	3	NH000AM50V4
000	6	0,3	M232495	2B623.	Y	0,13	3	NH000AM50V6
000	10	0,5	N232496	2B631.	Y	0,13	3	NH000AM50V10
000	16	0,7	P232497	2B635.	Y	0,13	3	NH000AM50V16
000	20	0,9	Q232498	2B637.	Y	0,13	3	NH000AM50V20
000	25	1,2	R232499	2B639.	Y	0,13	3	NH000AM50V25
000	32	1,5	S232500	2B643.	Y	0,13	3	NH000AM50V32
000	35	1,6	T232501	2B645.	Y	0,13	3	NH000AM50V35
000	40	1,8	V232502	2B647.	Y	0,13	3	NH000AM50V40
000	50	2,3	W232503	2B651.	Y	0,13	3	NH000AM50V50
000	63	2,9	X232504	2B655.	Y	0,13	3	NH000AM50V63
000	80	3,6	C227863	2B659.	Y	0,13	3	NH000AM50V80
00	100	5,8	Y232505	2B763.	Y	0,20	3	NH00AM50V100
00	125	6,4	Z232506	2B765.	Y	0,20	3	NH00AM50V125
00	160	7,9	J227869	2B769.	Y	0,20	3	NH00AM50V160
0	100	6,0	A232507	2B063.	Y	0,26	3	NH0AM50V100
0	125	7,9	B232508	2B065.	Y	0,26	3	NH0AM50V125
0	160	10,5	C232509	2B069.	Y	0,26	3	NH0AM50V160
0	200	11,8	A227884	2B071.	Y	0,26	3	NH0AM50V200
1	100	5,8	D232510	2B163.	Y	0,42	3	NH1AM50V100
1	125	7,5	E232511	2B165.	Y	0,42	3	NH1AM50V125
1	160	10,4	F232512	2B169.	Y	0,42	3	NH1AM50V160
1	200	14,2	G232513	2B171.	Y	0,42	3	NH1AM50V200
1	224	15,8	H232514	2B173.	Y	0,42	3	NH1AM50V224
1	250	17,5	J232515	2B175.	Y	0,42	3	NH1AM50V250
1	315	22,1	K227962	2B179.	Y	0,42	3	NH1AM50V315
2	250	16,8	K232516	2B275.	Y	0,64	3	NH2AM50V250
2	315	23,1	L232517	2B279.	Y	0,64	3	NH2AM50V315
2	355	26,4	M232518	2B281.	Y	0,64	3	NH2AM50V355
2	400	29,7	N232519	2B283.	Y	0,64	3	NH2AM50V400
2	500	34,4	C227978	2B287.	Y	0,64	3	NH2AM50V500
3	315	21,0	P232520	2B379.	Y	1,05	1	NH3AM50V315
3	355	23,3	Q232521	2B381.	Y	1,05	1	NH3AM50V355
3	400	29,1	R232522	2B383.	Y	1,05	1	NH3AM50V400
3	425	29,1	S232523	2B385.	Y	1,05	1	NH3AM50V425
3	450	34,0	T232524	2B386.	Y	1,05	1	NH3AM50V450
3	500	42,0	V232525	2B387.	Y	1,05	1	NH3AM50V500
3	630	42,0	M227987	2B389.	Y	1,05	1	NH3AM50V630

with screw contact

4	400	26,0	*)	P233555	8004.400505	N	2,18	1	NH4AM50V400-8
4	500	38,0	*)	Q233556	8004.500505	N	2,18	1	NH4AM50V500-8
4	630	50,0	*)	E222115	8004.630505	N	2,18	1	NH4AM50V630-8
4	800	65,0	*)	V222865	8004.800505	N	2,18	1	NH4AM50V800-8
4	1000	80,0	*)	S219137	8004.100505	N	2,18	1	NH4AM50V1000-8
4	1250	110,0	*)	V219668	8004.125505	N	2,21	1	NH4AM50V1250-8

contact blades for NH-bottom size 4a with swivel unit

4a	500	38,0	*)	R233557	8014.500505	N	2,00	1	NH4AAM50V500-8
4a	630	50,0	*)	S233558	8014.630505	N	2,00	1	NH4AAM50V630-8
4a	800	65,0	*)	T233559	8014.800505	N	2,00	1	NH4AAM50V800-8
4a	1000	80,0	*)	V233560	8014.100505	N	2,00	1	NH4AAM50V1000-8
4a	1250	110,0	*)	W233561	8014.125505	N	2,00	1	NH4AAM50V1250-8

*) with indicator on top

(1) Suitable for Microswitch describes page 106

General Purpose IEC Fuses



Cd/Pb-free

with non-isolated gripping lugs, double indicator, contact blades, complying with DIN VDE 0636 Part 201 and IEC 60269-2-1

NH Fuses (Plain Blades)
aM 500V, 690V
aM 690V Size 000 to 4a

NH-fuses, 690VAC aM

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
000	2	0,1	P227851	2C613.	Y	0,13	3	NH000AM69V2
000	4	0,2	Q227852	2C619.	Y	0,13	3	NH000AM69V4
000	6	0,3	R227853	2C623.	Y	0,13	3	NH000AM69V6
000	10	0,5	S227854	2C631.	Y	0,13	3	NH000AM69V10
000	16	0,7	T227855	2C635.	Y	0,13	3	NH000AM69V16
000	20	0,9	V227856	2C637.	Y	0,13	3	NH000AM69V20
000	25	1,2	W227857	2C639.	Y	0,13	3	NH000AM69V25
000	32	1,5	X227858	2C643.	Y	0,13	3	NH000AM69V32
000	35	1,6	Y227859	2C645.	Y	0,13	3	NH000AM69V35
000	40	1,8	Z227860	2C647.	Y	0,13	3	NH000AM69V40
000	50	2,3	A227861	2C651.	Y	0,13	3	NH000AM69V50
000	63	2,9	B227862	2C655.	Y	0,13	3	NH000AM69V63
00	50	2,3	D227864	2C751.	Y	0,20	3	NH00AM69V50
00	63	2,9	E227865	2C755.	Y	0,20	3	NH00AM69V63
00	80	3,6	F227866	2C759.	Y	0,20	3	NH00AM69V80
00	100	5,2	G227867	2C763.	Y	0,20	3	NH00AM69V100
00	125	6,4	H227868	2C765.	Y	0,20	3	NH00AM69V125
0	6	0,3	K227870	2C023.	Y	0,26	3	NH0AM69V6
0	10	0,5	L227871	2C031.	Y	0,26	3	NH0AM69V10
0	16	0,8	M227872	2C035.	Y	0,26	3	NH0AM69V16
0	20	1,0	N227873	2C037.	Y	0,26	3	NH0AM69V20
0	25	1,3	P227874	2C039.	Y	0,26	3	NH0AM69V25
0	32	1,6	Q227875	2C043.	Y	0,26	3	NH0AM69V32
0	35	1,7	R227876	2C045.	Y	0,26	3	NH0AM69V35
0	40	2,0	S227877	2C047.	Y	0,26	3	NH0AM69V40
0	50	2,8	T227878	2C051.	Y	0,26	3	NH0AM69V50
0	63	3,4	V227879	2C055.	Y	0,26	3	NH0AM69V63
0	80	4,9	W227880	2C059.	Y	0,26	3	NH0AM69V80
0	100	6,0	X227881	2C063.	Y	0,26	3	NH0AM69V100
0	125	7,9	Y227882	2C065.	Y	0,26	3	NH0AM69V125
0	160	10,5	Z227883	2C069.	Y	0,26	3	NH0AM69V160
1	16	1,0	B227885	2C135.	Y	0,43	3	NH1AM69V16
1	20	1,2	C227886	2C137.	Y	0,43	3	NH1AM69V20
1	25	1,4	D227887	2C139.	Y	0,43	3	NH1AM69V25
1	32	1,9	E227888	2C143.	Y	0,43	3	NH1AM69V32
1	35	2,0	F227889	2C145.	Y	0,43	3	NH1AM69V35
1	40	2,3	G227890	2C147.	Y	0,43	3	NH1AM69V40
1	50	2,9	H227891	2C151.	Y	0,43	3	NH1AM69V50
1	63	3,6	J227892	2C155.	Y	0,43	3	NH1AM69V63
1	80	4,6	K227893	2C159.	Y	0,43	3	NH1AM69V80
1	100	5,8	L227894	2C163.	Y	0,43	3	NH1AM69V100
1	125	7,5	M227895	2C165.	Y	0,43	3	NH1AM69V125
1	160	10,4	N227896	2C169.	Y	0,43	3	NH1AM69V160
1	200	14,2	P227897	2C171.	Y	0,43	3	NH1AM69V200
1	224	15,8	Q227898	2C173.	Y	0,43	3	NH1AM69V224
1	250	17,5	R227899	2C175.	Y	0,43	3	NH1AM69V250

(1) Suitable for Microswitch describes page 106

General Purpose IEC Fuses



NH Fuses (Plain Blades) aM 500V, 690V aM 690V Size 000 to 4a



NH-fuses, 690VAC aM

with non-isolated gripping lugs, double indicator, contact blades,
complying with DIN VDE 0636 Part 21 and IEC 60269-2-1



Cd/Pb-free

Size	Rated current $I_N(A)$	Power dissipation (W)	FS ref.-no.	Previous ref.	Micro- switch ⁽¹⁾	weight kg/pce	pack.	Catalog Number
2	35	1,8	L227963	2C245.	Y	0,64	3	NH2AM69V35
2	40	2,1	M227964	2C247.	Y	0,64	3	NH2AM69V40
2	50	2,7	N227965	2C251.	Y	0,64	3	NH2AM69V50
2	63	3,4	P227966	2C255.	Y	0,64	3	NH2AM69V63
2	80	4,4	Q227967	2C259.	Y	0,64	3	NH2AM69V80
2	100	5,5	R227968	2C263.	Y	0,64	3	NH2AM69V100
2	125	6,4	S227969	2C265.	Y	0,64	3	NH2AM69V125
2	160	9,3	T227970	2C269.	Y	0,64	3	NH2AM69V160
2	200	11,3	V227971	2C271.	Y	0,64	3	NH2AM69V200
2	224	12,2	W227972	2C273.	Y	0,64	3	NH2AM69V224
2	250	16,8	X227973	2C275.	Y	0,64	3	NH2AM69V250
2	300	21,0	Y227974	2C277.	Y	0,64	3	NH2AM69V300
2	315	23,1	Z227975	2C279.	Y	0,64	3	NH2AM69V315
2	355	26,4	A227976	2C281.	Y	0,64	3	NH2AM69V355
2	400	29,7	B227977	2C283.	Y	0,64	3	NH2AM69V400
3	250	14,6	D227979	2C375.	Y	1,05	1	NH3AM69V250
3	300	21,0	E227980	2C377.	Y	1,05	1	NH3AM69V300
3	315	21,0	F227981	2C379.	Y	1,05	1	NH3AM69V315
3	355	23,3	G227982	2C381.	Y	1,05	1	NH3AM69V355
3	400	29,1	H227983	2C383.	Y	1,05	1	NH3AM69V400
3	425	29,1	J227984	2C385.	Y	1,05	1	NH3AM69V425
3	450	34,0	K227985	2C386.	Y	1,05	1	NH3AM69V450
3	500	42,0	L227986	2C387.	Y	1,05	1	NH3AM69V500
with screw contact								
4	400	26,0 *)	Q227990	8004.40056	N	2,00	1	NH4AM69V400-8
4	500	38,0 *)	R227991	8004.50056	N	2,00	1	NH4AM69V500-8
4	630	50,0 *)	S227992	8004.63056	N	1,75	1	NH4AM69V630-8
4	800	65,0 *)	T227993	8004.80056	N	1,75	1	NH4AM69V800-8
4	1000	80,0 *)	V227994	8004.10056	N	2,00	1	NH4AM69V1000-8
contact blades for NH-bottom size 4a with swivel unit								
4a	500	38,0 *)	X227996	8014.50056	N	1,95	1	NH4AAM69V500-8
4a	630	50,0 *)	Y227997	8014.63056	N	1,95	1	NH4AAM69V630-8
4a	800	65,0 *)	A227999	8014.80056	N	1,95	1	NH4AAM69V800-8
4a	1000	80,0 *)	B228000	8014.10056	N	1,95	1	NH4AAM69V1000-8

*) with indicator on top

(1) Suitable for Microswitch describes page 106

General Purpose IEC Fuses

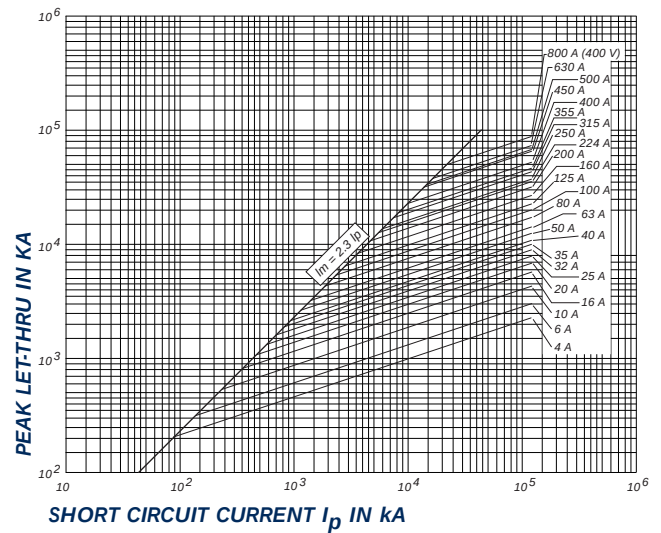
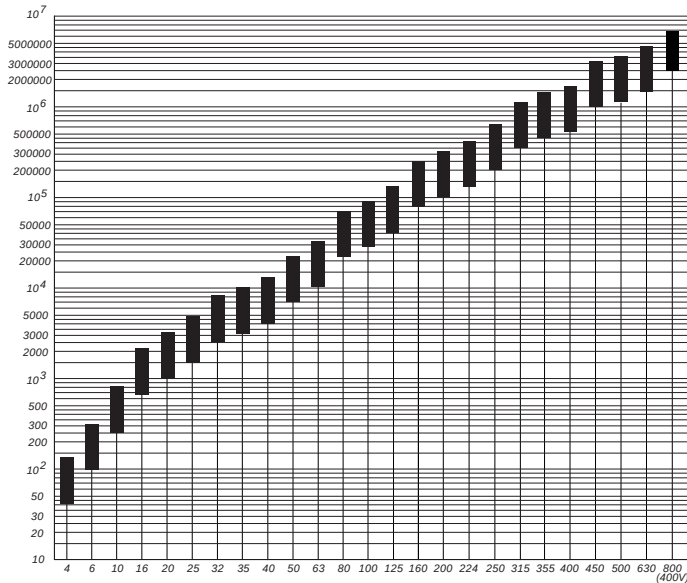
NH Fuses (Plain Blades)
aM 500V, 690V
aM Curves Set



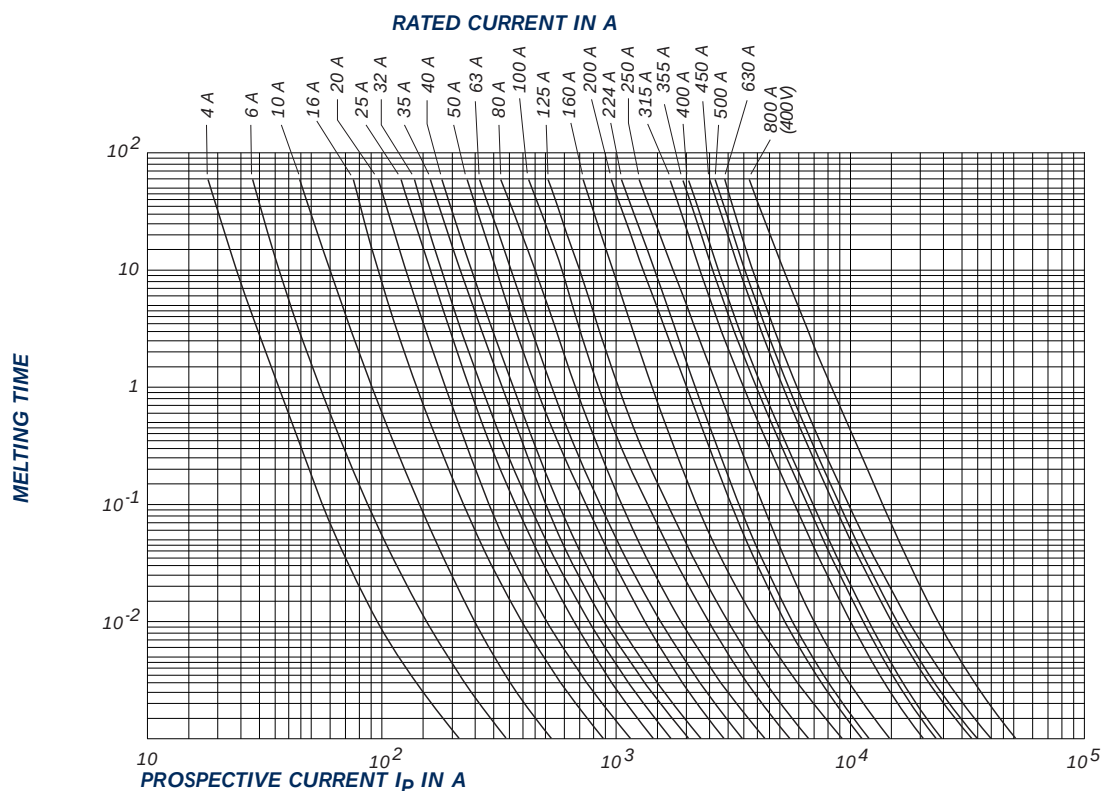
NH-fuses, 500VAC aM

Current Limitation Curves

Total Clearing I^2t



Time VS. Current Characteristics



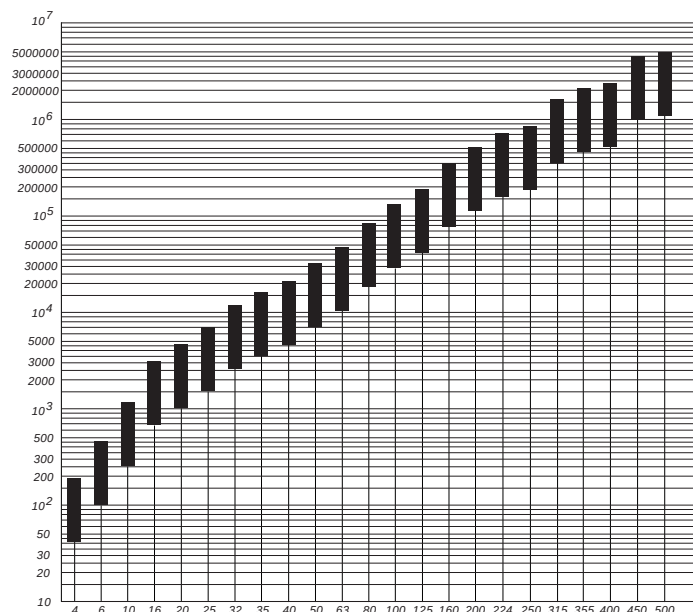
General Purpose IEC Fuses



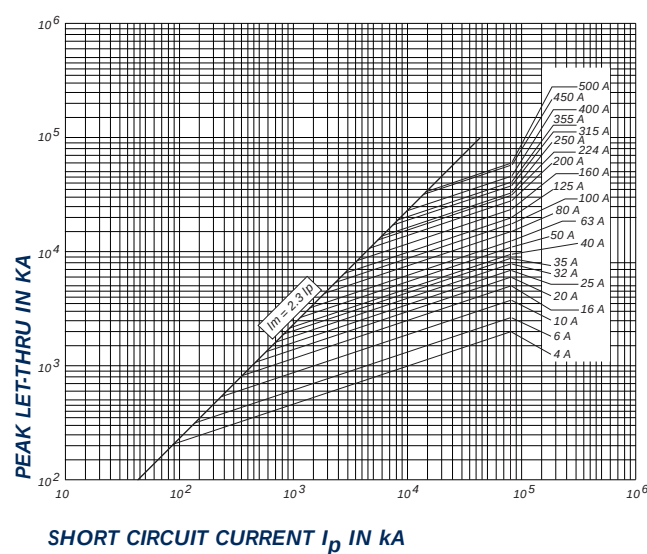
NH Fuses (Plain Blades) aM 500V, 690V aM Curves Set



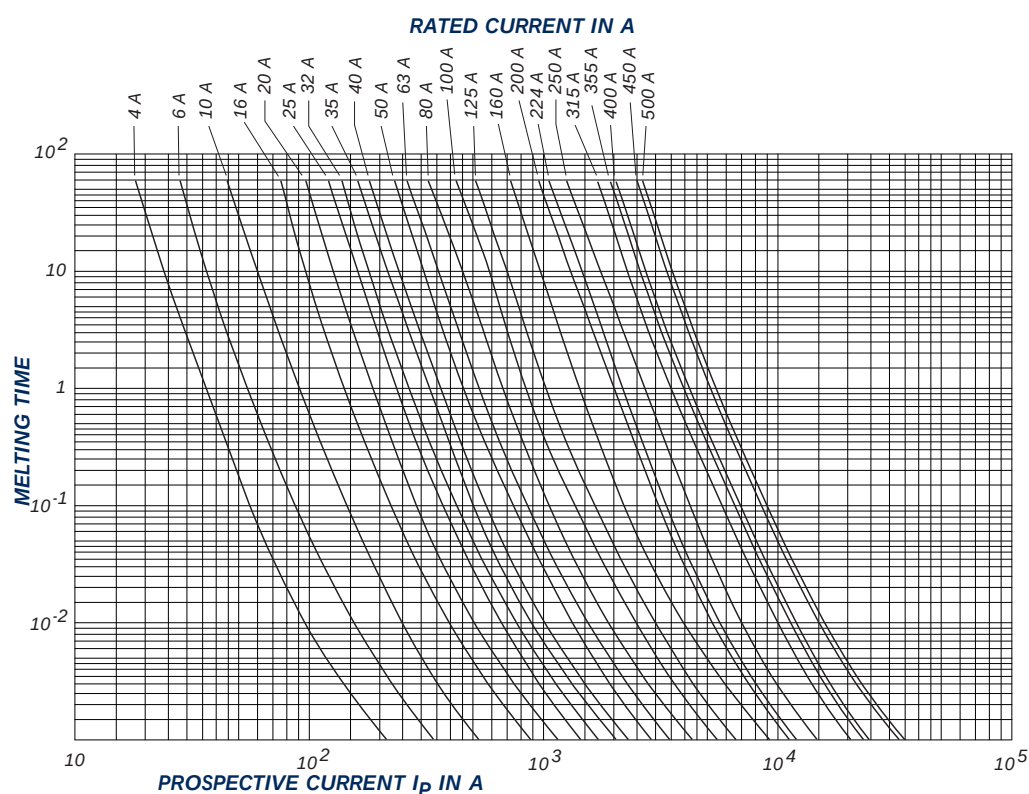
NH-fuses, 690VAC aM Total Clearing I^2t



Current Limitation Curves



Time VS. Current Characteristics



General Purpose IEC Fuses



NH Fuses (Plain Blades) 400V gTr

NH-fuses, 400VAC gTr

with non-isolated gripping
lugs, double indicator,
contact blades, complying
with DIN VDE 0636 Part 22,
DIN VDE 0636 Part 201

Size	Voltage	Transformer capacity (kVA)	Rated current I_N (A)	Power dissipation (W)	FS ref.-no.	Previous ref.	weight kg/pce	pack.	Catalog Number
2	400	50,0	72		H232813 ⁽²⁾	5A251.	0,37	1	NH2GTR50KVA
2	400	75,0	108		G232812 ⁽²⁾	5A257.	0,37	1	NH2GTR75KVA
2	400	100,0	145	12,0	B232807 ⁽²⁾	5A263.	0,37	1	NH2GTR100KVA
2	400	125,0	181	15,0	C232808 ⁽²⁾	5A265.	0,37	1	NH2GTR125KVA
2	400	160,0	231	18,4	D232809 ⁽²⁾	5A269.	0,37	1	NH2GTR160KVA
2	400	200,0	289	22,0	E232810 ⁽²⁾	5A271.	0,37	1	NH2GTR200KVA
2	400	250,0	361	27,0	F232811 ⁽²⁾	5A275.	0,37	1	NH2GTR250KVA
3	400	250,0	361	26,0	J232814 ⁽²⁾	5A375.	0,61	1	NH3GTR250KVA
3	400	315,0	455	34,0	K232815 ⁽²⁾	5A379.	0,61	1	NH3GTR315KVA
3	400	400,0	578	39,0	L232816 ⁽²⁾	5A383.	0,61	1	NH3GTR400KVA
3	400	500,0	723		M232817	5A387.	0,81	1	NH3GTR500KVA
3	400	630,0	910		N232818	5A389.	0,81	1	NH3GTR630KVA

contact blades for NH-bottom size 4a with swivel unit

4a	400	100,0	145	11,4 *	T212997	8008.100005	2,09	1	NH4AGTR100KVA-8
4a	400	125,0	181	14,5 *	Y213507	8008.125005	2,17	1	NH4AGTR125KVA-8
4a	400	160,0	231	17,8 *	Z214014	8008.160005	1,95	1	NH4AGTR160KVA-8
4a	400	200,0	289	20,6 *	C214523	8008.200005	1,95	1	NH4AGTR200KVA-8
4a	400	250,0	361	25,7 *	F215032	8008.250005	2,13	1	NH4AGTR250KVA-8
4a	400	315,0	455	33,2 *	M215544	8008.315005	1,95	1	NH4AGTR315KVA-8
4a	400	400,0	578	38,1 *	S216055	8008.400005	1,95	1	NH4AGTR400KVA-8
4a	400	500,0	723	53,2 *	V216563	8008.500005	1,95	1	NH4AGTR500KVA-8
4a	400	630,0	910	68,7 *	E217078	8008.630005	1,95	1	NH4AGTR630KVA-8
4a	400	800,0	1155	90,4 *	R217595	8008.800005	2,10	1	NH4AGTR800KVA-8

*) with indicator on top

⁽²⁾ These fuses are able to operate at 500VAC (tested at 550V +0 +5%).

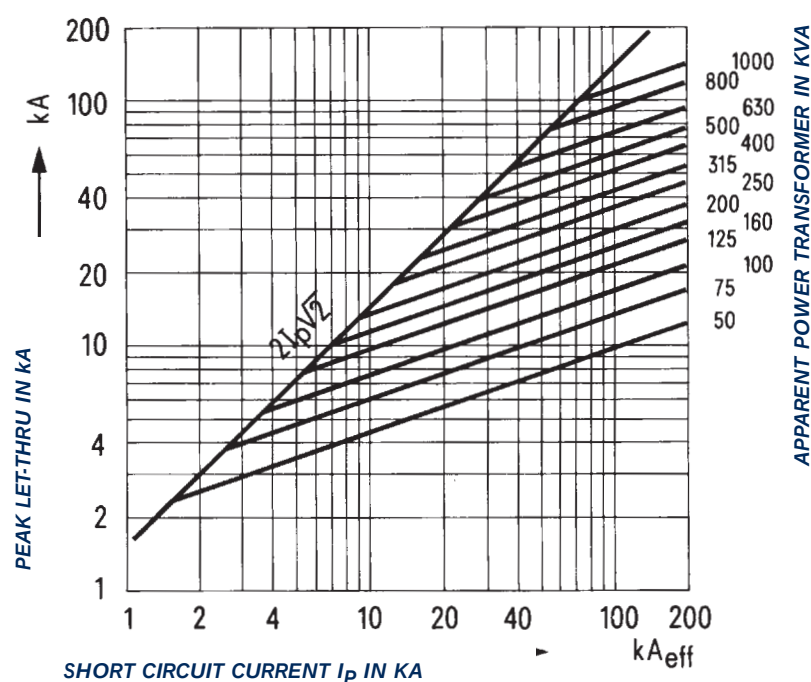
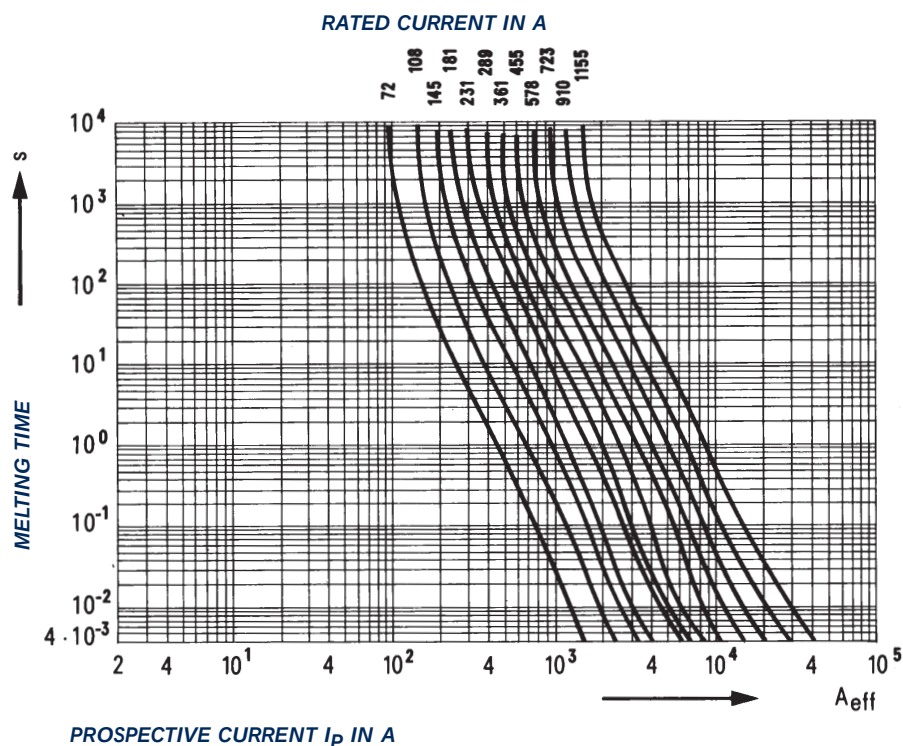
General Purpose IEC Fuses



NH Fuses (Plain Blades) 400V gTr gTr Curves Set

NH-fuses, 400VAC gTr

Time VS. Current Characteristics

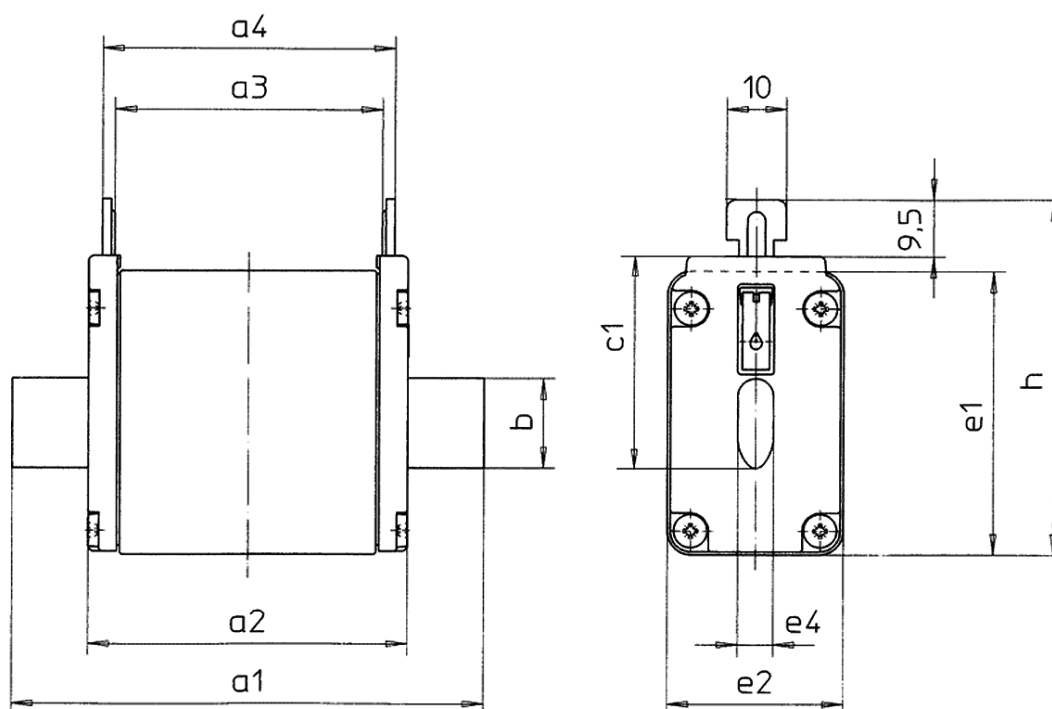


General Purpose IEC Fuses



NH Fuses (Plain Blades) gG/aM Mechanics for ceramic Body

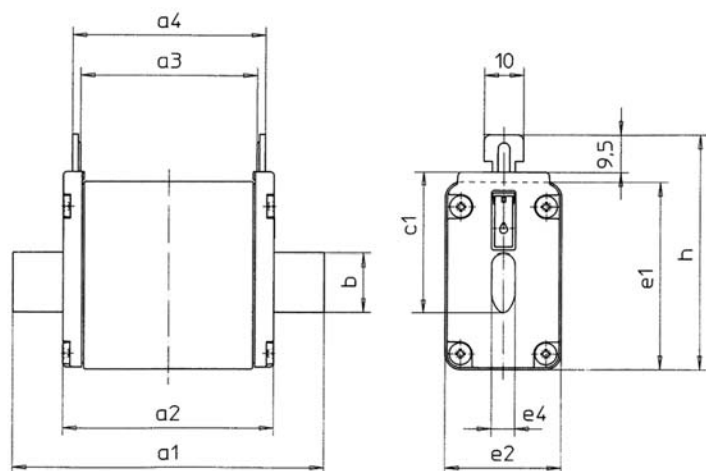
NH Fuses-links



Size	Rated current $I_N(A)$	a1	a2	a3	a4	b	c1	e1	e2	e4	h
Standard 400V and 500V gG with non-isolated gripping lugs											
size 000	2 – 100A	79	52	45,5	49,5	15	35	40,5	20,8	6	52,5
size 00	125/160A	79	52,8	45	50	15	35	47,5	29,5	6	59,5
size 0	2 – 160A (500V)	125	66,8	61	66	15	35	47,5	29,5	6	59,5
size 116	100A (500V), 16 – 125A (400V)	135	70,8	63	68	15	40	47,5	29,5	6	64,5
size 1125	355A (500V), 160 – 250A (400V)	135	70,8	63	68	20	40	52,5	39,5	6	64,5
size 2	16 – 250A	150	72,3	63	68	20	48	52,5	39,5	6	72,5
size 2	300 – 500A	150	72,3	63	68	26	48	60	51	6	72
size 3	250 – 400A	150	72,3	63	68	26	60	60	51	6	83,5
size 3	425 – 800A	150	72,3	63	68	33	60	74	70	6	86
size 4	400 – 1250A	200	85	62	68	49	86	108	90	8	117,5
size 4a	500 – 1250A	200	85	84	90	49	86	108	90	6	117,5
Standard 400V and 500V gG (SGL) with isolated gripping lugs											
size 000	2 – 100A	78	53,4	45,7	49,7	15	35	40,5	20,8	6	52,5
size 00	125/160A	79	53,5	44,8	49	15	35	47,5	29,5	6	59,5
size 0	2 – 160A (500V)	125	67,5	62,5	66,7	15	35	47,5	29,5	6	59,5
size 116	100A (500V), 16 – 125A (400V)	135	71,5	62,8	67	15	40	47,5	29,5	6	64,5
size 1125	250A (500V), 160 – 250A (400V)	135	73,4	63	67,2	20	40	52,5	39,5	6	64,5
size 2	16 – 250A	150	73,4	63	67,2	20	48	52,5	39,5	6	72,5

General Purpose IEC Fuses

NH Fuses (Plain Blades) gG/aM Mechanics for ceramic Body



NH Fuses-links

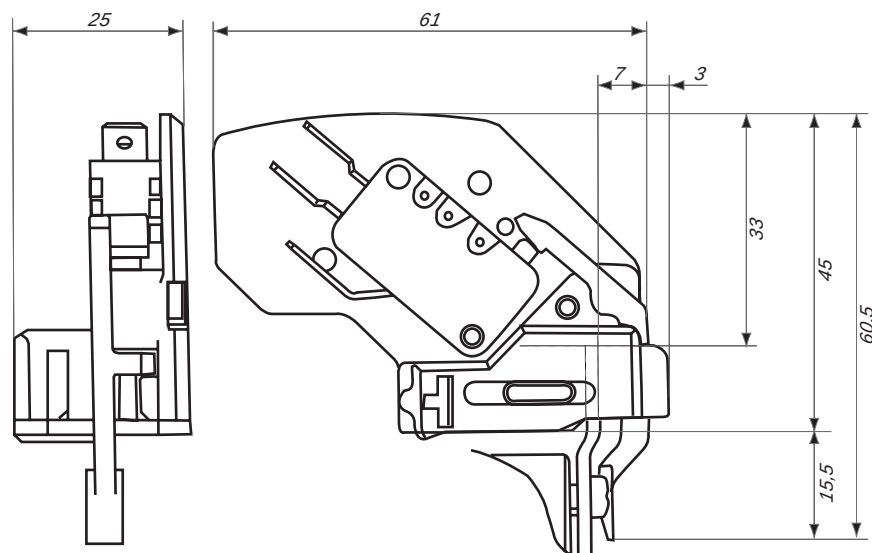
Size	Rated current $I_N(A)$	a1	a2	a3	a4	b	c1	e1	e2	e4	h
size 2	300 – 400A	150	73,4	63	67,2	26	48	60	51	6	72
size 3	250 – 400A	150	73,4	63	68	26	60	60	51	6	83,5
size 3	425 – 630A	150	73,4	63	68	33	60	74	70	6	86
NH 690V gG with non-isolated gripping lugs											
size 000	2 – 35A	79	53,8	45	49	15	35,8	40	20	6	47,8
size 00	40 – 100A	79	53,8	45	49	15	35,8	48	30	6	47,8
size 1	16 – 160A	135	75	64	68	20	40	44	30	6	52
size 1	200 – 250A	135	75	64	68	20	40	47	39	6	52
size 2	35 – 100A	150	75	64	68	26	48	44	30	6	60
size 2	125 – 315A	150	75	64	68	26	60	47	39	6	72
size 3	250 – 300A	150	75	64	68	26	60	47	39	6	72
size 3	315 – 425A	150	75	64	68	33	60	58	51	6	72
size 3	500A	150	75	64	68	33	70	64	64	6	72
size 4	400 – 800A	200	85	62	68	49	86	108	90	8	117,5
size 4a	400 – 800A	200	85	84	90	49	86	108	90	6	117,5
NH 690V gG (SGL) with isolated gripping lugs											
size 000	2 – 35A	79	53,8	45	49	15	35,8	40,5	21	6	47,8
size 0	40 – 125A	79	53,8	45	49	15	35,8	40,5	30	6	47,8
size 1	35 – 200A	135	75	64	68	20	40	51	39	6	52
size 2	32 – 200A	150	75	64	68	26	48	51	39	6	60
size 2	250 – 315A	150	75	64	68	26	48	60	46	6	60
size 3	250 – 315A	150	73,4	63	68	26	60	60	51	6	83,5
size 3	350 – 425A	150	73,4	63	68	33	60	74	70	6	86
NH 500V aM with non-isolated gripping lugs											
size 000	2 – 80A	79	53,8	45	49	15	35,8	40,5	21	6	47,8
size 00	100 – 160A	79	53,8	45	49	15	35,8	40,5	30	6	47,8
size 0	100 – 200A	125	68	64	68	15	35,8	44	30	6	47,8
size 1	160 – 250A	135	75	64	68	20	40	47	39	6	52
size 2	250 – 500A	150	75	64	68	26	48	47	39	6	60
size 3	315 – 630A	150	75	64	68	33	60	58	51	6	72
size 4	630 – 1250A	200	85	62	68	49	86	108	90	8	117,5
NH 690V aM with non-isolated gripping lugs											
size 000	2 – 80A	79	52	45,5	49,5	15	35	40,5	20,8	6	52,5
size 00	50 – 160A	79	52,8	45	50	15	35	47,5	29,5	6	59,5
size 0	6 – 200A	125	66,8	61	66	15	35	47,5	29,5	6	59,5
size 1	16 – 315A	135	70,8	63	68	20	40	52,5	39,5	6	64,5
size 2	35 – 500A	150	72,3	63	68	26	48	60	51	6	72
size 3	250 – 630A	150	72,3	63	68	33	60	74	70	6	86
size 4	400 – 1250A	200	85	62	68	49	86	108	90	8	117,5
size 4a	500 – 1250A	200	85	84	90	49	86	108	90	6	117,5
NH 400/500V gTr with non-isolated gripping lugs											
size 2	50 – 250kVA	150	72,3	63	68	26	48	60	51	6	72
size 3250 – 400kVA (500V), 500 – 630VA (400V)		150	72,3	63	68	33	60	74	70	6	86
size 4a	100 – 800kVA	200	85	84	90	49	86	108	90	6	117,5

General Purpose IEC Fuses

NH Fuses (Plain Blades) Microswitch indication system for NH-fuses size 000 to 3 with non-isolated gripping lugs

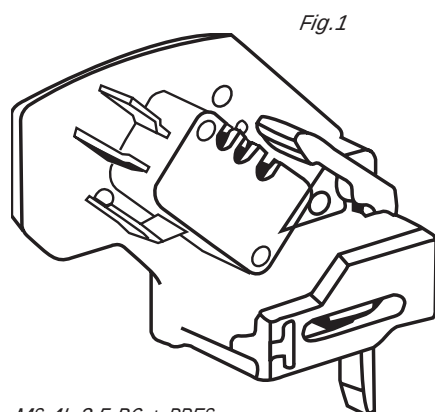


FS ref.-no.	Designation	weight g/piece	pack. unit	Catalog Number
2,8mm clips, automatically resettable G210157	MS 4L 2-5 B2 + PRES	26	3	MS4L2-5B2PRES
6,3mm clips, automatically resettable F210156	MS 4L 2-5 B6 + PRES	30	3	MS4L2-5B6PRES

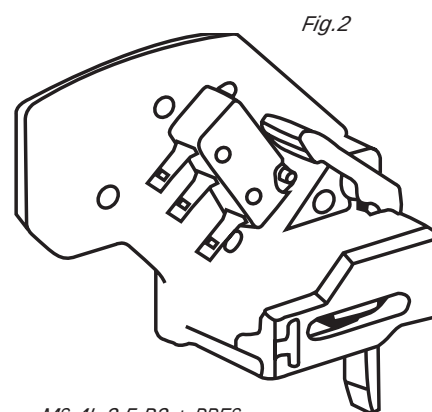


Automatically resettable, these microswitch systems indicate fuse presence (PRES) and proper mounting.

In case of improper mounting or fuse melting, this is indicated (terminal 1-4 closed).



MS 4L 2-5 B6 + PRES
F210156
6,3mm clips



MS 4L 2-5 B2 + PRES
G210157
2,8mm clips

General Purpose IEC Fuses

NH Fuses (Plain Blades) gG Ceramic body with French striker gG 690V Size 0 to 3



H216690



R223000



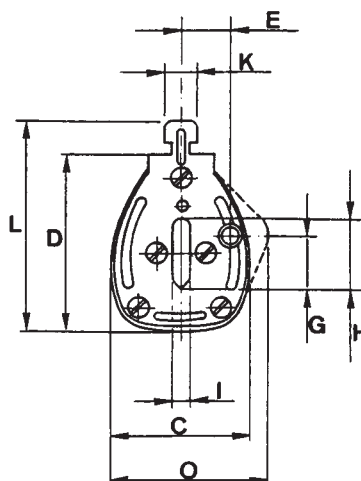
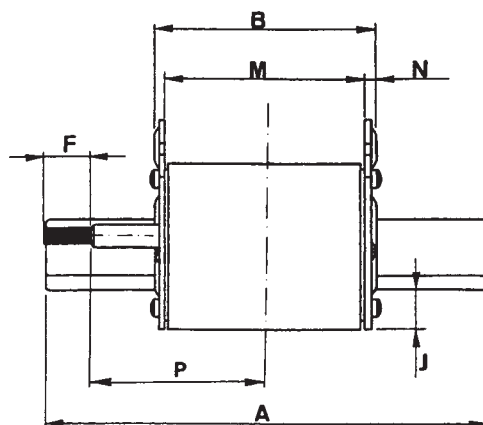
X214656



N219271

Size	Rated current I_N (A)	Rated voltage (V)	Previous ref.	Ref.-no.	Breaking capacity	Catalog Number
0	32	690V	36443	P213637	80kA - 690V	NH0GG69V32P-2
0	35	690V	36445	S214146	80kA - 690V	NH0GG69V35P-2
0	40	690V	36447	W214655	80kA - 690V	NH0GG69V40P-2
0	50	690V	36451	B215166	80kA - 690V	NH0GG69V50P-2
0	63	690V	36455	D215674	80kA - 690V	NH0GG69V63P-2
0	80	690V	36459	J216185	80kA - 690V	NH0GG69V80P-2
0	100	690V	36463	H216690	80kA - 690V	NH0GG69V100P-2
0	125	500V	36465	V217207	120kA - 500V	NH0GG50V125P-2
0	160	500V	36469	A217718	120kA - 500V	NH0GG50V160-2
0	200	500V	36471	K218233	120kA - 500V	NH0GG50V200P-2
1	80	690V	36559	Y218751	80kA - 690V	NH1GG69V80P-2
1	100	690V	36563	M219270	80kA - 690V	NH1GG69V100P-2
1	125	690V	36565	P219801	80kA - 690V	NH1GG69V125P-2
1	160	690V	36569	Z222478	80kA - 690V	NH1GG69V160P-2
1	200	690V	36571	R223000	80kA - 690V	NH1GG69V200P-2
1	224	500V	36573	Y200788	120kA - 500V	NH1GG50V224P-2
1	250	500V	36575	Q201333	120kA - 500V	NH1GG50V250P-2
1	315	500V	36579	Z201847	120kA - 500V	NH1GG50V315P-2
1	355	500V	36581	W211067	120kA - 500V	NH1GG50V355P-2
2	125	690V	36665	W212102	80kA - 690V	NH2GG69V125P-2
2	160	690V	36669	L212622	80kA - 690V	NH2GG69V160P-2
2	200	690V	36671	Y213139	80kA - 690V	NH2GG69V200P-2
2	224	690V	36673	Q213638	80kA - 690V	NH2GG69V224P-2
2	250	690V	36675	T214147	80kA - 690V	NH2GG69V250P-2
2	315	690V	36679	X214656	80kA - 690V	NH2GG69V315P-2
2	355	500V	36681	E215675	120kA - 500V	NH2GG69V355P-2
2	400	500V	36683	K216186	120kA - 500V	NH2GG50V400P-2
2	500	500V	36687	W217208	120kA - 500V	NH2GG50V500P-2
3	315	690V	36779	B217719	80kA - 690V	NH3GG69V315P-2
3	355	690V	36781	L218234	80kA - 690V	NH3GG69V355P-2
3	400	690V	36783	Z218752	80kA - 690V	NH3GG69V400P-2
3	500	690V	36787	N219271	80kA - 690V	NH3GG69V500P-2
3	630	500V	36789	Q219802	120kA - 500V	NH3GG50V630P-2

Pack. : 3 pieces



Dimensions

	0	1	2	3
A	124.5	134.5	150	150
B	66	67	67	67
C	39	40	56	69
D	49	55	62.5	76
E	14.5	16	19	24
F	15.5	15.5	15.5	15.5
G	14	14.5	14.5	14.5
H	15	20	26	32
I	6	6	6	6
J	14	14	15	16
K	10	10	10	10
L	59	65	72.5	86
M	60	61	61	61
N	3	3	3	3
O	41.5	45	-	-
P	47	52	60	60

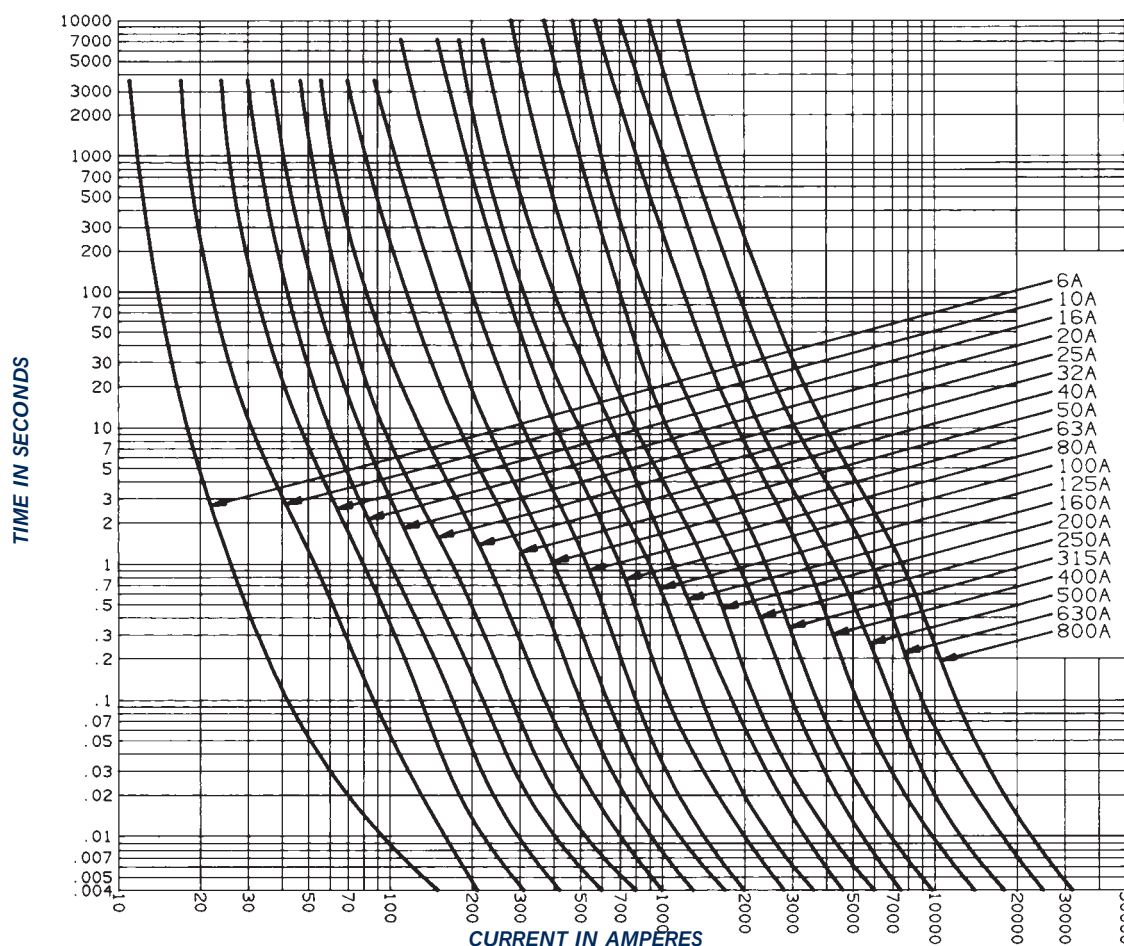
General Purpose IEC Fuses



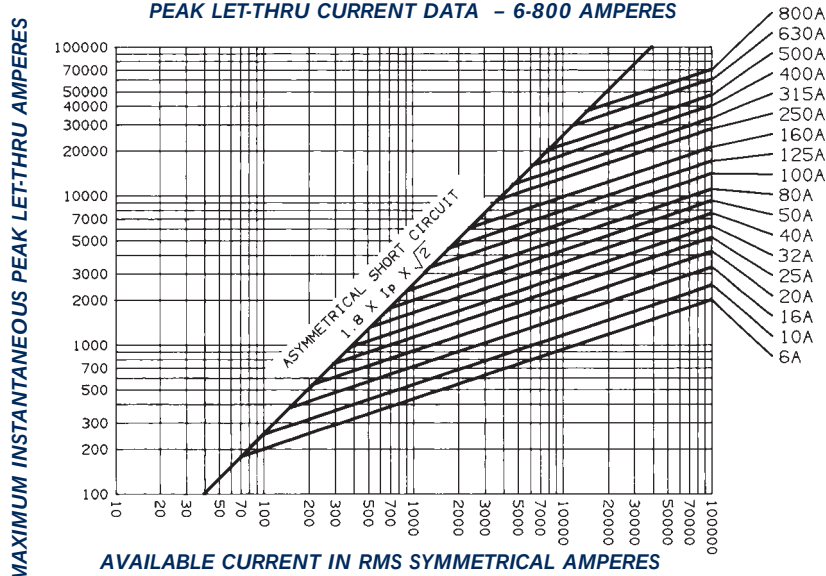
NH Fuses (Plain Blades)
gG Ceramic body with French striker
gG 690V Size 0 to 3

gG 500 - 690VAC

MELTING TIME - CURRENT DATA - 6-800 AMPERES



PEAK LET-THRU CURRENT DATA - 6-800 AMPERES



Striker



General Purpose IEC Fuses

NH Fuses (Plain Blades)
gG Ceramic body with French striker
gG 690V Size 0 to 3



gG 500 - 690VAC

Power Loss (Watts) at Rated Current

Rated current $I_N(A)$	Size			
	0	1	2	3
32	3.7 W			
35	4.0 W			
40	4.5 W			
50	5.2 W			
63	6.2 W			
80	7.5 W	6.9 W		
100	8.5 W	8.1 W		
125	10.7 W	9.6 W	9.5 W	
160	13.5 W	11.9 W	11.5 W	
200	15.0 W	14.9 W	14.5 W	
224		16.7 W	16.0 W	
250		18.7 W	17.5 W	
315		25.0 W	23.0 W	23 W
355		28.0 W	25.0 W	25 W
400			29.0 W	29 W
425			34.0 W	34 W
500			39.0 W	39 W
630				47 W
800				67 W

Typical values allowed by the standards

Rated current $I_N(A)$	0 160A	1 250A	2 400A	3 630A
VDE 0660 (500V)	25 W	32 W	45 W	60 W
IEC 269-2-1 (660V)	25 W	32 W	45 W	60 W
UNE 21103 (500V)	25 W	32 W	45 W	60 W
NFC 63210 (500V)	25 W	32 W	45 W	60 W
VDE 0636 (660V)	-	23 W	34 W	48 W
VDE 0636 (500V)	16 W	23 W	34 W	48 W
IEC 269 (500V)	16 W	23 W	34 W	48 W
UNESA (500V)	17 W	26 W	32 W	48 W
WDE W (500V)	16 W	21 W	32 W	42 W

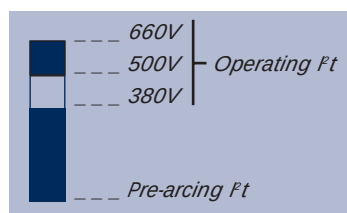
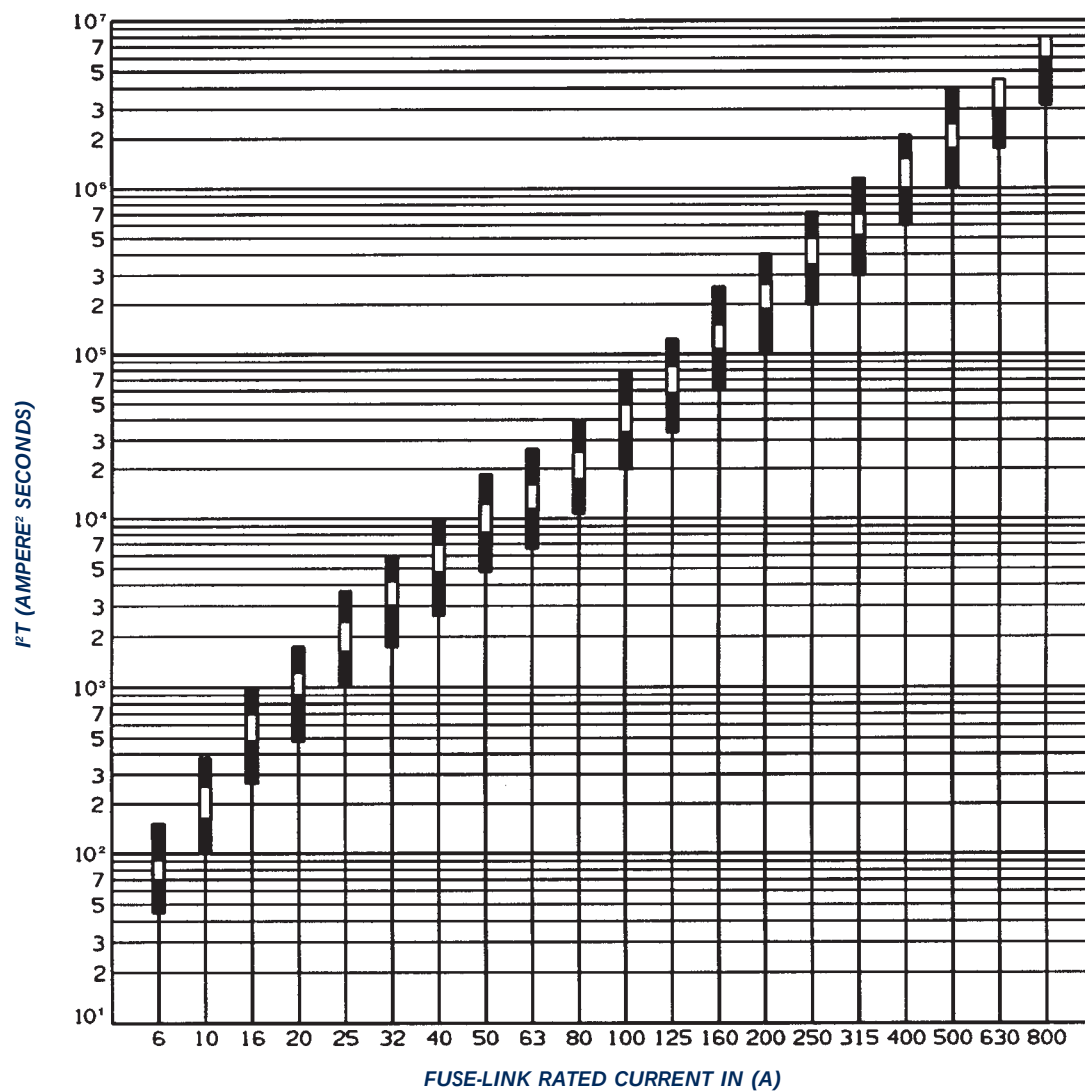
General Purpose IEC Fuses



NH Fuses (Plain Blades)
gG Ceramic body with French striker
gG 690V Size 0 to 3

gG 500 - 690VAC

I²T CHARACTERISTICS - DISCRIMINATION



General Purpose IEC Fuses

NH Fuses (Plain Blades) aM Ceramic body with French striker aM 690V Size 0 to 3



L216187



P219272



Y212104

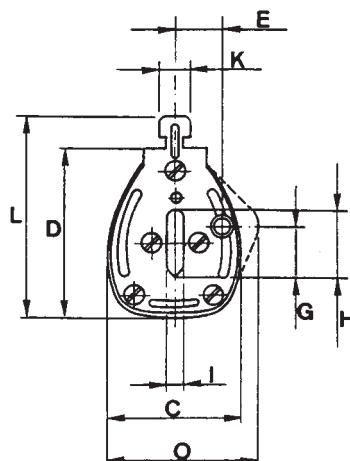
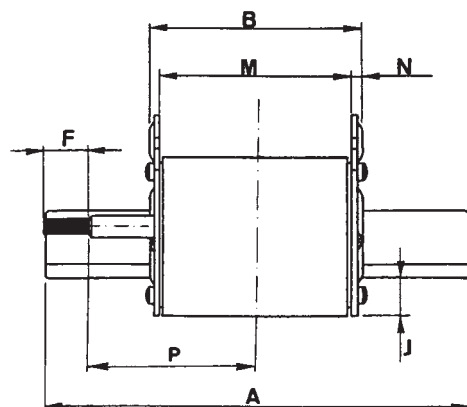


M216188

aM 500 - 690VAC

Size	Rated current $I_N(A)$	Rated voltage (V)	Previous ref.	Ref.-no.	Breaking capacity	Catalog Number
0	32	690V	37443	Z213140	80kA - 690V	NH0AM69V32P-2
0	40	690V	37447	R213639	80kA - 690V	NH0AM69V40P-2
0	50	690V	37451	V214148	80kA - 690V	NH0AM69V50P-2
0	63	690V	37455	Y214657	80kA - 690V	NH0AM69V63P-2
0	80	690V	37459	C215167	80kA - 690V	NH0AM69V80P-2
0	100	690V	37463	F215676	80kA - 690V	NH0AM69V100P-2
0	125	690V	37465	L216187	80kA - 690V	NH0AM69V125P-2
0	160	690V	37469	J216691	80kA - 690V	NH0AM69V160P-2
0	200	500V	37471	X217209	120kA - 500V	NH0AM50V200P-2
1	80	690V	37559	C217720	80kA - 690V	NH1AM69V80P-2
1	100	690V	37563	M218235	80kA - 690V	NH1AM69V100P-2
1	125	690V	37565	A218753	80kA - 690V	NH1AM69V125P-2
1	160	690V	37569	P219272	80kA - 690V	NH1AM69V160P-2
1	200	690V	37571	B222480	80kA - 690V	NH1AM69V200P-2
1	250	690V	37575	T223002	80kA - 690V	NH1AM69V250P-2
1	315	500V	37579	A200790	120kA - 500V	NH1AM50V315P-2
2	125	690V	37665	S201335	80kA - 690V	NH2AM69V125-2
2	160	690V	37669	B201849	80kA - 690V	NH2AM69V160-2
2	200	690V	37671	Y211069	80kA - 690V	NH2AM69V200-2
2	224	690V	37673	P211590	80kA - 690V	NH2AM69V224P-2
2	250	690V	37675	Y212104	80kA - 690V	NH2AM69V250-2
2	315	690V	37679	N212624	80kA - 690V	NH2AM69V315P-2
2	355	690V	37681	A213141	80kA - 690V	NH2AM69V355-2
2	400	690V	37683	S213640	80kA - 690V	NH2AM69V400-2
2	500	500V	37687	W214149	120kA - 500V	NH2AM50V500-2
3	315	690V	37779	Z214658	80kA - 690V	NH3AM69V315P-2
3	355	690V	37781	D215168	80kA - 690V	NH3AM69V355P-2
3	400	690V	37783	G215677	80kA - 690V	NH3AM69V400P-2
3	500	690V	37787	M216188	80kA - 690V	NH3AM69V500P-2
3	630	500V	37789	K216692	120kA - 500V	NH3AM50V630P-2

Pack. : 3 pieces



Dimensions

	0	1	2	3
A	124.5	134.5	150	150
B	66	67	67	67
C	39	40	56	69
D	49	55	62.5	76
E	14.5	16	19	24
F	15.5	15.5	15.5	15.5
G	14	14.5	14.5	14.5
H	15	20	26	32
I	6	6	6	6
J	14	14	15	16
K	10	10	10	10
L	59	65	72.5	86
M	60	61	61	61
N	3	3	3	3
O	41.5	45	-	-
P	47	52	60	60

General Purpose IEC Fuses



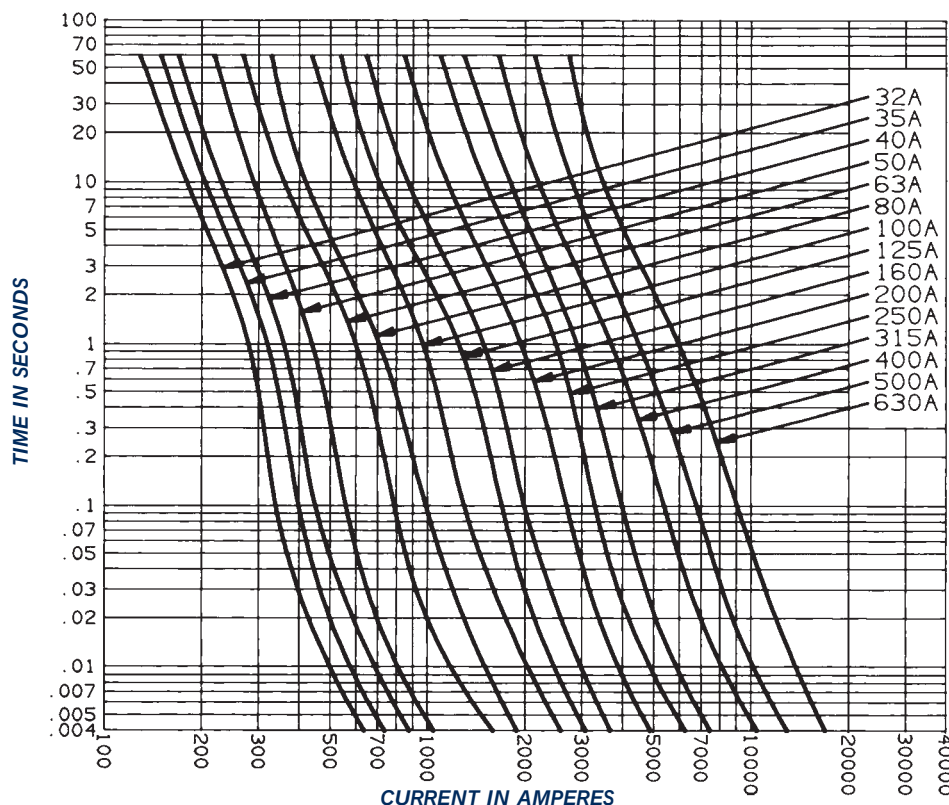
NH Fuses (Plain Blades)

aM Ceramic body with French striker

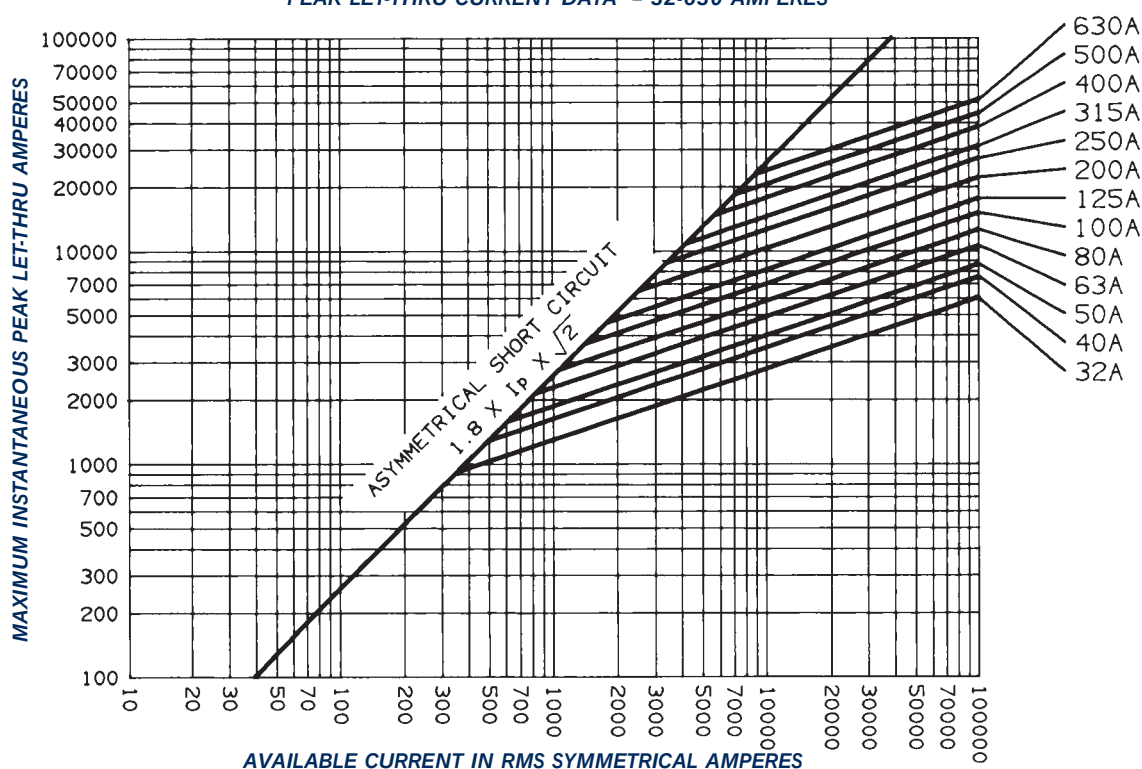
aM 690V Size 0 to 3

aM 500 - 690VAC

MELTING TIME - CURRENT DATA - 32-630 AMPERES



PEAK LET-THRU CURRENT DATA - 32-630 AMPERES



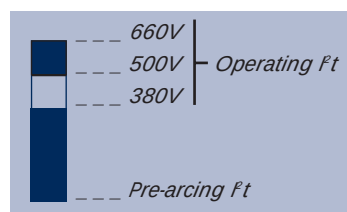
General Purpose IEC Fuses

NH Fuses (Plain Blades)
aM Ceramic body with French striker
aM 690V Size 0 to 3

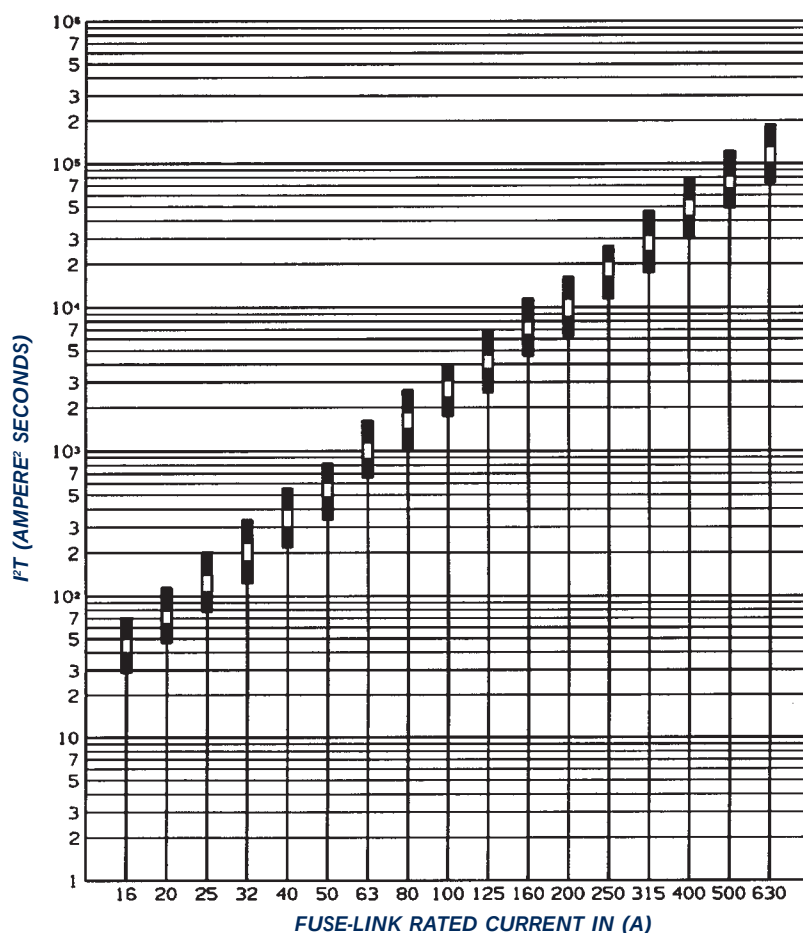
aM 500 - 690VAC

Power Loss (Watts) at Rated Current

Rated current $I_N(A)$	0	1	2	3
32	2.4 W			
40	2.8 W			
50	3.6 W			
63	4.6 W			
80	6.0 W	6.0 W		
100	7.5 W	7.5 W		
125	9.5 W	9.9 W		
160	12.0 W	12.7 W	12.7 W	
200		16.4 W	16.4 W	
224		18.7 W	18.7 W	
250		21.5 W	21.5 W	
315			29.0 W	25.0 W
355			32.0 W	29.0 W
400			34.0 W	34.0 W
425				38.5 W
500				45.0 W
630				60.0 W



I^2t CHARACTERISTICS – DISCRIMINATION





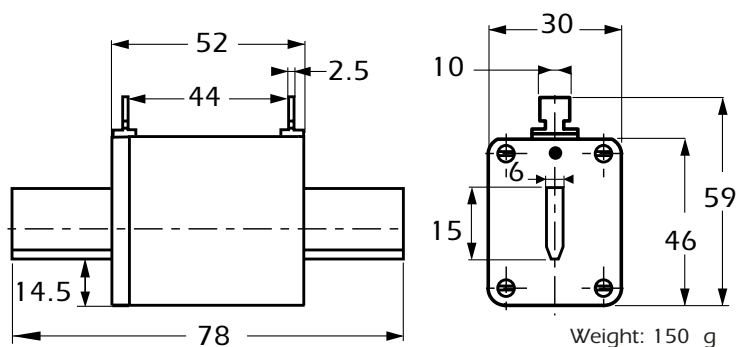
General Purpose IEC Fuses

NH Fuses (Plain Blades) gG Plastic body with/without French striker gG 500V Size 00



from 10 to 160 A

- BLADE-STYLE FUSES: WITH BLOWN FUSE INDICATOR
- COMPLYING WITH IEC 269.1 and 2.1 NF EN 60269.1 & 2 NF C 63210 AND DIN 43620 STANDARDS
- DIMENSIONS:



Main Characteristics

Size	Voltage rating (VAC)	Current rating IN(A)	Watts loss (W)	With BLOWN FUSE indicator		
				Designation	Reference Number	Catalog Number
00	500	10	1	gG 00 L / 10	M098290	NH00GG50V10-3
		16	1.4	gG 00 L / 16	N098291	NH00GG50V16-3
		20	1.8	gG 00 L / 20	P098292	NH00GG50V20-3
		25	2.1	gG 00 L / 25	Q098293	NH00GG50V25-3
		32	3	gG 00 L / 32	R098294	NH00GG50V32-3
		35	3	gG 00 L / 35	S098295	NH00GG50V35-3
		40	3.3	gG 00 L / 40	T098296	NH00GG50V40-3
		50	4.5	gG 00 L / 50	V098297	NH00GG50V50-3
		63	6	gG 00 L / 63	X098299	NH00GG50V63-3
		80	7	gG 00 L / 80	Z098301	NH00GG50V80-3
		100	7.5	gG 00 L / 100	A098302	NH00GG50V100-3
		125	13	gG 00 L / 125	B098303	NH00GG50V125-3
		160	15	gG 00 L / 160	D098305	NH00GG50V160-3

Accessories: Neutral link Z218269
Pull-out handle - PMP - Part # P215592

General Purpose IEC Fuses



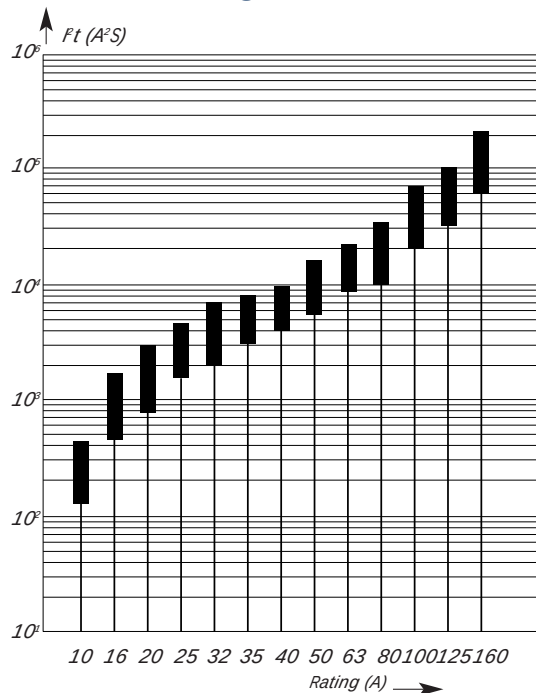
NH Fuses (Plain Blades)

gG Plastic body with/without French striker

gG 500V Size 00

from 10 to 160 A

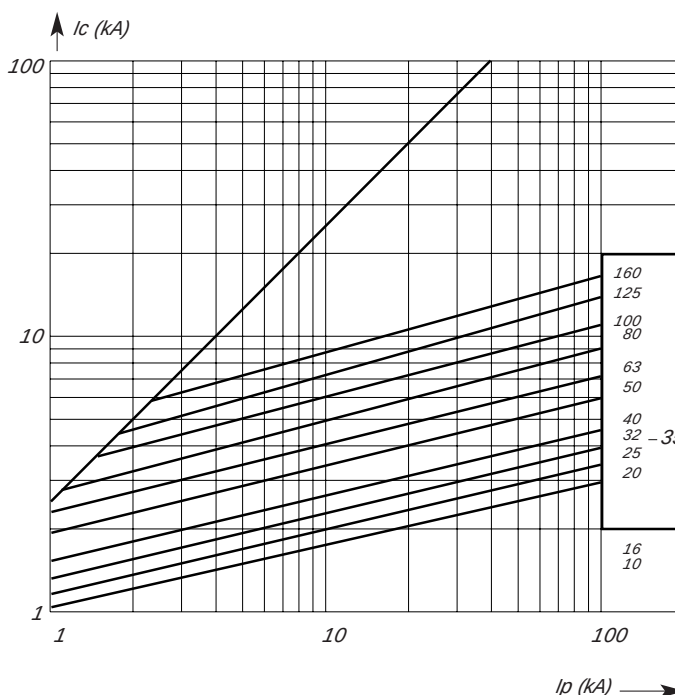
Total Clearing I^2t



b: total clearing I^2t @ 500 V

a: pre-arcing I^2t

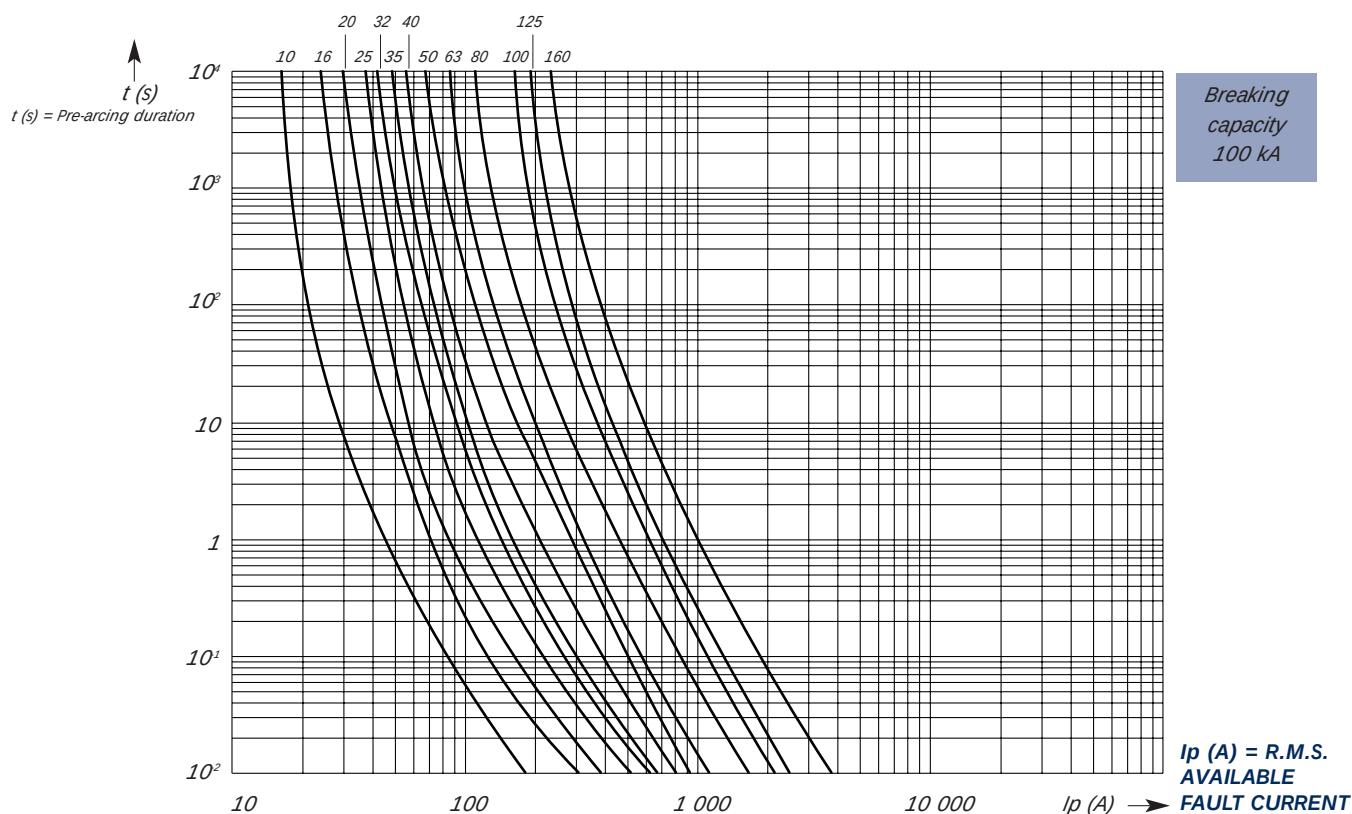
Current Limitation Curves



I_c = Peak let-through current

I_p = Available fault current

Time VS. Current Characteristics



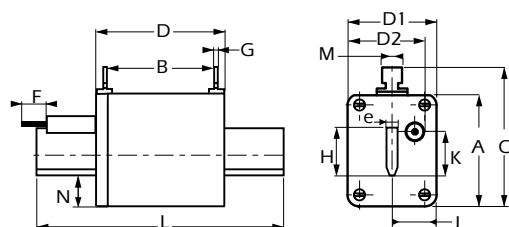
General Purpose IEC Fuses



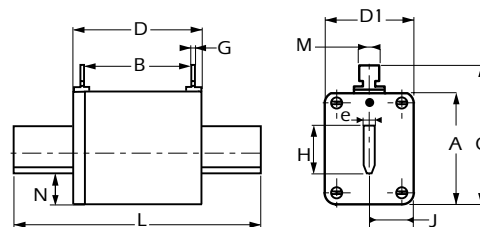
NH Fuses (Plain Blades)
gG Plastic body with/without French striker
gG 500V Size 0 and 1

from 40 to 250 A

- BLADE-STYLE FUSES: WITH BLOWN FUSE INDICATOR or TRIP-INDICATOR
- COMPLYING WITH IEC 269.1 AND 2.1 NF EN 60269.1 & 2 NF C 63210 - 63211 AND DIN 43620
- DIMENSIONS:



With trip-indicator



With blown fuse indicator

Size	A	B	C	D	D1	D2*	F*	G	H	J	K	L	M	N	e	Wgt.
0	46	62	59	67	36	39	14	2,5	15	14,5	14,5	125	10	14,5	6	230g
1	52	64	64	74	47	47	14	3	21	16	14,5	135	10	14,5	6	400g

* For fuses with trip-indicator

Size	Voltage rating (VAC)	Current rating I _N (A)	Watts loss (W)	With blown fuse indicator			With trip-indicator		
				Designation	Ref. Number	Catalog Number	Designation	Ref. Number	Catalog Number
0	500	40	4.2	gG 0 / 40	A095013	NH0GG50V40-3	gG 0 / 40 P	T095214	NH0GG50V40-4
		50	5.5	gG 0 / 50	B095014	NH0GG50V50-3	gG 0 / 50 P	V095215	NH0GG50V50-4
		63	6.5	gG 0 / 63	C095015	NH0GG50V63-3	gG 0 / 63 P	W095216	NH0GG50V63-4
		80	8.5	gG 0 / 80	D095016	NH0GG50V80-3	gG 0 / 80 P	Y095218	NH0GG50V80-4
		100	9.5	gG 0 / 100	E095017	NH0GG50V100-3	gG 0 / 100 P	A095220	NH0GG50V100-4
		125	12	gG 0 / 125	F095018	NH0GG50V125-3	gG 0 / 125 P	C095222	NH0GG50V125-4
		160	15	gG 0 / 160	G095019	NH0GG50V160-3	gG 0 / 160 P	G095226	NH0GG50V160-4
		200	19	gG 0 / 200	H095020	NH0GG50V200-3			
1	500	80	8.5	gG 1 / 80	K095022	NH1GG50V80-3	gG 1 / 80 P	D095591	NH1GG50V80-4
		100	9.6	gG 1 / 100	P095026	NH1GG50V100-3	gG 1 / 100 P	E095592	NH1GG50V100-4
		125	12.5	gG 1 / 125	T095030	NH1GG50V125-3	gG 1 / 125 P	F095593	NH1GG50V125-4
		160	15	gG 1 / 160	V095031	NH1GG50V160-3	gG 1 / 160 P	G095594	NH1GG50V160-4
		200	19	gG 1 / 200	W095032	NH1GG50V200-3	gG 1 / 200 P	H095595	NH1GG50V200-4
		250	23	gG 1 / 250	Z095035	NH1GG50V250-3	gG 1 / 250 P	K095597	NH1GG50V250-4

Accessories: Neutral link Reference Number Z219304 - Reference Number A219834
Pull-out handle - PMP Reference Number P215592

General Purpose IEC Fuses



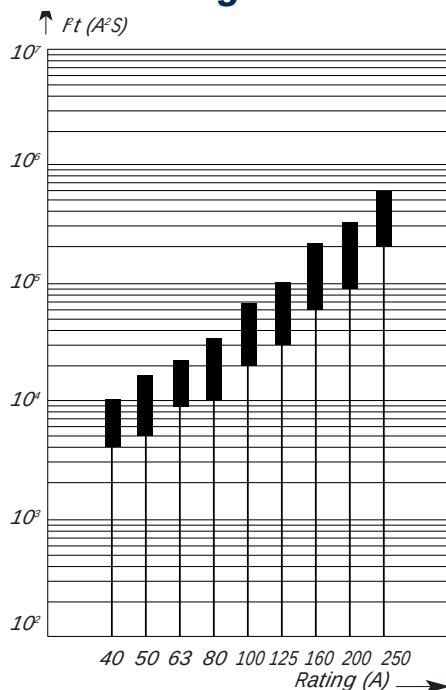
NH Fuses (Plain Blades)

gG Plastic body with/without French striker

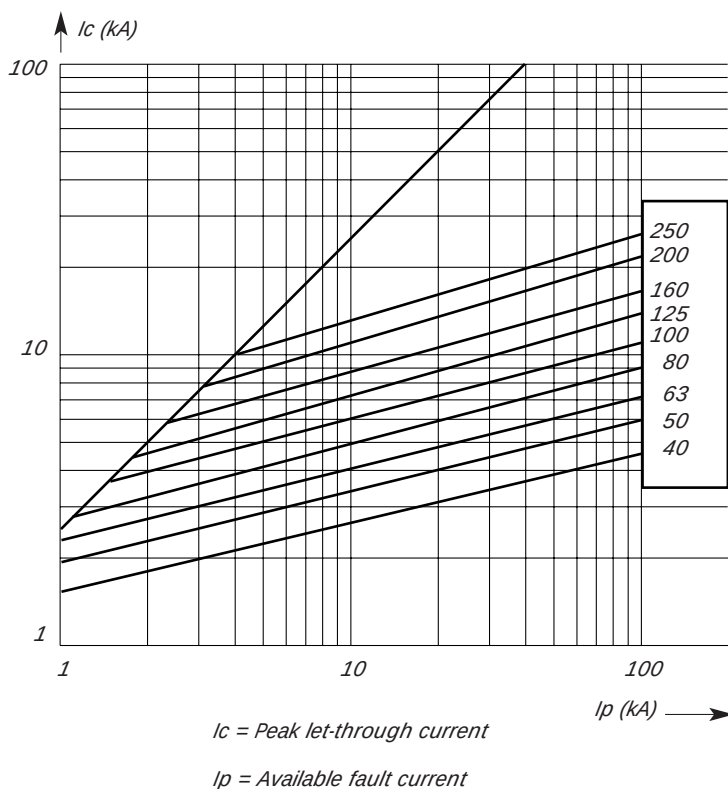
gG 500V Size 0 and 1

from 40 to 250 A

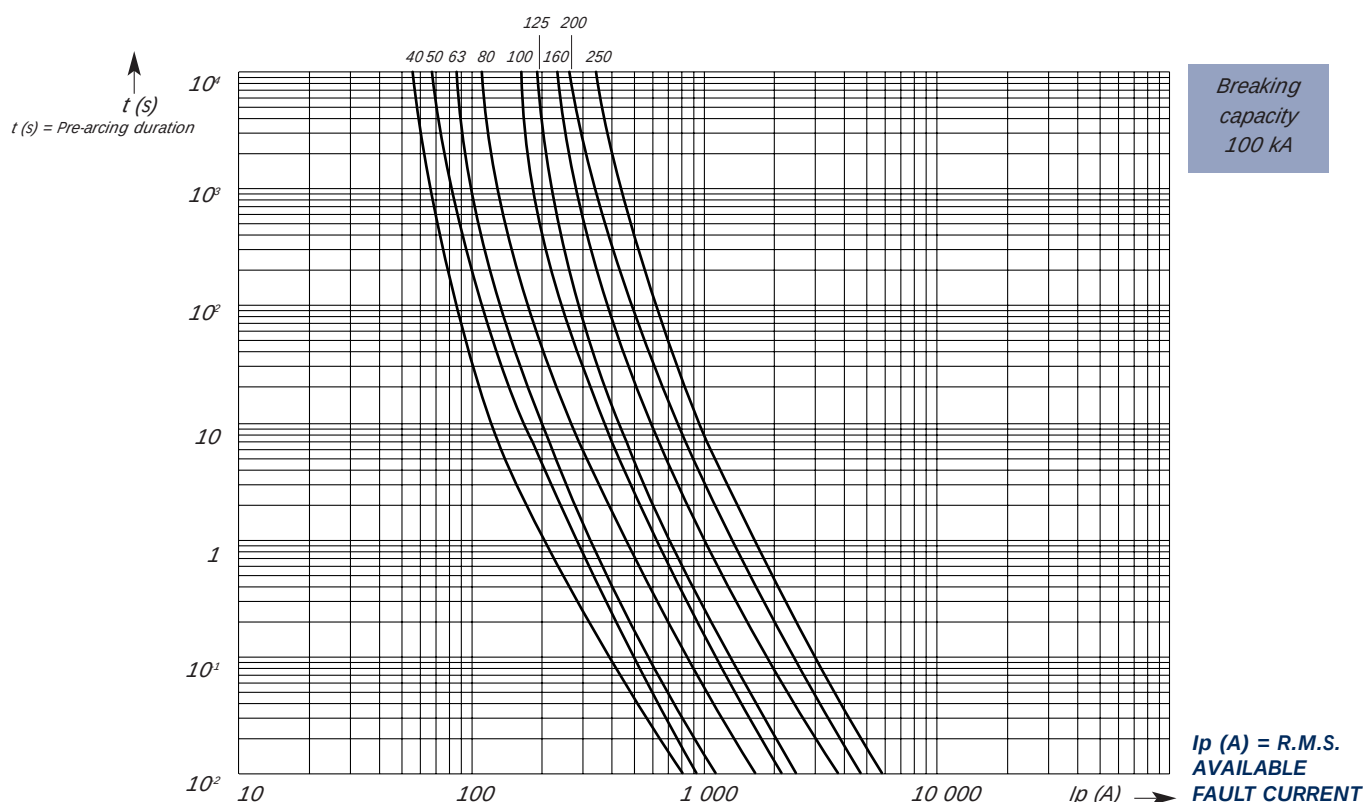
Total Clearing I^2t



Current Limitation Curves



Time VS. Current Characteristics



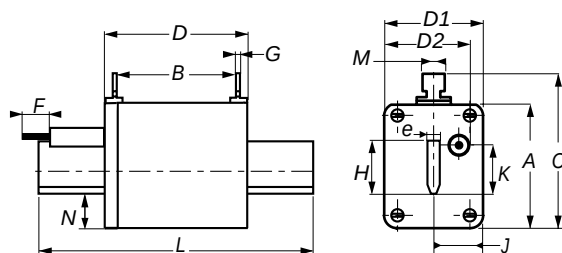
General Purpose IEC Fuses



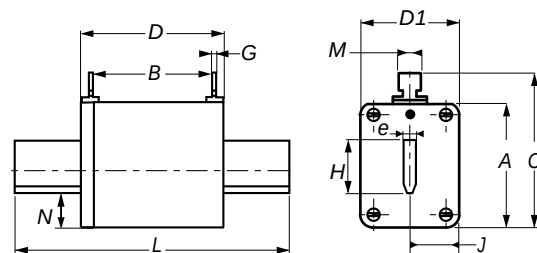
NH Fuses (Plain Blades) Plastic body with/without French striker gG 500V Size 2 and 3

from 125 to 630 A

- **BLADE-STYLE FUSES:** WITH BLOWN FUSE INDICATOR or TRIP-INDICATOR
- **COMPLYING WITH** IEC 269.1 and 2.1, NF EN 60269.1 & 2 NF C 63210 - 63211 AND DIN 43620
- **DIMENSIONS:**



With trip-indicator



With blown fuse indicator

Size	A	B	C	D	D1	D2*	F*	G	H	J	K	L	M	N	e	Wgt.
2	60	64	72	74	50	50	14	3	28	19	14,5	150	10	14,5	6	590g
3	75	61	88	75	70	64	14	2,5	36	23	14,5	150	10	18	6	850g

* For fuses with trip-indicator

Size	Voltage rating (VAC)	Current rating I_N (A)	Watts loss (W)	With blown fuse indicator			With trip-indicator		
				Designation	Ref. Number	Catalog Number	Designation	Ref. Number	Catalog Number
2	500	125	12	gG 2 /125	H095066	NH2GG50V125-3	gG 2 /125 P	X095033	NH2GG50V125-4
		160	15	gG 2 /160	K095068	NH2GG50V160-3	gG 2 /160 P	Y095034	NH2GG50V160-4
		200	19	gG 2 /200	M095070	NH2GG50V200-3	gG 2 /200 P	A095036	NH2GG50V200-4
		250	23	gG 2 /250	G095042	NH2GG50V250-3	gG 2 /250 P	F095041	NH2GG50V250-4
		315	24	gG 2 /315	H095043	NH2GG50V315-3	gG 2 /315 P	K095045	NH2GG50V315-4
		400	33	gG 2 /400	J095044	NH2GG50V400-3	gG 2 /400 P	M095047	NH2GG50V400-4
3	500	315	24	gG 3 /315	W095170	NH3GG50V315-3	gG 3 /315 P	N095048	NH3GG50V315-4
		400	33	gG 3 /400	V095054	NH3GG50V400-3	gG 3 /400 P	P095049	NH3GG50V400-4
		500	36	gG 3 /500	W095055	NH3GG50V500-3	gG 3 /500 P	N095071	NH3GG50V500-4
		630	45	gG 3 /630	X095056	NH3GG50V630-3	gG 3 /630 P	P095072	NH3GG50V630-4

Accessories : Neutral link BS2 Reference Number J097712 - BS3 Reference Number K097713
Pull-out handle - PMP Reference Number P215592

General Purpose IEC Fuses



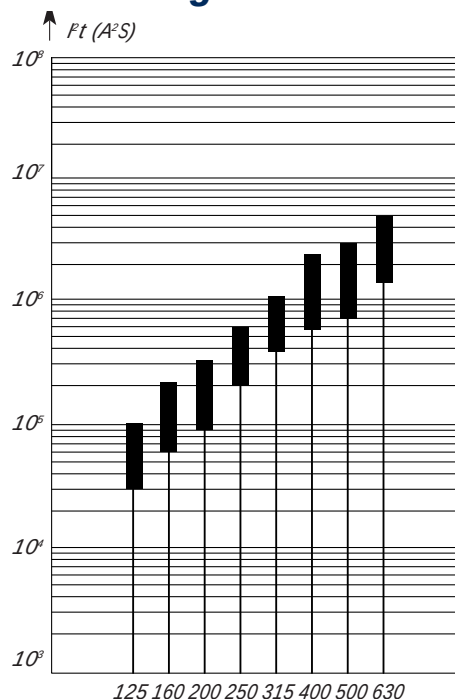
NH Fuses (Plain Blades)

gG Plastic body with/without French striker

gG 500V Size 2 and 3

from 125 to 630 A

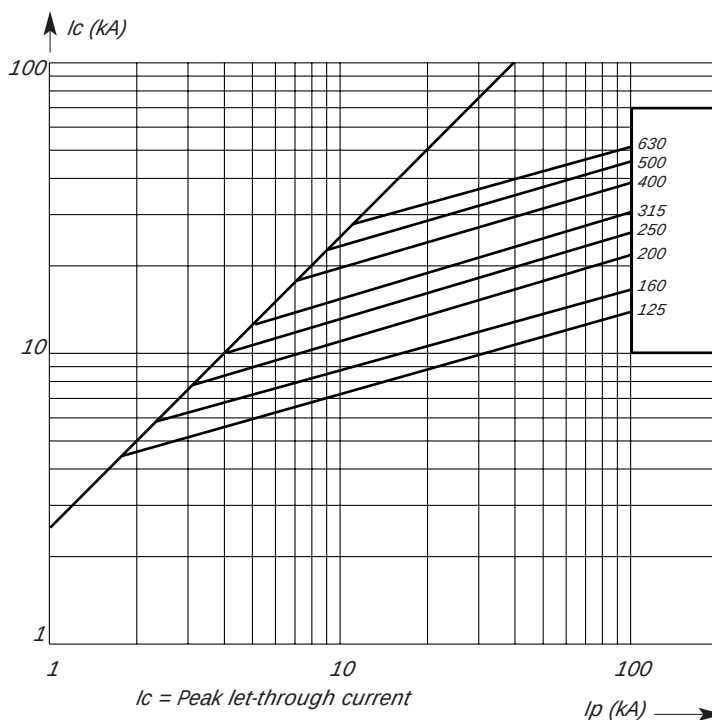
Total Clearing I^2t



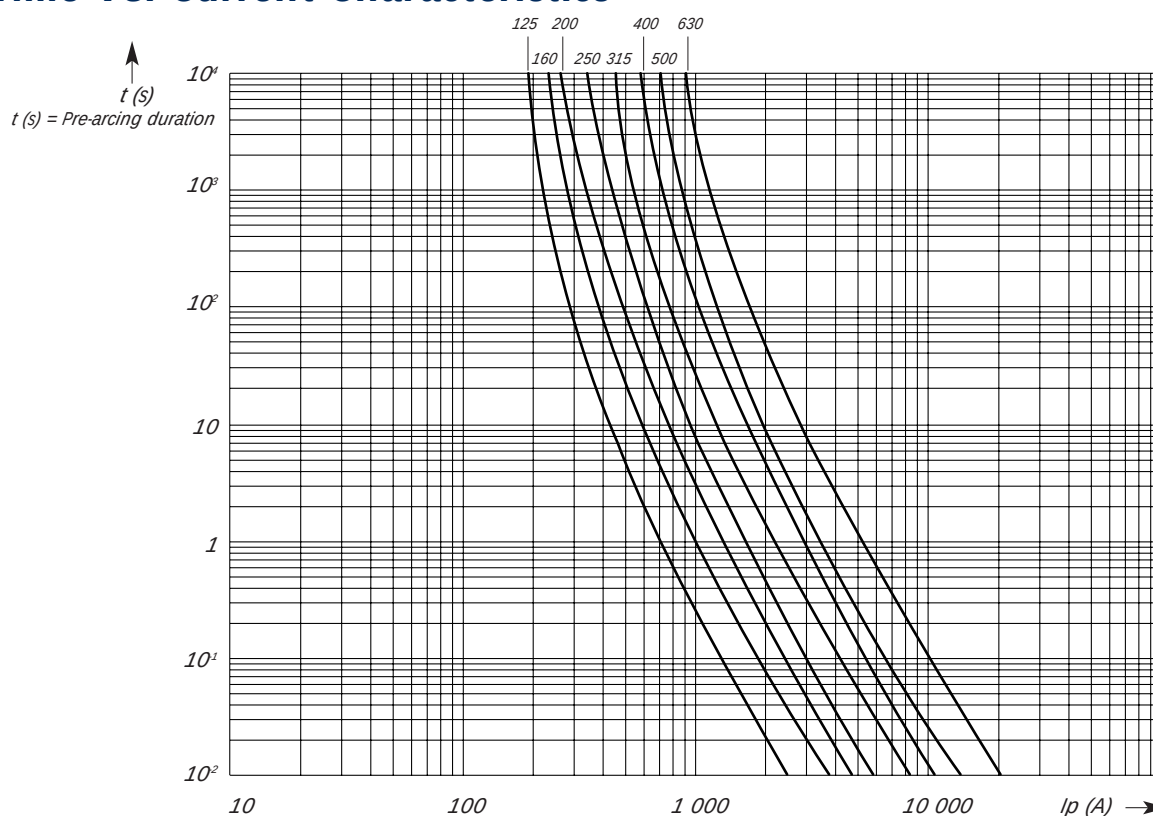
b: total clearing I^2t @ 500 V

a: pre-arcing I^2t

Current Limitation Curves



Time VS. Current Characteristics



Breaking capacity
100 kA

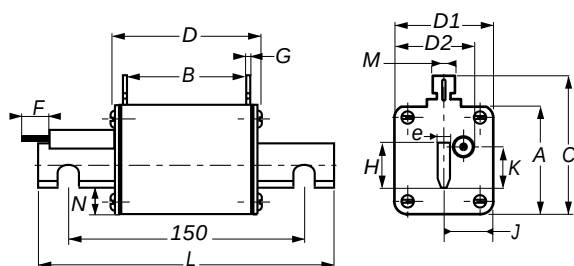
General Purpose IEC Fuses

NH Fuses (Plain Blades) gG Plastic body with/without French striker gG 500V Size 4

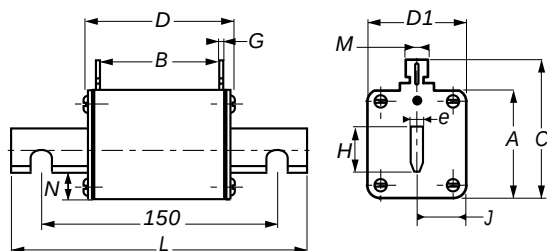


from 630 to 1250 A

- **BLADE-STYLE FUSES:** WITH BLOWN FUSE INDICATOR or TRIP-INDICATOR
- **COMPLYING WITH** IEC 269.1 and 2.1, NF EN 60269.1 & 2 NF C 63210 - 63211 AND DIN 43620
- **DIMENSIONS:**



With trip-indicator



With blown fuse indicator

Size	A	B	C	D	D1	D2*	F*	G	H	J	K	L	M	N	e	Wgt.
4	107	61	119	78	90	77	14	2,5	60	27	14,5	200	10	23	8	1900g

* For fuses with trip-indicator

Size	Voltage rating (VAC)	Current rating $I_N(A)$	Watts loss (W)	With blown fuse indicator			With trip-indicator		
				Designation	Ref. Number	Catalog Number	Designation	Ref. Number	Catalog Number
4	500	630	45	gG 4 / 630	S098318	NH4GG50V630-3	gG 4 / 630 P	G088510	NH4GG50V630-4
		800	51	gG 4 / 800	T098319	NH4GG50V800-3	gG 4 / 800 P	J088512	NH4GG50V800-4
		1000	77	gG 4 / 1000	V098320	NH4GG50V1000-3	gG 4 / 1000 P	K088513	NH4GG50V1000-4
		1250	80	gG 4 / 1250	W098321	NH4GG50V1250-3	gG 4 / 1250 P	L088514	NH4GG50V1250-4

Accessories: Neutral link - BS4 Reference Number M097715
Pull-out handle - PMP Reference Number P215592

General Purpose IEC Fuses

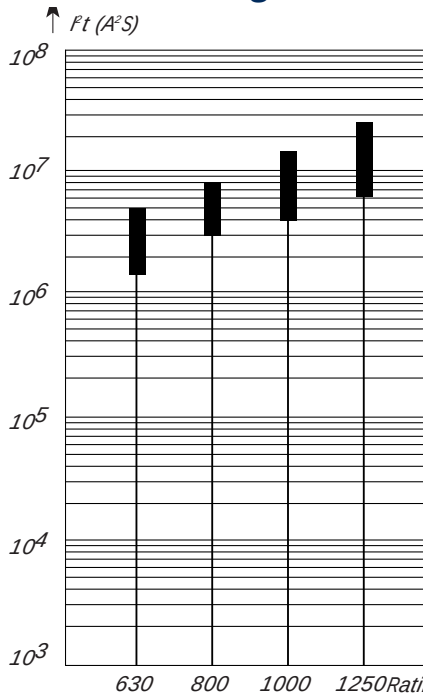


NH Fuses (Plain Blades)

gG Plastic body with/without French striker

gG 500V Size 4

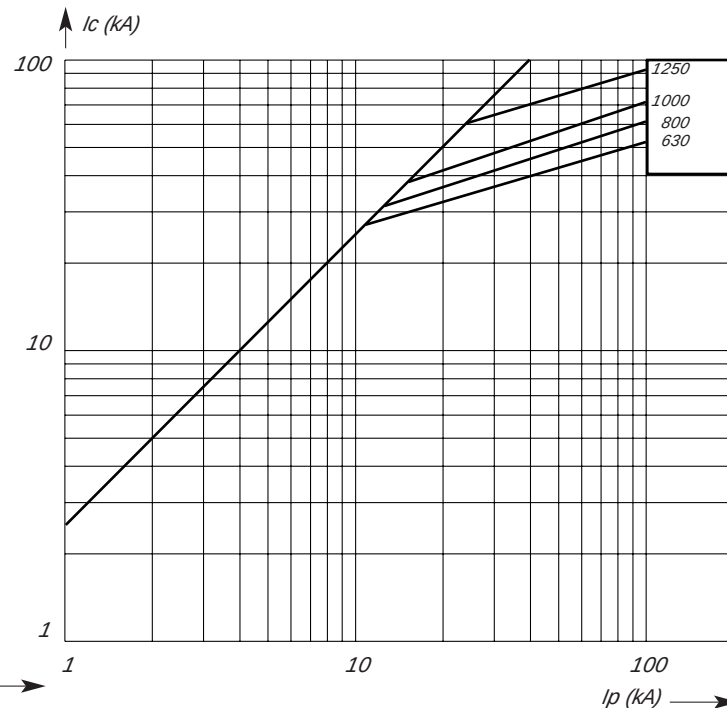
from 630 to 1250 A
Total Clearing I^2t



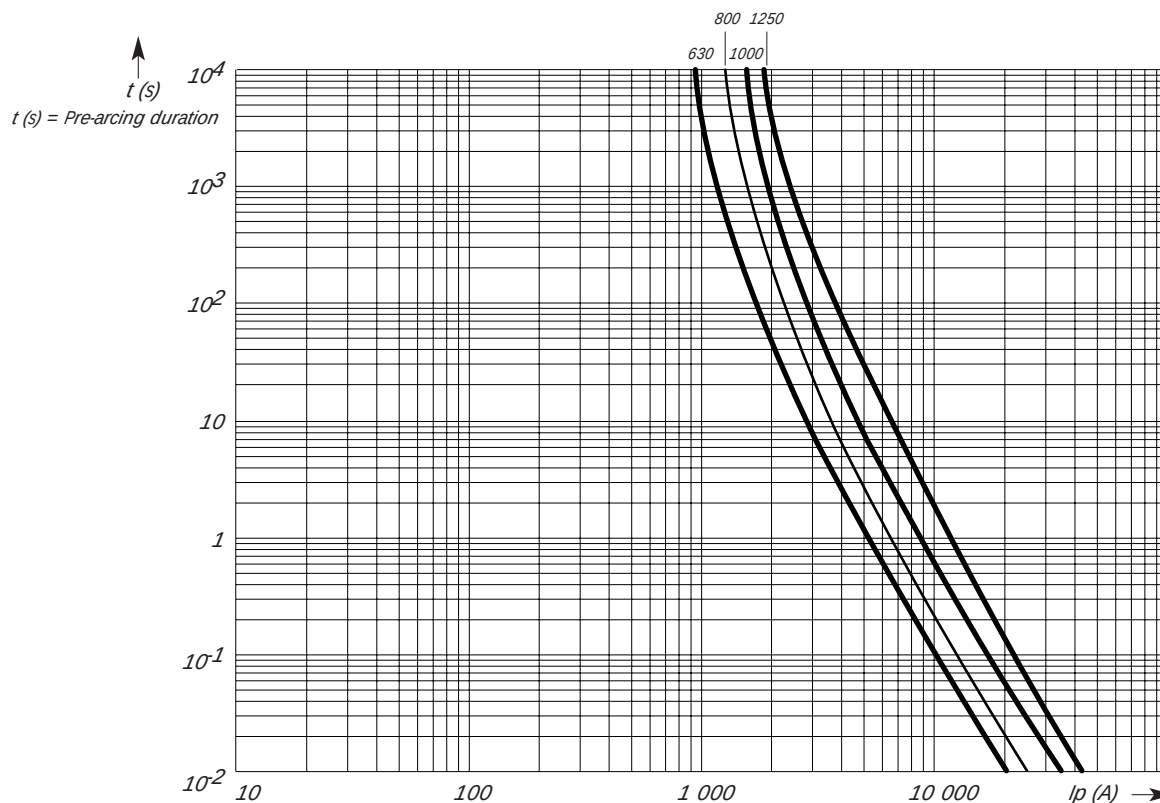
b: total clearing I^2t @ 500 V

a: pre-arcing I^2t

Current Limitation Curves



Time VS. Current Characteristics



Breaking capacity
100 kA

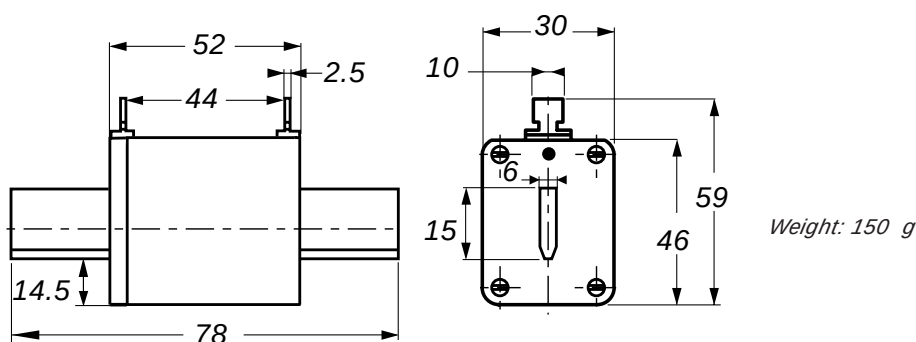
General Purpose IEC Fuses

NH Fuses (Plain Blades) aM Plastic body with/without French striker aM 500V Size 00



from 16 to 125 A

- **BLADE-STYLE FUSES: WITH BLOWN FUSE INDICATOR**
- **COMPLYING WITH IEC 269.1 and 2.1 NF EN 60269.1 & 2 NF C 63210 AND DIN 43620 STANDARDS**
- **DIMENSIONS:**



Size	Voltage rating (VAC)	Current rating I_N (A)	Watts loss (W)	With blown fuse indicator		
				Designation	Ref. Number	Catalog Number
00	500	16	0.8	aM 00 L /16	F098307	NH00AM50V16-3
		20	1.1	aM 00 L /20	G098308	NH00AM50V20-3
		25	1.3	aM 00 L /25	H098309	NH00AM50V25-3
		32	1.8	aM 00 L /32	J098310	NH00AM50V32-3
		35	2.0	aM 00 L /35	K098311	NH00AM50V35-3
		40	2.5	aM 00 L /40	L098312	NH00AM50V40-3
		50	3.0	aM 00 L /50	M098313	NH00AM50V50-3
		63	3.6	aM 00 L /63	N098314	NH00AM50V63-3
		80	5.2	aM 00 L /80	P098315	NH00AM50V80-3
		100	6.0	aM 00 L /100	Q098316	NH00AM50V100-3
	400	125	7.0	aM 00 L /125	R098317	NH00AM40V125-3

Accessories: Neutral link BS00 - Reference Number F097709
Pull-out handle - PMP - Reference Number P215592

General Purpose IEC Fuses



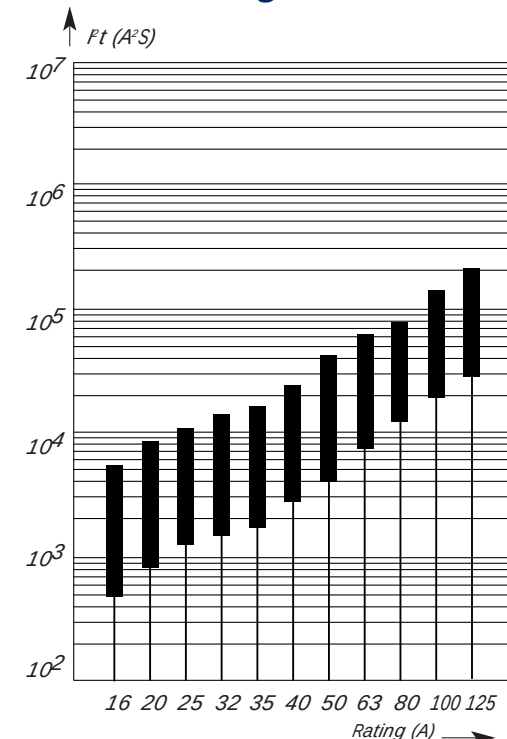
NH Fuses (Plain Blades)

aM Plastic body with/without French striker

aM 500V Size 00

from 16 to 125 A

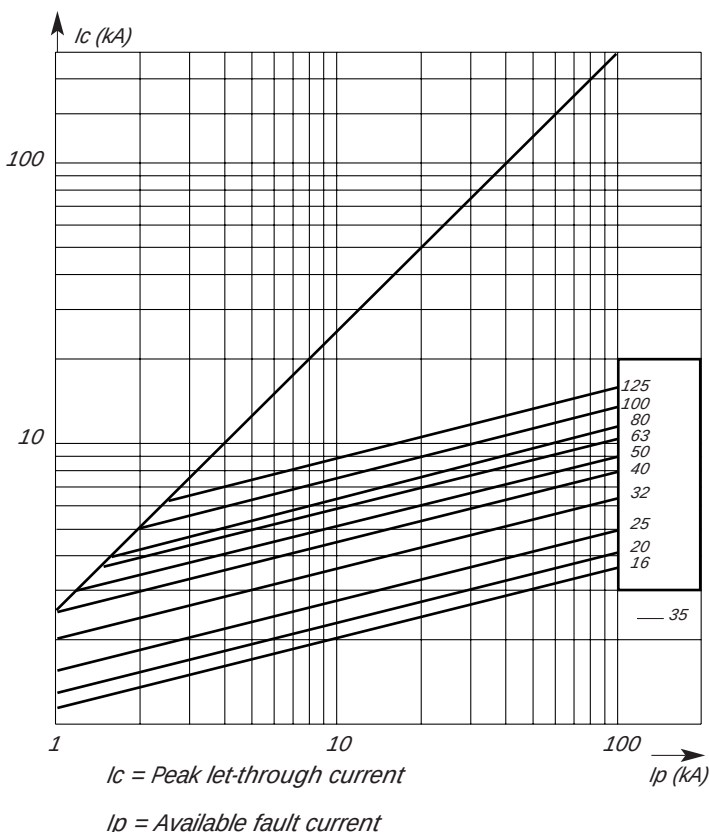
Total Clearing I^2t



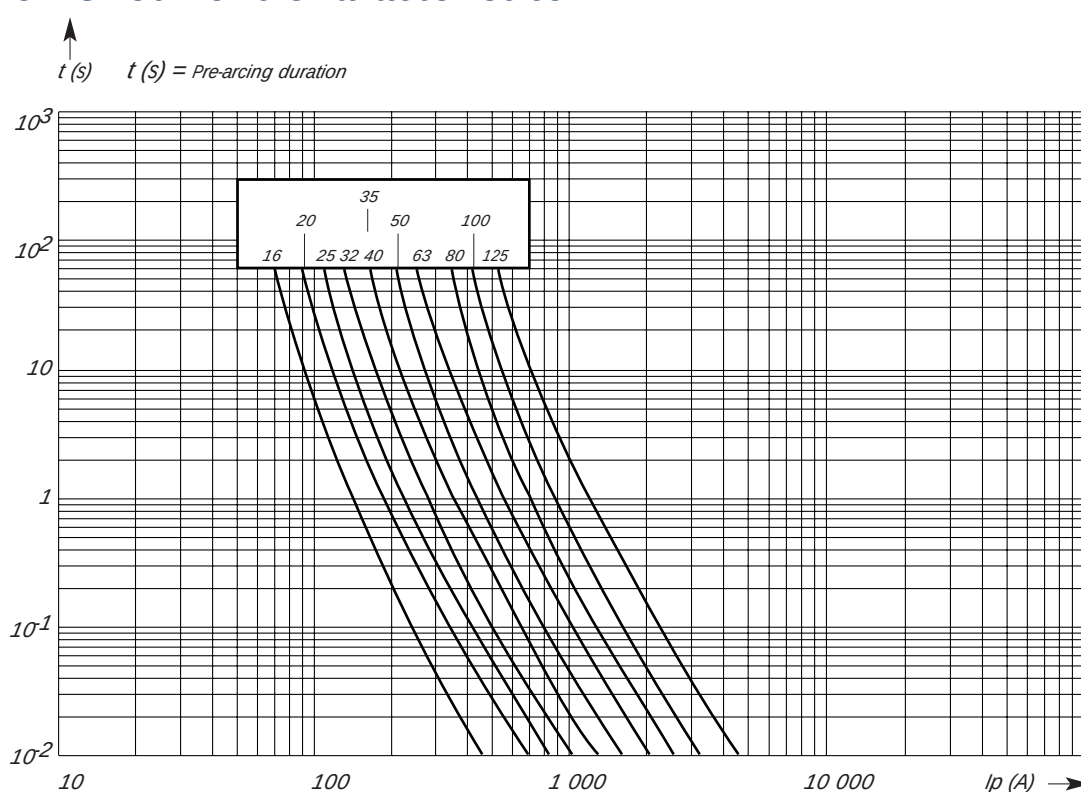
b: total clearing I^2t @ 500 V

a: pre-arcing I^2t

Current Limitation Curves



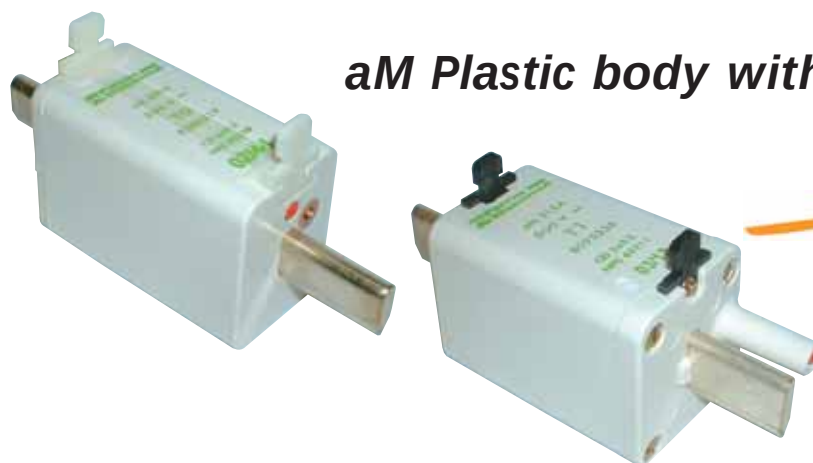
Time VS. Current Characteristics



Breaking capacity
100 kA

I_p (A) = R.M.S. AVAILABLE FAULT CURRENT

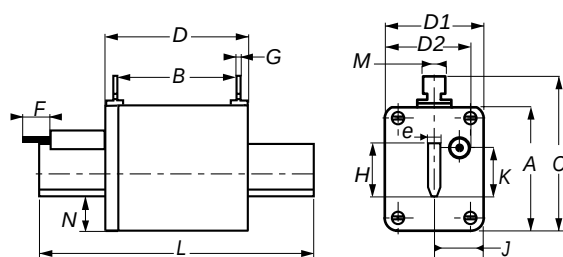
General Purpose IEC Fuses



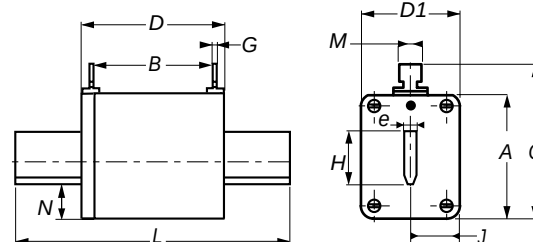
NH Fuses (Plain Blades) aM Plastic body with/without French striker aM 500V Size 0 and 1

from 40 to 315 A

- BLADE-STYLE FUSES: WITH BLOWN FUSE INDICATOR
- COMPLYING WITH IEC 269.1 and 2.1 NF EN 60269.1 & 2 NF C 63210 AND DIN 43620 STANDARDS
- DIMENSIONS:



With trip-indicator



With blown fuse indicator

Size	A	B	C	D	D1	D2*	F*	G	H	J	K	L	M	N	e	Wgt.
0	46	62	59	67	36	39	14	2,5	15	14,5	14,5	125	10	14,5	6	230g
1	52	64	64	74	47	47	14	3	21	16	14,5	135	10	14,5	6	400g

* For fuses with trip-indicator

Size	Voltage rating (VAC)	Current rating I _N (A)	Watts loss (W)	With blown fuse indicator			With trip-indicator		
				Designation	Ref. Number	Catalog Number	Designation	Ref. Number	Catalog Number
0	500	40	2,7	aM 0 / 40	K095114	NH0AM50V40-3	aM 0 / 40 P	N095232	NH0AM50V40-4
		50	3,2	aM 0 / 50	L095115	NH0AM50V50-3	aM 0 / 50 P	R095235	NH0AM50V50-4
		63	3,9	aM 0 / 63	M095116	NH0AM50V63-3	aM 0 / 63 P	X095240	NH0AM50V63-4
		80	5,5	aM 0 / 80	P095118	NH0AM50V80-3	aM 0 / 80 P	Z095242	NH0AM50V80-4
		100	6,5	aM 0 / 100	R095120	NH0AM50V100-3	aM 0 / 100 P	A095243	NH0AM50V100-4
		125	8,5	aM 0 / 125	T095122	NH0AM50V125-3	aM 0 / 125 P	B095244	NH0AM50V125-4
		160	11,5	aM 0 / 160	Y095126	NH0AM50V160-3	aM 0 / 160 P	M095254	NH0AM50V160-4
		200	13,5	aM 0 / 200	R088519	NH0AM50V200-3	aM 0 / 200 P	F088509	NH0AM50V200-4
1	500	80	5,5	aM 1 / 80	R095166	NH1AM50V80-3	aM 1 / 80 P	P095256	NH1AM50V80-4
		100	6,5	aM 1 / 100	T095168	NH1AM50V100-3	aM 1 / 100 P	E095270	NH1AM50V100-4
		125	8,5	aM 1 / 125	C095130	NH1AM50V125-3	aM 1 / 125 P	V095330	NH1AM50V125-4
		160	11,5	aM 1 / 160	D095131	NH1AM50V160-3	aM 1 / 160 P	W095331	NH1AM50V160-4
		200	13,5	aM 1 / 200	E095132	NH1AM50V200-3	aM 1 / 200 P	X095332	NH1AM50V200-4
		250	17	aM 1 / 250	H095135	NH1AM50V250-3	aM 1 / 250 P	A095335	NH1AM50V250-4
		315	24	aM 1 / 315	T088521	NH1AM50V315-3	aM 1 / 315 P	B095336	NH1AM50V315-4

Accessories: Neutral link BS0 Reference Number G097710 - BS1 Reference Number H097711
Pull-out handle - PMP Reference Number P215592

General Purpose IEC Fuses



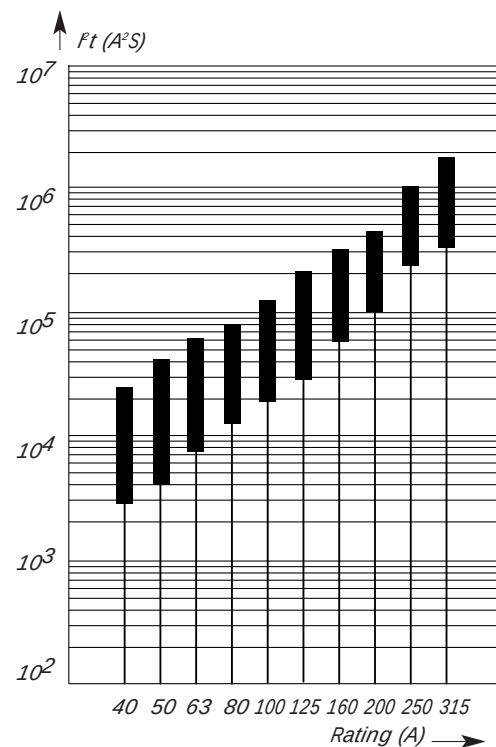
NH Fuses (Plain Blades)

aM Plastic body with/without French striker

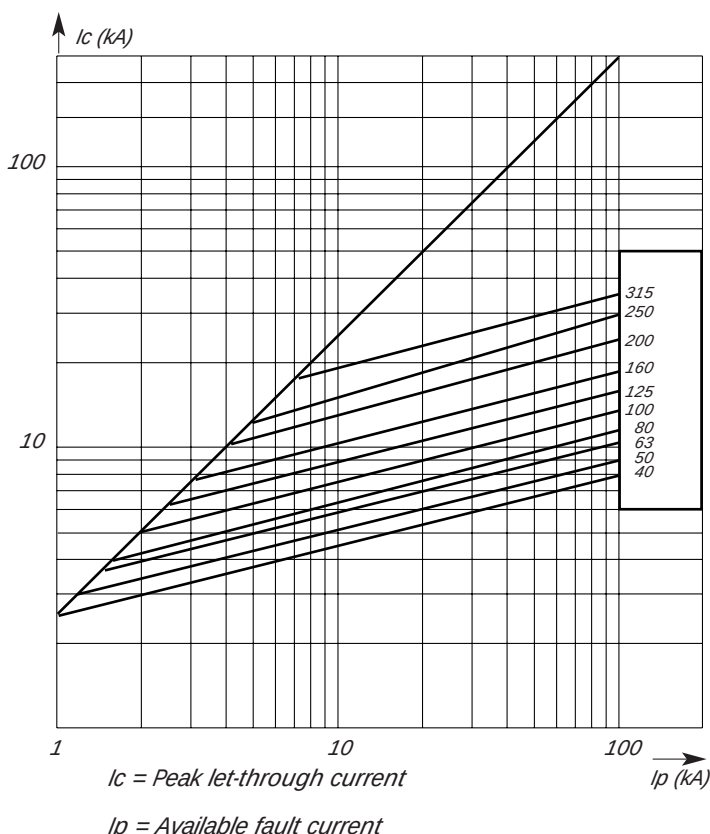
aM 500V Size 0 and 1

from 40 to 315 A

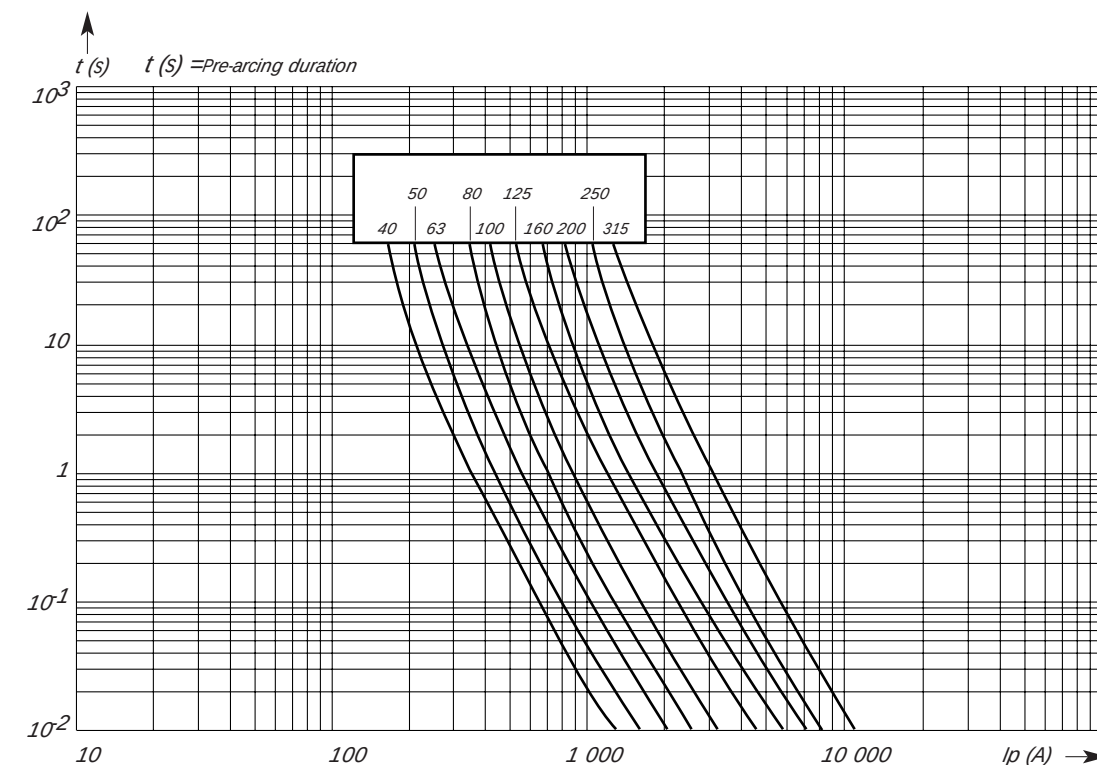
Total Clearing I^2t



Current Limitation Curves



Time VS. Current Characteristics



Breaking capacity
100 kA

I_p (A) = R.M.S.
AVAILABLE
FAULT CURRENT

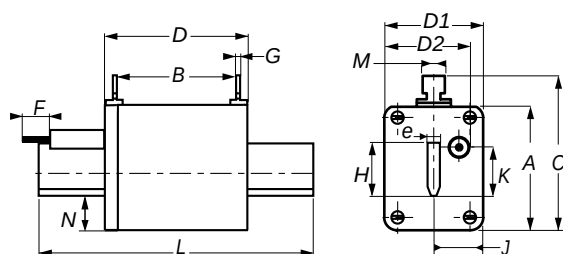
General Purpose IEC Fuses



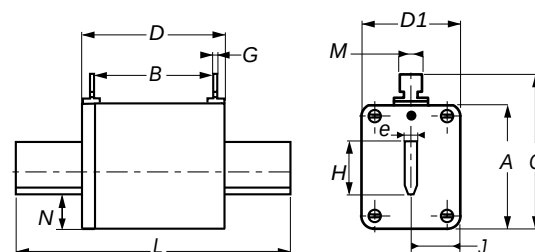
NH Fuses (Plain Blades) aM Plastic body with/without French striker aM 500V Size 2 and 3

from 125 to 630 A

- BLADE-STYLE FUSES: WITH BLOWN FUSE INDICATOR OR TRIP-INDICATOR
- COMPLYING WITH IEC 269.1 AND 2.1, NF EN 60269.1 & 2 NF C 63210 - 63211 AND DIN 43620
- DIMENSIONS:



With trip-indicator



With blown fuse indicator

Size	A	B	C	D	D1	D2*	F*	G	H	J	K	L	M	N	e	Wgt.
2	60	64	72	74	50	50	14	3	28	19	14,5	150	10	14,5	6	590g
3	75	61	88	75	70	64	14	2,5	36	23	14,5	150	10	18	6	850g

* For fuses with trip-indicator

Size	Voltage rating (VAC)	Current rating I_N (A)	Watts loss (W)	With blown fuse indicator			With trip-indicator		
				Designation	Ref. Number	Catalog Number	Designation	Ref. Number	Catalog Number
2	500	125	8,5	aM 2 /125	P095210	NH2AM50V125-3	aM 2 /125 P	Z095196	NH2AM50V125-4
		160	11,5	aM 2 /160	Q095211	NH2AM50V160-3	aM 2 /160 P	S095213	NH2AM50V160-4
		200	13,5	aM 2 /200	R095212	NH2AM50V200-3	aM 2 /200 P	F095340	NH2AM50V200-4
		250	17	aM 2 /250	Q095142	NH2AM50V250-3	aM 2 /250 P	H095342	NH2AM50V250-4
		315	24	aM 2 /315	R095143	NH2AM50V315-3	aM 2 /315 P	J095343	NH2AM50V315-4
		400	28	aM 2 /400	S095144	NH2AM50V400-3	aM 2 /400 P	K095344	NH2AM50V400-4
		500	34	aM 2 /500	W088523	NH2AM50V500-3	aM 2 /500 P	L095345	NH2AM50V500-4
3	500	315	24	aM 3 /315	J095182	NH3AM50V315-3	aM 3 /315 P	Q095073	NH3AM50V315-4
		400	28	aM 3 /400	D095154	NH3AM50V400-3	aM 3 /400 P	W095354	NH3AM50V400-4
		500	34	aM 3 /500	E095155	NH3AM50V500-3	aM 3 /500 P	X095355	NH3AM50V500-4
		630	41	aM 3 /630	F095156	NH3AM50V630-3	aM 3 /630 P	Y095356	NH3AM50V630-4

Accessories: Neutral link BS2 Reference Number J097712 - BS3 Reference Number K097713
Pull-out handle - PMP Reference Number P215592

General Purpose IEC Fuses



NH Fuses (Plain Blades)

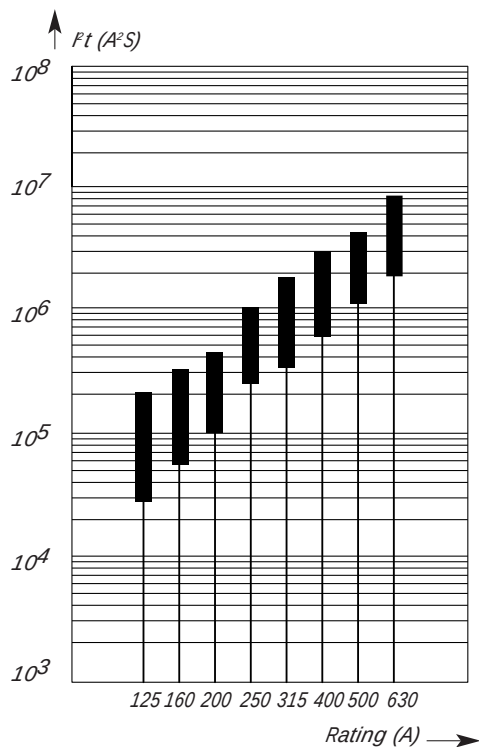
aM Plastic body with/without French striker

aM 500V Size 2 and 3

from 125 to 630 A

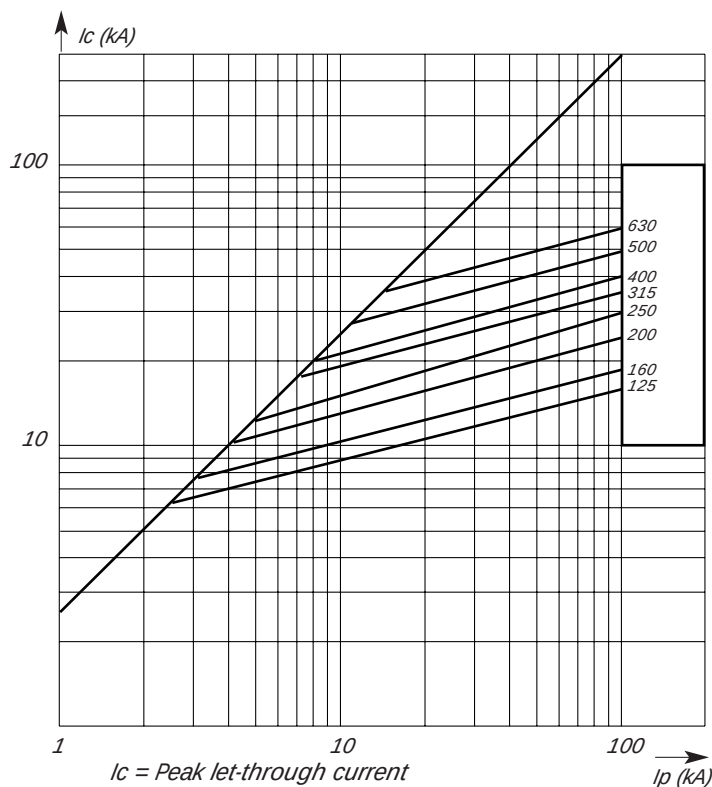
Total Clearing I^2t

Current Limitation Curves



b: total clearing I^2t @ 500 V

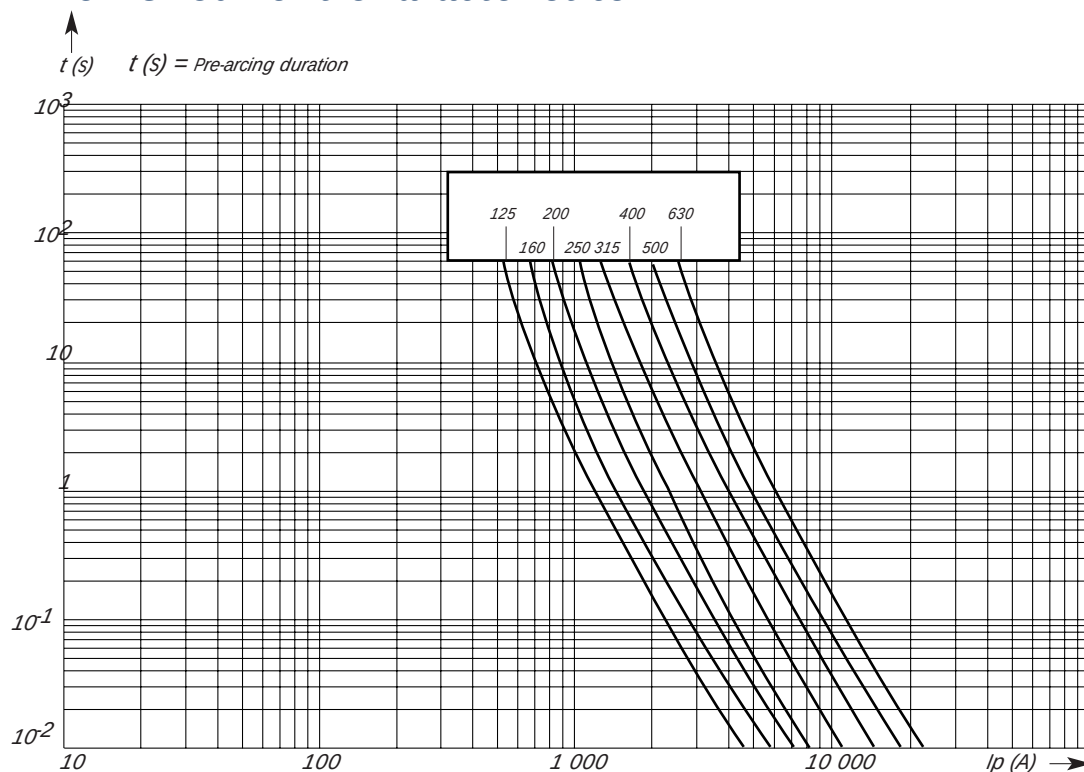
a: pre-arcing Pt



I_c = Peak let-through current

I_p = Available fault current

Time VS. Current Characteristics



Breaking capacity
100 kA

I_p (A) = R.M.S. AVAILABLE FAULT CURRENT

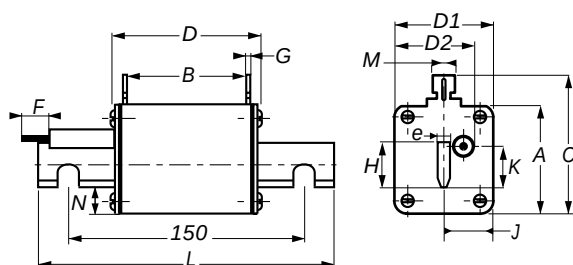
General Purpose IEC Fuses

NH Fuses (Plain Blades) aM Plastic body with/without French striker aM 500V Size 4

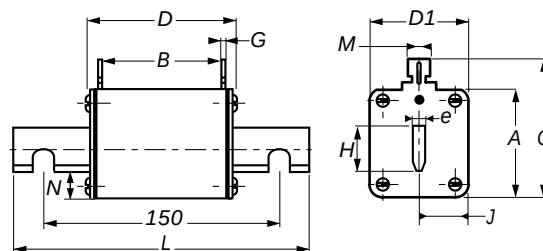


from 630 to 1250 A

- BLADE-STYLE FUSES: WITH BLOWN FUSE INDICATOR OR TRIP-INDICATOR
- COMPLYING WITH IEC 269.1 AND 2.1, NF EN 60269.1 & 2 NF C 63210 - 63211 AND DIN 43620
- DIMENSIONS:



With trip-indicator



With blown fuse indicator

Size	A	B	C	D	D1	D2*	F*	G	H	J	K	L	M	N	e	Wgt.
4	107	61	119	78	90	77	14	2,5	60	27	14,5	200	10	23	8	1900g

* For fuses with trip-indicator

Size	Voltage rating (VAC)	Current rating I_N (A)	Watts loss (W)	With blown fuse indicator			With trip-indicator		
				Designation	Ref. Number	Catalog Number	Designation	Ref. Number	Catalog Number
4	500	630	41	aM 4 /630	X098322	NH4AM50V630-3	aM 4 /630 P	M088515	NH4AM50V630-4
		800	49	aM 4 /800	A098325	NH4AM50V800-3	aM 4 /800 P	N088516	NH4AM50V800-4
		1000	70	aM 4 /1000	B098326	NH4AM50V1000-3	aM 4 /1000 P	P088517	NH4AM50V1000-4
	400	1250	75	aM 4 /1250	C098327	NH4AM40V1250-3	aM 4 /1250 P	Q088518	NH4AM40V1250-4

Accessories: Neutral link - BS4 Reference Number M097715
Pull-out handle - PMP Reference Number P215592

General Purpose IEC Fuses



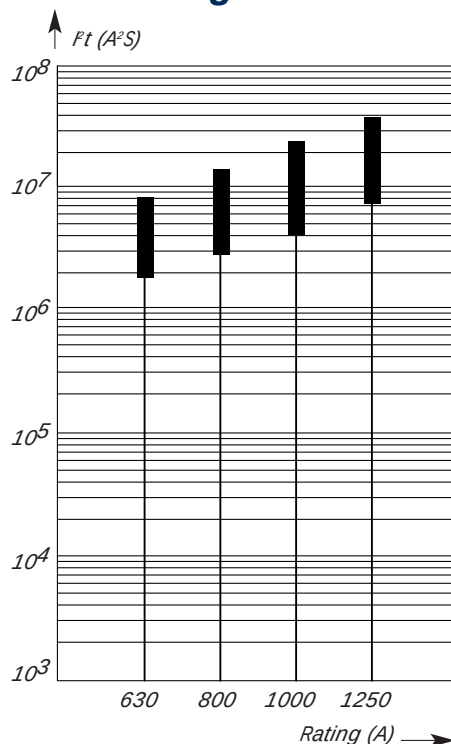
NH Fuses (Plain Blades)

aM Plastic body with/without French striker

aM 500V Size 4

from 630 to 1250 A

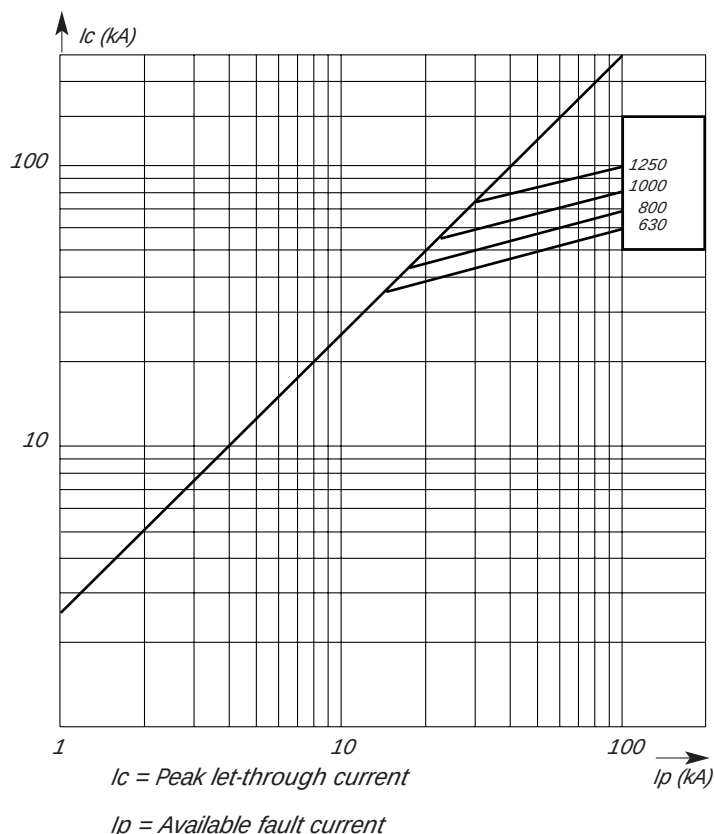
Total Clearing I^2t



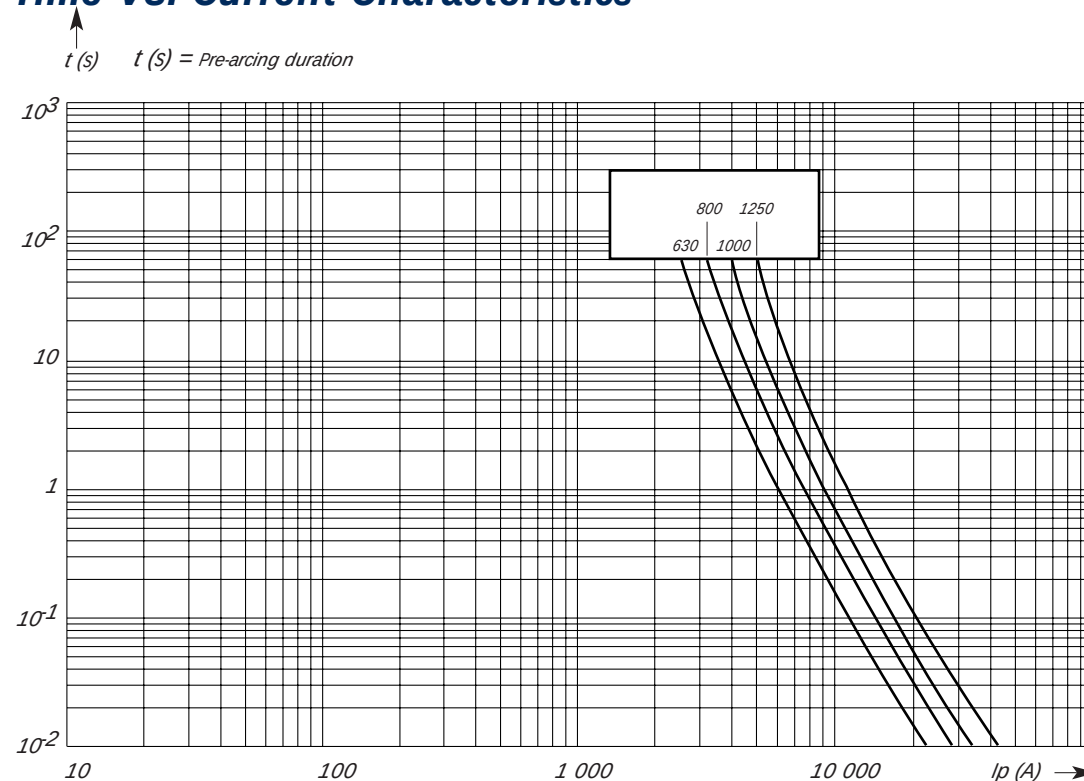
b: total clearing I^2t @ 500 V

a: pre-arcing I^2t

Current Limitation Curves



Time VS. Current Characteristics



Breaking capacity
100 kA

I_p (A) = R.M.S. AVAILABLE FAULT CURRENT

General Purpose Fuses IEC

Masterfuse gG 690V

Highlights

- High ratings 1250 to 2500 A
- gG operating fuse for 690V AC Nominal
- Conformity with IEC 60269 1 and 2
- Dimensional according section V on IEC 60269-2-1
- Breaking capacity 690V 160 KA – 50Hz

Applications

- General protection on Low Voltage Panel
- High power protection on 690V AC Voltage
- Back up for circuit breaker
- Blade fuses for power bus bar assembly
- Disconnecter, Switch and/or Circuit Breaker isolation

Main characteristics

Rated current	Size (ø in mm)	Melting I ² t (KA ² s)	Total I ² t at 690V (KA ² s)	Power losses at I _n (W)	Breaking capacity	Ref. Number	Catalog number
1250 A	76	1590	8200	78		E 302753	MF76GG69V1250
1600 A	89	2500	13000	111	160 KA	F 302754	MF89GG69V1600
2000 A	114	4800	25000	128	at 690V AC	G 302755	MF114GG69V2000
2500 A	127	7000	36000	175		H 302756	MF127GG69V2500

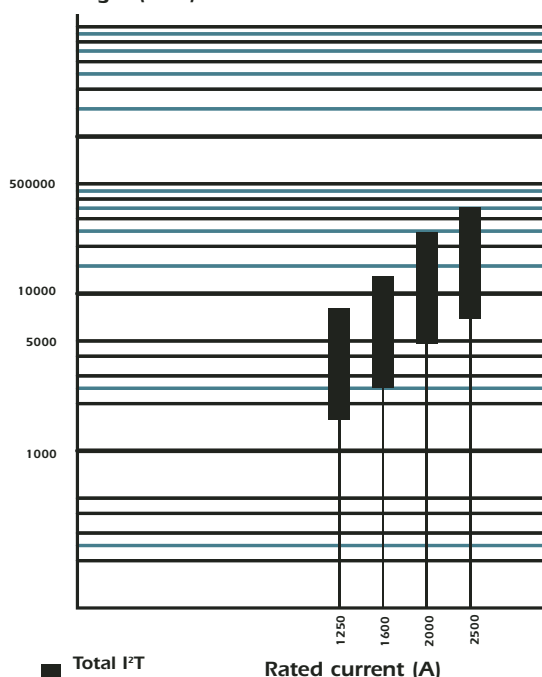
Pack: 1 piece

For ratings 3200A(Ø 146mm) – 4000A (Ø 160mm) – 4800 A (Ø 181mm) consults us

Electrical characteristics

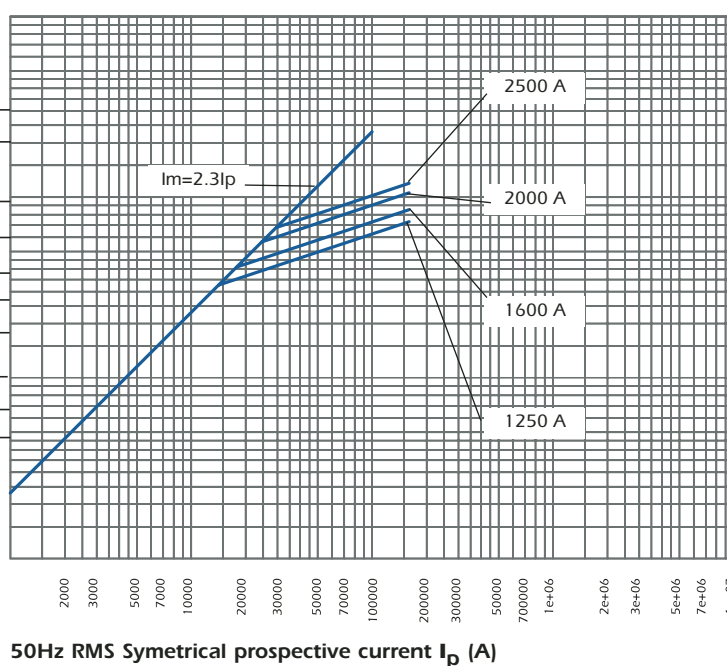
I²t vs rated current and applied voltage characteristics

Prearcing and clearing I²t(kA²s)



Peak let-thru current characteristics

Maximum peak let-thru current I_m (A)

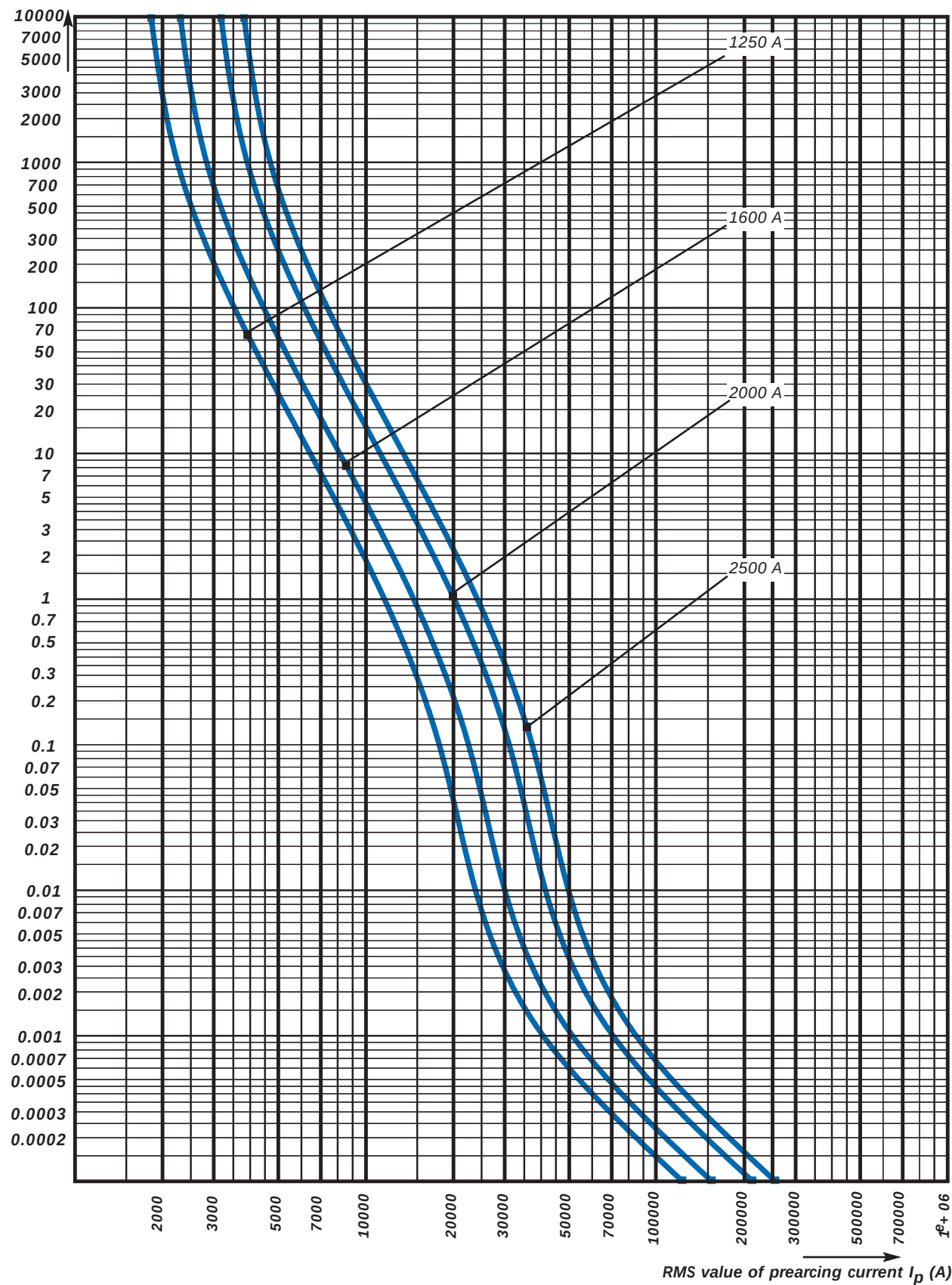


General Purpose Fuses IEC

Masterfuse gG 690V

Time current characteristics

Prearcing time (s)



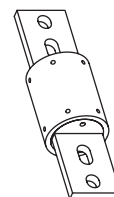
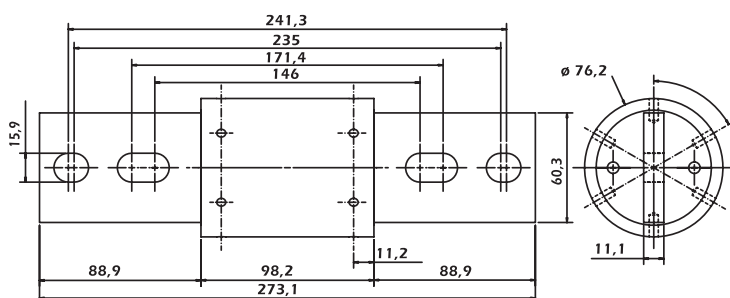


General Purpose Fuses IEC

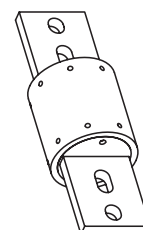
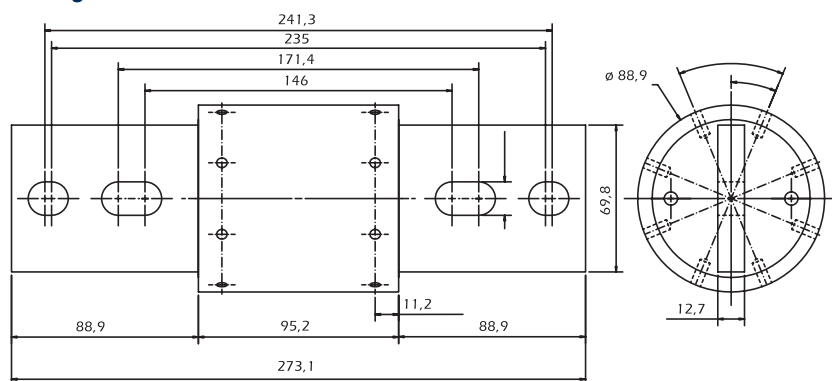
Masterfuse gG 690V

Dimensions

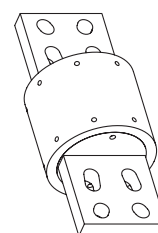
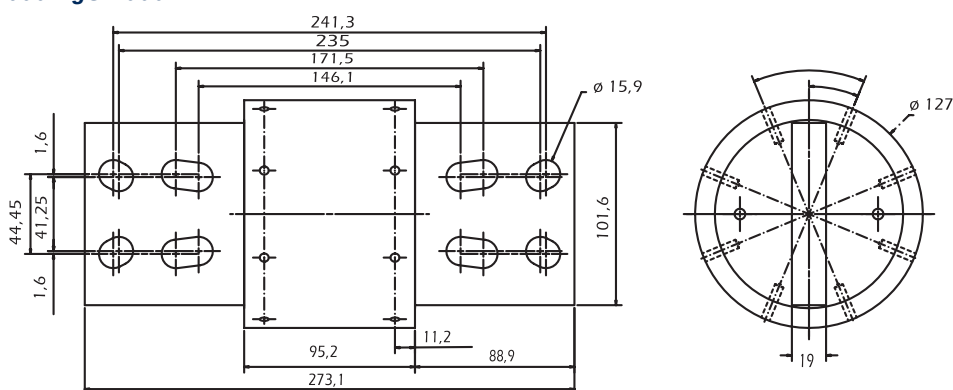
690 VgG 1250 A



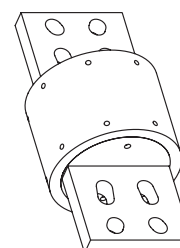
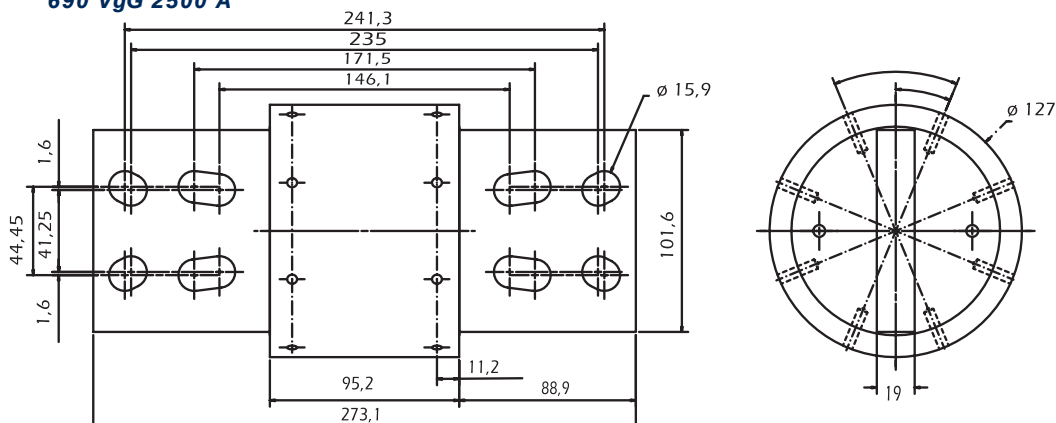
690 VgG 1600 A



690 VgG 2000 A



690 VgG 2500 A





General Purpose IEC Fuses

DIN Fuses
D0-type
NEOZED



D0 Fuse System

2–100 A, 400 (440) VAC, 250 VDC

Line protection fuses - gG

Motor protection fuses - aM

IEC 269-3-1

DIN VDE 0636 Part 41

DIN VDE 0636 Part 301



Germany



Austria



Denmark



Norway

Dimensions are stipulated in the following regulations:

DIN 49522 D0 Fuse-links

DIN 49523 D0 Gauge rings

DIN 49524 D0 Fuse bases

Structure of NEOZED fuse system

The NEOZED system, similar to the D-system, consists of a fuse base, gauge-ring, fuse link and screw cap. It is dimensioned for nominal voltages of 440VAC 400 VAC and 250 VDC. The system guarantees that from 6 A onwards rated current will not be confused from current stage to current stage. This is ensured by staging the diameter of the fuse link's base current in connection with gauge diameters determined accordingly.

General Purpose IEC Fuses



DIN Fuses D0-type NEOZED



D0 Fuse System

NEOZED Fuse-links 2–100 A gG

400 VAC, 250 VDC

Size	Rated in Current (A)	Gauge Color	Previous Reference	Reference Number	Pack	Catalog Number
D01	2	pink	01700.002000	T214676	50	
	4	brown	01700.004000	W200809	50	
	6	green	01700.006000	B215695	50	
	10	red	01700.010000	W211090	50	
	13	black	01700.013000*	C201206*	50	
	16	grey	01700.016000	R223023	50	
D02	20	blue	01701.020000	B217742	50	
	25	yellow	01701.025000	W213160	50	
	35	black	01701.035000	R219826	50	
	50	white	01701.050000	D215191	50	
	63	copper	01701.063000	C201873	50	
D03	80	silver	01702.080000	L216716	10	
	100	red	01702.100000	N212647	10	

*No VDE, ÖVE testing mark



Back-up fuse in operating class gG

Rated in Current (A)	20 A	25 A	35 A	50 A	63 A	80 A
20 A aM	600	300	200	<100	<100	<100
25 A aM	-	1500	700	100	<100	<100
35 A aM	-	-	1000	300	200	<100

NEOZED Fuse-links 20–35 A aM

400 VAC / 440 VAC

Size	Rated in Current (A)	Gauge Color	Previous Reference	Reference Number	Pack	Catalog Number
D02	20	blue	01701.020500*	H211607*	10	
	25	yellow	01701.025500*	F212640*	10	
	35	black	01701.035500*	J213655*	10	

*No VDE, ÖVE testing mark

Dimensions see following pages





General Purpose IEC Fuses

DIN Fuses D0-type NEOZED



D0 Fuse System

INNOZED Neozed-Sicherungssockel

für Schnappbefestigung mit Abdeckung, 400VAC



Größe	Bemessungs- strom in A	Polzahl	Referenz Nummer	Gewich in g/Stück	VE	Artikel -Gruppe
D01	16	1	2724.	75	12	42
D01	16	3	2734.	223	4	42
D02	63	1	2725.	77	12	42
D02	63	3	2735.	229	4	42

INNOZED Neozed-Sicherungssockel

für Schnappbefestigung ohne Abdeckung, 400VAC



Größe	Bemessungs- strom in A	Polzahl	Referenz Nummer	Gewich in g/Stück	VE	Artikel -Gruppe
D01	16	1	2724.1	70	12	42
D01	16	3	2734.1	210	4	42
D02	63	1	2725.1	72	12	42
D02	63	3	2735.1	217	4	42

Abdeckung für INNOZED



Größe	Bemessungs- strom in A	Polzahl	Referenz Nummer	Gewich in g/Stück	VE	Artikel -Gruppe
D01/ D02		1	2718.	5	24	42
D01/ D02		3	2732.	12	12	42

General Purpose IEC Fuses



DIN Fuses

D0-type

NEOZED



D0 Fuse System

NEOZED Screw cap - plastic

400 VAC / 440 VAC

Size	Rated in Current (A)	Cap Thread	Previous Reference	Reference Number	Pack	Catalog Number
with testing hole						
D01	16	E 14	01714.000200	E212501	20	
D02	63	E 18	01715.000200	P211981	20	
for D01 fuse links with adapter spring						
D02		E 18	01715.890200	M214026	20	
with sealable hole and testing hole						
D01	16	E 14	11714.000220	R214536	20	
D02	63	E 18	11715.000220	S214537	20	
without testing hole						
D02	63	E 18	01715.000000	L206435	20	



NEOZED Screw cap - porcelain

400 VAC / 440 VAC

Size	Rated in Current (A)	Cap Thread	Previous Reference	Reference Number	Pack	Catalog Number
with testing hole						
D01	16	E	14 01710.000200	H201211	20	
D02	63	E 18	01711.000200	T215044	20	
without testing hole						
D03 100	M30 x 2		01712.000200	V215045	20	

Dimensions see following pages



NEOZED Gauge rings

Size	Rated in Current (A)	Cap Thread	Previous Reference	Reference Number	Pack	Catalog Number
D01	2	pink	01705.002000	J216576	50	
	4	brown	01705.004000	J219681	50	
	6	green	01705.006000	P206438	50	
	10	red	01705.010000	M213014	50	
D02	2	pink	01706.002000*	K216577*	50	
	4	brown	01706.004000*	S222127*	50	
	6	green	01706.006000*	R211983*	50	
	10	red	01706.010000*	H216069*	50	
	16	grey	01706.016000*	Q218629*	50	
	20	blue	01706.020000	S200668	50	
	25	yellow	01706.025000	R213524	50	
	35	black	01706.035000	J216070	50	
	50	white	01706.050000	R218630	50	
D03	80	silver	01707.080000	T200669	25	

*For use of D01 fuse-links in D02 fuse-bases

Dimensions see following pages





General Purpose IEC Fuses

DIN Fuses
D0-type
NEOZED

D0 Fuse System

NEOZED Insulating covers

single pole for ceramic fuse bases:



3 pole:

	Previous Reference	Reference Number	Pack	Catalog Number
for type D01/D02				
with 1-side marking area	01718.008000	M222881	50	
with marking area	01718.700000	V200670	50	
for type D03				
without marking area	01728.000000	V211986	20	
for type D01/D02				
cover - cap	01721.030000	X201730	20	
for type D01/D02				
with marking area	01732.700000	M216579	20	

Dimensions see following pages

NEOZED Fuse bases

for screw mounting without shock-proof protection-cover, 400 VAC



Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	1 (1*)	4	01720.100000	Z216061	20	
D02	63	1 (2*)	25	01721.200000	M214532	20	
D02	63	1 (4*)	25	01721.400000	F213008	20	
D03	100	1 (4*)	50	01722.400000	J213011	10	
D01	16	3 (1*)	4	01730.100000	K200661	5	
D02	63	3 (2*)	25	01731.200000	F216573	5	
D02	63	3 (4*)	25	01731.400000	K206365	5	

NEOZED Fuse bases

for snap-on fastening without shock-proof protection-cover, 400 VAC



D01	16	1 (1*)	4	01720.150000	J200660	20	
D02	63	1 (2*)	25	01721.250000	J218623	20	
D02	63	1 (4*)	25	01721.450000	W215552	20	
D03	100	1 (4*)	50	01722.450000	Q214535	10	
D01	16	3 (1*)	4	01730.152000	B216063	5	
D02	63	3 (2*)	25	01731.252000	Y217601	5	
D02	63	3 (4*)	25	01731.452000	M211979	5	

*Terminal type and dimensions see following pages

NEOZED Fuse bases

For snap-on fastening with shock-proof protection-cover



Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	1 (1*)	4	01720.170000	B211463	20	
D01	16	1 (3*)	4	01720.370000	T215550	20	
D01	16	3 (1*)	4	01730.172000	A219144	5	
D02	63	1 (2*)	25	01721.270000	M200663	20	
D02	63	1 (4*)	25	01721.470000	K218624	20	
D02	63	3 (2*)	25	01731.272000	E222874	5	
D02	63	3 (4*)	25	01731.472000	K213518	5	
D03	100	1 (4*)	50	01722.470000	F216067	10	

Dimensions see following pages



DIN Fuses

D0-type

NEOZED

D0 Fuse System

LINOZED Fuse bases

For snap-on fastening, 400VAC

Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	1	35	01724.000000	M217085	6	
D02	63	1	35	01725.000000	R215042	6	
D01	16	3	35	01734.000000	E201208	2	
D02	63	3	35	01735.000000	Y215554	2	

Dual function terminals

Dimensions see following pages



NEOZED Universal fuse bases

for screw mounting, 400 VAC

Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	1 (1*)	4	01720.130000	B222871	20	
D02	63	1 (2*)	25	01721.230000	D216571	20	
	63	1 (4*)	25	01721.430000	Q215041	20	
D03	100	1 (4*)	50	01722.430000	K214024	10	
D01	16	1 (1*)	4	01720.180000	G213515	20	
D02	63	1 (2*)	25	01721.280000	L211978	20	
D02	63	1 (4*)	25	01721.480000	G213009	20	
D03	100	1 (4*)	50	01722.480000	H219680	10	

* Terminal type and dimensions see following pages



NEOZED 3-pole fuse bases

without shock-proof protection, 400 VAC

Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	3 (1*)	4	01737.100000	A212497	5	
D02	63	3 (2*)	25	01738.200000	Z217602	5	

Screw fixing

D01	16	3 (1*)	4	01737.100000	A212497	5	
D02	63	3 (2*)	25	01738.200000	Z217602	5	

Snap-on fastening

D01	16	3 (1*)	4	01737.150000	E213007	5	
D02	63	3 (2*)	25	01738.250000	B218110	5	

* Terminal type and dimensions see following pages

NEOZED 3-pole fuse bases

without shock-proof protection, 400 VAC

Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D02	63	1 (2*)	25	01746.200801	P222124	20	
D02	63	1 (2*)	25	01741.200001	L218625	20	

Clamp fixing for busbar 12 x 4...5mm, 15 x 4...5 mm

D02	63	1 (2*)	25	01746.200801	P222124	20	
-----	----	--------	----	--------------	---------	----	--

Clamp fixing for busbar 12 x 4 ...10 mm, 15 x 4 ...10 mm

D02	63	1 (2*)	25	01741.200001	L218625	20	
-----	----	--------	----	--------------	---------	----	--

Snap-on fastening for busbar 15 x 5 mm

D02	63	1 (2*)	25	01741.250000	G219679	20	
-----	----	--------	----	--------------	---------	----	--

* Terminal type and dimensions see following pages

Clamp fixing



Snap-on fastening



General Purpose IEC Fuses

DIN Fuses
D0-type
NEOZED

D0 Fuse System

NEOZED Fuse-links 2–63 A gG

440 VAC, 250 VDC



Size	Rated in Current (A)	Code Color	Previous Reference	Reference Number	Pack	Catalog Number
D01	2	rosa	01700.002400	E218780	50	
	4	braun	01700.004400	V219829	50	
	6	grün	01700.006400	X223028	50	
	10	rot	01700.010400	S201358	50	
	16	grau	01700.016400	C211096	50	
D02	20	blau	01701.020400	X212126	50	
	25	gelb	01701.025400	S213663	50	
	35	schwarz	01701.035400	C214684	50	
	50	weiß	01701.050400	J215702	50	
	63	Kupfer	01701.063400	N216718	50	

Dimensions see following pages

NEOZED Fuse bases

for snap-on fastening without shock-proof protection cover, 440 VAC



Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	1 (1*)	4	01720.150040	D201207	20	
D02	63	1 (2*)	25	01721.250040	M222122	20	
D02	63	1 (4*)	25	01721.450040	C216064	20	
D01	16	3 (1*)	4	01730.152040	C216570	5	
D02	63	3 (2*)	25	01731.252040	A218109	5	
D02	63	3 (4*)	25	01731.452040	C212499	5	

* Terminal type see following pages

LINOZED Fuse bases, Dual function clamps

for snap-on fastening, 440 VAC



Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	1	35	01724.000040	X217600	6	
D02	63	1	35	01725.000040	X215553	6	

Dimensions see following pages

LINOZED Fuse bases, Dual function terminal

for snap-on fastening, 440 VAC



Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
D01	16	3	35	01734.000040	P201723	2	
D02	63	3	35	01735.000040	E216066	2	

Dimensions see following pages

General Purpose IEC Fuses



DIN Fuses

D0-type

NEOZED



D0 Fuse System

NEOZED - Special holding spring

Size	Previous Reference	Reference Number	Pack	Catalog Number
D01 Fuse-links in D02-socket	01713.000000	Z215049	50	
D02 Fuse-links in D03-socket	01709.000000	P214028	10	
D01 Fuse-links in DL-socket	01733.000000	J218117	100	



NEOZED - Spacer

Size	Previous Reference	Reference Number	Pack	Catalog Number
D02 Fuse-links in D03-socket	01707.000000	T211985	10	



NEOZED - Gauge ring key

Size	Previous Reference	Reference Number	Pack	Catalog Number
gauge-rings D01, D02, D03	01708.000000	J212505	10	



NEOZED - Screw-cap remover

Size	Previous Reference	Reference Number	Pack	Catalog Number
plastic screw-caps D01, D02	01716.000000	X222936	1	
	01716.333000	F200726	1	



NEOZED - Locking caps

Size	Previous Reference	Reference Number	Pack	Catalog Number
D01 supply boards (1)	01714.800000*	D212546*	25	
D01 Industry (2)	01714.810000	P213062	25	
D02 supply boards (1)	01715.800000*	R214582*	25	
D02 Industry (2)	01715.810000	Y215094	25	

* only for authorized energy supplier personnel

1) black top, red screw pitch

2) red top, black screw pitch



NEOZED - Locking keys

Size	Previous Reference	Reference Number	Pack	Catalog Number
D02 Supply boards	01714.820000*	K213564	10	
D02 Industry	01714.830000	J214069	10	

* for authorized energy supplier personnel only



General Purpose IEC Fuses

DIN Fuses
D0-type
NEOZED

D0 Fuse System

INNOZED

Der Neozed-Sicherungssockel mit innovativer Anschlusstechnik

Kunststoffe

mit höchsten Ansprüchen

- Sockelabdeckung aus flammwidrigem Polyamid
- Gehäuse aus glasfasergefülltem, duroplastischem Polyester
- Hohe mechanische und thermische Belastbarkeit

Innovative Anschlusstechnik

durch zweigeteilte Rahmenklemme.

- Kontaktierung der Einspeiseleitungen
- Anschluss der Verdrahtungsschienen
- Leitungen leichter einführbar Klemmstellen der Leitungen visuell kontrollierbar
- Einsparung von Montagezeit
- Zusätzliche Betriebssicherheit und Flexibilität

Verdrahtungsschienen

Folgende Schienen sind einsetzbar:

- 3-phasig 16 mm² – Ref.Nr. 2963.003
- 1-phasig 16 mm² – Ref.Nr. 2963.

Flexible Klemmenteknik

Unterschiedliche Leiterquerschnitte und Leiterarten sind problemlos klemmbar, sowohl eingangs- als auch abgangsseitig

- Flexibilität bei der Verdrahtung
- Erhöhung der Betriebssicherheit bei der Klemmung unterschiedlicher Leiter



*35mm² und 4mm²
abgangsseitig*



*2 x 16mm²
auf der
Einspeiseseite*



*Zwillingsaderendhülle
auf der
Einspeiseseite*



*35mm² und 4mm²
auf der
Einspeiseseite*

DIN Fuses D0-type NEOZED

D0 Fuse System Variabler Berührungsschutz



MIT SOCKELABDECKUNG FÜR VERTEILERBAU

Berührungsschutz durch einfaches Aufrasten der Sockelabdeckung.



OHNE SOCKELABDECKUNG IM INDUSTRIELLEN ANLAGENBAU

Berührungsschutz nach BGVA 2 auch ohne Sockelabdeckung bis 25mm²

Anschlussquerschnitt

- Einsparung der Montagezeit und der Kosten der Sockelabdeckung



FELDABDECKUNG AUS KUNSTSTOFF

individuell zugeschnitten

- einfach und kostengünstig

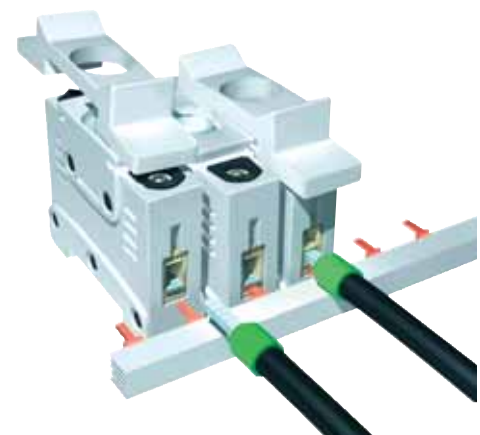
Geteilte Anschlussklemme zur Klemmung zweier Leitungen

Einspeisung		Abgang
1. flexible Leitungen mit Aderendhülse		
zwei Leitungen gleichen Querschnitts: zwei unterschiedliche Leitungen:	bis max. 10mm ²	bis max. 16mm ²
	16mm ² u. max. 10mm ²	
	25mm ² u. max. 6mm ²	25mm ² u. max. 6mm ²
	35mm ² u. max. 4mm ²	35mm ² u. max. 4mm ²
mit Zwillingsaderendhülse:	bis max. 16mm ²	bis max. 16mm ²
2. flexible, feindrähtige Leitungen ohne Aderendhülse		
zwei Leitungen gleichen Querschnitts: zwei unterschiedliche Leitungen:	bis max. 10mm ²	bis max. 16mm ²
	16mm ² u. max. 10mm ²	
	25mm ² u. max. 10mm ²	25mm ² u. max. 16mm ²
	35mm ² u. max. 10mm ²	5mm ² u. max. 10mm ²
3. kurzschlussfeste Leitungen:		
zwei Leitungen gleichen Querschnitts:	bis max. 6mm ²	bis max. 6mm ²
Maximaler Anschlussquerschnitt der Zu- und Abgangsklemme: 35mm ²		



VORTEILE des INNOZED

- Schnellere Montage
- Höhere Betriebssicherheit
- Klemmstelle sichtbar vor Verdrahtungsschiene





Vorschriften

IEC 60269-3-1

DIN VDE 0636 Teil 301

Prüfzeichen



Germany



Denmark



Norway

Baugrößen

Drei Baugrößen stehen zur Verfügung:

- Sicherungssockel D01
 - Gewinde E 14
 - Nennstrom 16A
 - für Sicherungseinsätze 2 ... 16A
- Sicherungssockel D02
 - Gewinde E 18
 - Nennstrom 63A
 - für Sicherungseinsätze 20 ... 63A
 - mit Spezialpasshülsen auch verwendbar für Sicherungseinsätze 2 ... 16A
- Sicherungssockel D03
 - Gewinde M 30 x 2
 - Nennstrom 100A
 - für Sicherungseinsätze 80 und 100A

Betriebsklassen

Die Betriebsklasse ist durch zwei Buchstaben gekennzeichnet.

Der erste Buchstabe gibt die Funktionsklasse, der zweite das zu schützende Objekt an. Unser Lieferprogramm umfasst NEOZEDSicherungseinsätze nach DIN VDE 0636 für folgende Betriebsklassen:

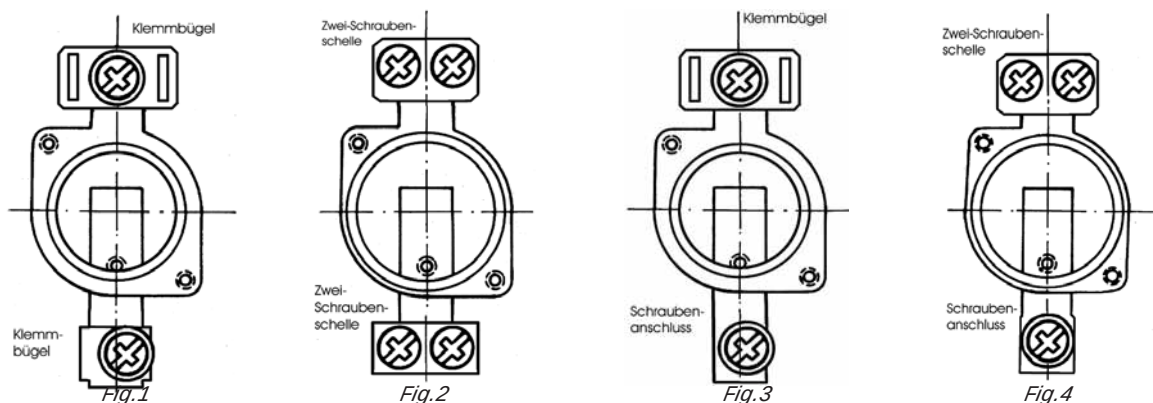
- gG: Ganzbereichskabel- und Leitungsschutz
- gR: Ganzbereichs-Halbleiterschutz
- aM: Teilbereichs-Schaltgeräteschutz (Motorschutz)

Schaltvermögen

NEOZED-Sicherungseinsätze schalten im gesamten Bereich der Zeit-Stromkennlinie auch im Bereich der kritischen Ströme zuverlässig ab.

Das Schaltvermögen ist 50kA.

Klemmrausführung der keramiksockel





DIN Fuses

D0-type

NEOZED



D0 Fuse System

Ausschreibungstexte

Neozed-Sicherungssockel INNOZED

400VAC / 250VDC,
D01 (D02), 16A (63A),
Berührungsschutz nach BGVA 2 (auch ohne
Abdeckung)
Abdeckung abnehmbar bei eingeschraubter
Sicherung
Material Kunststoff zweigeteilte Rahmenklemmen

Neozed-Sicherungssockel LINOZED

400VAC / 250VDC
D01 (D02), 16A (63A)
Berührungsschutz nach BGVA 2
Material Kunststoff
Doppelfunktionsklemmen gefederter Fußkontakt

Neozed-Sicherungssockel

400VAC / 250VDC
D01 (D02, D03)
16A (63A, 100A)
Material Keramik
Anschlussart Klemmbügel (Schelle – Schelle,
Schraube – Schelle)

Neozed-Sicherungseinsatz

400VAC / 250VDC
D01 (D02, D03)
2 ... 16A (20 ... 63A, 80 ... 100A)
Betriebsklasse gG

Neozed-Sicherungseinsatz

400VAC / 400VAC
D02, 20A (25A, 35A)
Betriebsklasse aM für Schaltgeräteschutz in
Motorenstromkreisen

Neozed-Sicherungseinsatz

440VAC
D01 (D02, D03)
2 ... 16A (20 ... 63A, 80 ... 100A)
Betriebsklasse gR für Halbleiterschutz

Neozed-Schraubkappen

400VAC / 250VDC
D01 (D02, D03)
16A (63A, 100A)
Material Kunststoff (Keramik),
mit Prüfloch (und Plombierloch)

Neozed-Hülsenpasseinsatz

D01 (D02, D03)
2 ... 10A (20 ... 50A, 80A)
Neozed-Spezialhülsenpasseinsatz für D01-
Sicherungseinsätze in D02-Sicherungssockeln
D02, 2 ... 16A



DIN Fuses
D0-type
NEOZED



D0 Fuse System

2 – 100A, 400 (440)VAC, 250VDC Leitungsschutzsicherungen gG

Eigenverbrauch in W

Nennstrom in A	Größtwerte *	Messwerte
2	2,5/2,5	1,5
4	1,8	1,5
6	1,8	1,3
10	2,0	1,8
16	2,5/2,2	2,1
20	3,0/2,5	2,3
25	3,5/3,0	2,6
35	4,0	2,9
50	5,0	3,5
63	5,5	4,2
80	6,5	4,9
100	7,0	5,8

Selektivität

NEOZED-Sicherungseinsätze sind im Verhältnis 1:1,6 der Nennströme mit allen Sicherungseinsätzen selektiv, die folgenden Anforderungen entsprechen:

Betriebsklasse gG entspr. IEC 60269-2-1, 60269-3-1

Betriebsklasse gG entspr. DIN VDE 0636 Teil 201, 301

NEOZED-Sicherungseinsätze sind untereinander und bei gemischtem Einsatz mit Sicherungseinsätzen anderer Lindner-Systeme im Verhältnis 1:1,25 selektiv, d.h. von Nennstromstufe zu Nennstromstufe. Beide Sicherungen sollten jedoch bei so enger Staffelung gleichen Umgebungseinflüssen ausgesetzt sein.

NEOZED-Sicherungseinsätze 32A

Zur Absicherung von 32A CEE Steckdosen sind entsprechend der neuen DIN VDE 0623 Teil 1/06.93 (DIN EN 60309-1) Sicherungseinsätze mit maximal 32A Bemessungsstrom vorgeschrieben.

Bisher durften 32A CEE Steckdosen ausnahmsweise mit 35A abgesichert werden.

Diese Ausnahmeregelung darf zukünftig für Neuanlagen nicht mehr angewendet werden, da die entsprechende Vorschrift DIN VDE 0623/03.77 nicht mehr gültig ist. Es gilt jedoch eine Übergangsfrist bis 2003-02-01.

Passorgane: Es sind die Hülsenpreiseinsätze 35A zu verwenden.



DIN Fuses D0-type NEOZED

D0 Fuse System

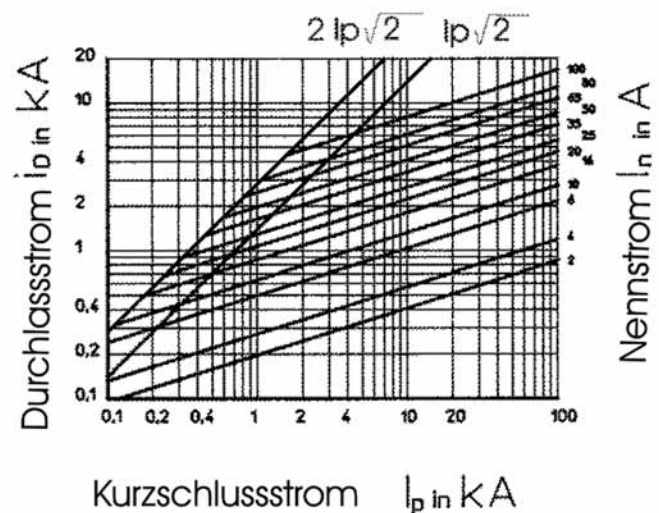
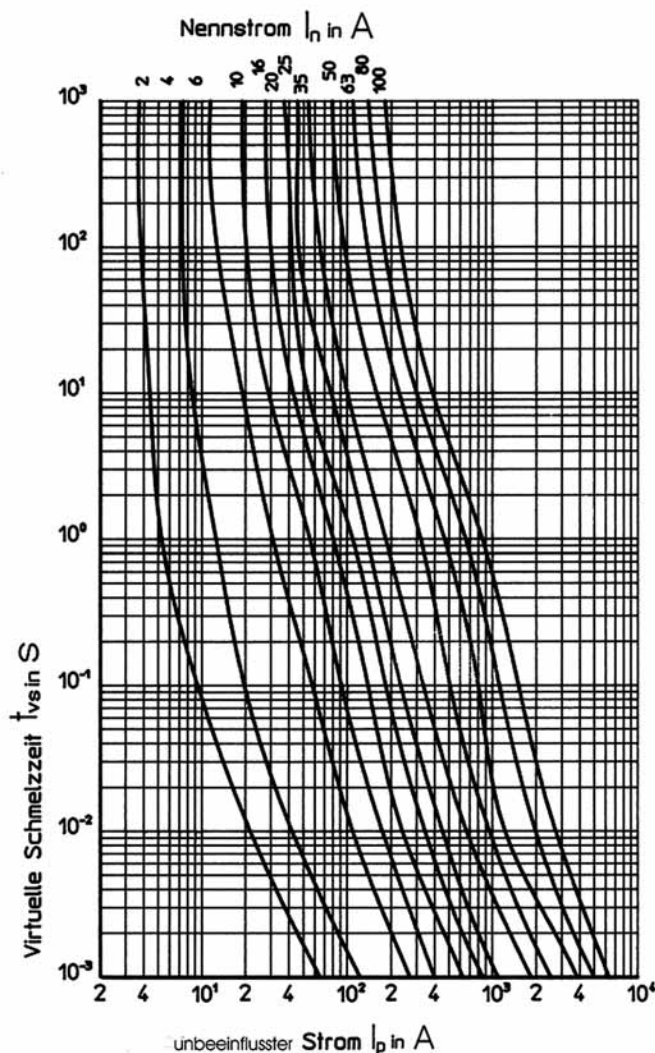
Direkte Zuordnung bei Schutz von Kabel und Leitungen bei Überlast

Bei der Zuordnung von Überstrom-Schutzorganen zum Kabel- und Leitungsschutz sind nach DIN VDE 0100 Teil 430 folgende Bedingungen zu erfüllen:

- $I_B \leq I_N \leq I_Z$ (Nennstromregel) (1)
- $I_2 \leq 1,45 \times I_N$ (Auslöseregel) (2)
- I_B - Betriebsstrom des Stromkreises
- I_N - Nennstrom der ausgewählten Überstromeinrichtung
- I_Z - zulässige Strombelastbarkeit des Kabels
- I_2 - Auslösestrom der Schutzeinrichtung

DIN VDE 0636 Teil 301 wurde durch eine Zusatzprüfung "Abschalten mit $I_2 = 1,45 \times I_N$ in der konventionellen Prüfdauer" ergänzt.

NEOZED-Sicherungseinsätze gG erfüllen die Bedingungen dieser Zusatzprüfung. Damit ist eine direkte Zuordnung des Nennstromes des Sicherungseinsatzes zur Belastbarkeit der Leitung oder des Kabels möglich.





DIN Fuses D0-type NEOZED



D0 Fuse System

Vorschriften

IEC 60269-3-1
DIN VDE 0636 Teil 301
20/25/35A 400 (440)VAC, 250VDC
Schaltgeräteschutz-Sicherungen aM

Anwendung

NEOZED-Sicherungseinsätze der Betriebsklasse aM gewähren Motoren und Schaltgeräten den besten Schutz im Fall eines Kurzschlusses. Im Vergleich zu alternativen Schutzorganen haben Sicherungseinsätze der Betriebsklasse aM entscheidende Vorteile:
Besonders träges Abschaltverhalten im Überlastbereich verhindert unerwünschtes, vorzeitiges Auslösen des Schutzorgans; sehr flinkes Abschalten im Kurzschlussfall sorgt für höchste Kurzschlussstrombegrenzung und verhindert damit das Abbrennen und Verschweißen der Kontakte des Schaltgerätes.
Eine um bis zu 50% geringere Verlustleistung bietet entscheidende Vorteile bei häufigem Lastwechsel und Reversierbetrieb und spart außerdem noch Energiekosten.

Nennströme und Zeit-Strombereiche

NEOZED-Sicherungseinsätze aM gibt es nur in der Baugröße D02
20A 25A 35A
Zeit-Strombereiche nach IEC 60269

Selektivität

Selektivität erreicht man, wenn die vorgeschaltete Sicherung der Betriebsklasse gG mindestens drei Nennstromstufen größer als die Motorschutzsicherung aM ist. Dies verhindert unerwünschtes Abschmelzen der Vorsicherung bei kleinen Kurzschlussströmen.

- Beispiel: Nennstrom der Motorschutzsicherung 25A aM
Nennstrom der Vorsicherung 35A gG
Kurzschlussstrom im Motorstromkreis 500A
Selektivitätsgrenze lt. Tabelle 700A
- Ergebnis: keine Selektivität

Selektivitätsgrenzen in A

Nennstrom	20A	25A	35A	50A	63A	80A
20A aM	600	300	200	<100	<100	<100
25A aM	–	1500	700	100	<100	<100
35A aM	–	–	1000	300	200	<100

Vorsicherung der Betriebsklasse gG

Eigenverbrauch und Erwärmung

Die Verlustleistung der NEOZED-Sicherungseinsätze aM sind technisch bedingt geringer als bei den vergleichbaren der Betriebsklasse gG. Auch bei diesen Sicherungseinsätzen unterschreitet die LINDNER-Konstruktion die Größenwerte entsprechender Norm erheblich.

Eigenverbrauch in W

Nennstrom in A	Größtwerte *	Messwerte
20A	3,0/2,5	1,10
25A	3,5/3,0	1,05
35A	4	1,95

*) nach IEC 269-3-1, DIN VDE 0636 Teil 301/DIN VDE 0636 Teil 41



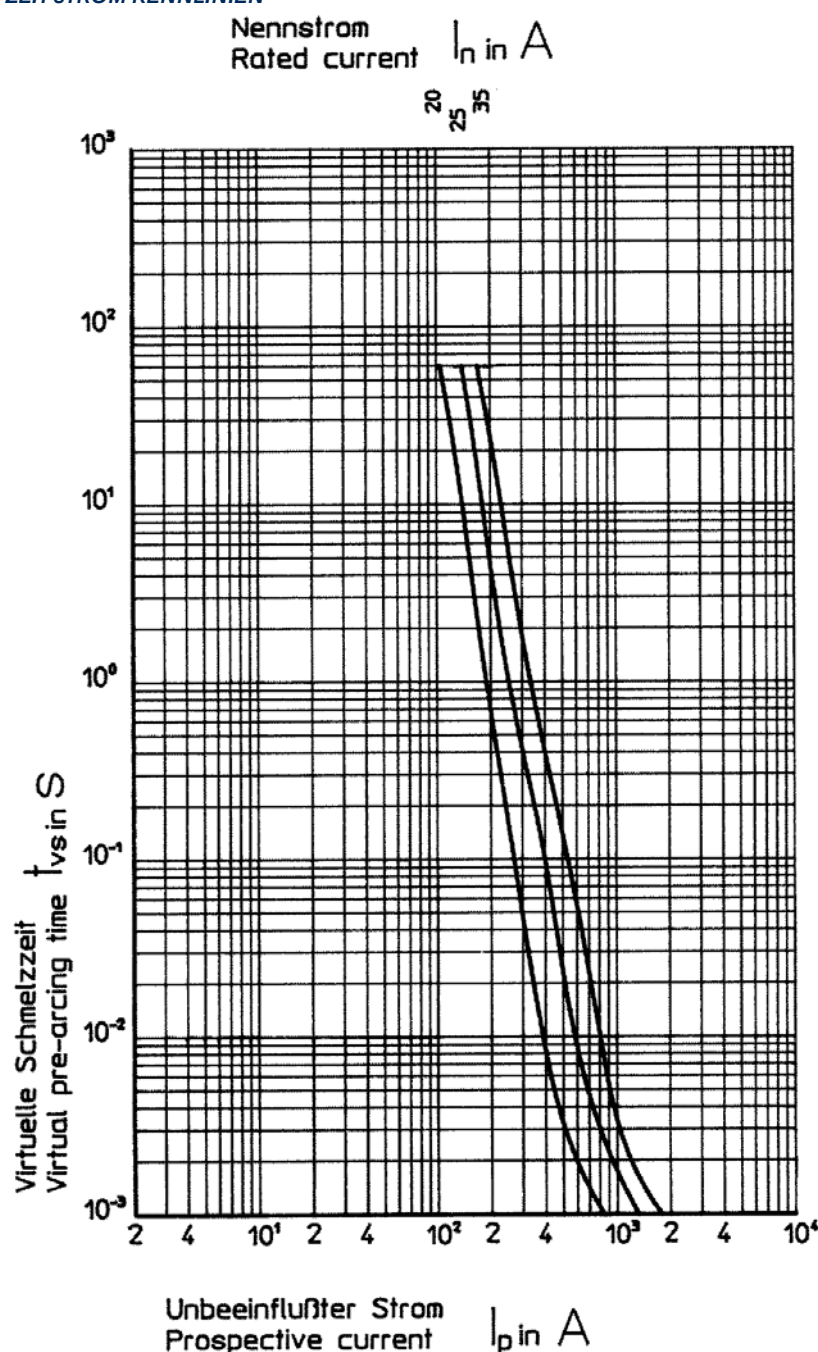
DIN Fuses D0-type NEOZED

D0 Fuse System

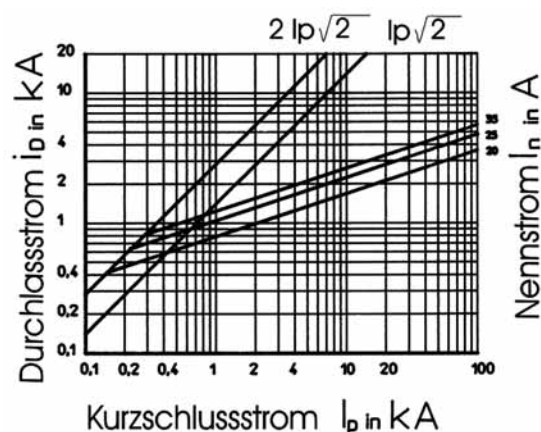
Aufbau

Die NEOZED Sicherungseinätze der Betriebsklasse aM bestehen aus den gleichen Bauteilen wie die Standard-Typen der Betriebsklasse gG: Keramikhülse, Kontaktkappen, Kennmelder mit Kennmelderdraht, Löschsand. Nur der Schmelzleiter, der die Kennlinie und das Abschmelzverhalten einer Sicherung ausmacht, ist ein anderer. Zur Unterscheidung zu anderen Betriebsklassen sind die aM-Sicherungseinsätze in grüner Farbe beschriftet.

ZEIT-STROM-KENNLINIEN



DURCHLASSTROM-KENNLINIEN



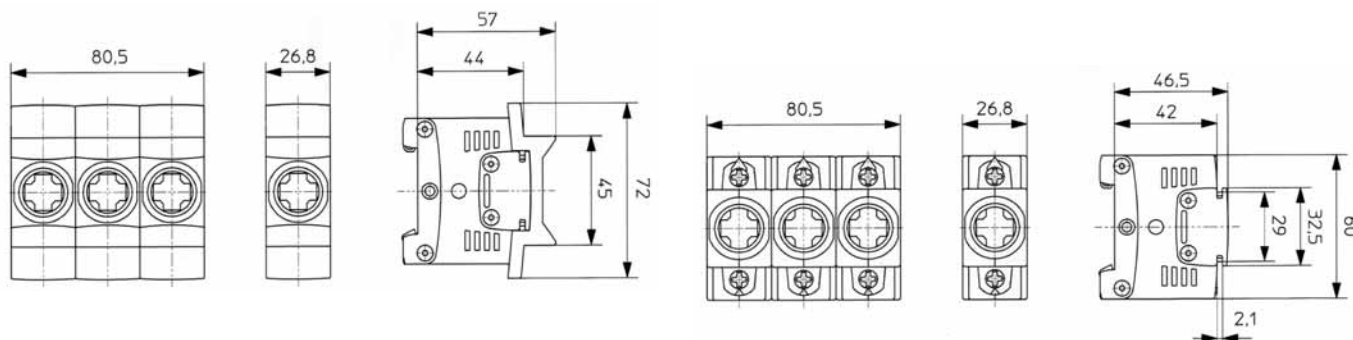


General Purpose IEC Fuses

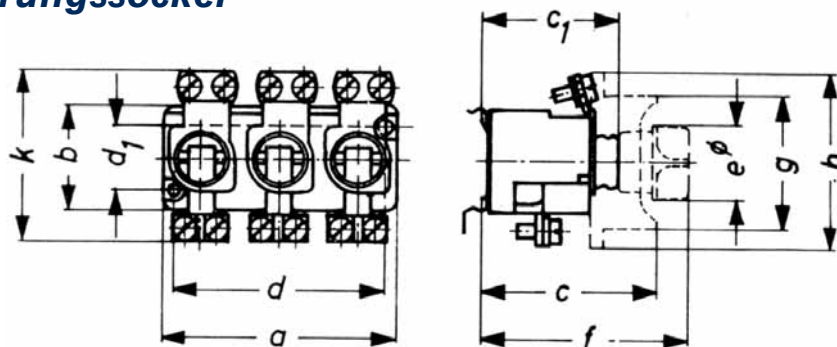
DIN Fuses
D0-type
NEOZED

D0 Fuse System

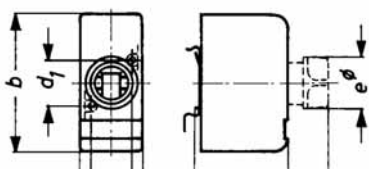
INNOZED-Sicherungssockel



NEOZED-Sicherungssockel



Referenz. Nummer	Catalog Number	a	b	c	c1	d	d1	eØ	f	g	h	k
1720.1		26	36	–	39,5	20	22	25,5	64	34Ø	–	50,5
1721.2/.4		26	36	–	39,5	20	22	25,5	64	34Ø	–	57,5
1722.4		44	50	–	44	32	32	40	74	52Ø	–	86
1730.1		81	36	–	39,5	74	22	25,5	64	–	–	50,5
1731.2/.4		81	36	–	39,5	74	22	25,5	64	–	–	57,5
1730.12		81	36	55	39,5	74	22	25,5	64	45	71	50,5
1731.22/.42		81	36	55	39,5	74	22	25,5	64	45	71	57,5
1720.15		26	36	–	41,5	20	22	25,5	66	34Ø	–	50,5
1721.25/.45		26	36	–	41,5	20	22	25,5	66	34Ø	–	57,5
1722.45		44	50	–	46	32	32	40	76	52Ø	–	86
1720.17		27	36	57	41,5	20	22	25,5	66	45	71	50,5
1721.27/.47		27	36	57	41,5	20	22	25,5	66	45	71	57,5
1722.47		44	50	54,5	46	32	32	40	76	45	71	86
1730.15		81	36	–	41,5	74	22	25,5	66	–	–	50,5
1731.25/.45		81	36	–	41,5	74	22	25,5	66	–	–	57,5
1730.17		81	36	57	41,5	74	22	25,5	66	45	71	50,5
1731.27/.47		81	36	57	41,5	74	22	25,5	66	45	71	57,5



Referenz. Nummer	Catalog Number	a	b	c	d	d1	eØ	f
1720.13		31	70	44,5	20	22	25,5	64
1721.23/1721.43		31	70	44,5	20	22	25,5	64
1722.43		50	105	48	32	32	40	74
1720.18		31	70	46,5	20	22	25,5	66
1721.28/1721.48		31	70	46,5	20	22	25,5	66
1722.48		50	105	50	32	32	40	76

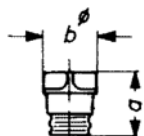


DIN Fuses D0-type NEOZED



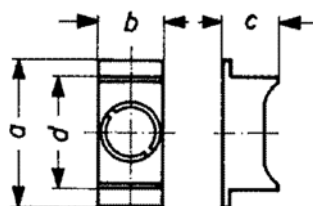
D0 Fuse System

NEOZED Schraubkappen



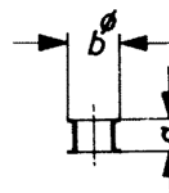
Referenz. Nummer	Catalog Number	a	b
1714.		29,5	23
1715.		29,5	23
1710.		31	25
1711.		31	25
1712.		37	40

NEOZED Abdeckungen



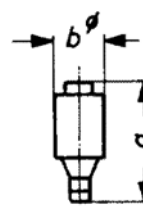
Referenz. Nummer	Catalog Number	a	b	c
1718.008		60	26,8	23
1728.7		71	26,8	23
1728.		60	44	18
1732.7		71	81	23

NEOZED Hülsenpasseinsätze



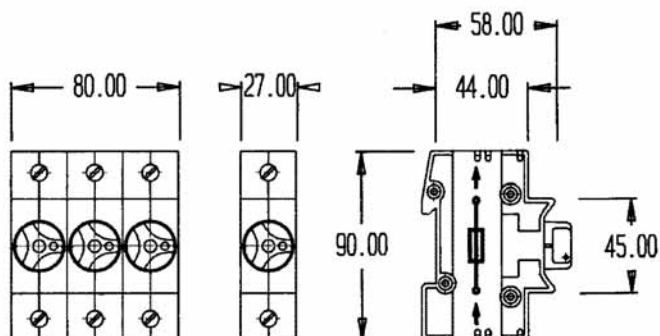
Referenz. Nummer	Catalog Number	a	b
1705.		10	12
1706.		10	16
1707.		10	27

NEOZED Sicherungseinsätze



Referenz. Nummer	Catalog Number	a	b
D01		36	11
D02		36	15
D03		43	22

LINOZED-Sicherungssockel



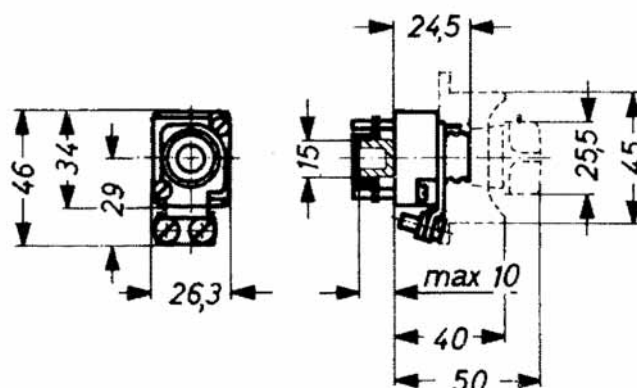


General Purpose IEC Fuses

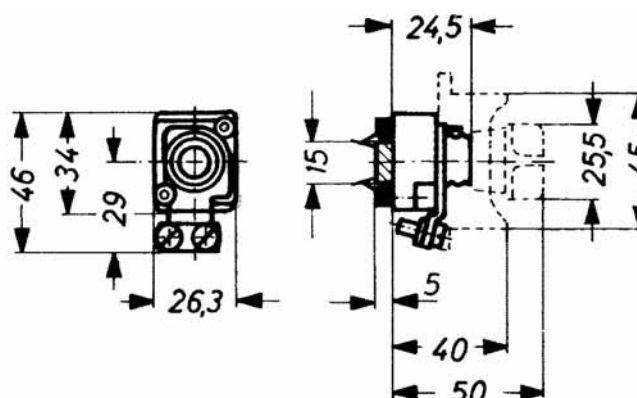
DIN Fuses
D0-type
NEOZED

D0 Fuse System

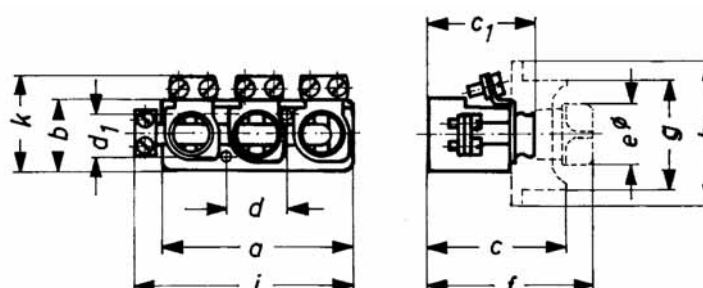
**NEOZED-Reiter-Sicherungssockel
mit Schellenbefestigung, 400VAC**



**NEOZED-Reiter-Sicherungssockel
mit Schnappbefestigung, 400VAC**



NEOZED-Reihen-Sicherungssockel



Referenz. Nummer	Catalog Number	a	b	c	c1	d	d1	eØ	f	g	h	i	k
1737.12		80,5	30	55	39,5	22	20	25,5	64	45	71	88,5	36,5
1738.22		80,5	30	55	39,5	22	20	25,5	64	45	71	91,5	44,5
1737.17		80,5	30	57	41,5	22	20	25,5	66	45	71	88,5	36,5
1737.27		80,5	30	57	41,5	22	20	25,5	66	45	71	91,5	44,5



General Purpose IEC Fuses

DIN Fuses
D-type
DIAZED



D Fuse System

2 – 200 A, 500 V, 690 V

*Line protection fuses gL-gG
IEC 60269 parts 1, 3 and 3-1
DIN VDE 0636 Parts 10, 30 and 31*

Dimensions are stipulated in the following regulations:

*DIN 49360 D Fuse-links
DIN 49515 D Fuse-links
DIN 49367 D Fuse-links, long design
DIN 49514 D Screw caps
DIN 49510 D Fuse bases
DIN 49362 D Gauge rings
DIN 49516 D Screw gauge pieces*

Structure of the D fuse system

Like the modern NEOZED system, the D-Fuse system consists of fuse base, gauge piece, fuse link and screw cap. It is designed for a rated voltage of 500V. Noninterchangeability of rated current is guaranteed from one current level to the other above 6 Amps. This is ensured by graduating the diameter of the bottom contact of the fuse-link along with corresponding fixed diameters for the gauge piece.





DIN Fuses

D-type

DIAZED

D Fuse System

D Fuse bases

for snap-on fastening 500 VAC / 690 VAC

Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
without shock-proof protection cover							
DII	25	1*	6	00685.100000	K207055	15	
DIII	63	4*	16	00686.400000	V215597	15	
with shock-proof protection cover							
DII	25	1	6	00685.110000	D211511	10	
DIII	63	4	16	00686.410000	C216110	10	

* Terminal type see following pages



D Fuse bases

for screw fixing 500 VAC / 690 VAC

Size	Rated in Current (A)	Pole	Max. cross sect. mm ²	Previous Reference	Reference Number	Pack	Catalog Number
without shock-proof protection cover							
DII	25	1*	6	00081.100000	K218670	15	
DIII	63	4*	16	00072.400000	H212021	15	
with shock-proof protection cover							
DII	25	1*	6	00081.110000	Z219189	10	
DIII	63	4*	16	00072.410000	A212543	10	

* Terminal type see following pages



D Fuse-links

2 - 200A fast acting (CEE-16 standard), 500 VAC

Size	Rated in Current (A)	Gauge Color	Previous Reference	Reference Number	Pack	Catalog Number
NDZ	2	pink	00594.002000	C222918	25	
NDZ	4	brown	00594.004000	L200708	25	
NDZ	6	green	00594.006000	A201250	25	
NDZ	10	red	00594.010000	L201766	25	
NDZ	16	gray	00594.016000	D207049	25	
NDZ	20	blue	00594.020000	B211509	25	
NDZ	25	yellow	00594.025000	Y212541	25	
DII	2	pink	00597.002000	E213559	25	
DII	4	brown	00597.004000	D214064	25	
DII	6	green	00597.006000	L214577	25	
DII	10/6 (1)	red	00597.610000	X218152	25	
DII	10	red	00597.010000	S215089	25	
DII	16	gray	00597.016000	A216108	25	
DII	20	blue	00597.020000	J217128	25	
DII	25	yellow	00597.025000	P217639	25	
DIII	35	Black	00598.035000	J218669	25	
DIII	50	white	00598.050000	J222165	25	
DIII	63	copper	00598.063000	M200709	25	

(1) with base contact stud for 6 A





General Purpose IEC Fuses

DIN Fuses D-type DIAZED

D Fuse System

D Fuse-links

2 -200 A gG, 500 VAC



Size	Rated in Current (A)	Gauge Color	Previous Reference	Reference Number	Pack	Catalog Number
NDZ	2	pink	00594.002700	W212539	25	
NDZ	4	brown	00594.004700	G213055	25	
NDZ	6	green	00594.006700	C213557	25	
NDZ	10	red	00594.010700	B214062	25	
NDZ	16	grey	00594.016700	J214575	25	
NDZ	20	blue	00594.020700	Q215087	25	
NDZ	25	yellow	00594.025700	Q215593	25	
D II	2	pink	00597.002700	Z219718	25	
D II	4	brown	00597.004700	G222163	25	
D II	6	green	00597.006700	B222917	25	
D II	10/6 f1	red	00597.610700	D213558	25	
D II	10	red	00597.010700	K200707	25	
D II	16	grey	00597.016700	K201765	25	
D II	20	blue	00597.020700	A211508	25	
D II	25	yellow	00597.025700	X212540	25	

1 with base contact stud for 6 A (without VDE test mark)

D III	35	black	00598.035700	C214063	25	
D III	50	white	00598.050700	K214576	25	
D III	63	copper	00598.063700	R215088	25	
D IV	80	silver	00595.080700	V216609	10	
D IV	100	red	00595.100700	M217637	10	
D V	125	yellow	00596.125700	V218150	10	
D V	160	copper	00596.160700	G218667	10	
D V	200	blue	00596.200700	W219186	10	

Characteristics see following pages

D Fuse system 690 VAC

In this design, the fuse base and gauge piece correspond to the 500 V standard for D III (E33). The extended fuse links D III and a special extended screw cap serve to complement the present system. D-type 690 V fuses are only available in size III.

D Fuse-links

2 - 63 A gG 690 VAC



Size	Rated in Current (A)	Gauge Color	Previous Reference	Reference Number	Pack	Catalog Number
D III	2	pink	00603.002700	R215594	25	
D III	4	brown	00603.004700	Z216107	25	
D III	6	green	00603.006700	W216610	25	
D III	10	red	00603.010700	H217127	25	
D III	16	grey	00603.016700	N217638	25	
D III	20	blue	00603.020700	W218151	25	
D III	25	yellow	00603.025700	H218668	25	
D III	35	black	00603.035700	X219187	25	
D III	50	white	00603.050700	A219719	25	
D III	63	copper	00603.063700	H222164	25	

D Screw-cap long design 690 VAC



D III	63		00605.000000	L218671	25	
-------	----	--	--------------	---------	----	--

Dimensions see following pages

General Purpose IEC Fuses



DIN Fuses

D-type

DIAZED



D Fuse System

D Screw caps

Porcelain and Plastic, 500 VAC

Size	Rated in Current (A)	Gauge Color	Previous Reference	Reference Number	Pack	Catalog Number
Porcelain with testing hole						
DII	25	E 27	00690.000200	E218619	20	
DIII	63	E 33	00691.000200	B213004	20	
Porcelain without testing hole						
NDZ	25	E 16	00589.000000	Z216613	50	
DII	25	E 27	00690.000000	Z218108	20	
DIII	63	E 33	00691.000000	F211973	20	
DIV	100	R11/4	00592.000000	Y216060	10	
Plastic with testing hole						
DII	25	E 27	02071.000000	L201720	20	
DII	63	E 33	02072.000000	E214019	20	



D Gauge piece

Size	Rated in Current (A)	Gauge Color	Previous Reference	Reference Number	Pack	Catalog Number
NDZ	2	pink	01655.002000	B212544	50	
NDZ	4	brown	01655.004000	M213060	50	
NDZ	6	green	01655.006000	H213562	50	
NDZ	10	red	01655.010000	G214067	50	
NDZ	16	grey	01655.016000	P214580	50	



D Screw gauge pieces for DII / DIII

D II	2	pink	01657.002000	A219190	25	
D II	4	brown	01657.004000	D219722	25	
D II	6	green	01657.006000	L222167	25	
D II	10	red	01657.010000	F222921	25	
D II	16	grey	01657.016000	P200711	25	
D II	20	blue	01657.020000	D201253	25	
D II	25	yellow	01657.025000	P201769	25	
D III	35	black	01658.035000	C207071	25	
D III	50	white	01658.050000	E211512	25	
D III	63	copper	01658.063000	J212022	25	



D Gauge rings for DII / DIII, TRI60 System

D II	2	pink	01652.002000	W215092	50	
D II	4	brown	01652.004000	W215598	50	
D II	6	green	01652.006000	D216111	50	
D II	10	red	01652.010000	A216614	50	
D II	16	grey	01652.016000	M217131	50	
D II	20	blue	01652.020000	S217642	50	
D II	25	yellow	01652.025000	A218155	50	
D III	2	pink	01653.002000	M218672	50	
D III	4	brown	01653.004000	E219723	50	
D III	6	green	01653.006000	M222168	50	
D III	10	red	01653.010000	G222922	50	
D III	16	grey	01653.016000	Q200712	50	
D III	20	blue	01653.020000	E201254	50	
D III	25	yellow	01653.025000	Q201770	50	
D III	35	black	01653.035000	L207079	50	
D III	50	white	01653.050000	F211513	50	



Dimensions see following pages



General Purpose IEC Fuses

DIN Fuses D-type DIAZED



Key for D gauge pieces

D Fuse System



Size	Previous Reference	Reference Number	Pack	Catalog Number
DII, DIII	01657.993000	E216112	10	

D Cover insulating material



Single pole

D II (40 mm width)	00685.700000*	H214068	30	
D III (50 mm width)	00686.700000*	X215093	30	
D II (45 mm width)	00685.709000	Q214581	30	
D III (54 mm width)	00686.709000	X215599	30	

* Standart version

Triple pole

D II	00625.700000	N213061	8	
D III	00626.700000	J213563	8	

D Touch Protection rings



Plastic

D II	00181.900000	K222120	50	
D III	00182.900000	A222870	50	

Porcelain

D II	00081.900000	C219675	30	
D III	00072.900000	K212023	20	

D Adapter fittings



for DII-fuses links in D III-bases

D II/ D III	00581.000000	C212545	50	
-------------	--------------	---------	----	--

D Locking caps



DII Supply boards ¹⁾	02071.800000*	B216615*	10	
DII Industry ²⁾	02071.810000	N217132	10	
DIII Supply boards ¹⁾	02072.800000*	T217643*	10	
DIII Industry ²⁾	02072.810000	B218156	10	

* For authorized energy supplier personnel only

¹⁾ black top, red screw pitch

²⁾ red top, black screw pitch

Locking keys

Supply boards	01714.820000*	K213564*	10	
Industry	01714.830000	J214069	10	

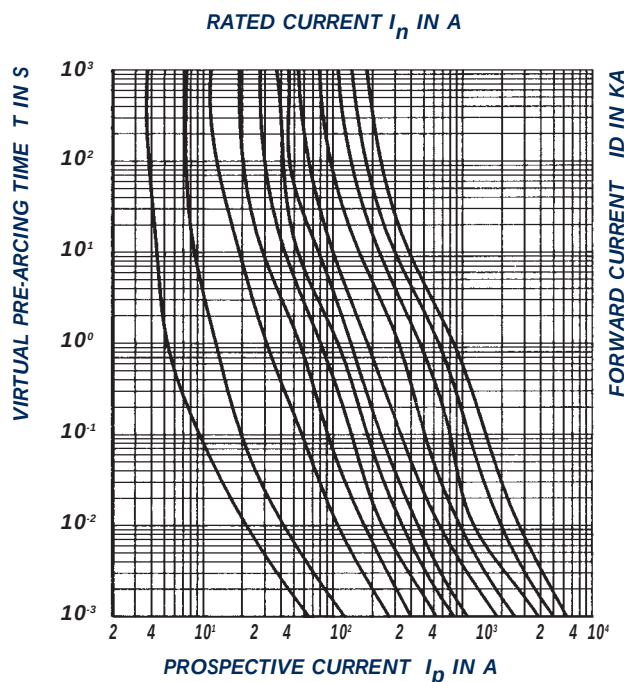
*For authorized energy supplier personnel only

General Purpose IEC Fuses

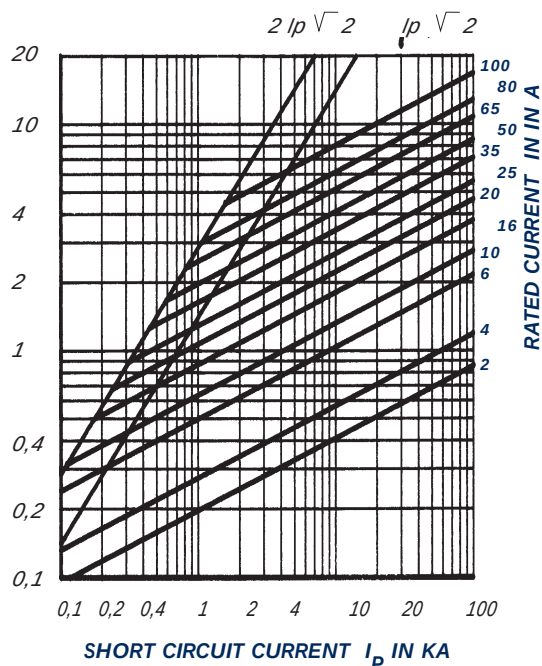


DIN Fuses D-type DIAZED

D Fuse System

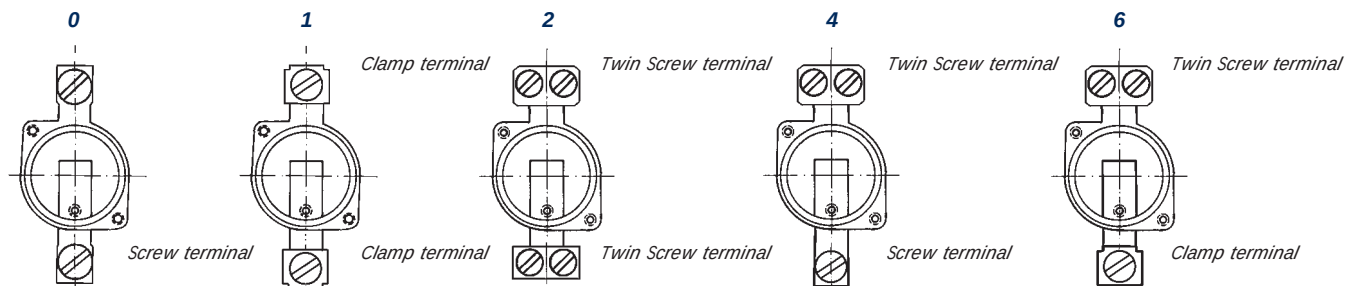


Time-current characteristics of D Fuses 2...100 A gL-gG

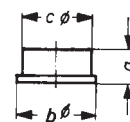
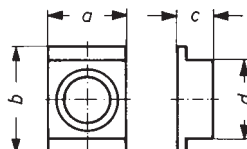
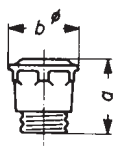
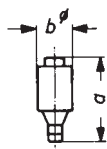


Forward current characteristics of DIAZED fuses 2...100 A gL-gG

Terminal types



Dimensions



D Fuse-links

Cat Number	a_1	$b \times$
NDZ	50	12
DII	50	22
DIII	50	27
DIV	63	37
DV	65	45

D Screw caps

Cat Number	a	b
690.0002	42	34
691.0002	43	42
589.0002	34	27
690	42	34
691	43	42
592	52	60
2071	42	33
2072	43	40

D Covers

Cat Number	a	b	c
685.7	40	90	22
686.7	50	90	22
685.709	45	90	22
686.709	54	90	22
625.7	107	107	51
626.7	127	130	51

D touch protection rings

Cat Number	a	b	c
181.9	17,5	44,5	40,5
182.9	19	54	50,5
81.9	18,5	43,5	39,8
72.9	18	53,5	50,5



General Purpose IEC Fuses

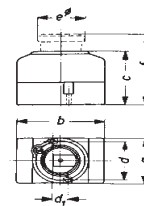
DIN Fuses
D-type
DIAZED



Dimensions

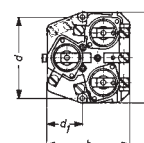
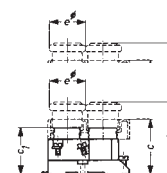
D Fuse System

Catalog number	Sizes in mm						
	a	b	c	d	d1	eX	f
99	40	70	53	32	—	38	82
199	40	70	54	20	—	38	83
200	50	90	54	20	—	48	83

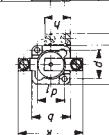
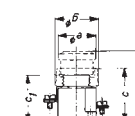


Catalog number	Sizes in mm							
	a	b	c	c1	d	d1	eX	f
625	90	81	54.5	46	80	35	37	81
626	109	100	54.5	46	95	49.5	46.5	81
625*	107	107	51	—	—	—	—	—
626*	127	130	51	—	—	—	—	—

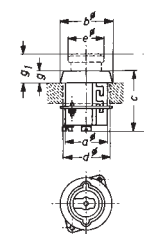
* with cover cap



Catalog number	Sizes in mm											
	a	b	c	c1	d	d1	eX	f	X	h	i	k
685/81	38	40	60	46	29	27	38	82	43	—	—	60
686/72	46	44	57	48	35	33,5	48	84	52	—	—	73



Catalog number	Sizes in mm							
	a	b	c	d	e	f	g	g1
120	42	52	60	44	38	85	12	37
121	52	62	63	54	48	88	13	38





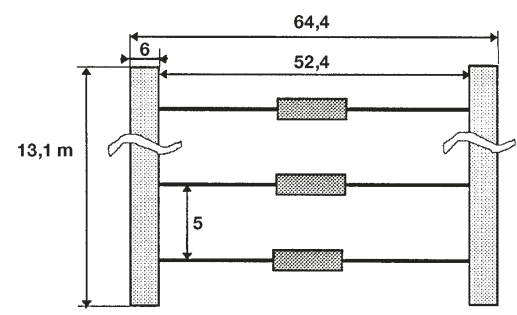
IEC Fuses Subminiature MQ Fast Acting

Complying with UL / CSA STD 248-14

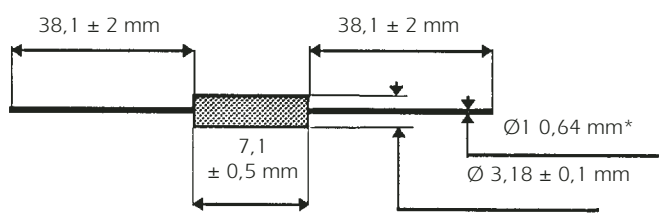
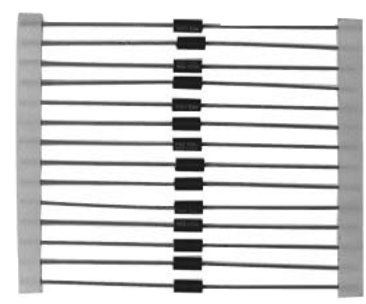
125 VAC
FROM 0,1 TO 15 A

Dimensions

Packaging : Ammo-box



Max weight: 0.5 g



* Ø1 = 0,81 mm pour (for) 10A, 15A



Basic Characteristics

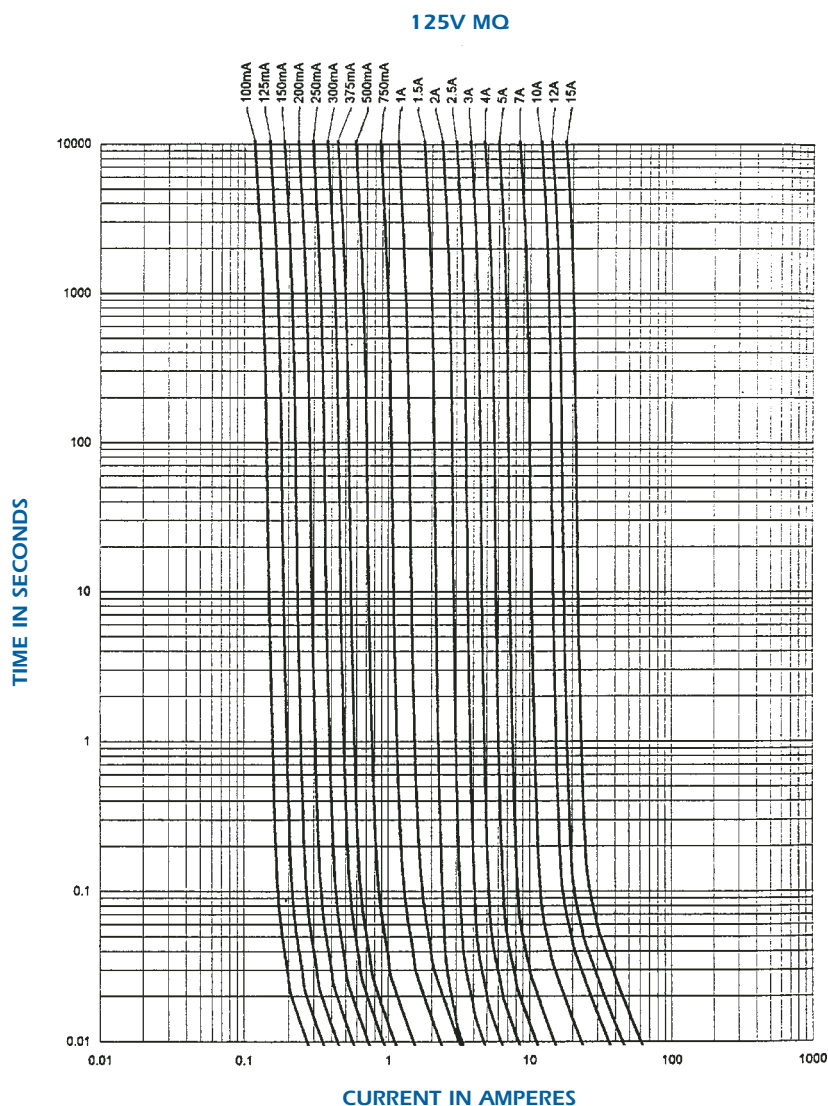
Size	Rated Voltage	Rated Current	Breaking Capacity under 125 V	Max. power dissip	Max. Voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	A	W	V			
3,2 X 7,6	125	0,100	125 VAC	0,35	3	125V F 0,100 A MQ AMMO	M 208 621	MIMQF12,5V0,1
		0,125		0,087	0,61	125V F 0,125 A MQ AMMO	G 090 695	MIMQF12,5V0,125
		0,150		0,10	0,54	125V F 0,150 A MQ AMMO	X 208 929	MIMQF12,5V0,15
		0,200		0,12	0,58	125V F 0,200 A MQ AMMO	Y 208 930	MIMQF12,5V0,2
		0,250		0,14	0,43	125V F 0,250 A MQ AMMO	E 075 996	MIMQF12,5V0,25
		0,375		0,18	0,35	125V F 0,375 A MQ AMMO	F 075 997	MIMQF12,5V0,375
		0,500	50A	0,21	0,31	125V F 0,500 A MQ AMMO	M 090 700	MIMQF12,5V0,5
		0,750		0,27	0,25	125V F 0,750 A MQ AMMO	G 075 998	MIMQF12,5V0,75
		1,000		0,33	0,22	125V F 1 A MQ AMMO	Q 090 703	MIMQF12,5V1
		1,500		0,42	0,18	125V F 1,5 A MQ AMMO	H 075 999	MIMQF12,5V1,5
		2,000	125VDC	0,33	0,24	125V F 2 A MQ AMMO	T 090 706	MIMQF12,5V2
		2,500		0,40	0,22	125V F 2,5 A MQ AMMO	V 090 707	MIMQF12,5V2,5
		3,000		0,48	0,2	125V F 3 A MQ AMMO	W 090 708	MIMQF12,5V3
		3,500			0,2	125V F 3,5 A MQ AMMO	C 085 424	MIMQF12,5V3,5
		4,000		0,58	0,19	125V F 4 A MQ AMMO	X 090 709	MIMQF12,5V4
		5,000	300A	0,71	0,17	125V F 5 A MQ AMMO	Y 090 710	MIMQF12,5V5
		7,000		0,9	0,15	125V F 7 A MQ AMMO	J 076 000	MIMQF12,5V7
		10,00		1,3	0,093	125V F 10 A MQ AMMO	T 078 700	MIMQF12,5V10
		15,00		1,8	0,088	125V F 15 A MQ AMMO	K 076 001	MIMQF12,5V15

IEC Fuses Subminiature MQ Fast Acting

Melting time limits

Current	100 % x In	200 % x In
100 mA → 15 A	4 h mini	5 s maxi

Time-current characteristics



Packaging: in box of 100 and 1000 pieces

Installation instructions

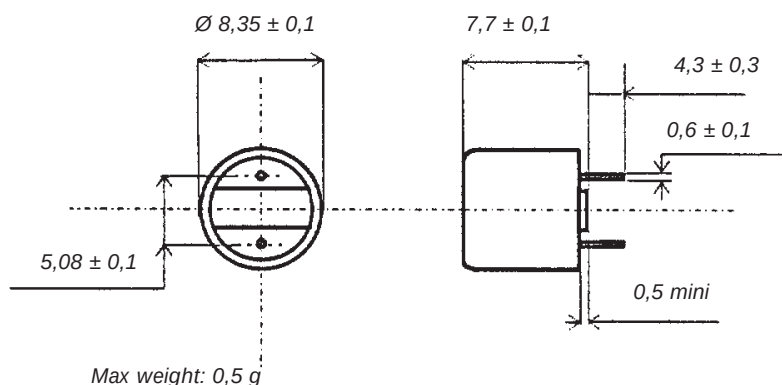
- Soldering heat resistance as per IEC 68-2-20-: 260°C for 10 seconds.
- Material:
 - Body: Thermoset V0 UL 94.
 - Connection: Tin-plated copper.
- Operating temperature: -55°C to 125°C.

IEC Fuses Subminiature MRF Fast Acting

Complying with IEC-127-3 Standard Sheet 3

250 VAC
FROM 0,050 TO 6,3 A

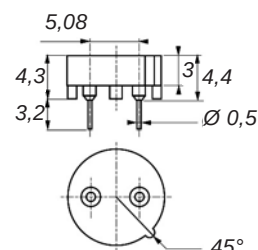
Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max. power dissip	Max. Voltage drop	Désignation	Reference Number	Catalog Number
mm	VAC	A	A	W	V			
$\varnothing 8,35$ x $h=7,7$	250	0,050	35	0,08	0,72	250V MRF 0,05 A	K 085 385	MIMRF25V0,05
		0,063		0,09	0,65	250V MRF 0,063 A	L 085 386	MIMRF25V0,063
		0,080		0,11	0,58	250V MRF 0,08 A	M 085 387	MIMRF25V0,08
		0,100		0,12	0,52	250V MRF 0,1 A	N 085 388	MIMRF25V0,1
		0,125		0,14	0,47	250V MRF 0,125 A	P 085 389	MIMRF25V0,125
		0,160		0,10	0,27	250V MRF 0,16 A	Q 085 390	MIMRF25V0,16
		0,200		0,12	0,26	250V MRF 0,2 A	R 085 391	MIMRF25V0,2
		0,250		0,15	0,254	250V MRF 0,250 A	S 085 392	MIMRF25V0,25
		0,315		0,18	0,246	250V MRF 0,315 A	T 085 393	MIMRF25V0,315
		0,400		0,22	0,239	250V MRF 0,400 A	V 085 394	MIMRF25V0,4
		0,500		0,27	0,232	250V MRF 0,500 A	X 085 396	MIMRF25V0,5
		0,630		0,15	0,106	250V MRF 0,630 A	Y 085 397	MIMRF25V0,63
		0,800		0,19	0,103	250V MRF 0,800 A	Z 085 398	MIMRF25V0,8
		1,000		0,23	0,1	250V MRF 1 A	A 085 399	MIMRF25V1
		1,250		0,28	0,097	250V MRF 1,25 A	B 085 400	MIMRF25V1,25
		1,600		0,35	0,094	250V MRF 1,6 A	C 085 401	MIMRF25V1,6
		2,000		0,42	0,091	250V MRF 2 A	D 085 402	MIMRF25V2
		2,500		0,51	0,088	250V MRF 2,5 A	E 085 403	MIMRF25V2,5
		3,150		0,62	0,086	250V MRF 3,15 A	F 085 404	MIMRF25V3,15
		4,000	40	0,77	0,083	250V MRF 4 A	G 085 405	MIMRF25V4
		5,000	50	0,93	0,081	250V MRF 5 A	R 208 625	MIMRF25V5
		6,300*	63	1,14	0,078	250V MRF 6,3 A	S 208 626	MIMRF25V6,3

* Non approval rating



Reference Number:
G210548
Catalog number MISIMRT/MRF

Miniature Fuses

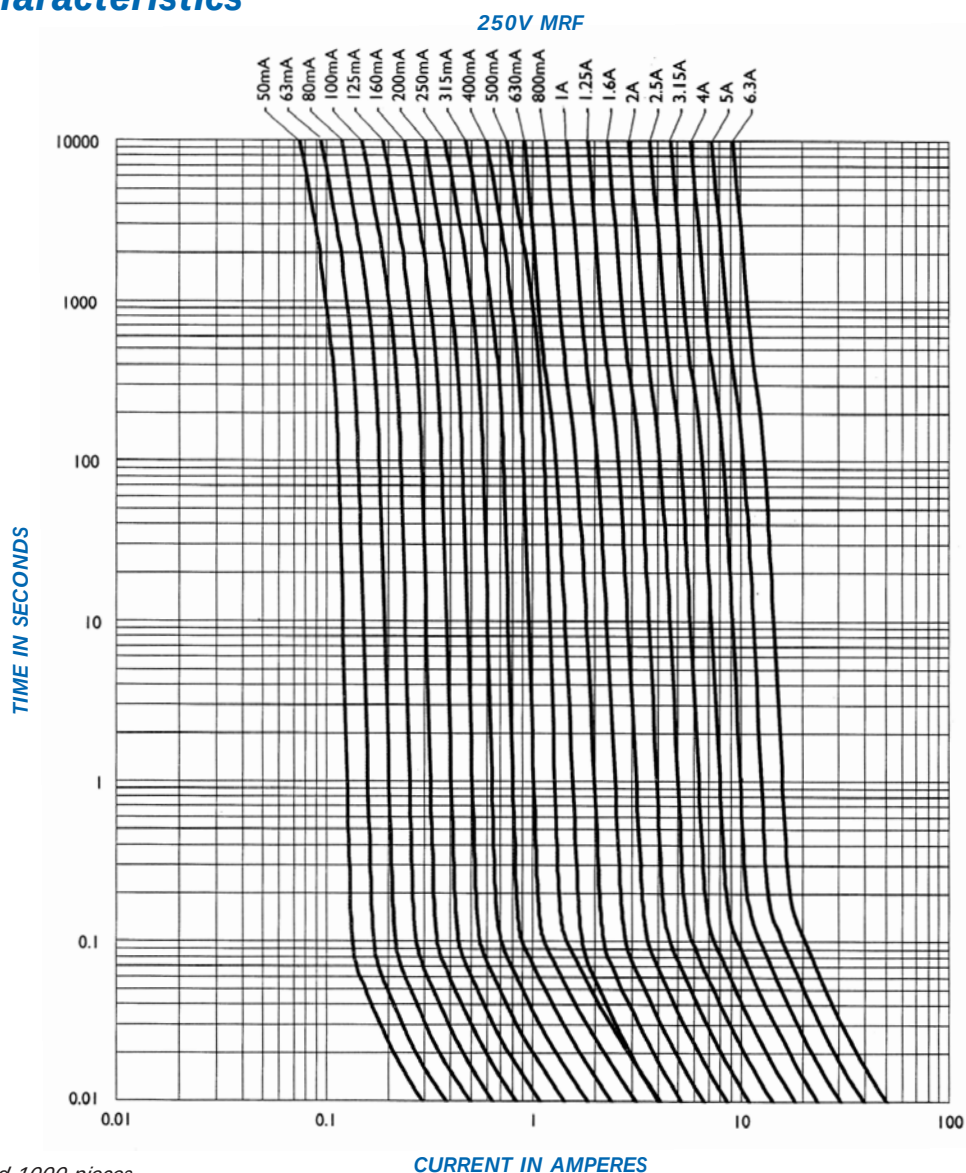
IEC Fuses Subminiature MRF Fast Acting



Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
50 mA → 6,3 A	30 min maxi	10 ms mini 3 s maxi	3 ms mini 300 ms maxi	20 ms maxi

Time-current characteristics



Packaging: in box of 100 and 1000 pieces

Installation instructions

- Soldering heat resistance as per IEC 68-2-20: 260°C for 10 seconds.
- Material:
 - Body: Thermoplastic V0 UL 94.
 - Connection: Tin-plated copper alloy.
- Operating temperature: -55°C to 125°C.



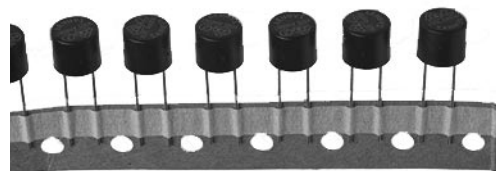
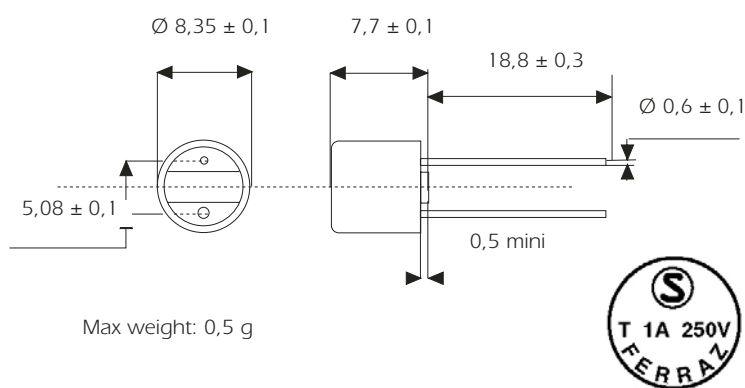
Miniature Fuses

IEC Fuses Subminiature MRFL Fast Acting

Complying with IEC-127-3 Standard Sheet 3

250 VAC
FROM 0,250 TO 6,3 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max. power dissip	Max. Voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	A	W	V			
Ø8,35 x h=7,7	250	0,250	35	0,15	0,254	250V MRF 0,250 A LL AMMO	B 208 289	MIMRF25V0,25LL
		0,315		0,18	0,246	250V MRF 0,315 A LL AMMO	C 208 290	MIMRF25V0,315LL
		0,400		0,22	0,239	250V MRF 0,400 A LL AMMO	D 208 291	MIMRF25V0,4LL
		0,500		0,27	0,232	250V MRF 0,500 A LL AMMO	E 208 292	MIMRF25V0,5LL
		0,630		0,15	0,106	250V MRF 0,630 A LL AMMO	F 208 293	MIMRF25V0,63LL
		0,800		0,19	0,103	250V MRF 0,800 A LL AMMO	G 208 294	MIMRF25V0,8LL
		1,000		0,23	0,100	250V MRF 1 A LL AMMO	H 208 295	MIMRF25V1LL
		1,250		0,28	0,097	250V MRF 1,25 A LL AMMO	J 208 296	MIMRF25V1,25LL
		1,600		0,35	0,094	250V MRF 1,6 A LL AMMO	K 208 297	MIMRF25V1,6LL
		2,000		0,42	0,091	250V MRF 2 A LL AMMO	L 208 298	MIMRF25V2LL
		2,500		0,51	0,088	250V MRF 2,5 A LL AMMO	M 208 299	MIMRF25V2,5LL
		3,150		0,62	0,086	250V MRF 3,15 A LL AMMO	N 208 300	MIMRF25V3,15LL
		4,000	40	0,77	0,083	250V MRF 4 A LL AMMO	P 208 301	MIMRF25V4LL
		5,000	50	0,93	0,081	250V MRF 5 A LL AMMO	X 208 630	MIMRF25V5LL
		6,000	63	1,14	0,078	250V MRF 6,3 A LL AMMO	Y 208 631	MIMRF25V6,3LL

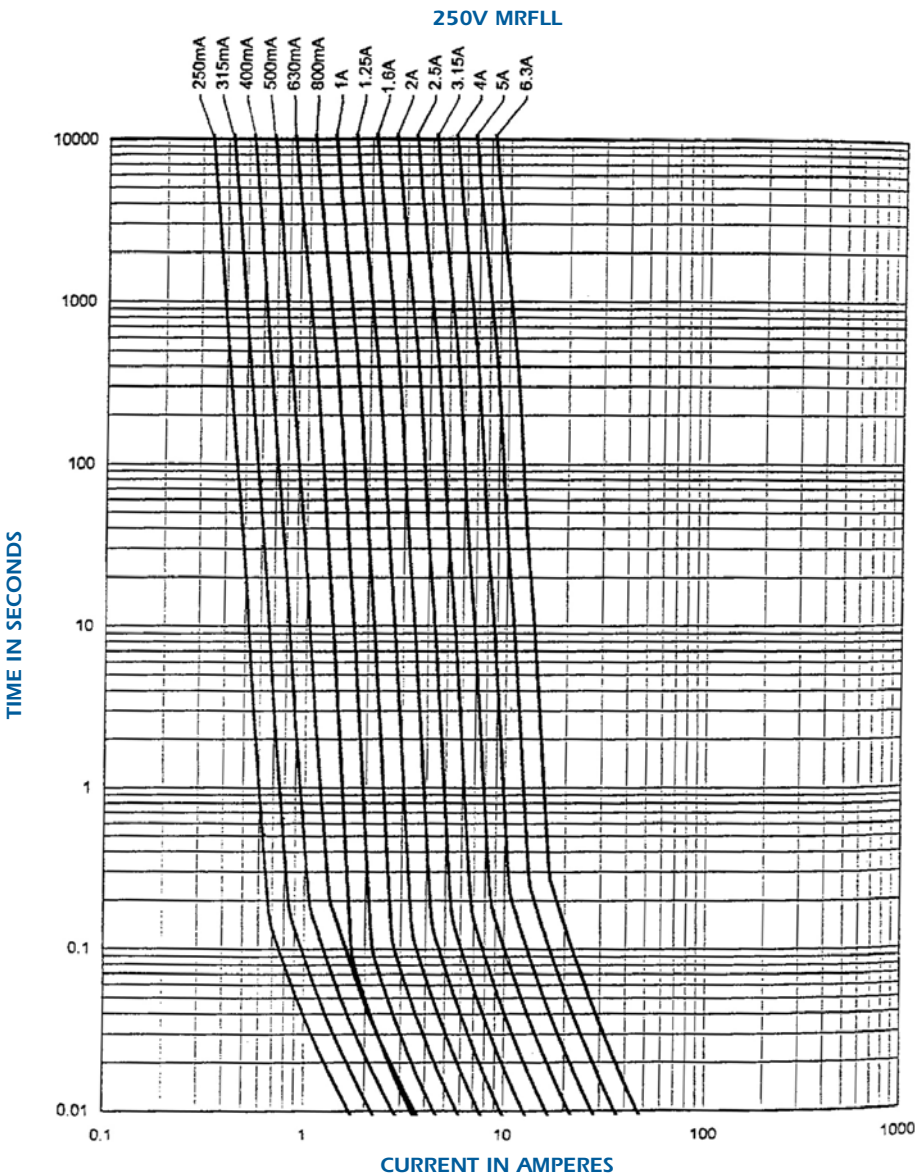
Lower rated current consult us

IEC Fuses Subminiature MRFL Fast Acting

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
250 mA → 4 A	30 min maxi	10 ms mini 3 s maxi	3 ms mini 300 ms maxi	20 ms maxi

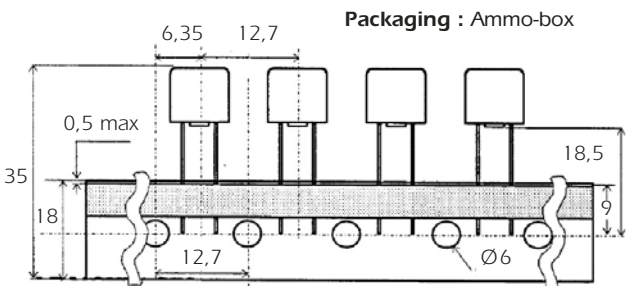
Time-current characteristics



Packaging: in box of 100 and 1000 pieces

Installation instructions

- Soldering heat resistance: according IEC 68-2-20: 260°C for 10 seconds.
- Material:
 - Body: Thermoplastic V0 UL 94.
 - Connection: Tin-plated copper alloy.

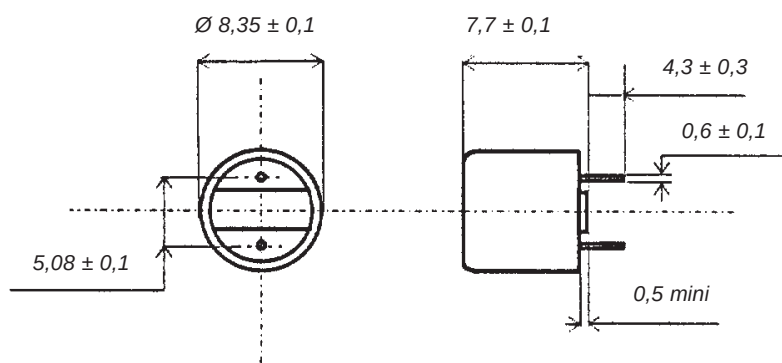


IEC Fuses Subminiature MRT Time Lag

Complying with IEC-127-3 Standard Sheet 4

250 VAC
FROM 0,080 TO 6,3 A

Dimensions



Max weight: 0.5 g

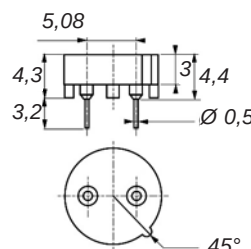


Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max. power dissip	Max. Voltage drop	Designation				Reference Number	Catalog Number
mm	VAC	A	A	W	V						
Ø8,35 x h=7,7	250	0,080	35**	0,10	0,40	250V	MRT	0,080	A	C 081 767	MIMRT25V0,08
		0,100		0,11	0,35	250V	MRT	0,100	A	D 082 550	MIMRT25V0,1
		0,125		0,13	0,30	250V	MRT	0,125	A	E 082 551	MIMRT25V0,125
		0,160		0,15	0,28	250V	MRT	0,160	A	F 082 552	MIMRT25V0,16
		0,200		0,17	0,25	250V	MRT	0,200	A	G 082 553	MIMRT25V0,2
		0,250		0,19	0,22	250V	MRT	0,250	A	H 082 554	MIMRT25V0,25
		0,315		0,22	0,19	250V	MRT	0,315	A	J 082 555	MIMRT25V0,315
		0,400		0,25	0,16	250V	MRT	0,400	A	K 082 556	MIMRT25V0,4
		0,500		0,29	0,15	250V	MRT	0,500	A	L 082 557	MIMRT25V0,5
		0,630		0,33	0,13	250V	MRT	0,630	A	M 082 558	MIMRT25V0,63
		0,800		0,38	0,12	250V	MRT	0,800	A	N 082 559	MIMRT25V0,8
		1,000		0,44	0,11	250V	MRT	1	A	P 082 560	MIMRT25V1
		1,250		0,51	0,10	250V	MRT	1,25	A	Q 082 561	MIMRT25V1,25
		1,600		0,58	0,095	250V	MRT	1,6	A	R 082 562	MIMRT25V1,6
		2,000		0,67	0,090	250V	MRT	2	A	S 082 563	MIMRT25V2
		2,500		0,77	0,087	250V	MRT	2,5	A	T 082 564	MIMRT25V2,5
		3,150		0,88	0,083	250V	MRT	3,15	A	V 082 565	MIMRT25V3,15
		4,000*	40**	1,02	0,080	250V	MRT	4	A	W 082 566	MIMRT25V4
		5,000*	50**	1,17	0,077	250V	MRT	5	A	Z 208 632	MIMRT25V5
		6,300*	63**	1,34	0,073	250V	MRT	6,3	A	A 208 633	MIMRT25V6,3

* approval only.

** 100A for



Reference Number:
G210548
Catalog number MISIMRT/MRF

Miniature Fuses

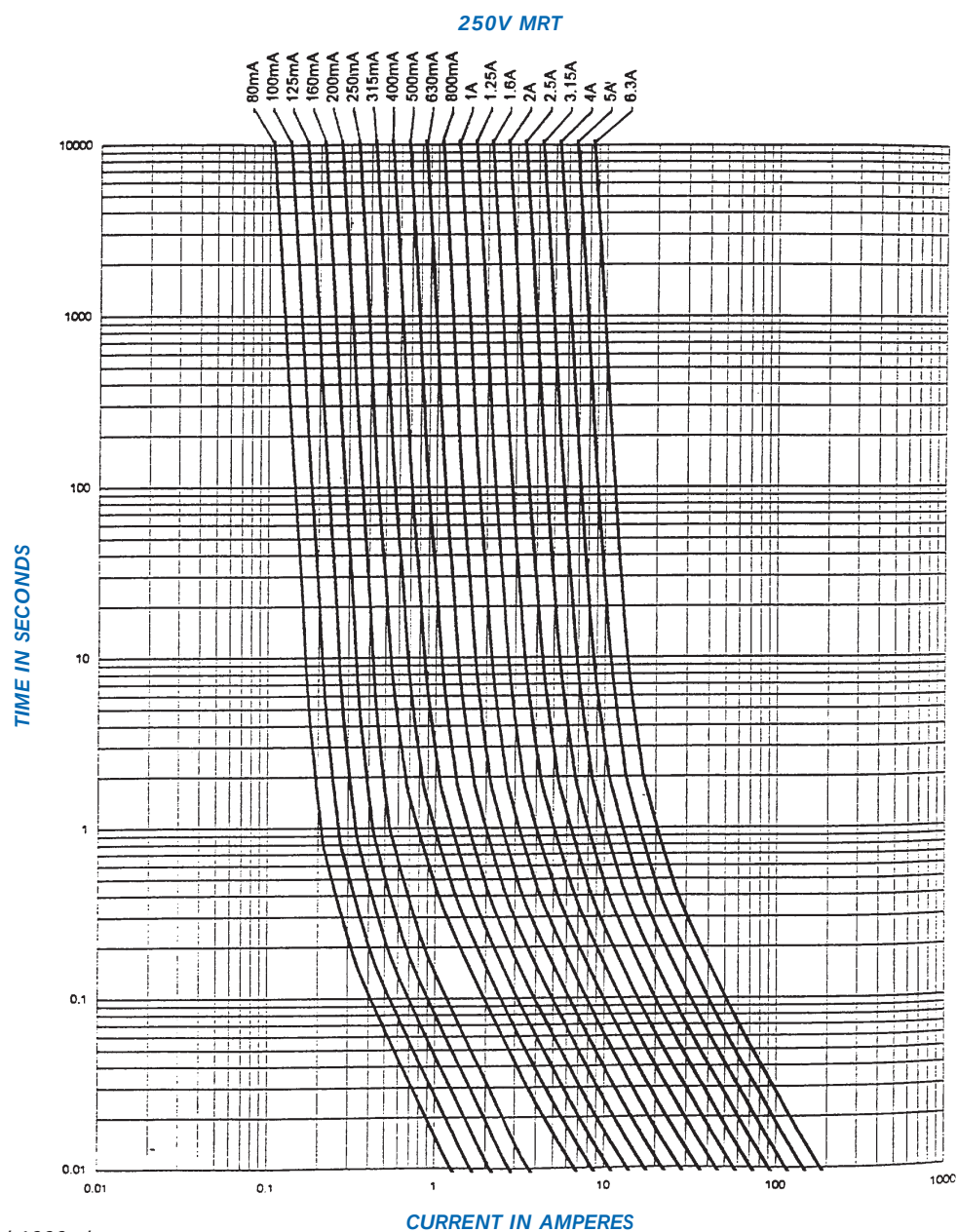
IEC Fuses Subminiature MRT Time Lag



Melting time limits

Current	210 % x I_n	275 % x I_n	400 % x I_n	1 000 % x I_n
80 mA → 6,3 A	2 min maxi	400 ms mini 10 s maxi	150 ms mini 3 s maxi	20 ms mini 150 ms maxi

Time-current characteristics



Packaging: in box of 100 and 1000 pieces.

Installation instructions

- Soldering heat resistance as per IEC 68-2-20 260°C for 10 seconds.
- Material:
 - Body: Thermoplastic V0 UL 94.
 - Connection: Tin-plated copper alloy.
- Operating temperature: -55°C to 125°C

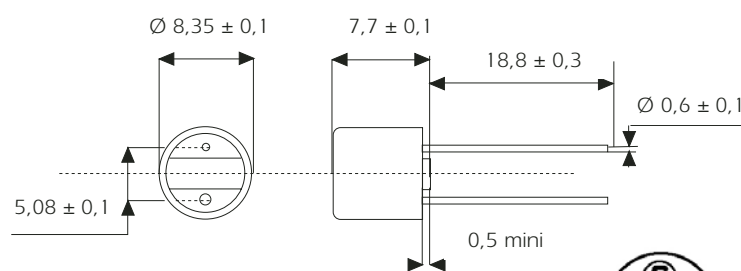


IEC Fuses Subminiature MRTLL Time Lag

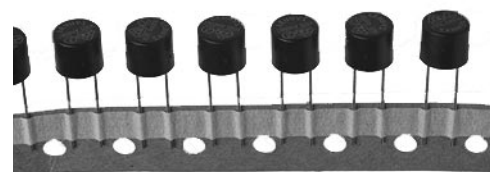
Complying with IEC-127-3 Standard Sheet 4

250 VAC
FROM 0,080 TO 6,3 A

Dimensions



Max weight: 0,5 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max. power dissip	Max. Voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	A	W	V			
Ø8,35 x h=7,7	250	0,080	35**	0,10	0,40	250V MRT 0,080 LL AMMO	W 208 284	MIMRT25V0,08LL
		0,100		0,11	0,35	250V MRT 0,100 LL AMMO	X 208 285	MIMRT25V0,1LL
		0,125		0,13	0,30	250V MRT 0,125 LL AMMO	Y 208 286	MIMRT25V0,125LL
		0,160		0,15	0,28	250V MRT 0,160 LL AMMO	Z 208 287	MIMRT25V0,16LL
		0,200		0,17	0,25	250V MRT 0,200 LL AMMO	A 208 288	MIMRT25V0,2LL
		0,250		0,19	0,22	250V MRT 0,250 LL AMMO	Q 208 302	MIMRT25V0,25LL
		0,315		0,22	0,19	250V MRT 0,315 LL AMMO	R 208 303	MIMRT25V0,315LL
		0,400		0,25	0,16	250V MRT 0,400 LL AMMO	S 208 304	MIMRT25V0,4LL
		0,500		0,29	0,15	250V MRT 0,500 LL AMMO	T 208 305	MIMRT25V0,5LL
		0,630		0,33	0,13	250V MRT 0,630 LL AMMO	V 208 306	MIMRT25V0,63LL
		0,800		0,38	0,12	250V MRT 0,800 LL AMMO	W 208 307	MIMRT25V0,8LL
		1,000		0,44	0,11	250V MRT 1 LL AMMO	X 208 308	MIMRT25V1LL
		1,250		0,51	0,10	250V MRT 1,25 LL AMMO	Y 208 309	MIMRT25V1,25LL
		1,600		0,58	0,095	250V MRT 1,6 LL AMMO	Z 208 310	MIMRT25V1,6LL
		2,000		0,67	0,090	250V MRT 2 LL AMMO	A 208 311	MIMRT25V2LL
		2,500		0,77	0,087	250V MRT 2,5 LL AMMO	B 208 312	MIMRT25V2,5LL
		3,150		0,88	0,083	250V MRT 3,15 LL AMMO	C 208 313	MIMRT25V3,15LL
		4,000*	40**	1,02	0,080	250V MRT 4 LL AMMO	D 208 314	MIMRT25V4LL
		5,000*	50**	1,17	0,077	250V MRT 5 LL AMMO	B 208 634	MIMRT25V5LL
		6,300*	63**	1,34	0,073	250V MRT 6,3 LL AMMO	C 208 635	MIMRT25V6,3LL

* approval only.

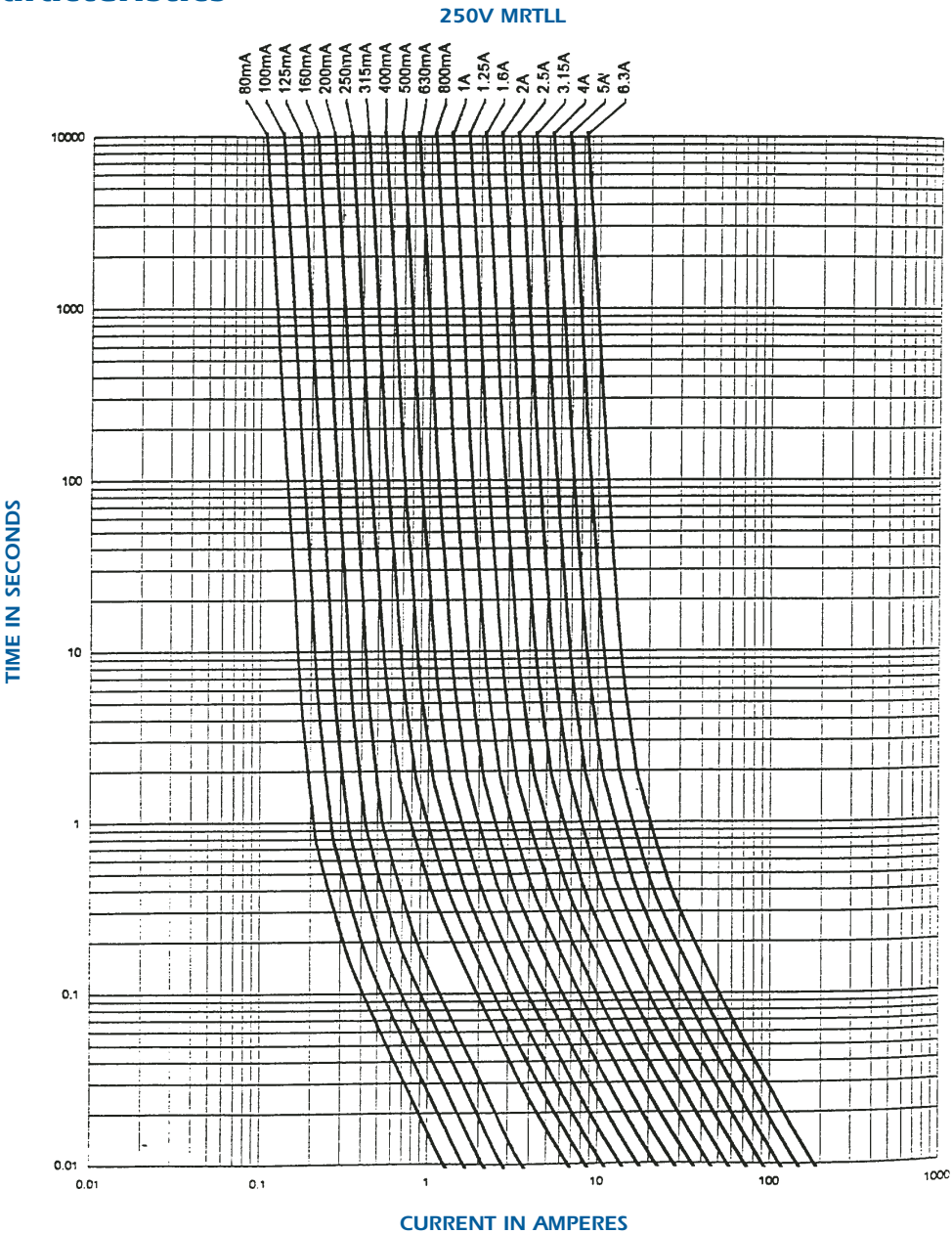
** 100A for

IEC Fuses Subminiature MRTLL Time Lag

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
80 mA → 6,3 A	2 min maxi	400 ms mini 10 s maxi	150 ms mini 3 s maxi	20 ms mini 150 ms maxi

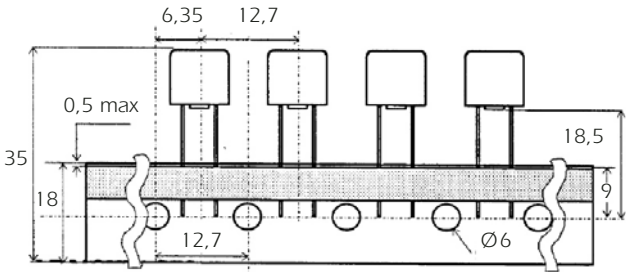
Time-current characteristics



Packaging: in box of 100 and 1000 pieces.

Installation instructions

- Soldering heat resistance as per IEC 68-2-20 260°C for 10 seconds.
- Material:
 - Body: Thermoplastic V0 UL 94.
 - Connection: Tin-plated copper alloy.
- Operating temperature: -55°C to 125°C.





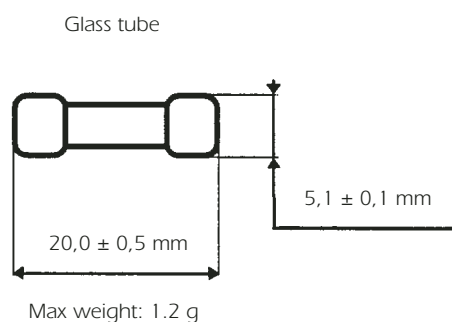
Miniature Fuses

IEC Fuses 5x20 low breaking capacity 5SF Fast Acting

Complying with IEC-127-2 Standard Sheet 2

250 VAC
FROM 0.08 TO 10 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max. power dissip	Max. Voltage drop	Designation				Reference Number	Catalog Number
mm	VAC	A	A	W	V						
5 x 20	250	0,08	35	0,39	0,93	250V	5SF	0,08	A 5 x 20	Z 090504	MI5SF25V0,08
		0,1		0,44	0,84	250V	5SF	0,1	A 5 x 20	A 090505	MI5SF25V0,1
		0,125		0,5	0,76	250V	5SF	0,125	A 5 x 20	B 090506	MI5SF25V0,125
		0,16		0,57	0,68	250V	5SF	0,16	A 5 x 20	C 090507	MI5SF25V0,16
		0,2		0,64	0,62	250V	5SF	0,2	A 5 x 20	D 090508	MI5SF25V0,20
		0,25		0,73	0,56	250V	5SF	0,25	A 5 x 20	E 090509	MI5SF25V0,25
		0,315		0,83	0,50	250V	5SF	0,315	A 5 x 20	F 090510	MI5SF25V0,315
		0,4		0,94	0,45	250V	5SF	0,4	A 5 x 20	G 090511	MI5SF25V0,40
		0,5		0,12	0,14	250V	5SF	0,5	A 5 x 20	H 090512	MI5SF25V0,50
		0,63		0,15	0,13	250V	5SF	0,63	A 5 x 20	J 090513	MI5SF25V0,63
		0,8		0,2	0,13	250V	5SF	0,8	A 5 x 20	K 090514	MI5SF25V0,80
		1		0,27	0,12	250V	5SF	1	A 5 x 20	L 090515	MI5SF25V1
		1,25		0,35	0,11	250V	5SF	1,25	A 5 x 20	M 090516	MI5SF25V1,25
		1,6		0,47	0,11	250V	5SF	1,6	A 5 x 20	N 090517	MI5SF25V1,6
		2		0,62	0,10	250V	5SF	2	A 5 x 20	P 090518	MI5SF25V2
		2,5		0,82	0,10	250V	5SF	2,5	A 5 x 20	Q 090519	MI5SF25V2,5
		3,15		1,08	0,09	250V	5SF	3,15	A 5 x 20	R 090520	MI5SF25V3,15
		4	40	1,43	0,09	250V	5SF	4	A 5 x 20	S 090521	MI5SF25V4
		5	50	1,89	0,08	250V	5SF	5	A 5 x 20	T 090522	MI5SF25V5
		6,3	63	2,5	0,08	250V	5SF	6,3	A 5 x 20	V 090523	MI5SF25V6,3
		8*	80	3,3	0,08	250V	5SF	8	A 5 x 20	W 090524	MI5SF25V8
		10*	100	4,37	0,07	250V	5SF	10	A 5 x 20	X 090525	MI5SF25V10

* and approval only.

* Non standard rating.

IEC Fuses

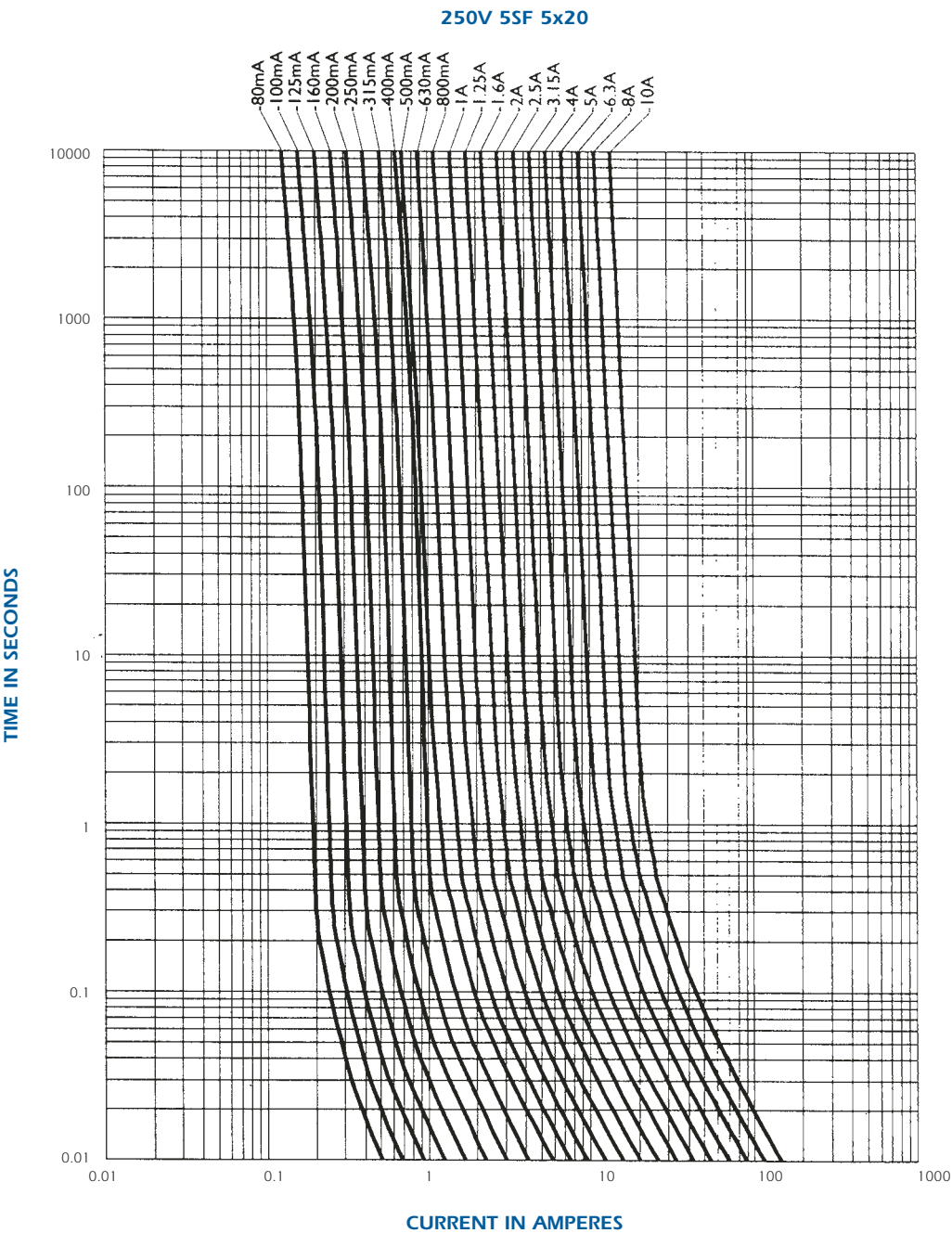
5x20 low breaking capacity

5SF Fast Acting

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
0,08 mA → 100 mA	30 min maxi	10 ms mini 500 ms maxi	3 ms mini 100 ms maxi	20 ms maxi
125 mA → 10 A	30 min maxi	50 ms mini 2 s maxi	10 ms mini 300 ms maxi	20 ms maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.



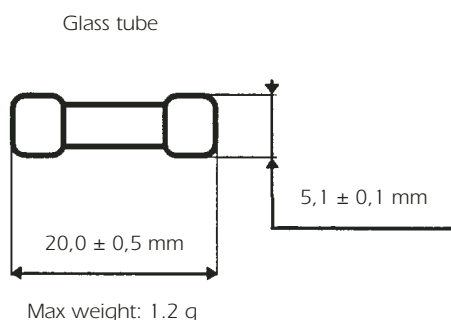
Miniature Fuses

IEC Fuses 5x20 low breaking capacity 5ST Time Lag

Complying with IEC-127-2 Standard Sheet 3

250 VAC
FROM 0.063 TO 10 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max. power dissip	Max. Voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	A	W	V			
5 x 20	250	0,063	35	0,28	2,77	250V 5ST 0,063 A 5 x 20	D 090531	MI5ST25V0,063
		0,08		0,29	2,24	250V 5ST 0,08 A 5 x 20	E 090532	MI5ST25V0,08
		0,1		0,30	1,82	250V 5ST 0,1 A 5 x 20	F 090533	MI5ST25V0,1
		0,125		0,30	1,47	250V 5ST 0,125 A 5 x 20	G 090534	MI5ST25V0,125
		0,16		0,31	1,19	250V 5ST 0,16 A 5 x 20	H 090535	MI5ST25V0,16
		0,2		0,32	0,97	250V 5ST 0,2 A 5 x 20	J 090536	MI5ST25V0,2
		0,25		0,32	0,78	250V 5ST 0,25 A 5 x 20	K 090537	MI5ST25V0,25
		0,315		0,33	0,63	250V 5ST 0,315 A 5 x 20	L 090538	MI5ST25V0,315
		0,4		0,34	0,51	250V 5ST 0,4 A 5 x 20	M 090539	MI5ST25V0,4
		0,5		0,34	0,42	250V 5ST 0,5 A 5 x 20	N 090540	MI5ST25V0,5
		0,63		0,18	0,17	250V 5ST 0,63 A 5 x 20	P 090541	MI5ST25V0,63
		0,8		0,20	0,15	250V 5ST 0,8 A 5 x 20	Q 090542	MI5ST25V0,8
		1		0,17	0,10	250V 5ST 1 A 5 x 20	R 090543	MI5ST25V1
		1,25		0,19	0,09	250V 5ST 1,25 A 5 x 20	S 090544	MI5ST25V1,25
		1,6		0,23	0,09	250V 5ST 1,6 A 5 x 20	T 090545	MI5ST25V1,6
		2		0,26	0,08	250V 5ST 2 A 5 x 20	V 090546	MI5ST25V2
		2,5		0,31	0,07	250V 5ST 2,5 A 5 x 20	W 090547	MI5ST25V2,5
		3,15		0,36	0,07	250V 5ST 3,15 A 5 x 20	X 090548	MI5ST25V3,15
		4	40	0,42	0,06	250V 5ST 4 A 5 x 20	Y 090549	MI5ST25V4
		5	50	0,49	0,06	250V 5ST 5 A 5 x 20	Z 090550	MI5ST25V5
		6,3	63	0,57	0,06	250V 5ST 6,3 A 5 x 20	A 090551	MI5ST25V6,3
		8*	80	0,8	0,06	250V 5ST 8 A 5 x 20	P 206070	MI5ST25V8
		10*	100	1	0,06	250V 5ST 10 A 5 x 20	Q 206071	MI5ST25V10

* Non-standard ratings.

IEC Fuses

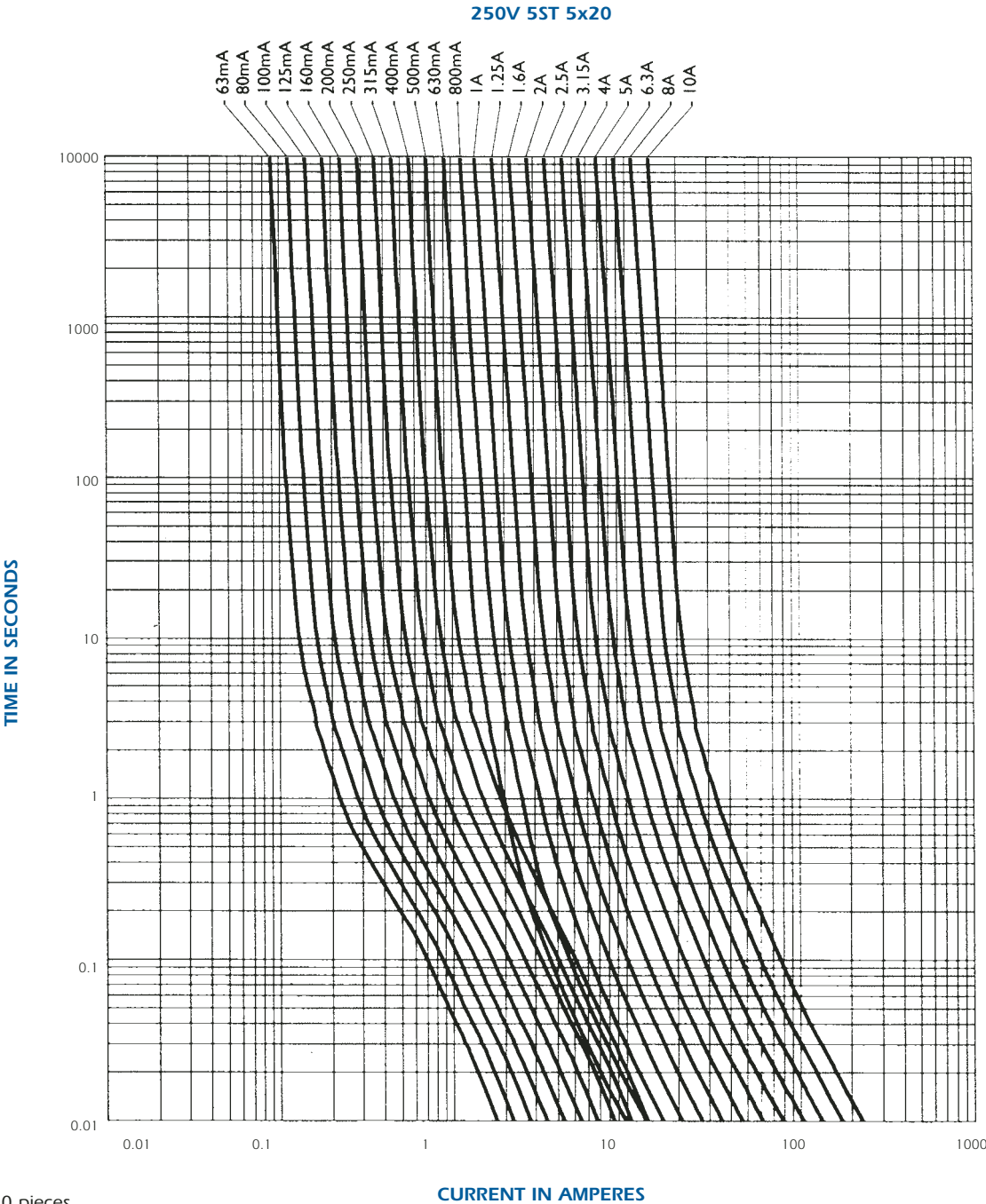
5x20 low breaking capacity

5ST Time Lag

Melting time limits

Current	210 % x In	275 % x In		400 % x In		1 000 % x In	
0,063 A → 0,1 A	2 min maxi	200 ms mini	10 s maxi	40 ms mini	3 s maxi	10 ms mini	300 ms maxi
0,125 A → 10 A	2 min maxi	600 ms mini	10 s maxi	150 ms mini	3 s maxi	20 ms mini	300 ms maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.



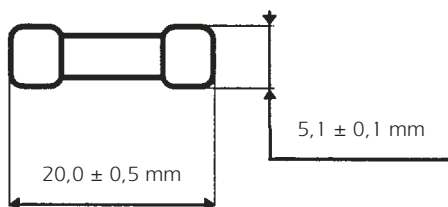
IEC Fuses 5x20 High breaking capacity 5HF Fast Acting

Complying with IEC-127-2 Standard Sheet 1

250 VAC
FROM 0.1 TO 10 A

Dimensions

Ceramic tube



Max weight: 1.2 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max power dissip	Max voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	A	W	V			
5 x 20	250	0,1#	1500	0,30	0,56	250V 5HF 0,1 A 5 x 20	G095548	MI5HF25V0,1
		0,125#		0,36	0,54	250V 5HF 0,125 A 5 x 20	H095549	MI5HF25V0,125
		0,16#		0,43	0,52	250V 5HF 0,16 A 5 x 20	J095550	MI5HF25V0,16
		0,2#		0,52	0,5	250V 5HF 0,2 A 5 x 20	Q095556	MI5HF25V0,2
		0,25#		0,63	0,48	250V 5HF 0,25 A 5 x 20	R095557	MI5HF25V0,25
		0,315#		0,76	0,46	250V 5HF 0,315 A 5 x 20	S095558	MI5HF25V0,315
		0,4#		0,92	0,44	250V 5HF 0,4 A 5 x 20	T095559	MI5HF25V0,4
		0,5#		1,11	0,43	250V 5HF 0,5 A 5 x 20	V095560	MI5HF25V0,5
		0,63#		1,35	0,41	250V 5HF 0,63 A 5 x 20	W095561	MI5HF25V0,63
		0,8#		0,58	0,2	250V 5HF 0,8 A 5 x 20	X095562	MI5HF25V0,8
		1		0,69	0,18	250V 5HF 1 A 5 x 20	Y095563	MI5HF25V1
		1,25		0,81	0,17	250V 5HF 1,25 A 5 x 20	C095567	MI5HF25V1,25
		1,6		0,96	0,16	250V 5HF 1,6 A 5 x 20	D095568	MI5HF25V1,6
		2		1,1	0,15	250V 5HF 2 A 5 x 20	E095569	MI5HF25V2
		2,5		1,3	0,14	250V 5HF 2,5 A 5 x 20	F095570	MI5HF25V2,5
		3,15		1,6	0,14	250V 5HF 3,15 A 5 x 20	G095571	MI5HF25V3,15
		4		1,9	0,13	250V 5HF 4 A 5 x 20	H095572	MI5HF25V4
		5		2,2	0,12	250V 5HF 5 A 5 x 20	J095573	MI5HF25V5
		6,3		2,7	0,113	250V 5HF 6,3 A 5 x 20	K095574	MI5HF25V6,3
		8*#		3,1	0,106	250V 5HF 8 A 5 x 20	J085407	MI5HF25V8
		10*#		3,7	0,1	250V 5HF 10 A 5 x 20	K085408	MI5HF25V10

* Non-standard ratings.

Product non-certified.



IEC Fuses

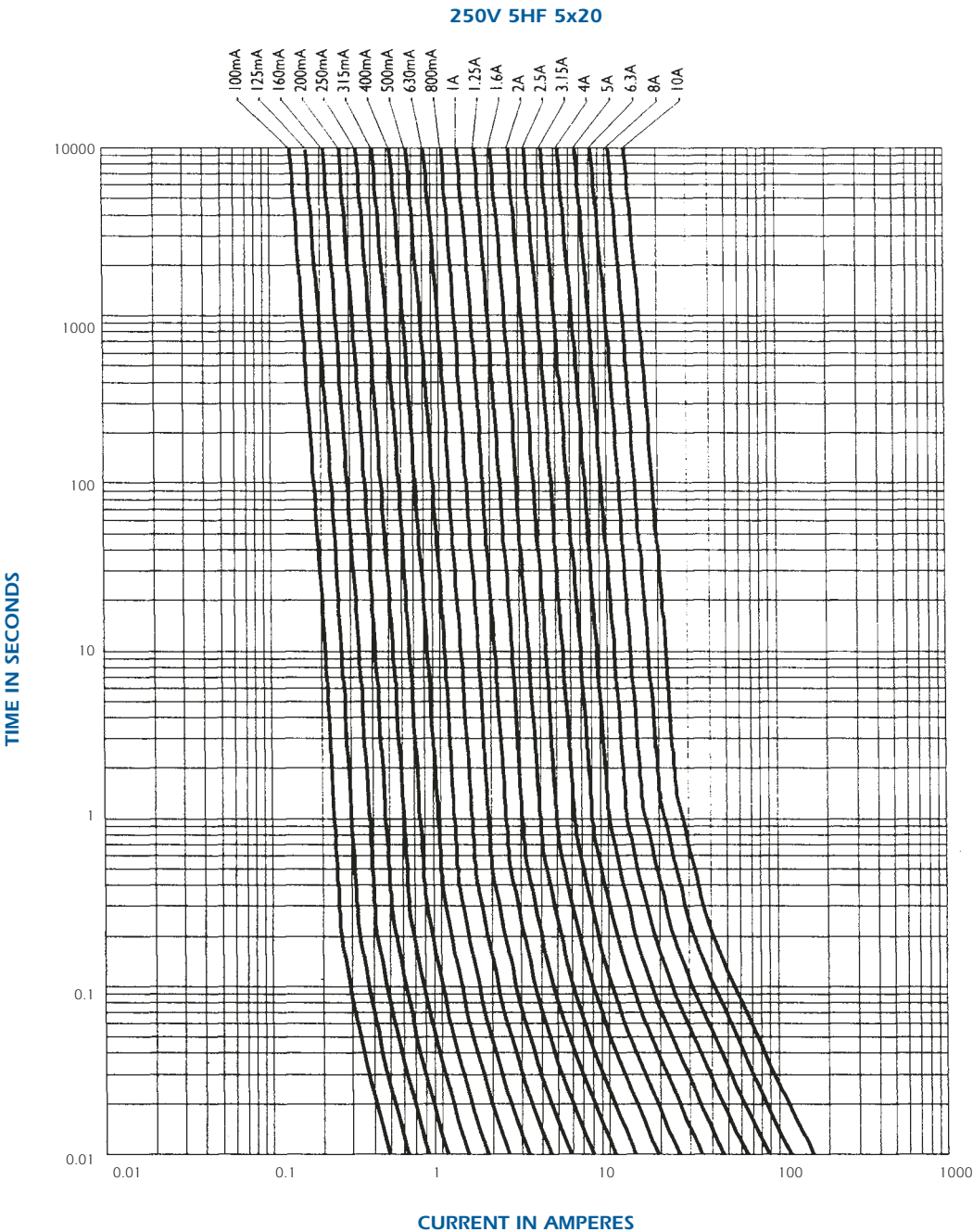
5x20 High breaking capacity

5HF Fast Acting

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
1 A → 3,15 A	30 min maxi	10 ms mini 2 s maxi	3 ms mini 300 ms maxi	20 ms maxi
4 A → 10 A	30 min maxi	10 ms mini 3 s maxi	3 ms mini 300 ms maxi	20 ms maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.



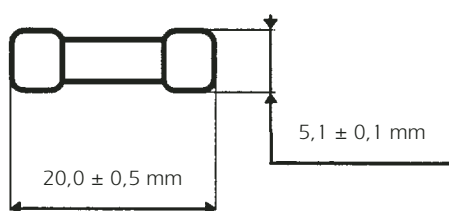
IEC Fuses 5x20 High breaking capacity 5HT Time Lag

Complying with IEC-127-2 Standard Sheet 5

250 VAC
FROM 0,25 TO 10 A

Dimensions

Ceramic tube



Max weight: 1,2 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max power dissip	Max voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	A	W	V			
5 x 20	250	0,25#	1500		0,7	250V 5HT 0,25 A 5 x 20	P085366	MI5HT25V0,25
		0,315#			0,68	250V 5HT 0,315 A 5 x 20	R094821	MI5HT25V0,315
		0,4#			0,64	250V 5HT 0,4 A 5 x 20	W094825	MI5HT25V0,4
		0,5#			0,6	250V 5HT 0,5 A 5 x 20	S085369	MI5HT25V0,5
		0,63#			0,5	250V 5HT 0,63 A 5 x 20	X094826	MI5HT25V0,63
		0,8#			0,385	250V 5HT 0,8 A 5 x 20	V085371	MI5HT25V0,8
		1		0,73	0,25	250V 5HT 1 A 5 x 20	W085372	MI5HT25V1
		1,25		0,81	0,22	250V 5HT 1,25 A 5 x 20	X085373	MI5HT25V1,25
		1,6		0,91	0,19	250V 5HT 1,6 A 5 x 20	Y085374	MI5HT25V1,6
		2		1	0,17	250V 5HT 2 A 5 x 20	Z085375	MI5HT25V2
		2,5		1,1	0,15	250V 5HT 2,5 A 5 x 20	A085376	MI5HT25V2,5
		3,15		1,2	0,13	250V 5HT 3,15 A 5 x 20	B085377	MI5HT25V3,1
		4		1,4	0,1	250V 5HT 4 A 5 x 20	C085378	MI5HT25V4
		5		1,5	0,1	250V 5HT 5 A 5 x 20	D085379	MI5HT25V5
		6,3		1,7	0,1	250V 5HT 6,3 A 5 x 20	E085380	MI5HT25V6,3
		8*		2,7	0,1	250V 5HT 8 A 5 x 20	A208357	MI5HT25V8
		10*		2,9	0,1	250V 5HT 10 A 5 x 20	B208358	MI5HT25V10

* Non-standard ratings.

Product non-certified.



IEC Fuses

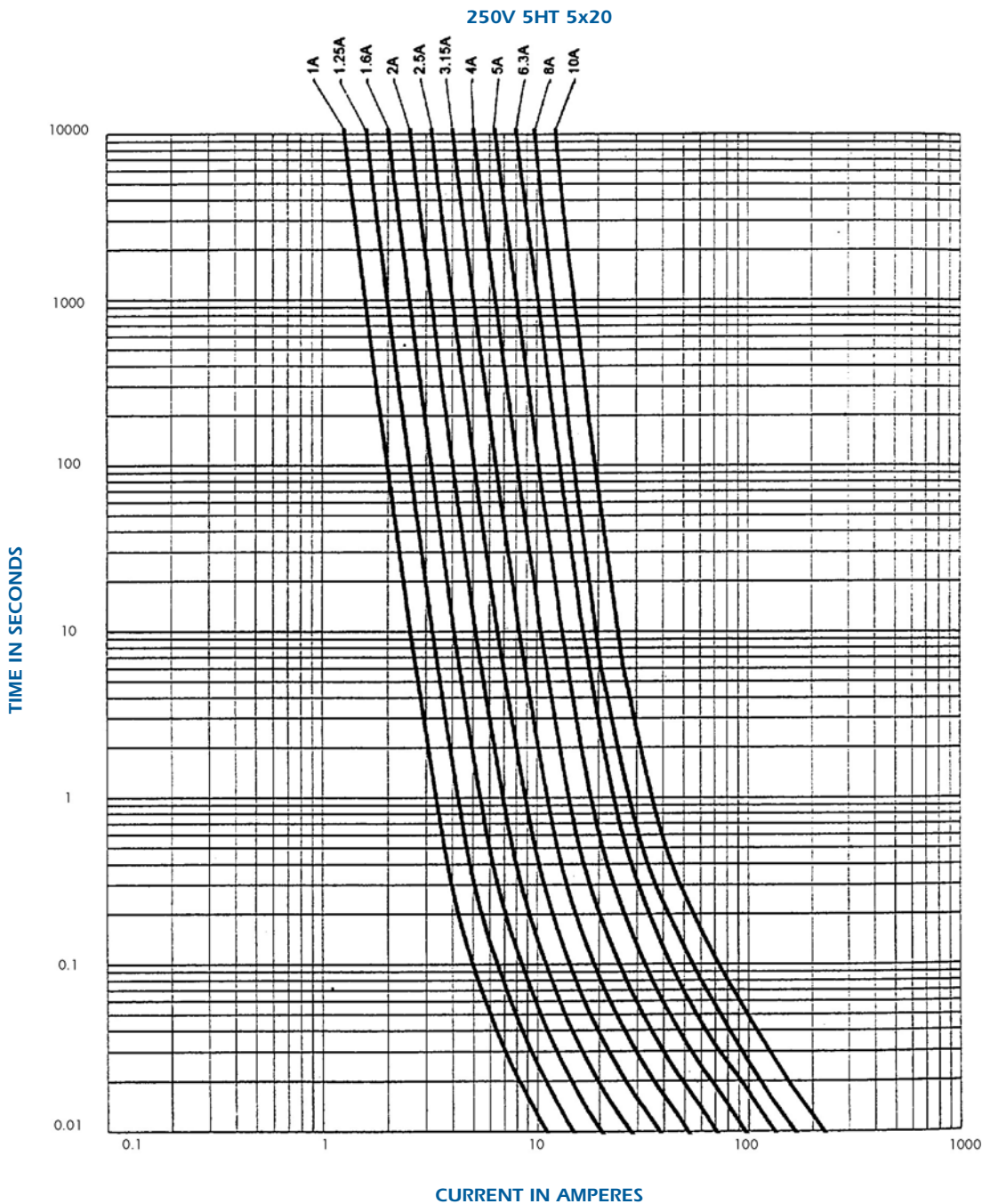
5x20 High breaking capacity

5HT Time Lag

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
1 A → 3,15 A	30 min maxi	1 s mini 80 s maxi	95 ms mini 5 s maxi	10 ms mini 100 ms maxi
4 A → 10 A	30 min maxi	1 s mini 80 s maxi	150 ms mini 5 s maxi	20 ms mini 100 ms maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.

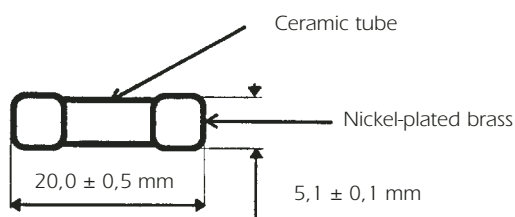


IEC fuses 5x20 high breaking capacity FC Fast Acting

Complying with IEC 127-2 Standard Sheet 1

250 VAC
FROM 0,16 TO 10A

Dimensions



Sand-filled fuses
Max weight: 1.2 g



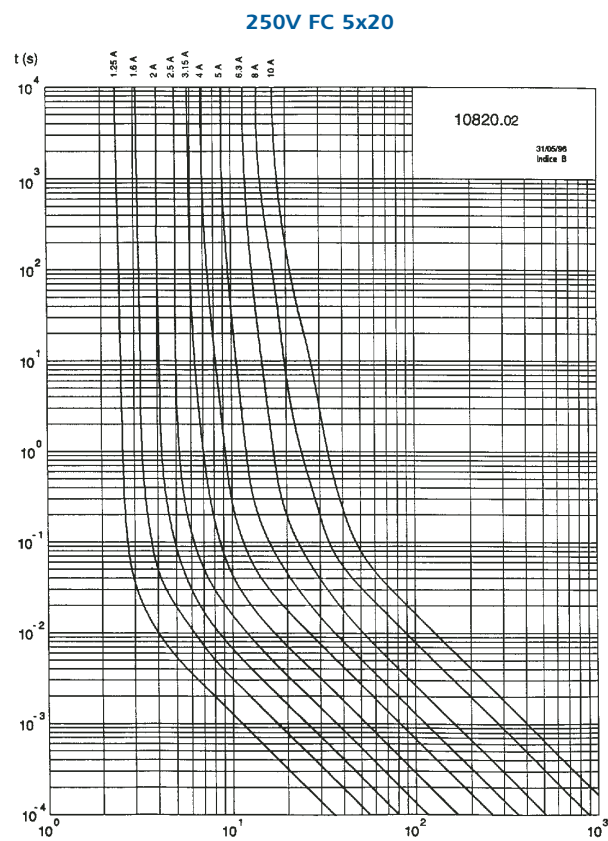
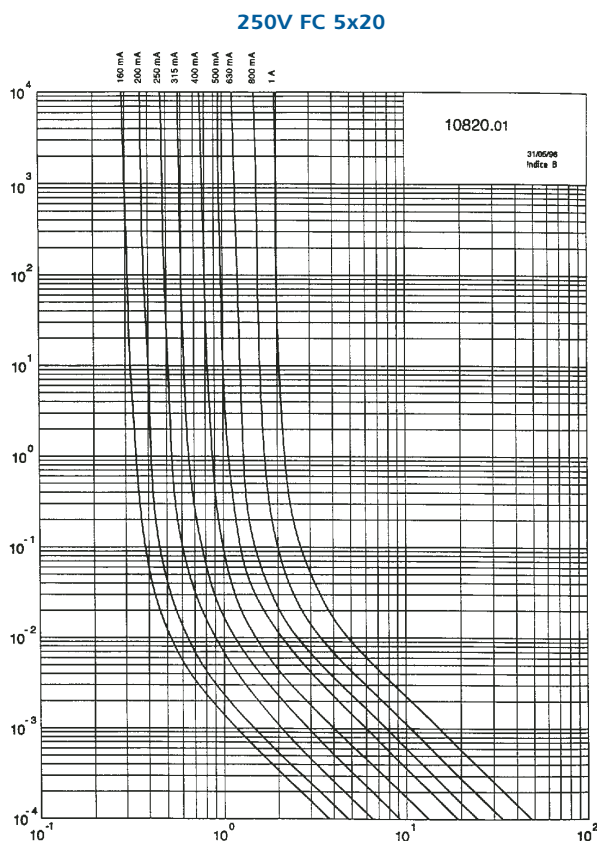
Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
5 x 20	250	0,160	along IEC 127 1500 A under 250 VAC cos φ ≥ 0,7	0,0011	0,0025	1,6	250V FC 0,160 A 5x20	S206027	MI5FC25V0,16
		0,200		0,0018	0,004	1,45	250V FC 0,200 A 5x20	T206028	MI5FC25V0,20
		0,250		0,0035	0,008	1,3	250V FC 0,250 A 5x20	K206112	MI5FC25V0,25
		0,315		0,0072	0,016	1,15	250V FC 0,315 A 5x20	W206030	MI5FC25V0,31
		0,400		0,015	0,032	1,1	250V FC 0,400 A 5x20	X206031	MI5FC25V0,4
		0,500		0,032	0,066	1	250V FC 0,500 A 5x20	Y206032	MI5FC25V0,5
		0,630		0,052	0,082	0,45	250V FC 0,630 A 5x20	Z206033	MI5FC25V0,63
		0,800*		0,098	0,16	0,4	250V FC 0,800 A 5x20	A206034	MI5FC25V0,8
		1,000		0,2	0,32	0,37	250V FC 1,000 A 5x20	T205844	MI5FC25V1
		1,250		0,11	0,35	0,55	250V FC 1,250 A 5x20	D206037	MI5FC25V1,25
		1,600		0,28	0,55	0,42	250V FC 1,600 A 5x20	E206038	MI5FC25V1,6
		2,000		0,55	1,2	0,38	250V FC 2,000 A 5x20	F205119	MI5FC25V2
		2,500		1,1	2,4	0,34	250V FC 2,500 A 5x20	F206039	MI5FC25V2,5
		3,150		2,5	5	0,28	250V FC 3,150 A 5x20	G206040	MI5FC25V3,15
		4,000		6,1	12	0,23	250V FC 4,000 A 5x20	H206041	MI5FC25V4
		5,000		11	22	0,21	250V FC 5,000 A 5x20	Y205411	MI5FC25V5
		6,300		25	45	0,18	250V FC 6,300 A 5x20	E205785	MI5FC25V6,3
		8*		72	130	0,13	250V FC 8,000 A 5x20	G205925	MI5FC25V8
		10*		150	270	0,11	250V FC 10,00 A 5x20	T205683	MI5FC25V10

* Non-SEMKO approved rating.

IEC fuses 5x20 high breaking capacity FC Fast Acting

Time-current characteristics



I tolerance $\pm 12\%$. Actual pre-arcing time (s). R.M.S. Value of pre-arcing current (A).

Packaging: in boxes of 1,000 pieces.

These fuses are available with axial leads: refer to data sheet FC "AL" Fast Acting.



Miniature Fuses



IEC Fuses Fuses maintenance set Set 5SF, 5ST, 5HF, 5HT

Range 5SF - 5x20 - 250VAC
Fast acting F - Low breaking capacity
Reference number: G203763
Catalog number: MIBOX5SF

According to IEC-127-2 publication standard sheet 2



Breaking capacity under 250 VAC: 35 A or 10 I _N					
100 mA A090505	125 mA B090506	160 mA C090507	200 mA D090508	250 mA E090509	315 mA F090510
400 mA G090511	500 mA H090512	630 mA J090513	800 mA K090514	1 A L090515	1,25 A M090516
1,6 A N090517	2 A P090518	2,5 A Q090519	3,15 A R090520	4 A S090521	6,3 A V090523

Max weight: 400 g

Packaging: 360 pieces (20x18)

Range 5ST - 5x20 - 250VAC
Time lag T - Low breaking capacity
Reference number: H203764
Catalog number: MIBOX5ST

According to IEC-127-2 publication standard sheet 3



Breaking capacity under 250 VAC: 35 A or 10 I _N					
100 mA F090533	125 mA G090534	160 mA H090535	200 mA J090536	250 mA K090537	315 mA L090538
400 mA M090539	500 mA N090540	630 mA P090541	800 mA Q090542	1 A R090543	1,25 A S090544
1,6 A T090545	2 A V090546	2,5 A W090547	3,15 A X090548	4 A Y090549	6,3 A A090551

Max weight: 400 g

Packaging: 360 pieces (20x18)

Miniature Fuses

IEC Fuses

Fuses maintenance set

Set 5SF, 5ST, 5HF, 5HT

Range 5HF - 5x20 - 250VAC

Fast acting F - High breaking capacity

Reference number: B229863

Catalog number: MIBOX5HF

According to IEC-127-2 publication standard sheet 1



Breaking capacity under 250 VAC : 1500 A					
100 mA G095548	125 mA H095549	160 mA J095550	200 mA Q095556	250 mA R095557	315 mA S095558
400 mA T095559	500 mA V095560	630 mA W095561	800 mA X095562	1 A Y095563	1,25 A C095567
1,6 A D095568	2 A E095569	2,5 A F095570	3,15 A G095571	4 A H095572	6,3 A K095574

Max weight : 400 g

Packaging: 360 pieces (20x18)

Range 5HT - 5x20 - 250VAC

Time lag T - High breaking capacity

Reference number: C229864

Catalog number: MIBOX5HT

According to IEC-127-2 publication standard sheet 5



Breaking capacity under 250 VAC : 1500 A					
250 mA P085366	315 mA R094821	400 mA W094825	500 mA S085369	630 mA X094826	800 mA V085371
1 A W085372	1,25 A X085373	1,6 A Y085374	2 A Z085375	2,5 A A085376	3,15 A B085377
4 A C085378	5 A D085379	6,3 A E085380	8 A A208357	10 A B208358	

Max weight : 400 g

Packaging: 360 pieces (20x18)



IEC Fuses

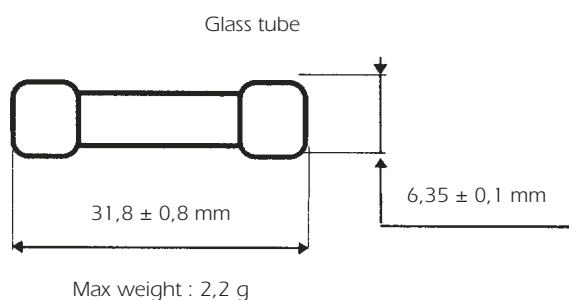
6x32 low breaking capacity

3SF Fast Acting

Complying with IEC-127-2 Standard Sheet 4

250 VAC
FROM 0.315 TO 10 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max power dissip	Max voltage drop	Designation					Reference Number	Catalog Number
mm	VAC	A	A	W	V							
6 x 32	250	0,315	35	1,64	3,15	250V	3SF	0,315	A	6.32	P 090564	MI6SF25V0,315
		0,4		1,92	2,93	250V	3SF	0,4	A	6.32	Q 090565	MI6SF25V0,4
		0,5		0,27	0,26	250V	3SF	0,5	A	6.32	R 090566	MI6SF25V0,5
		0,63		0,31	0,24	250V	3SF	0,63	A	6.32	S 090567	MI6SF25V0,63
		0,8		0,37	0,23	250V	3SF	0,8	A	6.32	T 090568	MI6SF25V0,8
		1		0,44	0,21	250V	3SF	1	A	6.32	V 090569	MI6SF25V1
		1,25		0,51	0,2	250V	3SF	1,25	A	6.32	W 090570	MI6SF25V1,25
		1,6		0,59	0,18	250V	3SF	1,6	A	6.32	X 090571	MI6SF25V1,6
		2		0,70	0,17	250V	3SF	2	A	6.32	Y 090572	MI6SF25V2
		2,5		0,83	0,16	250V	3SF	2,5	A	6.32	Z 090573	MI6SF25V2,5
	250 (150*)	3,15	40	1	0,15	250V	3SF	3,15	A	6.32	A 090574	MI6SF25V3,15
		4		1,19	0,15	250V	3SF	4	A	6.32	B 090575	MI6SF25V4
	250 (60*)	5	50	1,37	0,14	250V	3SF	5	A	6.32	C 090576	MI6SF25V5
		6,3	63	1,71	0,13	250V	3SF	6	A	6.32	D 090577	MI6SF25V6,3
		8**	80	2,05	0,13	250V	3SF	8	A	6.32	E 090578	MI6SF25V8
		10**	100	2,45	0,12	250V	3SF	10	A	6.32	F 090579	MI6SF25V10

* approval voltage.

** no standard rating.

IEC Fuses

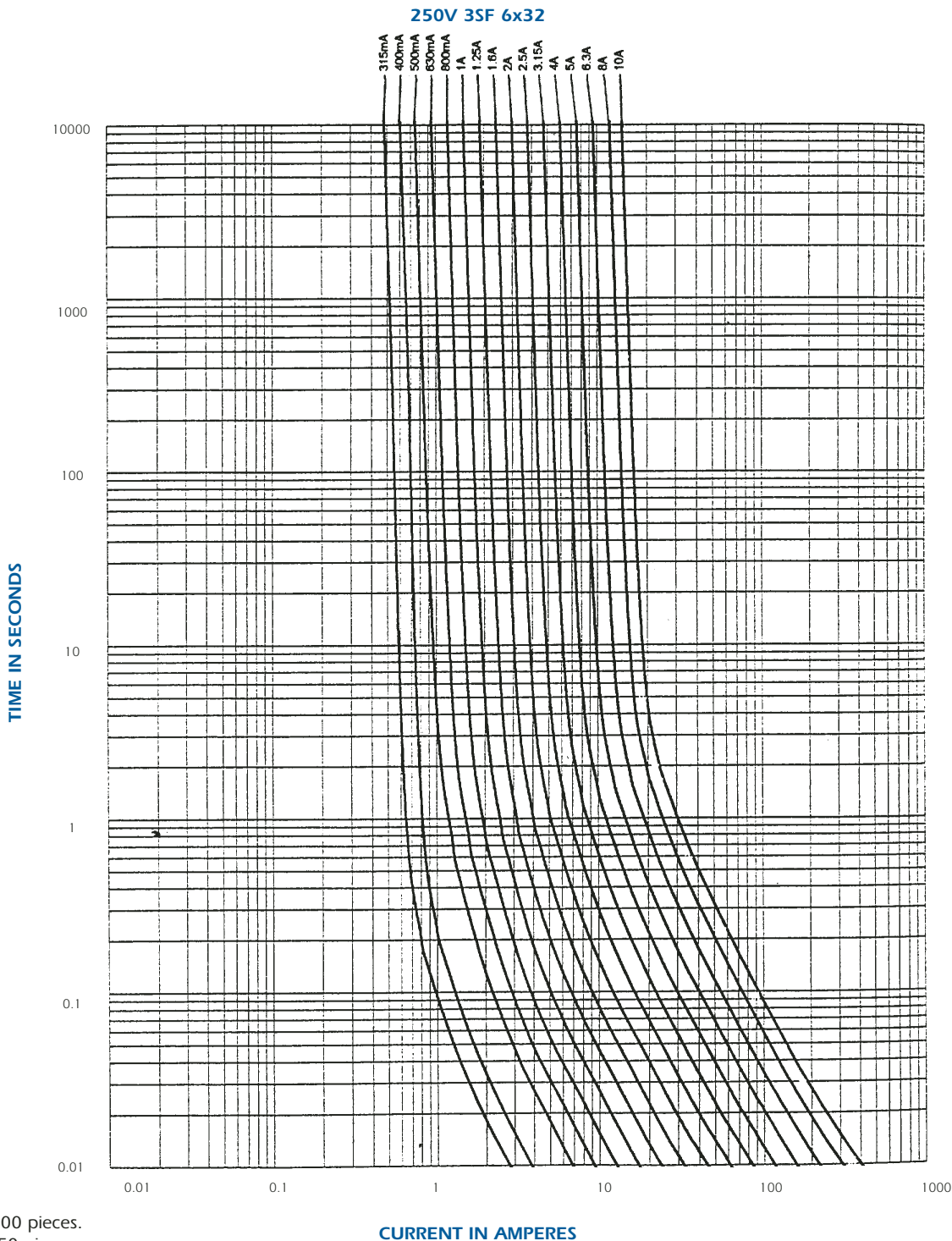
6x32 low breaking capacity

3SF Fast Acting

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
50 -> 100 mA	20 s maxi	2 ms mini	200 ms maxi	1 ms mini
125 mA -> 10 A	20 s maxi	20 ms mini	1500 ms maxi	30 ms maxi
			8 ms mini	400 ms maxi
				5 ms maxi
				80 ms maxi

Time-current characteristics



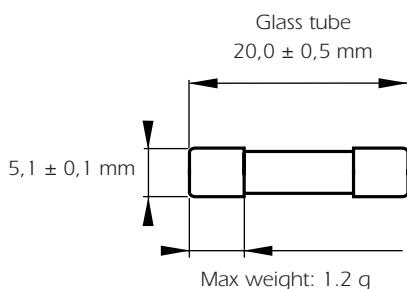
Packaging: in box of 1000 pieces.
in blister of 50 pieces.



Convenience Fuses 5F 5x20 - Fast acting

250 VAC - F: fast acting
from 0.032 to 20 A
size: 5 x 20

Dimensions



Basic Characteristics

Size	U _n Rated Voltage	Breaking Capacity	I _n Rating	Designation			Reference Number	Catalog Number
mm	V		A					
5x20	250	35A 250V	0,032	FUS.CIL.DOM(CRIS.)	F5X20	0,032A	D222942	MI5F25V0,032
			0,04	FUS.CIL.DOM(CRIS.)	F5X20	0,04A	M200732	MI5F25V0,04
			0,05	FUS.CIL.DOM(CRIS.)	F5X20	0,05A	B201274	MI5F25V0,05
			0,063	FUS.CIL.DOM(CRIS.)	F5X20	0,063A	L201789	MI5F25V0,063
			0,08	FUS.CIL.DOM(CRIS.)	F5X20	0,08A	K211011	MI5F25V0,08
			0,1	FUS.CIL.DOM(CRIS.)	F5X20	0,1A	L200731	MI5F25V0,1
			0,125	FUS.CIL.DOM(CRIS.)	F5X20	0,125A	A201273	MI5F25V0,125
			0,16	FUS.CIL.DOM(CRIS.)	F5X20	0,16A	K201788	MI5F25V0,16
			0,2	FUS.CIL.DOM(CRIS.)	F5X20	0,2A	J211010	MI5F25V0,2
			0,25	FUS.CIL.DOM(CRIS.)	F5X20	0,25A	A211531	MI5F25V0,25
			0,315	FUS.CIL.DOM(CRIS.)	F5X20	0,315A	F212042	MI5F25V0,315
			0,4	FUS.CIL.DOM(CRIS.)	F5X20	0,4A	B211532	MI5F25V0,4
			0,5	FUS.CIL.DOM(CRIS.)	F5X20	0,5A	Y212564	MI5F25V0,5
			0,63	FUS.CIL.DOM(CRIS.)	F5X20	0,63A	J213080	MI5F25V0,63
			0,8	FUS.CIL.DOM(CRIS.)	F5X20	0,8A	G212043	MI5F25V0,8
			1	FUS.CIL.DOM(CRIS.)	F5X20	1A	D213581	MI5F25V1
			1,25	FUS.CIL.DOM(CRIS.)	F5X20	1,25A	D214087	MI5F25V1,25
			1,6	FUS.CIL.DOM(CRIS.)	F5X20	1,6A	Z212565	MI5F25V1,6
			2	FUS.CIL.DOM(CRIS.)	F5X20	2A	J214598	MI5F25V2
			2,5	FUS.CIL.DOM(CRIS.)	F5X20	2,5A	Q215110	MI5F25V2,5
			3,15	FUS.CIL.DOM(CRIS.)	F5X20	3,15A	R215617	MI5F25V3,15
		10xI _n 250V	4	FUS.CIL.DOM(CRIS.)	F5X20	4A	Z216130	MI5F25V4
			5	FUS.CIL.DOM(CRIS.)	F5X20	5A	W216633	MI5F25V5
			6,3	FUS.CIL.DOM(CRIS.)	F5X20	6,3A	H217150	MI5F25V6,3
			8	FUS.CIL.DOM(CRIS.)	F5X20	8A	M217660	MI5F25V8
			10	FUS.CIL.DOM(CRIS.)	F5X20	10A	X218175	MI5F25V10
			12,5	FUS.CIL.DOM(CRIS.)	F5X20	12,5A	K218693	MI5F25V12,5
			16	FUS.CIL.DOM(CRIS.)	F5X20	16A	Y219211	MI5F25V16
			20	FUS.CIL.DOM(CRIS.)	F5X20	20A	A219742	MI5F25V20

Packaging: 10 boxes x 10 fuses.

Fuses without approval.

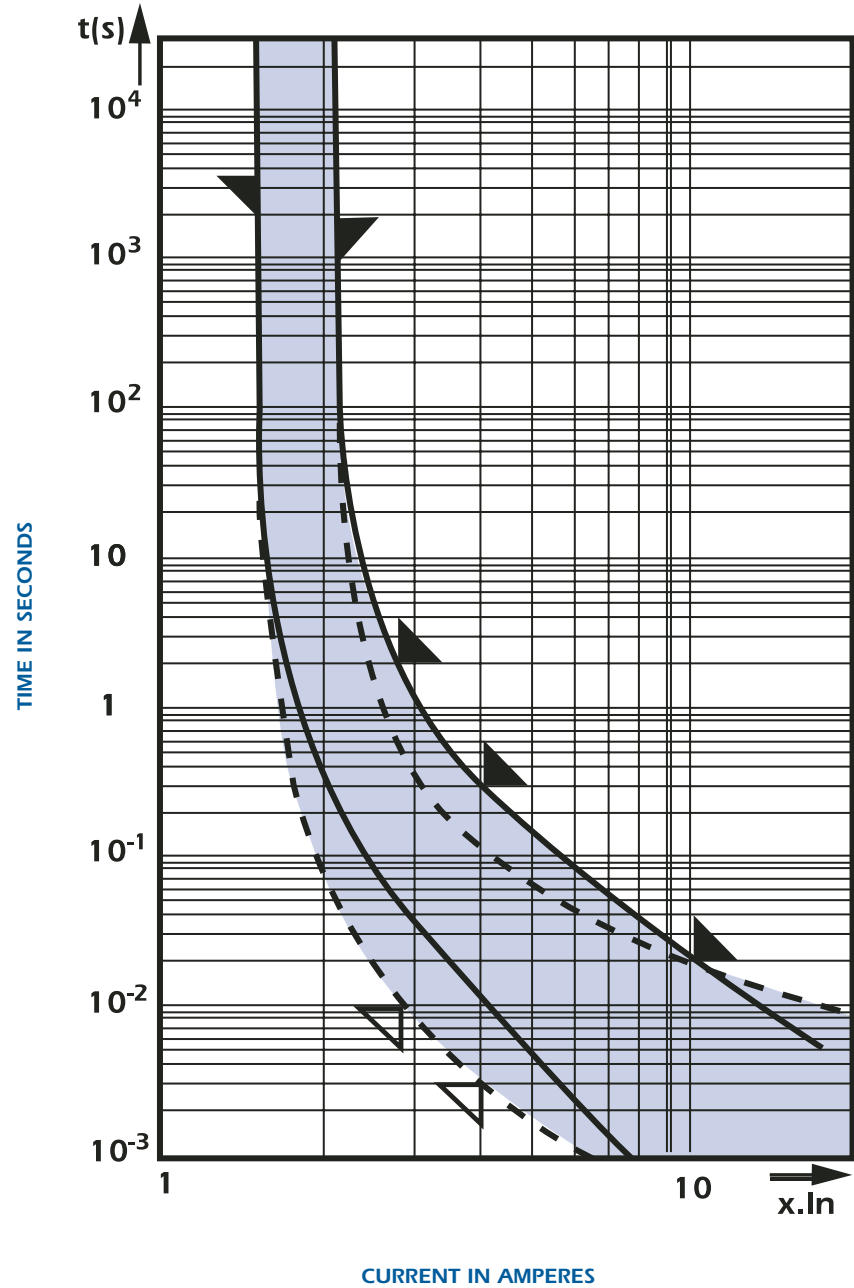
Convenience Fuses

5F 5x20 - Fast acting

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
0,032 mA -> 100 mA	30 min maxi	10 ms mini	500 ms maxi	3 ms mini
125 mA -> 20 A	30 min maxi	50 ms mini	2 s maxi	10 ms mini

Time-current characteristics

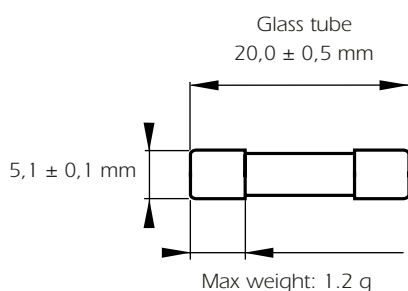




Convenience Fuses 5SM 5x20 - Medium time lag

250 VAC - M: medium time
from 0.032 to 16 A
size: 5 x 20

Dimensions



Basic Characteristics

Size	U _n Rated Voltage	Breaking Capacity	I _n Rating	Designation	Reference Number	Catalog Number
mm	V		A			
5x20	250	80A 250V	0,032	5SM 32MA MITTELTR.	D218158	MI5SM25V0,032
			0,04	5SM 40MA MITTELTR.	Q218675	MI5SM25V0,04
			0,05	5SM 50MA MITTELTR.	D219193	MI5SM25V0,05
			0,063	5SM 63MA MITTELTR.	H219726	MI5SM25V0,063
			0,08	5SM 80MA MITTELTR.	Q222171	MI5SM25V0,08
			0,1	5SM 100MA MITTELTR.	K222925	MI5SM25V0,1
			0,125	5SM 125MA MITTELTR.	T200715	MI5SM25V0,125
			0,16	5SM 160MA MITTELTR.	H201257	MI5SM25V0,16
			0,2	5SM 200MA MITTELTR.	T201773	MI5SM25V0,2
			0,25	5SM 250MA MITTELTR.	K207147	MI5SM25V0,25
			0,315	5SM 315MA MITTELTR.	J211516	MI5SM25V0,315
			0,4	5SM 400MA MITTELTR.	N212026	MI5SM25V0,4
			0,5	5SM 500MA MITTELTR.	F212548	MI5SM25V0,5
			0,63	5SM 630MA MITTELTR.	R213064	MI5SM25V0,63
			0,8	5SM 800MA MITTELTR.	M213566	MI5SM25V0,8
			1	5SM 1A MITTELTR.	L214071	MI5SM25V1
			1,25	5SM 1,25A MITTELTR.	T214584	MI5SM25V1,25
			1,6	5SM 1,6A MITTELTR.	A215096	MI5SM25V1,6
			2	5SM 2A MITTELTR.	A215602	MI5SM25V2
			2,5	5SM 2,5A MITTELTR.	H216115	MI5SM25V2,5
			3,15	5SM 3,15A MITTELTR.	E216618	MI5SM25V3,15
		300A 250V	4	5SM 4A MITTELTR.	R217135	MI5SM25V4
			5	5SM 5A MITTELTR.	E218159	MI5SM25V5
			6,3	5SM 6,3A MITTELTR.	R218676	MI5SM25V6,3
			8	5SM 8A MITTELTR.	E219194	MI5SM25V8
			10	5SM 10A MITTELTR.	J219727	MI5SM25V10
			16	5SM 16A MITTELTR.	R222172	MI5SM25V16

Packaging: 10 boxes x 10 fuses.

Fuses without approval.

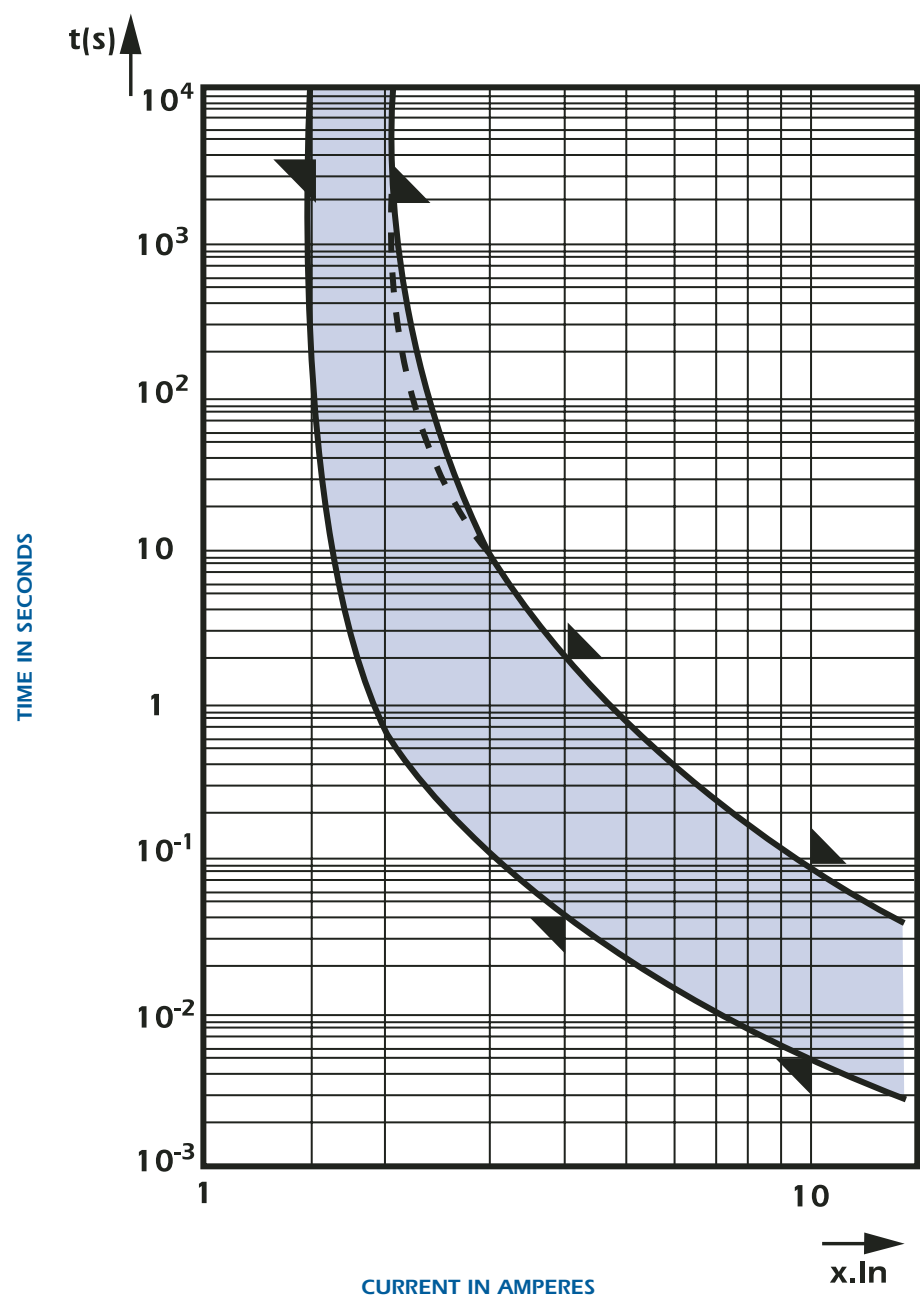
Convenience Fuses

5SM 5x20 - Medium time lag

Melting time limits

Current	210 % x In	400 % x In		1 000 % x In	
32 mA -> 1,25A	10 min maxi	40 ms mini	2 s maxi	5 ms mini	90 ms maxi
1,6A -> 16 A	30 min maxi	40 ms mini	2 s maxi	5 ms mini	90 ms maxi

Time-current characteristics

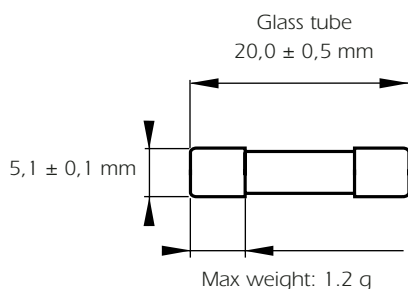




Convenience Fuses 5T 5x20 - Time lag

250 VAC - T: time lag
from 0.032 to 20 A
size: 5 x 20

Dimensions



Basic Characteristics

Size	U _n Rated Voltage	Breaking Capacity	I _n Rating	Designation			Reference Number	Catalog number
mm	V		A					
5x20	250	35A 250V	0,032	FUS.CIL.DOM(CRIS.)	T5X20	0,032A	C216639	MI5T25V0,032
			0,04	FUS.CIL.DOM(CRIS.)	T5X20	0,04A	P217156	MI5T25V0,04
			0,05	FUS.CIL.DOM(CRIS.)	T5X20	0,05A	T217666	MI5T25V0,05
			0,063	FUS.CIL.DOM(CRIS.)	T5X20	0,063A	D218181	MI5T25V0,063
			0,08	FUS.CIL.DOM(CRIS.)	T5X20	0,08A	R218699	MI5T25V0,08
			0,1	FUS.CIL.DOM(CRIS.)	T5X20	0,1A	B216638	MI5T25V0,1
			0,125	FUS.CIL.DOM(CRIS.)	T5X20	0,125A	N217155	MI5T25V0,125
			0,16	FUS.CIL.DOM(CRIS.)	T5X20	0,16A	S217665	MI5T25V0,16
			0,2	FUS.CIL.DOM(CRIS.)	T5X20	0,2A	C218180	MI5T25V0,2
			0,25	FUS.CIL.DOM(CRIS.)	T5X20	0,25A	Q218698	MI5T25V0,25
			0,315	FUS.CIL.DOM(CRIS.)	T5X20	0,315A	D219216	MI5T25V0,315
			0,4	FUS.CIL.DOM(CRIS.)	T5X20	0,4A	E219217	MI5T25V0,4
			0,5	FUS.CIL.DOM(CRIS.)	T5X20	0,5A	F219747	MI5T25V0,5
			0,63	FUS.CIL.DOM(CRIS.)	T5X20	0,63A	N222192	MI5T25V0,63
			0,8	FUS.CIL.DOM(CRIS.)	T5X20	0,8A	G219748	MI5T25V0,8
			1	FUS.CIL.DOM(CRIS.)	T5X20	1A	J222947	MI5T25V1
			1,25	FUS.CIL.DOM(CRIS.)	T5X20	1,25A	S200737	MI5T25V1,25
			1,6	FUS.CIL.DOM(CRIS.)	T5X20	1,6A	P222193	MI5T25V1,6
			2	FUS.CIL.DOM(CRIS.)	T 5X20	2A	G201279	MI5T25V2
			2,5	FUS.CIL.DOM(CRIS.)	T5X20	2,5A	R201794	MI5T25V2,5
			3,15	FUS.CIL.DOM(CRIS.)	T5X20	3,15A	Q211016	MI5T25V3,15
		10xln 250V	4	FUS.CIL.DOM(CRIS.)	T5X20	4A	G211537	MI5T25V4
			5	FUS.CIL.DOM(CRIS.)	T5X20	5A	M212048	MI5T25V5
			6,3	FUS.CIL.DOM(CRIS.)	T5X20	6,3A	E212570	MI5T25V6,3
			8	FUS.CIL.DOM(CRIS.)	T5X20	8A	Q213086	MI5T25V8
			10	FUS.CIL.DOM(CRIS.)	T5X20	10A	J213586	MI5T25V10
			12,5	FUS.CIL.DOM(CRIS.)	T5X20	12,5A	P214603	MI5T25V12,5
			16	FUS.CIL.DOM(CRIS.)	T5X20	16A	X215116	MI5T25V16
			20	FUS.CIL.DOM(CRIS.)	T5X20	20A	Y215623	MI5T25V20

Packaging: 10 boxes x 10 fuses.

Fuses without approval.

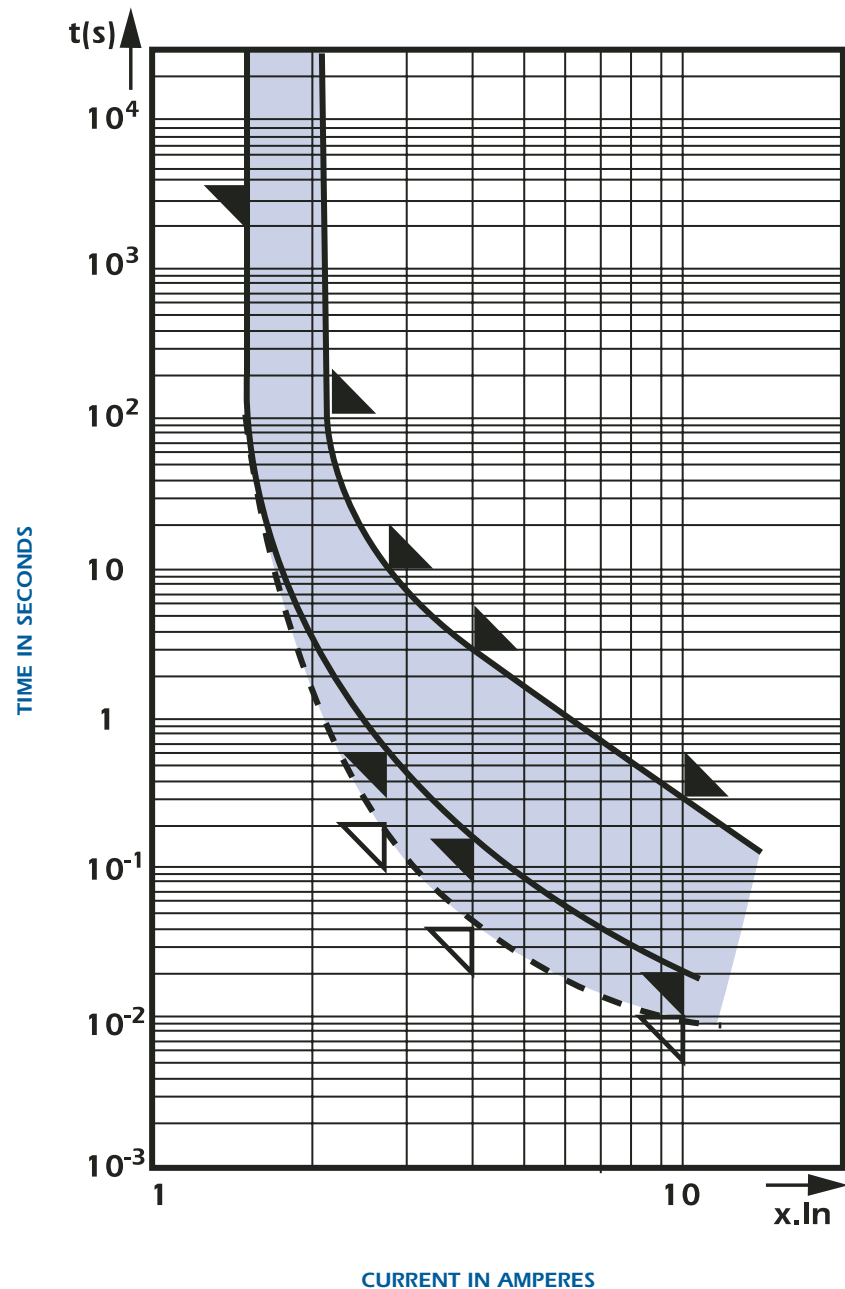
Convenience Fuses

5T 5x20 - Time lag

Melting time limits

Current	210 % x In	275 % x In		400 % x In		1 000 % x In	
0,032 A → 0,1 A	2 min maxi	200 ms mini	10 s maxi	40 ms mini	3 s maxi	10 ms mini	300 ms maxi
0,125 A → 20 A	2 min maxi	600 ms mini	10 s maxi	150 ms mini	3 s maxi	20 ms mini	300 ms maxi

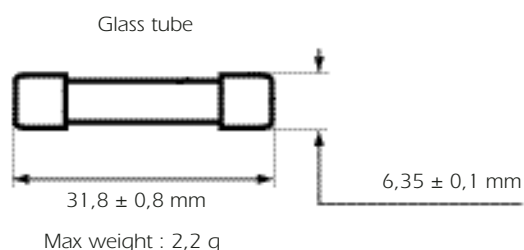
Time-current characteristics





Convenience Fuses 6F 6x32 - Time lag

Dimensions



250 VAC - F: fast acting
from 0.032 to 25 A
size: 6 x 32

Basic Characteristics

Size	U _n Rated Voltage	Breaking Capacity	I _n Rating	Designation			Reference Number	Catalog Number
mm	V		A					
6x32	250	35A 250V	0,032	FUS.CIL.DOM(CRIS.)	F6X32	0,032A	B219214	MI6F25V0,032
			0,04	FUS.CIL.DOM(CRIS.)	F6X32	0,04A	D219745	MI6F25V0,04
			0,05	FUS.CIL.DOM(CRIS.)	F6X32	0,05A	L222190	MI6F25V0,05
			0,063	FUS.CIL.DOM(CRIS.)	F6X32	0,063A	G222945	MI6F25V0,063
			0,08	FUS.CIL.DOM(CRIS.)	F6X32	0,08A	Q200735	MI6F25V0,08
			0,1	FUS.CIL.DOM(CRIS.)	F6X32	0,1A	K217152	MI6F25V0,1
			0,125	FUS.CIL.DOM(CRIS.)	F6X32	0,125A	P217662	MI6F25V0,125
			0,16	FUS.CIL.DOM(CRIS.)	F6X32	0,16A	Z218177	MI6F25V0,16
			0,2	FUS.CIL.DOM(CRIS.)	F6X32	0,2A	M218695	MI6F25V0,2
			0,25	FUS.CIL.DOM(CRIS.)	F6X32	0,25A	A219213	MI6F25V0,25
			0,315	FUS.CIL.DOM(CRIS.)	F6X32	0,315A	C219744	MI6F25V0,315
			0,4	FUS.CIL.DOM(CRIS.)	F6X32	0,4A	E201277	MI6F25V0,4
			0,5	FUS.CIL.DOM(CRIS.)	F6X32	0,5A	K222189	MI6F25V0,5
			0,63	FUS.CIL.DOM(CRIS.)	F6X32	0,63A	F222944	MI6F25V0,63
			0,8	FUS.CIL.DOM(CRIS.)	F6X32	0,8A	P201792	MI6F25V0,8
			1	FUS.CIL.DOM(CRIS.)	F6X32	1A	P200734	MI6F25V1
			1,25	FUS.CIL.DOM(CRIS.)	F6X32	1,25A	D201276	MI6F25V1,25
			1,6	FUS.CIL.DOM(CRIS.)	F6X32	1,6A	N211014	MI6F25V1,6
			2	FUS.CIL.DOM(CRIS.)	F6X32	2A	N201791	MI6F25V2
			2,5	FUS.CIL.DOM(CRIS.)	F6X32	2,5A	M211013	MI6F25V2,5
			3,15	FUS.CIL.DOM(CRIS.)	F6X32	3,15A	J212045	MI6F25V3,15
		10xln 250V	4	FUS.CIL.DOM(CRIS.)	F6X32	4A	B212567	MI6F25V4
			5	FUS.CIL.DOM(CRIS.)	F6X32	5A	M213083	MI6F25V5
			6,3	FUS.CIL.DOM(CRIS.)	F6X32	6,3A	G214090	MI6F25V6,3
			8	FUS.CIL.DOM(CRIS.)	F6X32	8A	L214600	MI6F25V8
			10	FUS.CIL.DOM(CRIS.)	F6X32	10A	T215113	MI6F25V10
			12,5	FUS.CIL.DOM(CRIS.)	F6X32	12,5A	V215620	MI6F25V12,5
			16	FUS.CIL.DOM(CRIS.)	F6X32	16A	Z216636	MI6F25V16
			20	FUS.CIL.DOM(CRIS.)	F6X32	20A	Q217663	MI6F25V20
			25	FUS.CIL.DOM(CRIS.)	F6X32	25A	A218178	MI6F25V25

Packaging: 10 boxes x 10 fuses.

Fuses without approval.

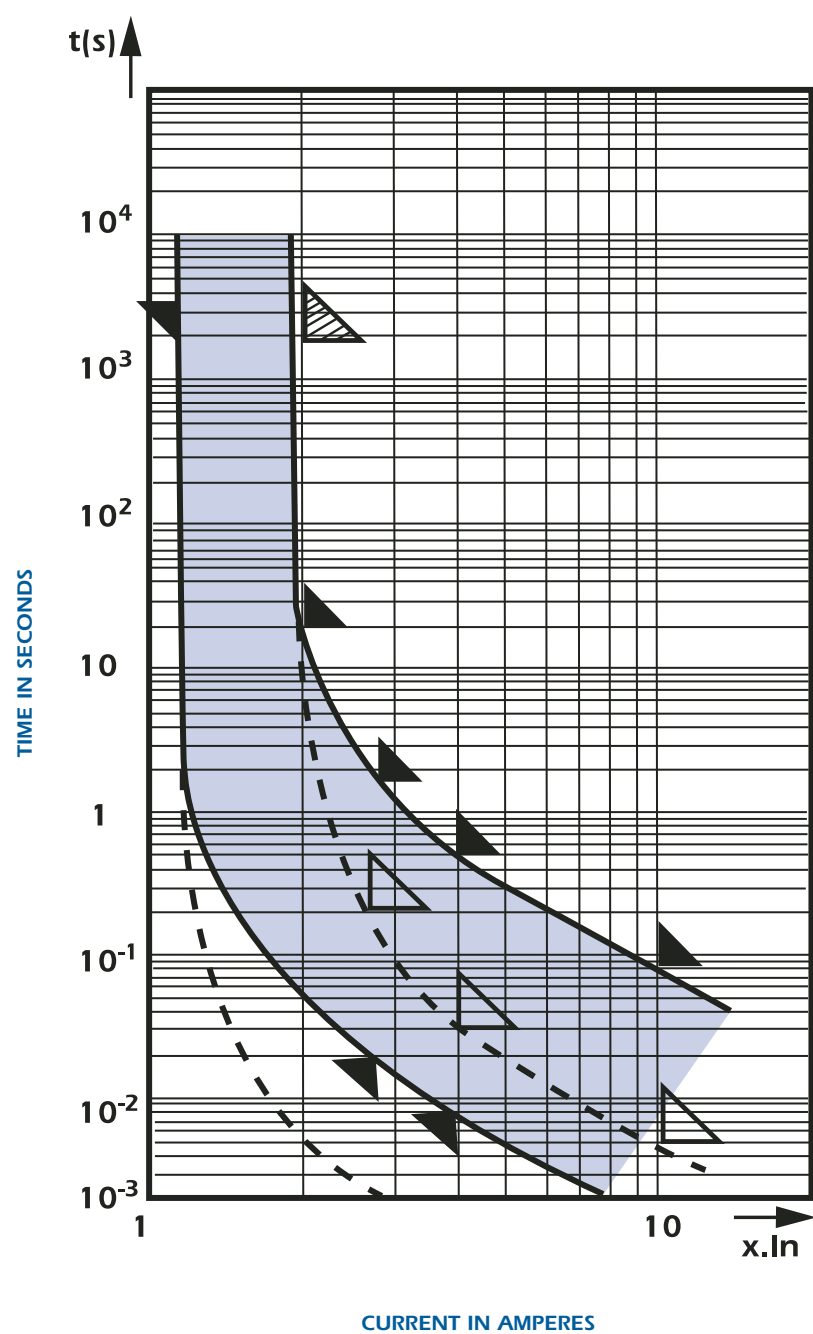
Convenience Fuses

6F 6x32 - Time lag

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
32 -> 100 mA	20 s maxi	2 ms mini	1 ms mini	5 ms maxi
125 mA -> 25 A	20 s maxi	20 ms mini	8 ms mini	80 ms maxi

Time-current characteristics

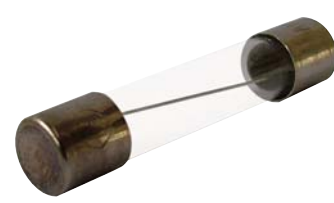
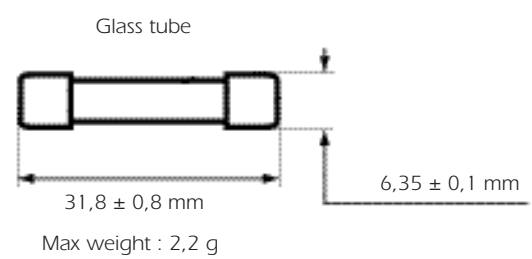




Convenience Fuses 6T 6x32 - Fast Acting

250 VAC - T: time lag
from 0.032 to 25 A
size: 6 x 32

Dimensions



Basic Characteristics

Size	U _n Rated Voltage	Breaking Capacity	I _n Rating	Designation			Reference Number	Catalog Number
mm	V		A					
6x32	250	35A 250V	0,032	FUS.CIL.DOM(CRIS.)	T6X32	0,032A	H216138	MI6T25V0,032
			0,04	FUS.CIL.DOM(CRIS.)	T6X32	0,04A	F216642	MI6T25V0,04
			0,05	FUS.CIL.DOM(CRIS.)	T6X32	0,05A	S217159	MI6T25V0,05
			0,063	FUS.CIL.DOM(CRIS.)	T6X32	0,063A	X217669	MI6T25V0,063
			0,08	FUS.CIL.DOM(CRIS.)	T6X32	0,08A	G218184	MI6T25V0,08
			0,1	FUS.CIL.DOM(CRIS.)	T6X32	0,1A	M214095	MI6T25V0,1
			0,125	FUS.CIL.DOM(CRIS.)	T6X32	0,125A	Q214604	MI6T25V0,125
			0,16	FUS.CIL.DOM(CRIS.)	T6X32	0,16A	A215625	MI6T25V0,16
			0,2	FUS.CIL.DOM(CRIS.)	T6X32	0,2A	G216137	MI6T25V0,2
			0,25	FUS.CIL.DOM(CRIS.)	T6X32	0,25A	E216641	MI6T25V0,25
			0,315	FUS.CIL.DOM(CRIS.)	T6X32	0,315A	R217158	MI6T25V0,315
			0,4	FUS.CIL.DOM(CRIS.)	T6X32	0,4A	V218702	MI6T25V0,4
			0,5	FUS.CIL.DOM(CRIS.)	T6X32	0,5A	W217668	MI6T25V0,5
			0,63	FUS.CIL.DOM(CRIS.)	T6X32	0,63A	F218183	MI6T25V0,63
			0,8	FUS.CIL.DOM(CRIS.)	T6X32	0,8A	H219220	MI6T25V0,8
			1	FUS.CIL.DOM(CRIS.)	T6X32	1A	T218701	MI6T25V1
			1,25	FUS.CIL.DOM(CRIS.)	T6X32	1,25A	G219219	MI6T25V1,25
			1,6	FUS.CIL.DOM(CRIS.)	T6X32	1,6A	K219751	MI6T25V1,6
			2	FUS.CIL.DOM(CRIS.)	T6X32	2A	J219750	MI6T25V2
			2,5	FUS.CIL.DOM(CRIS.)	T6X32	2,5A	R222195	MI6T25V2,5
			3,15	FUS.CIL.DOM(CRIS.)	T6X32	3,15A	M222950	MI6T25V3,15
		10xIn 250V	4	FUS.CIL.DOM(CRIS.)	T6X32	4A	W200740	MI6T25V4
			5	FUS.CIL.DOM(CRIS.)	T6X32	5A	K201282	MI6T25V5
			6,3	FUS.CIL.DOM(CRIS.)	T6X32	6,3A	Q212051	MI6T25V6,3
			8	FUS.CIL.DOM(CRIS.)	T6X32	8A	H212573	MI6T25V8
			10	FUS.CIL.DOM(CRIS.)	T6X32	10A	S213088	MI6T25V10
			12,5	FUS.CIL.DOM(CRIS.)	T6X32	12,5A	L213588	MI6T25V12,5
			16	FUS.CIL.DOM(CRIS.)	T6X32	16A	N214096	MI6T25V16
			20	FUS.CIL.DOM(CRIS.)	T6X32	20A	R214605	MI6T25V20
			25	FUS.CIL.DOM(CRIS.)	T6X32	25A	Z215118	MI6T25V25

Packaging: 10 boxes x 10 fuses.

Fuses without approval.

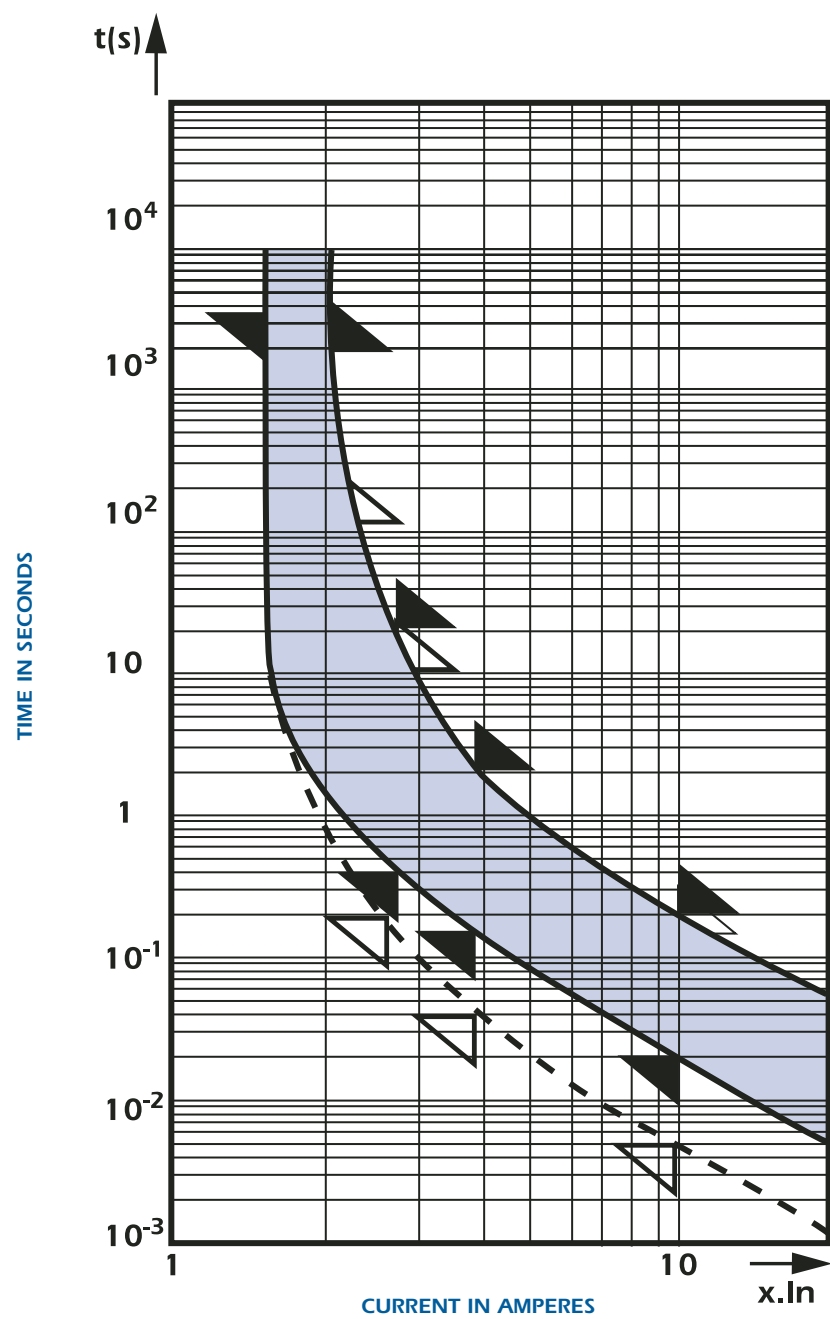
Convenience Fuses

6T 6x32 - Fast Acting

Melting time limits

Current	210 % x In	275 % x In	400 % x In	1 000 % x In
32 -> 100 mA	2 min maxi	0,2 ms mini	10 ms maxi	40 ms mini
125 mA -> 25 A	30 min maxi	0,40 ms mini	20 ms maxi	150 ms mini

Time-current characteristics



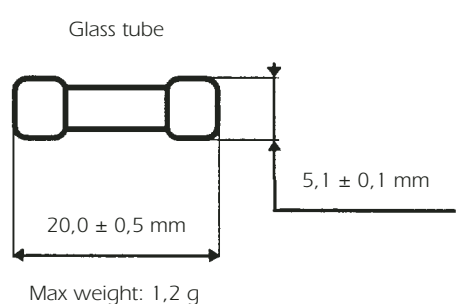


UL Fuses 5x20 5MF Fast Blow

Complying with UL / CSA 248-14

250 VAC/ 125 VAC
FROM 0.08 TO 8 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under		Max power dissip	Max voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	250 VAC	125 VAC	W	V			
5 x 20	250	0,080	200	10 000	0,32	3,05	250V 5MF 0,08 A 5 x 20	Q208601	MI5MF25V0,08
		0,100			0,35	2,65	250V 5MF 0,100 A 5 x 20	F207511	MI5MF25V0,1
		0,125			0,6	3,64	250V 5MF 0,125 A 5 x 20	G207512	MI5MF25V0,125
		0,200			0,72	2,76	250V 5MF 0,200 A 5 x 20	H207513	MI5MF25V0,2
		0,250			0,79	2,40	250V 5MF 0,250 A 5 x 20	J207514	MI5MF25V0,25
		0,300			0,84	2,09	250V 5MF 0,300 A 5 x 20	K207515	MI5MF25V0,3
		0,400					250V 5MF 0,400 A 5 x 20	L207516	MI5MF25V0,4
		0,500			1,04	1,58	250V 5MF 0,500 A 5 x 20	V206236	MI5MF25V0,5
		0,600					250V 5MF 0,600 A 5 x 20	W206237	MI5MF25V0,6
		0,700			0,20	0,22	250V 5MF 0,700 A 5 x 20	M207517	MI5MF25V0,7
		0,750					250V 5MF 0,750 A 5 x 20	X206238	MI5MF25V0,75
		0,800					250V 5MF 0,800 A 5 x 20	N207518	MI5MF25V0,8
		1,000			0,26	0,2	250V 5MF 1 A 5 x 20	Y206239	MI5MF25V1
		1,250			0,31	0,19	250V 5MF 1,25 A 5 x 20	Z206240	MI5MF25V1,25
		1,500			0,36	0,18	250V 5MF 1,5 A 5 x 20	A206241	MI5MF25V1,5
		1,600				0,18	250V 5MF 1,6 A 5 x 20	P207519	MI5MF25V1,6
		2,000			0,44	0,17	250V 5MF 2 A 5 x 20	B206242	MI5MF25V2
		2,500			0,52	0,16	250V 5MF 2,5 A 5 x 20	C206243	MI5MF25V2,5
		3,000			0,59	0,15	250V 5MF 3 A 5 x 20	D206244	MI5MF25V3
	125	4,000	-		0,73	0,14	125V 5MF 4 A 5 x 20	E206245	MI5MF12,5V4
		5,000			0,86	0,13	125V 5MF 5 A 5 x 20	F206246	MI5MF12,5V5
		6,000			0,98	0,12	125V 5MF 6 A 5 x 20	G206247	MI5MF12,5V6
		7,000			1,1	0,12	125V 5MF 7 A 5 x 20	H206248	MI5MF12,5V7
		8,000			1,22	0,12	125V 5MF 8 A 5 x 20	J206249	MI5MF12,5V8

UL Fuses

5x20

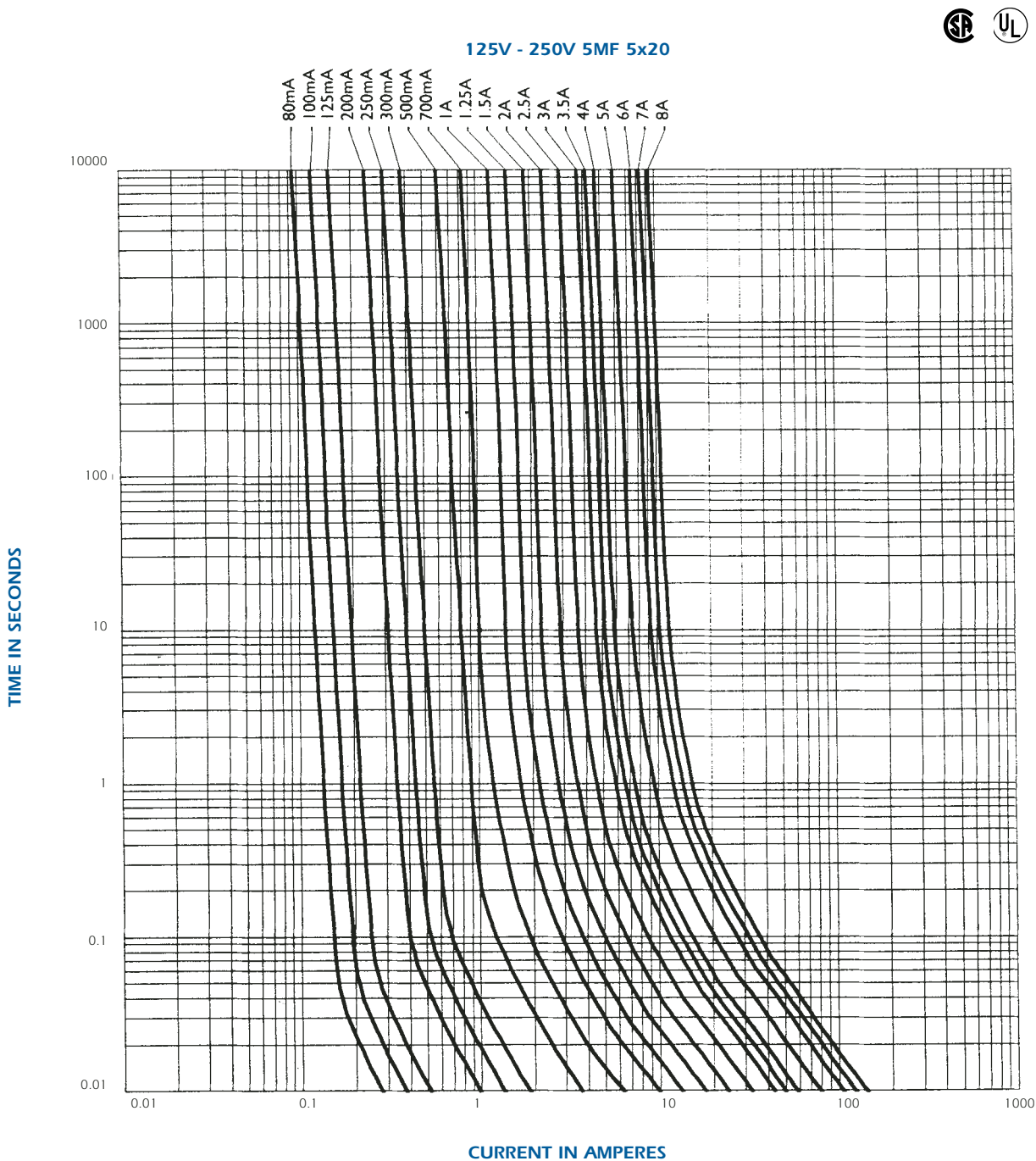
5MF Fast Blow



Melting time limits

Current	100 % x In	135 % x In	200 % x In
0,08 -> 8 A	4 h mini	1 h maxi	5 s maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.



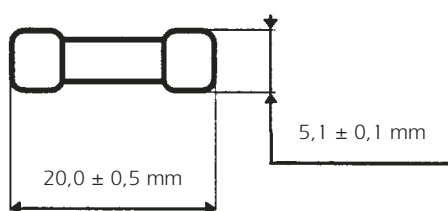
UL Fuses 5x20 5TT Slow Blow

Complying with UL / CSA 248-14

250 VAC / 125 VAC
FROM 0.08 TO 10 A

Dimensions

Glass tube $\leq 5A$. Ceramic tube $\geq 6A$



Max weight: 1.2 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under		Max power dissip	Max voltage drop	Designation					Reference Number	Catalog Number
mm	VAC	A	A	A	W	V							
5 x 20	250	0,080*	100	10 000			250V	5TT	0,080	A	5 x 20	N207564	MI5TT 25V0,08
		0,100			0,45	2,8	250V	5TT	0,100	A	5 x 20	P207565	MI5TT 25V0,1
		0,125			0,48	2,3	250V	5TT	0,125	A	5 x 20	Q207566	MI5TT 25V0,125
		0,200			0,55	1,7	250V	5TT	0,200	A	5 x 20	R207567	MI5TT 25V0,2
		0,250			0,58	1,4	250V	5TT	0,250	A	5 x 20	S207568	MI5TT 25V0,25
		0,300			0,62	1,2	250V	5TT	0,300	A	5 x 20	T207569	MI5TT 25V0,3
		0,400			0,66	1,0	250V	5TT	0,400	A	5 x 20	V207570	MI5TT 25V0,4
		0,500			0,70	0,86	250V	5TT	0,500	A	5 x 20	W207571	MI5TT 25V0,5
		0,600					250V	5TT	0,600	A	5 x 20	X207572	MI5TT 25V0,6
		0,700					250V	5TT	0,700	A	5 x 20	Y207573	MI5TT 25V0,7
		0,750			0,79	0,64	250V	5TT	0,750	A	5 x 20	Z207574	MI5TT 25V0,75
		0,800					250V	5TT	0,800	A	5 x 20	A207575	MI5TT 25V0,8
		1,000			0,85	0,52	250V	5TT	1	A	5 x 20	B207576	MI5TT 25V1
		1,250			0,91	0,44	250V	5TT	1,25	A	5 x 20	C207577	MI5TT 25V1,250
		1,500					250V	5TT	1,5	A	5 x 20	D207578	MI5TT 25V1,5
		1,600			0,97	0,37	250V	5TT	1,6	A	5 x 20	E207579	MI5TT 25V1,6
		2,000			1,03	0,32	250V	5TT	2	A	5 x 20	F207580	MI5TT 25V2
		2,500			1,1	0,27	250V	5TT	2,5	A	5 x 20	G207581	MI5TT 25V2,5
		3,000			1,17	0,23	250V	5TT	3	A	5 x 20	H207582	MI5TT 25V3
	125	4,000	—	1000	1,25	0,19	125V	5TT	4	A	5 x 20	J207606	MI5TT 12,5V4
		5,000			1,33	0,16	125V	5TT	5	A	5 x 20	K207607	MI5TT 12,5V5
		6,000			1,23	0,12	125V	5TT	6	A	5 x 20	L207608	MI5TT 12,5V6
		7,000					125V	5TT	7	A	5 x 20	M207609	MI5TT 12,5V7
		8,000			1,31	0,10	125V	5TT	8	A	5 x 20	N207610	MI5TT 12,5V8
		10,000			1,40	0,09	125V	5TT	10	A	5 x 20	F208937	MI5TT 12,5V10

* Non approval rating

UL Fuses

5x20

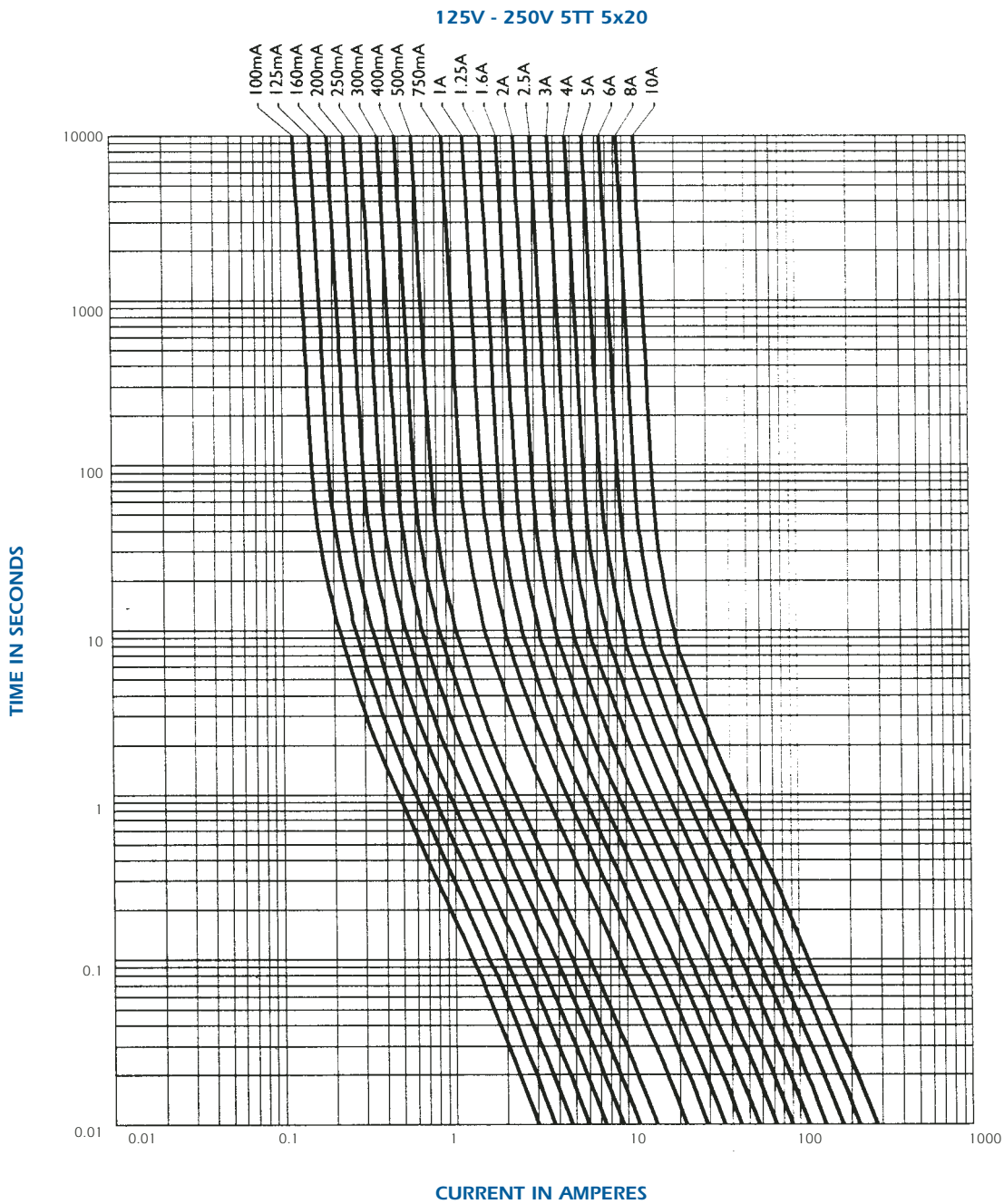
5TT Slow Blow



Melting time limits

Current	100 % x In	135 % x In	200 % x In	
0,08 -> 3 A	4 h mini	1 h maxi	5s mini	30s maxi
4 A -> 10 A	4h mini	1 h maxi	3s mini	30s maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.



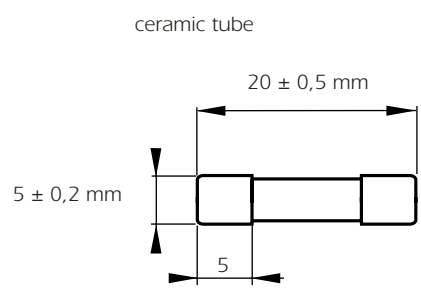
UL Fuses
5x20

SU Medium time Lag

Complying with UL 198-G and CSA 22-2
Approvals: UL Listed E 90660 - CSA certified LR 49184.3

250 VAC
FROM 1,25 TO 12,5 A

Dimensions



Max weight: 1.5 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC	Max voltage drop	Designation			Reference Number	Catalog Number	
mm	V	A	A	V						
5 x 20	250	1,25	10 000 Cos φ = 0,7 à 0,8	0,60	250V	SU	1,25A	5x20	G087498	MI5SU25V1,25
		1,6		0,50	250V	SU	1,60A	5x20	H087499	MI5SU25V1,6
		2		0,40	250V	SU	2,00A	5x20	J087500	MI5SU25V2
		2,5		0,35	250V	SU	2,50A	5x20	K087501	MI5SU25V2,5
		3,15		0,29	250V	SU	3,15A	5x20	L087502	MI5SU25V3,15
		4		0,24	250V	SU	4,00A	5x20	M087503	MI5SU25V4
		5		0,20	250V	SU	5,00A	5x20	N087504	MI5SU25V5
		6,3		0,17	250V	SU	6,30A	5x20	P087505	MI5SU25V6,3
		8		0,15	250V	SU	8,00A	5x20	Q087506	MI5SU25V8
		10		0,14	250V	SU	10,00A	5x20	R087507	MI5SU25V10
		12,5		0,12	250V	SU	12,50A	5x20	S087508	MI5SU25V12,5

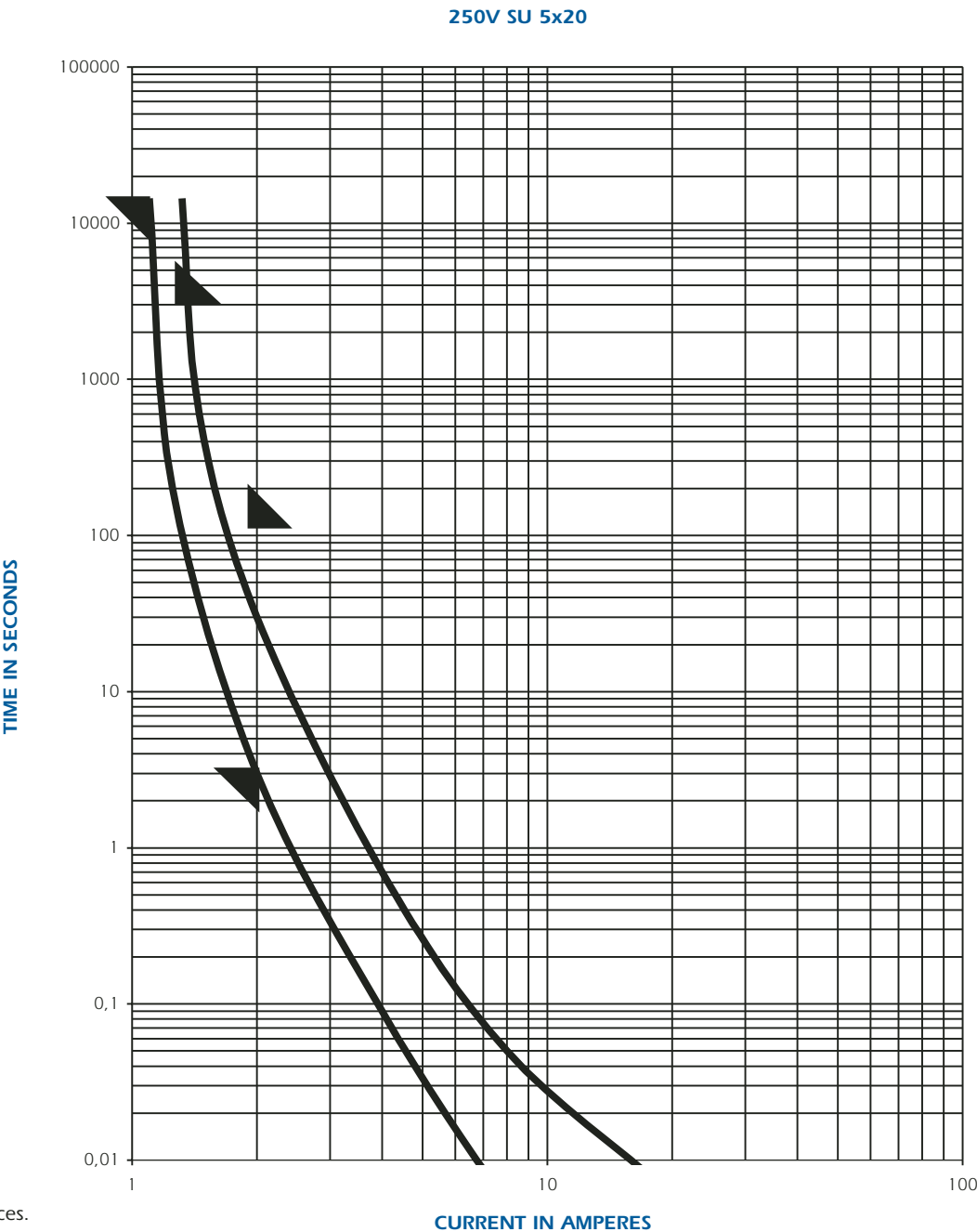
UL Fuses
5x20
SU Medium time Lag



Melting time limits

Current	110 % In	135 % x In	200 % x In	
1,25 → 15 A	4 h mini	1 h maxi	3 s mini	120 s maxi

Time-current characteristics



Packaging: in blister of 50 pieces.

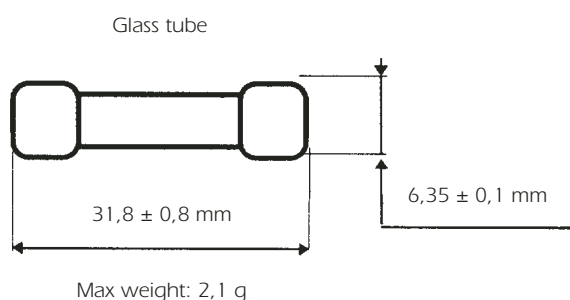


UL Fuses 6x32 3AG Fast Blow

Complying with UL / CSA STD 248-14

250 VAC / 125 VAC
FROM 0,1 TO 15 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under		Max power dissip	Max voltage drop	Designation	Reference Number	Catalog Number
mm	VAC	A	250 VAC	125 VAC	W	V			
6 x 32	250	0,100	200	10 000	0,59	4,5	250V 3AG 0,100 A 6 x 32	D085701	MI6AG25V0,1
		0,125			0,80	4,5	250V 3AG 0,125 A 6 x 32	E085702	MI6AG25V0,125
		0,150			0,94	4,3	250V 3AG 0,150 A 6 x 32	F085703	MI6AG25V0,15
		0,175			0,96	4,1	250V 3AG 0,175 A 6 x 32	G085704	MI6AG25V0,175
		0,200			1,10	3,9	250V 3AG 0,200 A 6 x 32	H085705	MI6AG25V0,2
		0,250			1,29	3,6	250V 3AG 0,250 A 6 x 32	J085706	MI6AG25V0,25
		0,300			1,51	3,4	250V 3AG 0,300 A 6 x 32	K085707	MI6AG25V0,3
		0,375			1,64	3,2	250V 3AG 0,375 A 6 x 32	L085708	MI6AG25V0,375
		0,500			0,25	2,9	250V 3AG 0,500 A 6 x 32	M085709	MI6AG25V0,5
		0,600			0,30	0,21	250V 3AG 0,600 A 6 x 32	N085710	MI6AG25V0,6
		0,750			0,30	0,24	250V 3AG 0,750 A 6 x 32	P085711	MI6AG25V0,75
		1,000			0,37	0,23	250V 3AG 1,000 A 6 x 32	Q085712	MI6AG25V1
		1,250			0,44	0,21	250V 3AG 1,250 A 6 x 32	R085713	MI6AG25V1,25
		1,500			0,51	0,2	250V 3AG 1,500 A 6 x 32	S085714	MI6AG25V1,5
		2,000			0,59	0,18	250V 3AG 2,000 A 6 x 32	T085715	MI6AG25V2
		2,500			0,7	0,17	250V 3AG 2,500 A 6 x 32	V085716	MI6AG25V2,5
		3,000			0,83	0,162	250V 3AG 3,000 A 6 x 32	W085717	MI6AG25V3
		4,000			1	0,154	250V 3AG 4,000 A 6 x 32	X085718	MI6AG25V4
		5,000			1,2	0,146	250V 3AG 5,000 A 6 x 32	Y085719	MI6AG25V5
		6,000			1,4	0,139	250V 3AG 6,000 A 6 x 32	Z085720	MI6AG25V6
		7,000			1,6	0,135	250V 3AG 7,000 A 6 x 32	A085721	MI6AG25V7
		8,000			1,7	0,132	250V 3AG 8,000 A 6 x 32	B085722	MI6AG25V8
		10,000			2	0,125	250V 3AG 10,00 A 6 x 32	C085723	MI6AG25V10
	125	12,000	-		2,4	0,12	125V 3AG 12,00 A 6 x 32	D207509	MI6AG12,5V12
		15,000	-		2,8	0,114	125V 3AG 15,00 A 6 x 32	E207510	MI6AG12,5V15

UL Fuses

6x32

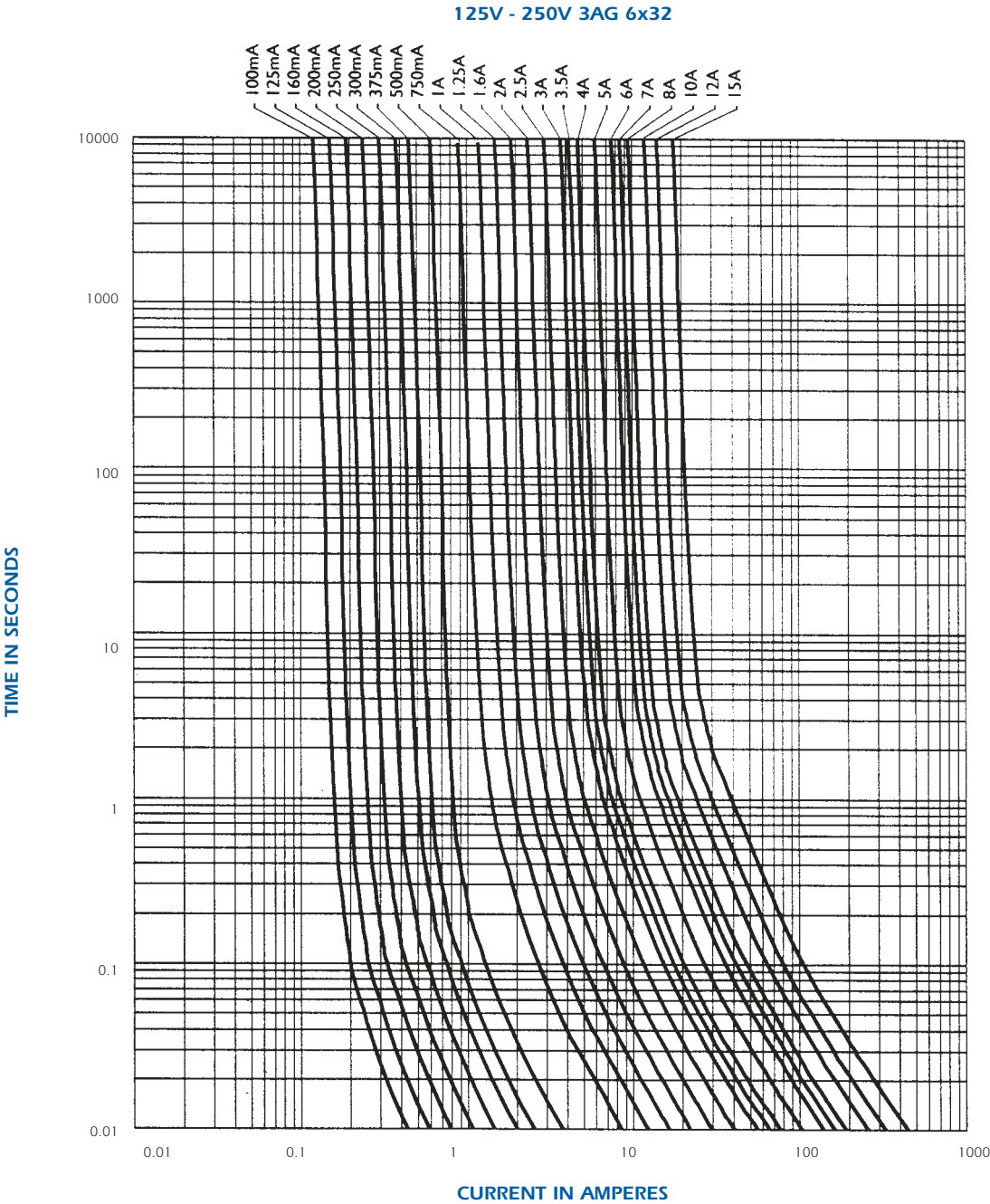
3AG Fast Blow



Melting time limits

Current	100 % x In	135 % x In	200 % x In
0,1 -> 15 A	4 h mini	1 h maxi	5 s maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.

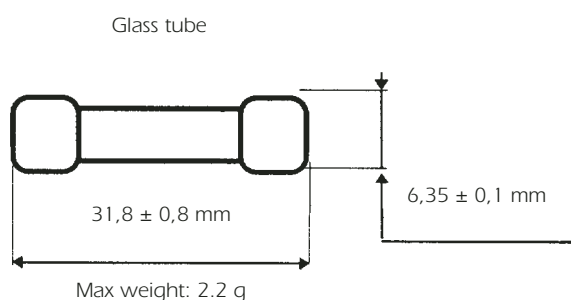


UL Fuses 6x32 3SB Slow Blow

Complying with UL / CSA STD 248-14

250 VAC / 125 VAC
FROM 0,062 TO 15 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC 125 VAC		Max power dissip	Max voltage drop	Designation	Reference Number	Catalog Number	
mm	VAC	A	A	A	W	V				
6 x 32	250	0,063	35 A	10 000	0,71	6,9	250V 3SB 0,062 A 6 x 32	B207507	MI6SB25V0,062	
		0,08			0,74	5,7	250V 3SB 0,08 A 6 x 32	C207508	MI6SB25V0,08	
		0,1			0,54	3,3	250V 3SB 0,1 A 6 x 32	D085724	MI6SB25V0,1	
		0,125			0,56	2,7	250V 3SB 0,125 A 6 x 32	E085725	MI6SB25V0,125	
		0,15			0,59	2,3	250V 3SB 0,15 A 6 x 32	F085726	MI6SB25V0,15	
		0,175			0,60	2,2	250V 3SB 0,175 A 6 x 32	G085727	MI6SB25V0,175	
		0,2			0,61	1,9	250V 3SB 0,2 A 6 x 32	H085728	MI6SB25V0,2	
		0,25			0,64	1,6	250V 3SB 0,25 A 6 x 32	J085729	MI6SB25V0,25	
		0,3			0,68	1,3	250V 3SB 0,3 A 6 x 32	K085730	MI6SB25V0,3	
		0,375			0,71	1,1	250V 3SB 0,375 A 6 x 32	V087510	MI6SB25V0,375	
		0,4			0,73	1	250V 3SB 0,4 A 6 x 32	X087512	MI6SB25V0,4	
		0,5			0,75	0,9	250V 3SB 0,5 A 6 x 32	Y 087513	MI6SB25V0,5	
		0,6			0,8	0,8	250V 3SB 0,6 A 6 x 32	Z087514	MI6SB25V0,6	
		0,75			0,83	0,7	250V 3SB 0,75 A 6 x 32	A087515	MI6SB25V0,75	
		1			0,88	0,5	250V 3SB 1 A 6 x 32	B087516	MI6SB25V1	
		1,25	0,9		0,5	250V 3SB 1,25 A 6 x 32	C087517	MI6SB25V1,25		
		1,5	1		0,38	250V 3SB 1,5 A 6 x 32	D087518	MI6SB25V1,5		
		1,8	1		0,34	250V 3SB 1,8 A 6 x 32	E087519	MI6SB25V1,8		
		2	1		0,32	250V 3SB 2 A 6 x 32	F087520	MI6SB25V2		
		2,5	1,1		0,27	250V 3SB 2,5 A 6 x 32	G087521	MI6SB25V2,5		
		3	1,1		0,22	250V 3SB 3 A 6 x 32	H087522	MI6SB25V3		
	125	—	4		200 A	1,2	0,19	250V 3SB 4 A 6 x 32	J087523	MI6SB25V4
			5			1,3	0,16	250V 3SB 5 A 6 x 32	K087524	MI6SB25V5
			6			1,6	0,16	250V 3SB 6 A 6 x 32	L087525	MI6SB25V6
			7			1,8	0,16	250V 3SB 7 A 6 x 32	M087526	MI6SB25V7
			8			1,9	0,15	250V 3SB 8 A 6 x 32	Q087529	MI6SB25V8
			10			2,3	0,14	125V 3SB 10 A 6 x 32	Y207619	MI6SB12,5V10
			12			2,6	0,13	125V 3SB 12 A 6 x 32	Z207620	MI6SB12,5V12
			15			3	0,12	125V 3SB 15 A 6 x 32	A207621	MI6SB12,5V15

UL Fuses

6x32

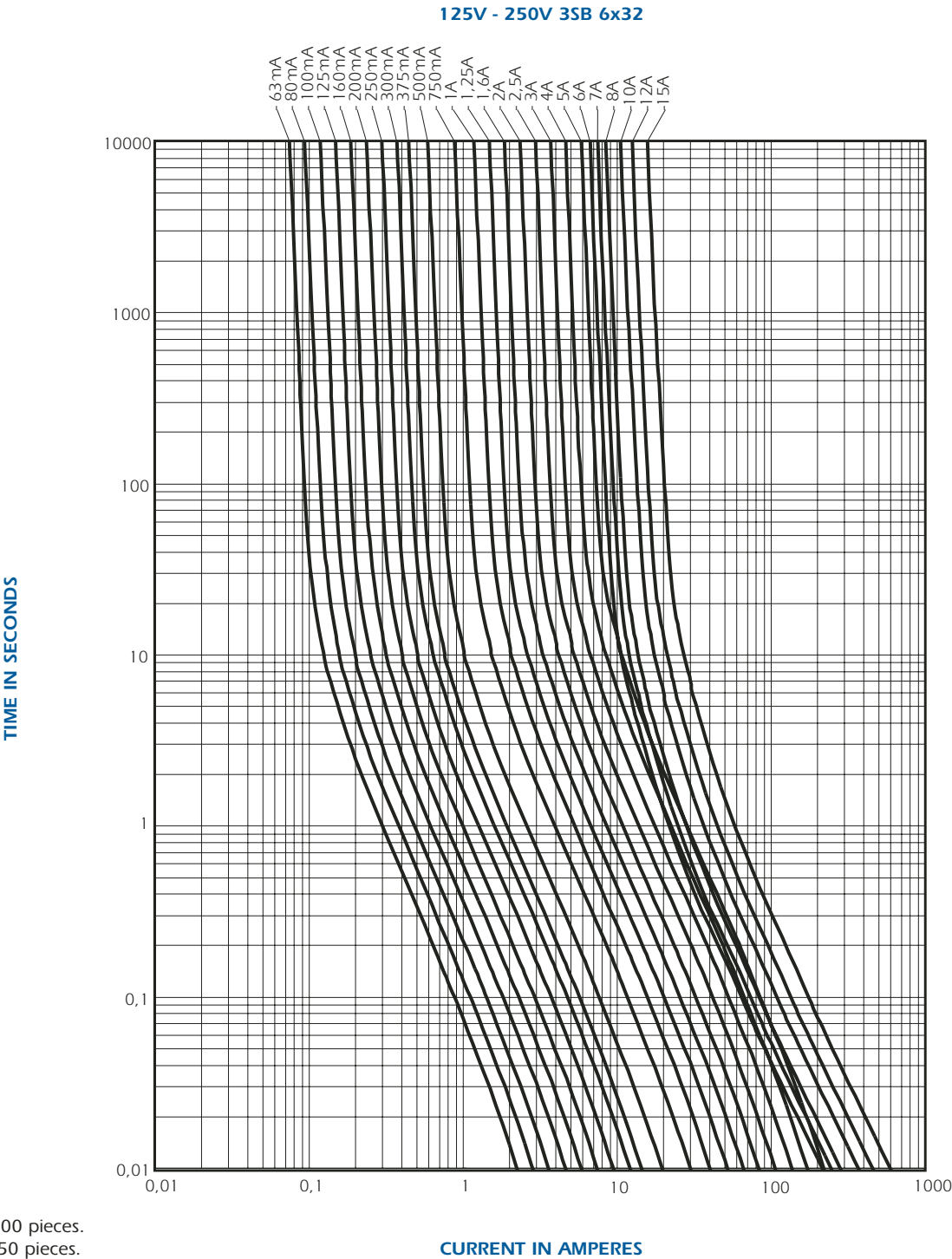
3SB Slow Blow



Melting time limits

Current	100 % x In	135 % x In	200 % x In	
0,063 -> 15 A	4 h mini	1 h maxi	5 s mini	30 s maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.

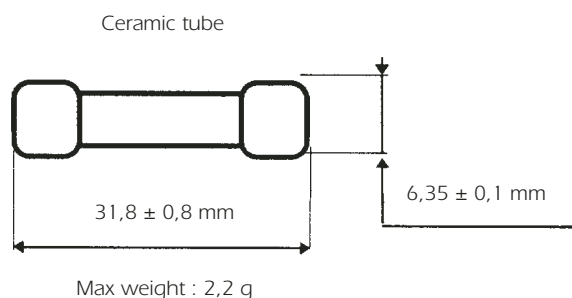


UL Fuses 6x32 3AB Fast Blow

Complying with UL / CSA STD 248-14

250 VAC
FROM 0.1 TO 15 A

Dimensions



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 VAC 125 VAC		Max power dissip	Max voltage drop	Designation						Reference Number	Catalog Number
mm	VAC	A	A	A	W	V								
6 x 32	250	0,1 A	35 A	10 000	0,59	4,5	250V 3AB 0,1 A 6 x 32					R208602	MI6AB25V0,100	
		0,125 A			0,74	4,5	250V 3AB 0,125 A 6 x 32				S208603	MI6AB25V0,125		
		0,16 A			0,87	4,2	250V 3AB 0,16 A 6 x 32				T208604	MI6AB25V0,160		
		0,2 A			1,02	3,9	250V 3AB 0,2 A 6 x 32				V208605	MI6AB25V0,200		
		0,25 A			1,19	3,6	250V 3AB 0,25 A 6 x 32				W208606	MI6AB25V0,250		
		0,3 A			1,4	3,4	250V 3AB 0,3 A 6 x 32				X208607	MI6AB25V0,3		
		0,375 A			1,58	3,2	250V 3AB 0,375 A 6 x 32				Y208608	MI6AB25V0,375		
		0,5 A			1,92	2,9	250V 3AB 0,5 A 6 x 32				L206251	MI6AB25V0,5		
		0,75 A			0,3	0,2	250V 3AB 0,75 A 6 x 32				N206253	MI6AB25V0,75		
		1 A			0,37	0,23	250V 3AB 1 A 6 x 32				P206254	MI6AB25V1		
		1,5 A	0,5		0,2	250V 3AB 1,5 A 6 x 32				R206256	MI6AB25V1,5			
		2 A	0,59		0,18	250V 3AB 2 A 6 x 32				S206257	MI6AB25V2			
		2,5 A	0,7		0,17	250V 3AB 2,5 A 6 x 32				T206258	MI6AB25V2,5			
		3 A	0,83		0,162	250V 3AB 3 A 6 x 32				V206259	MI6AB25V3			
		3,5 A	0,91		0,157	250V 3AB 3,5 A 6 x 32				M206252	MI6AB25V3,5			
		4 A	1		0,154	250V 3AB 4 A 6 x 32				W206260	MI6AB25V4			
		4,5 A	1,1		0,150	250V 3AB 4,5 A 6 x 32				Q206255	MI6AB25V4,5			
		5 A	1,2		0,146	250V 3AB 5 A 6 x 32				X206261	MI6AB25V5			
		6 A	1,4		0,139	250V 3AB 6 A 6 x 32				Y206262	MI6AB25V6			
		7 A	1,6		0,135	250V 3AB 7 A 6 x 32				Z206263	MI6AB25V7			
		8 A	1,7		0,132	250V 3AB 8 A 6 x 32				A206264	MI6AB25V8			
		10 A	2		0,125	250V 3AB 10 A 6 x 32				B206265	MI6AB25V10			
		12 A*	2,2		0,120	250V 3AB 12 A 6 x 32				C206266	MI6AB25V12			
		15 A*	2,5		0,114	250V 3AB 15 A 6 x 32				D206267	MI6AB25V15			

* Non approval rating.

UL Fuses

6x32

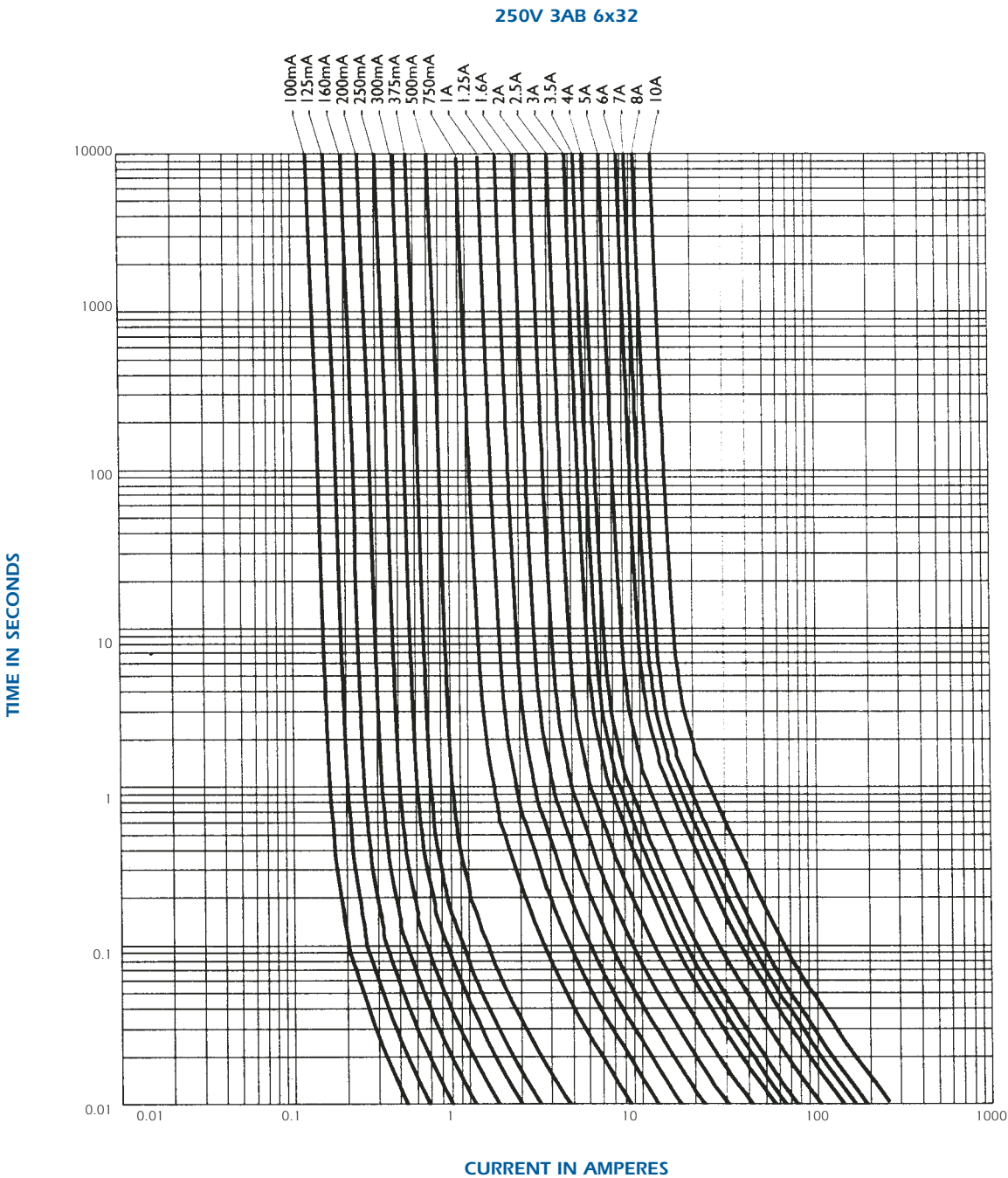
3AB Fast Blow



Melting time limits

Current	100 % x In	135 % x In	200 % x In
0,1 -> 15 A	4 h mini	1 h maxi	5 s maxi

Time-current characteristics



Packaging: in box of 1000 pieces.
in blister of 50 pieces.

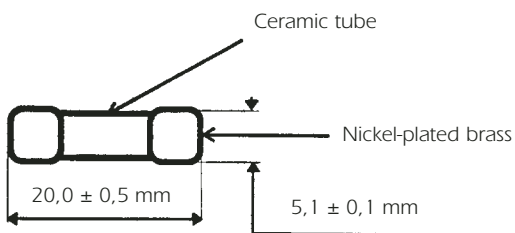


Very HRC Fuses 5x20 125V to 250V - FA/FB Very Fast Acting

Approvals UL recognized E 90660

FROM 0,04 TO 20A

Dimensions



FA,FB: fuses with filler
Max weight: 1.2 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
5 x 20	250	0,040*	250 VAC	0,00013	0,0004	1,5	250V FB 0,040 A 5x20	K084051	MI5FB25V1,26
		0,050*	4 kA	0,00020	0,0006	1,5	250V FB 0,050 A 5x20	Q080468	MI5FB25V0,05
		0,063*	cos φ ≥ 0,7	0,00041	0,0012	1,3	250V FB 0,063 A 5x20	N084054	MI5FB25V0,063
		0,080*		0,00077	0,0022	1,1	250V FB 0,080 A 5x20	P080467	MI5FB25V0,08
		0,100*		0,00131	0,0037	1,1	250V FB 0,100 A 5x20	L084052	MI5FB25V0,1
		0,125		0,00077	0,0021	1,7	250V FA 0,125 A 5x20	L084029	MI5FA25V0,125
		0,160	250 VAC	0,0020	0,006	1,3	250V FA 0,160 A 5x20	F084001	MI5FA25V0,16
		0,200	30 kA	0,0046	0,013	1,1	250V FA 0,200 A 5x20	Y084017	MI5FA25V0,2
		0,250	cos φ ≥ 0,2	0,009	0,025	1,0	250V FA 0,250 A 5x20	G084002	MI5FA25V0,25
		0,315		0,016	0,045	0,90	250V FA 0,315 A 5x20	Z084018	MI5FA25V0,315
		0,400		0,03	0,085	0,85	250V FA 0,400 A 5x20	A084019	MI5FA25V0,4
		0,500		0,05	0,15	0,80	250V FA 0,500 A 5x20	H084003	MI5FA25V0,5
		0,630		0,12	0,35	0,70	250V FA 0,630 A 5x20	X084016	MI5FA25V0,63
		0,800	for approvals	0,25	0,72	0,60	250V FA 0,800 A 5x20	C084021	MI5FA25V0,8
		1,000	(UL 198G)	0,11	0,25	0,46	250V FA 1,000 A 5x20	J084004	MI5FA25V1
		1,250	Ic = 10 kA	0,26	0,65	0,36	250V FA 1,250 A 5x20	K084005	MI5FA25V1,25
		1,600	under	0,39	0,9	0,42	250V FA 1,600 A 5x20	L084006	MI5FA25V1,6
		2,000	250 VAC	0,81	1,9	0,37	250V FA 2,000 A 5x20	M084007	MI5FA25V2
		2,500	cos φ ≥ 0,7	1,44	3,2	0,34	250V FA 2,500 A 5x20	N084008	MI5FA25V2,5
		3,150		2,46	5,5	0,33	250V FA 3,150 A 5x20	P084009	MI5FA25V3,15
		4,000		4,6	10	0,31	250V FA 4,000 A 5x20	Q084010	MI5FA25V4
		5,000		11	25	0,24	250V FA 5,000 A 5x20	R084011	MI5FA25V5
		6,300		23	50	0,20	250V FA 6,300 A 5x20	S084012	MI5FA25V6,3
		8		2,5	40	0,10	250V FA 8,000 A 5x20	T084013	MI5FA25V8
		10		4,5	70	0,095	250V FA 10,00 A 5x20	V084014	MI5FA25V10
		# 12,5		8,1	120	0,090	250V FA 12,50 A 5x20	W084015	MI5FA25V12,5
	125	# 16*	10 kA 125 V	25	160	0,062	125V FA 16,00 A 5x20	R084034	MI5FA12,5V16
		# 20*	cos φ ≥ 0,7	51	330	0,056	125V FA 20,00 A 5x20	D084022	MI5FA12,5V20

* Non-certified rating.

For these ratings, heating within fuse holders must be checked.

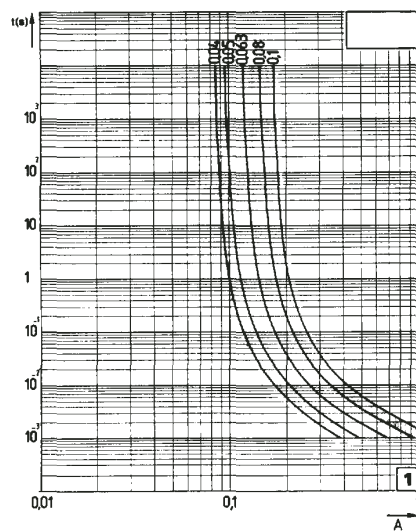
Very HRC Fuses

5x20

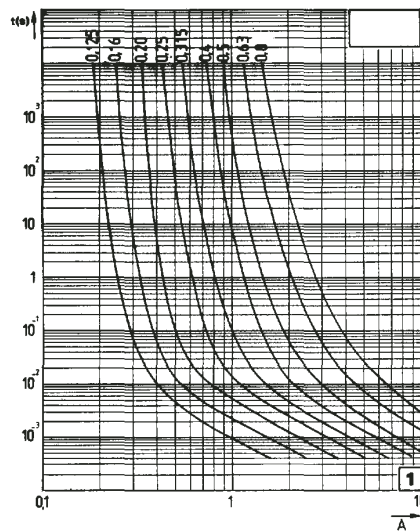
125V to 250V - FA/FB Very Fast Acting

Time-current characteristics

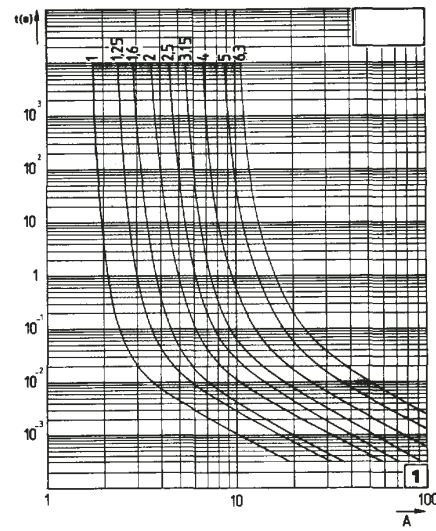
250 V FB 5 x 20



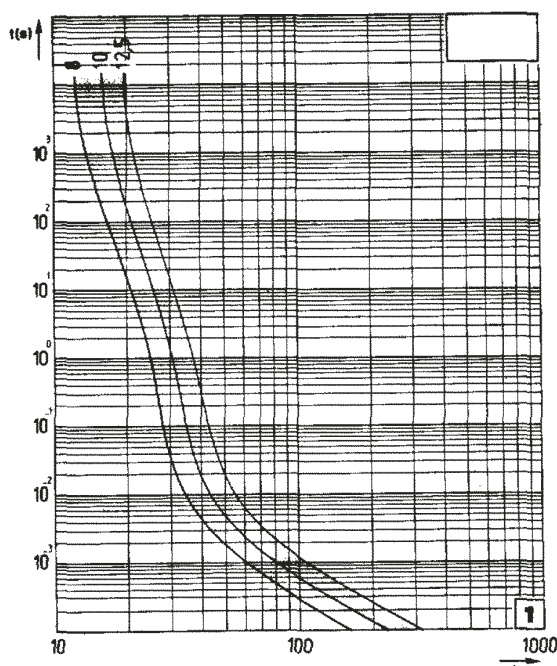
250 V FA 5 x 20



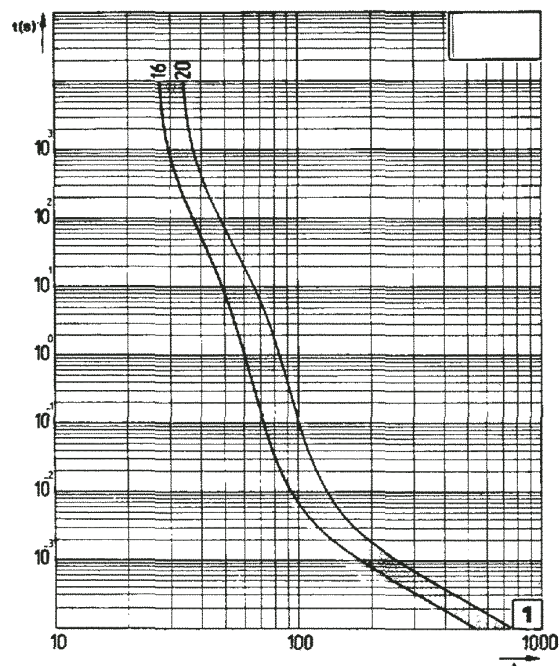
250 V FA 5 x 20



250 V FA 5 x 20



125 V FA 5 x 20



I tolerance $\pm 12\%$. Actual pre-arcing time (s). R.M.S. Value of prearcing current (A).

Packaging: in blister of 50 pieces.

Ask us about boxes of 1000 pieces.



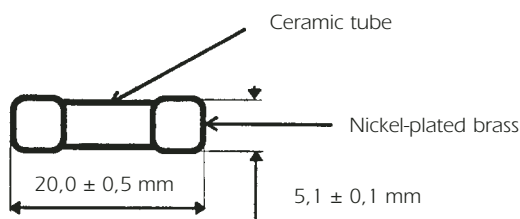
Very HRC Fuses

5x20

125V to 250V - SA/SB Medium Time Lag

FROM 0,04 TO 16A

Dimensions



Fuses with filler.
Max weight: 1.2 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation			Reference Number	Catalog Number
mm	VAC	A		A ² s		V					
5 x 20	250	0,040	250 VAC 4 kA cos φ ≥ 0,7	0,00013	0,0004	1,5	250V SB	0,040 A	5x20	C080479	MI5SB25V0,04
		0,050		0,00029	0,00082	1,2	250V SB	0,050 A	5x20	R080469	MI5SB25V0,05
		0,063		0,00057	0,0016	1	250V SB	0,063 A	5x20	F080482	MI5SB25V0,063
		0,080		0,00131	0,0037	0,8	250V SB	0,080 A	5x20	B080478	MI5SB25V0,08
		0,100		0,00077	0,0021	1,4	250V SA	0,100 A	5x20	M084122	MI5SA25V0,1
		0,125	250 VAC 10 kA cos φ ≥ 0,7	0,002	0,006	1,1	250V SA	0,125 A	5x20	L084121	MI5SA25V0,125
		0,160		0,0046	0,013	0,9	250V SA	0,160 A	5x20	P084101	MI5SA25V0,16
		0,200		0,009	0,025	0,8	250V SA	0,200 A	5x20	G084117	MI5SA25V0,2
		0,250		0,016	0,045	0,75	250V SA	0,250 A	5x20	Q084102	MI5SA25V0,25
		0,315		0,030	0,085	0,7	250V SA	0,315 A	5x20	H084118	MI5SA25V0,315
		0,400		0,050	0,15	0,68	250V SA	0,400 A	5x20	J084119	MI5SA25V0,4
		0,500		0,12	0,35	0,55	250V SA	0,500 A	5x20	R084103	MI5SA25V0,5
		0,630		0,11	0,25	0,26	250V SA	0,630 A	5x20	F084116	MI5SA25V0,63
		0,800		0,17	0,38	0,26	250V SA	0,800 A	5x20	K084120	MI5SA25V0,8
		1,000		0,26	0,65	0,26	250V SA	1,000 A	5x20	S084104	MI5SA25V1
		1,250		0,55	1,2	0,2	250V SA	1,250 A	5x20	T087164	MI5SA25V1,25
		1,600		1,44	3,2	0,16	250V SA	1,600 A	5x20	D087173	MI5SA25V1,6
		2,000		2,46	5,5	0,15	250V SA	2,000 A	5x20	M087020	MI5SA25V2
		2,500		4,6	10	0,14	250V SA	2,500 A	5x20	N087021	MI5SA25V2,5
		3,150		11	25	0,11	250V SA	3,150 A	5x20	P087022	MI5SA25V3,15
		4,000		23	50	0,1	250V SA	4,000 A	5x20	Q087023	MI5SA25V4
		5,000		41	90	0,1	250V SA	5,000 A	5x20	R087024	MI5SA25V5
		6,300		15,7	50	0,11	250V SA	6,300 A	5x20	S087025	MI5SA25V6,3
		8		27,5	85	0,11	250V SA	8,000 A	5x20	T087026	MI5SA25V8
		10		53	160	0,1	250V SA	10,00 A	5x20	V087027	MI5SA25V10
		12,5*		63	200	0,095	250V SA	12,50 A	5x20	W087028	MI5SA25V12,5
	125	16*	10 kA 125 VAC cos φ ≥ 0,7	163	350	0,11	125V SA	16,00 A	5x20	W086338	MI5SA12,5V16

* For these ratings, heating within fuse holder must be checked.

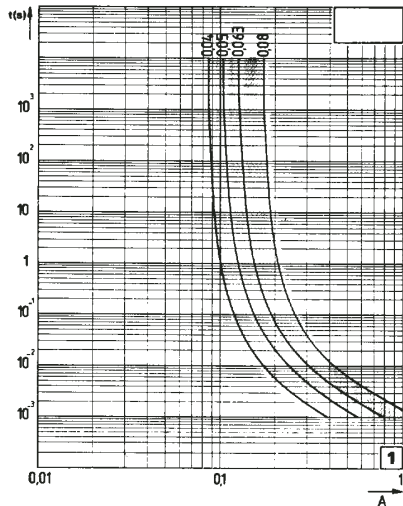
Very HRC Fuses

5x20

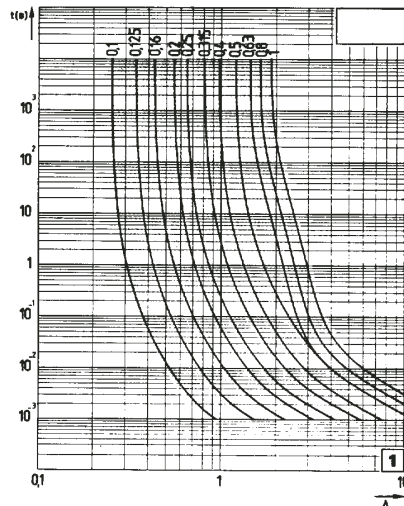
125V to 250V - SA/SB Medium Time Lag

Time-current characteristics

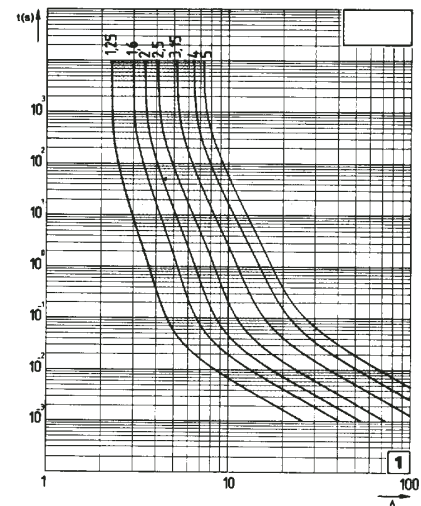
250 V SB 5 x 20



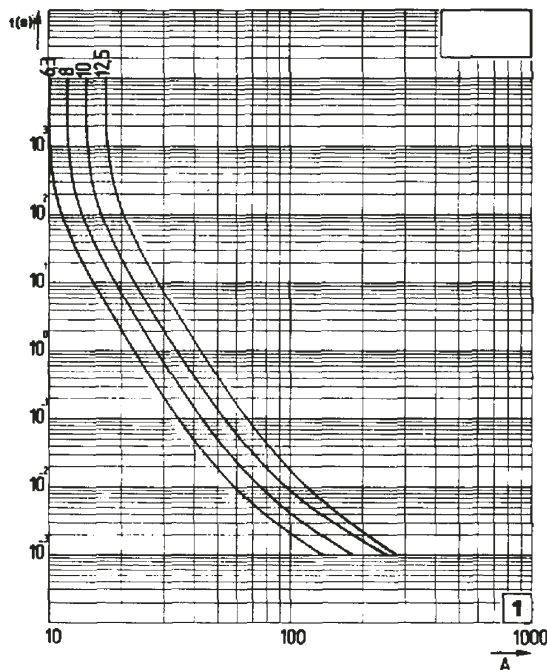
250 V SA 5 x 20



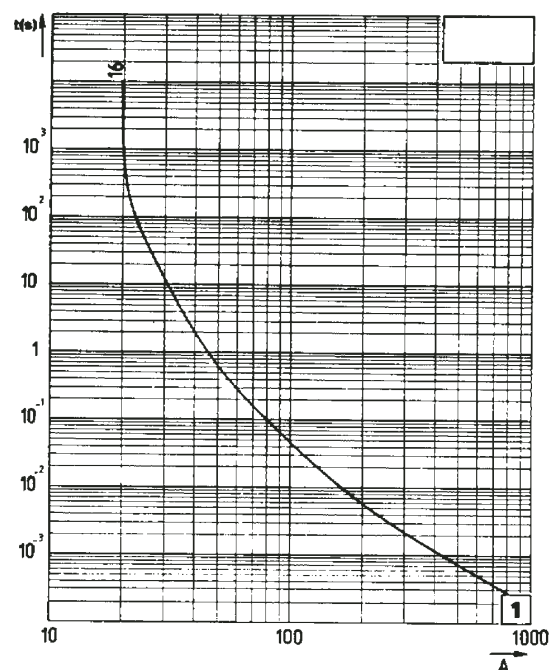
250 V SA 5 x 20



250 V SA 5 x 20



125 V SA 16 A



I tolerance $\pm 12\%$. Actual pre-arcing time (s). R.M.S. Value of pre-arcing current (A).

Packaging: in blister of 50 pieces.

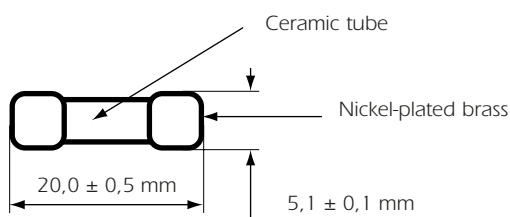
Ask us about boxes of 1000 pieces.



Very HRC Fuses 5x20 400V - FA Very Fast Acting

FROM 0,1 TO 4A

Dimensions



Fuses with filler
Max weight : 1,2 g

Basic Characteristics

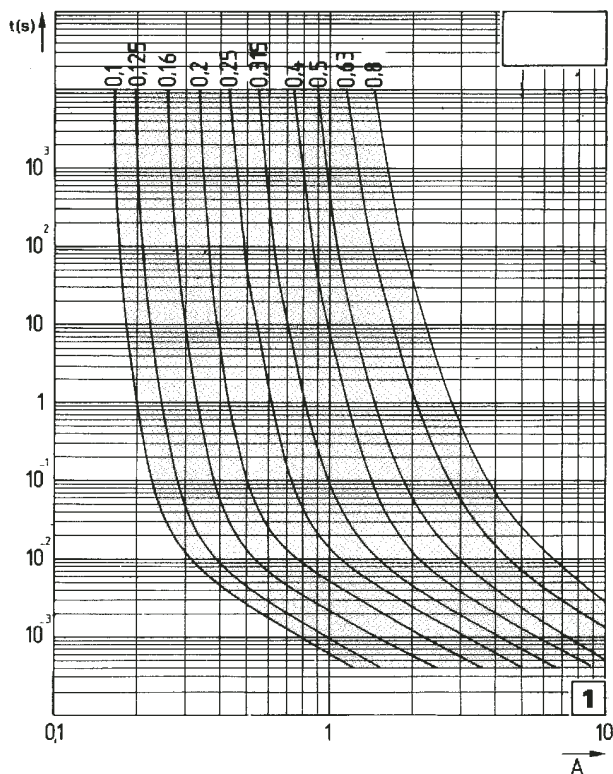
Size	Rated Voltage	Rated Current	Breaking Capacity under 400 V AC	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
5 x 20	400	0,100	10 kA cos φ ≥ 0,7	0,00057	0,0033	1,8	400V FA 0,100 A 5x20	T093305	MI5FA40V0,1
		0,125		0,00077	0,0045	1,7	400V FA 0,125 A 5x20	W093307	MI5FA40V0,125
		0,160		0,0020	0,0123	1,3	400V FA 0,160 A 5x20	Y093309	MI5FA40V0,16
		0,200		0,0046	0,0275	1,1	400V FA 0,200 A 5x20	P095992	MI5FA40V0,2
		0,250		0,009	0,054	1,0	400V FA 0,250 A 5x20	E093315	MI5FA40V0,25
		0,315		0,016	0,095	0,90	400V FA 0,315 A 5x20	Q093348	MI5FA40V0,315
		0,400		0,03	0,18	0,85	400V FA 0,400 A 5x20	G093317	MI5FA40V0,4
		0,500		0,05	0,3	0,80	400V FA 0,500 A 5x20	H093318	MI5FA40V0,5
		0,630		0,12	0,73	0,70	400V FA 0,630 A 5x20	J093319	MI5FA40V0,63
		0,800		0,25	1,52	0,60	400V FA 0,800 A 5x20	L093321	MI5FA40V0,8
		1,000		0,11	0,45	0,46	400V FA 1,000 A 5x20	F093270	MI5FA40V1
		1,250		0,26	1,1	0,36	400V FA 1,250 A 5x20	M093322	MI5FA40V1,25
		1,600		0,39	1,6	0,42	400V FA 1,600 A 5x20	N093323	MI5FA40V1,6
		2,000		0,81	3,3	0,37	400V FA 2,000 A 5x20	P093324	MI5FA40V2
		2,500		1,44	5,8	0,34	400V FA 2,500 A 5x20	M093345	MI5FA40V2,5
		3,150		2,46	10	0,33	400V FA 3,150 A 5x20	N093346	MI5FA40V3,15
		4,000		4,6	18,7	0,31	400V FA 4,000 A 5x20	P093347	MI5FA40V4

Ratings lower than 0,1A : please enquire.

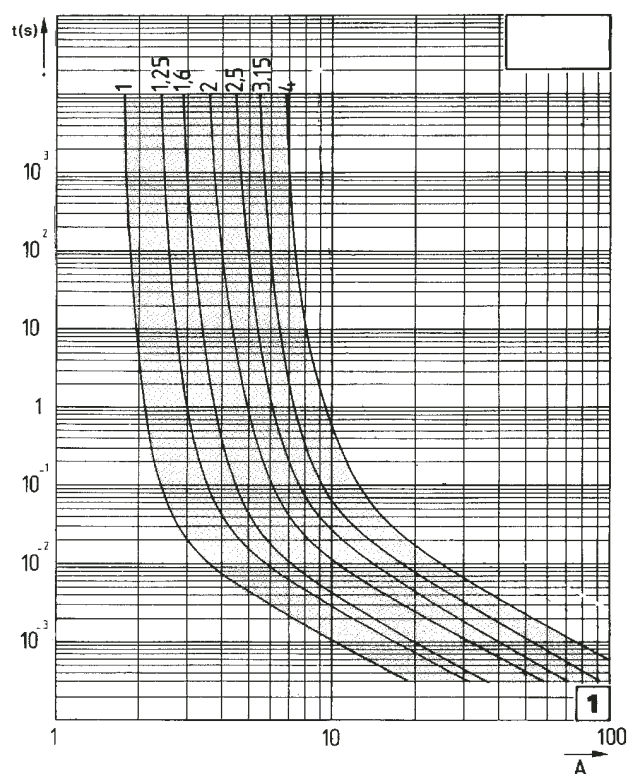
Very HRC Fuses 5x20 400V - FA Very Fast Acting

Time-current characteristics

400V FA 5x20



400V FA 5x20



I margin $\pm 12\%$. Actual pre-arcing time(s). R.M.S. Value of pre-arcing current (A).

Packaging: Blister per 50 pièces.

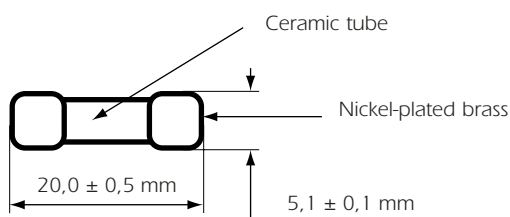
For a 1000 pieces box packaging consult us.



Very HRC Fuses 5x20 400V - SA Medium Time Lag

FROM 0,1 TO 3,15A

Dimensions



Fuses with filler
Max weight : 1,2 g

Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 400 V AC	[I ² t] Pre-arcing	[I ² t] Total clearing at U _n	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
5 x 20	400	0,100	10 kA cos φ ≥ 0,7	0,00077	0,0045	1,4	400V SA 0,100 A 5x20	C095429	MI5SA40V0,1
		0,125		0,002	0,00123	1,1	400V SA 0,125 A 5x20	T078930	MI5SA40V0,125
		0,160		0,0046	0,0275	0,9	400V SA 0,160 A 5x20	Q095993	MI5SA40V0,16
		0,200		0,009	0,054	0,8	400V SA 0,200 A 5x20	R095994	MI5SA40V0,2
		0,250		0,016	0,095	0,75	400V SA 0,250 A 5x20	E095431	MI5SA40V0,25
		0,315		0,030	0,18	0,70	400V SA 0,315 A 5x20	A095450	MI5SA40V0,315
		0,400		0,050	0,30	0,68	400V SA 0,400 A 5x20	S095995	MI5SA40V0,4
		0,500		0,12	0,73	0,55	400V SA 0,500 A 5x20	E095477	MI5SA40V0,5
		0,630		0,11	0,45	0,26	400V SA 0,630 A 5x20	T095996	MI5SA40V0,63
		0,800		0,17	0,71	0,26	400V SA 0,800 A 5x20	G095479	MI5SA40V0,8
		1,000		0,26	1,1	0,26	400V SA 1,000 A 5x20	J095481	MI5SA40V1
		1,250		0,55	2,25	0,20	400V SA 1,250 A 5x20	Y095494	MI5SA40V1,25
		1,600		1,44	6	0,16	400V SA 1,600 A 5x20	Z095495	MI5SA40V1,6
		2,000		2,46	10	0,15	400V SA 2,000 A 5x20	A095496	MI5SA40V2
		2,500		4,6	20	0,14	400V SA 2,500 A 5x20	B095497	MI5SA40V2,5
		3,150		11	45	0,11	400V SA 3,150 A 5x20	C095498	MI5SA40V3,15

Ratings lower than 0,1A : please enquire.

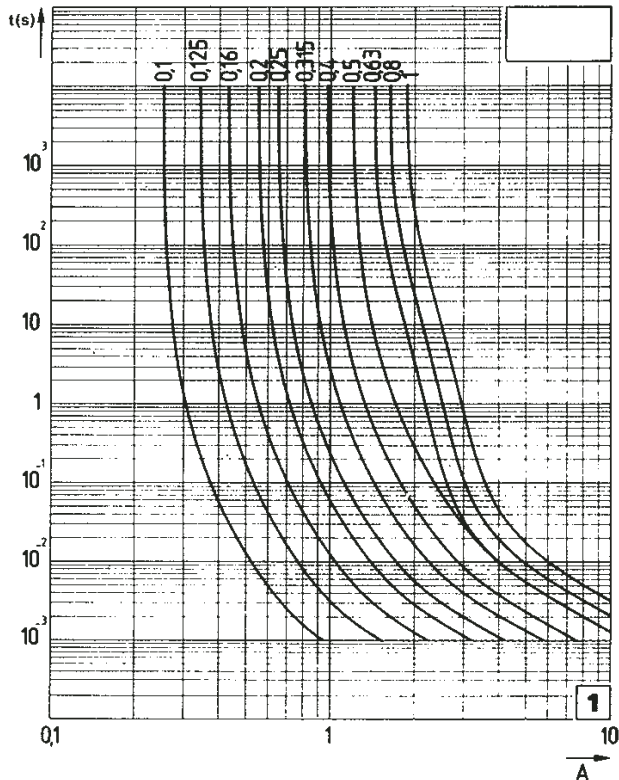
Very HRC Fuses

5x20

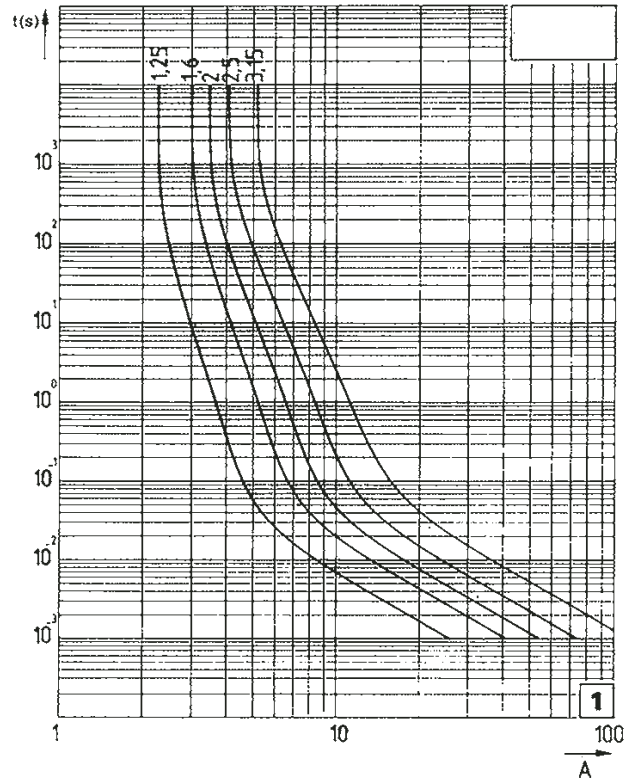
400V - SA Medium Time Lag

Time-current characteristics

400V SA 5x20



400V SA 5x20



I margin $\pm 12\%$. Actual pre-arcing time(s). R.M.S. Value of pre-arcing current (A).

Packaging: Blister per 50 pièces.

For a 1000 pieces box packaging consult us.

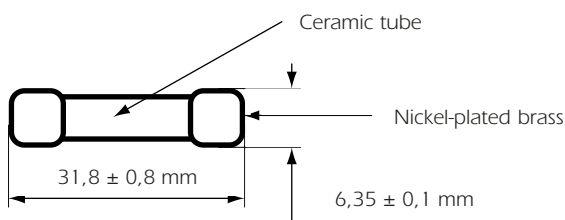


Very HRC Fuses 6x32 125V to 250V - FA Very Fast Acting

Approvals UL recognized E 76491

FROM 0,1 TO 30A

Dimensions



Fuses with filler
Max weight : 2,5 g

Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	250	0,100	200 kA 250 VAC cos φ ≥ 0,2	0,00057	0,0011	2,75	250 V FA 0,100 A 6x32	R094315	MI6FA25V0,1
		0,125		0,00077	0,0015	2,60	250 V FA 0,125 A 6x32	F084323	MI6FA25V0,125
		0,160		0,002	0,004	2	250 V FA 0,160 A 6x32	G084301	MI6FA25V0,16
		0,200		0,0046	0,009	1,7	250 V FA 0,200 A 6x32	C084320	MI6FA25V0,2
		0,250		0,009	0,018	1,55	250 V FA 0,250 A 6x32	H084302	MI6FA25V0,25
		0,315		0,016	0,032	1,45	250 V FA 0,315 A 6x32	D084321	MI6FA25V0,315
		0,400		0,03	0,06	1,4	250 V FA 0,400 A 6x32	E084322	MI6FA25V0,4
		0,500		0,05	0,1	1,4	250 V FA 0,500 A 6x32	J084303	MI6FA25V0,5
		0,630		0,12	0,24	1,15	250 V FA 0,630 A 6x32	B084319	MI6FA25V0,63
		0,800		0,25	0,5	1	250 V FA 0,800 A 6x32	G084324	MI6FA25V0,8
		1,000		0,11	0,2	0,71	250 V FA 1,000 A 6x32	K084304	MI6FA25V1
		1,250		0,26	0,5	0,55	250 V FA 1,250 A 6x32	L084305	MI6FA25V1,25
		1,600		0,39	0,7	0,65	250 V FA 1,600 A 6x32	M084306	MI6FA25V1,6
		2,000		0,81	1,4	0,55	250 V FA 2,000 A 6x32	N084307	MI6FA25V2
		2,500		1,44	2,5	0,52	250 V FA 2,500 A 6x32	P084308	MI6FA25V2,5
		3,150		2,46	4,3	0,53	250 V FA 3,150 A 6x32	Q084309	MI6FA25V3,15
		4,000		4,6	8	0,48	250 V FA 4,000 A 6x32	R084310	MI6FA25V4
		5,000		11	20	0,37	250 V FA 5,000 A 6x32	S084311	MI6FA25V5
		6,300		23	40	0,31	250 V FA 6,300 A 6x32	T084312	MI6FA25V6,3
		8		1,5	25	0,19	250 V FA 8,000 A 6x32	V084313	MI6FA25V8
		10		2,5	42	0,19	250 V FA 10,00 A 6x32	W084314	MI6FA25V10
		12,5		3,8	60	0,2	250 V FA 12,50 A 6x32	X084315	MI6FA25V12,5
		16		7,1	115	0,15	250 V FA 16,00 A 6x32	Z084317	MI6FA25V16
		20		12,7	200	0,14	250 V FA 20,00 A 6x32	A084318	MI6FA25V20
	125	25	100 kA 125 VAC cos φ ≥ 0,2	32,5	200	0,14	125 V FA 25,00 A 6x32	H084325	MI6FA12,5V25
		30		61,5	400	0,12	125 V FA 30,00 A 6x32	J084326	MI6FA12,5V30

Ratings lower than 0,1A : please enquire.

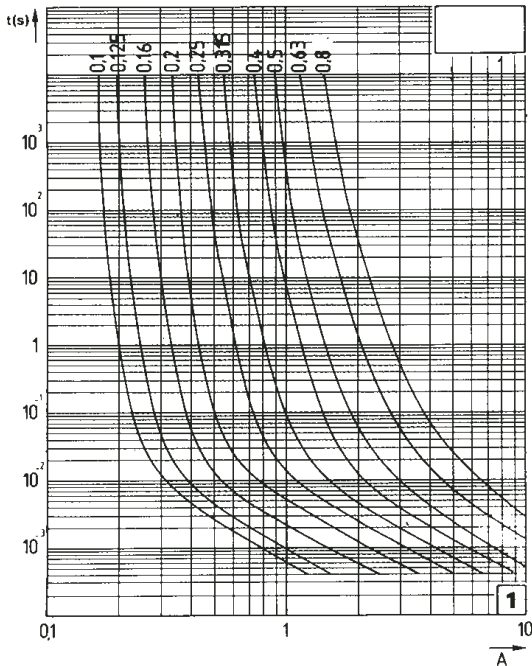
Very HRC Fuses

6x32

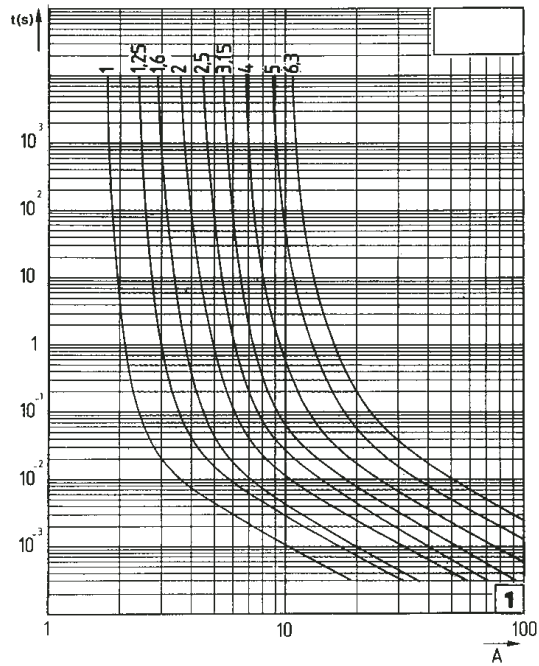
125V to 250V - FA Very Fast Acting

Time-current characteristics

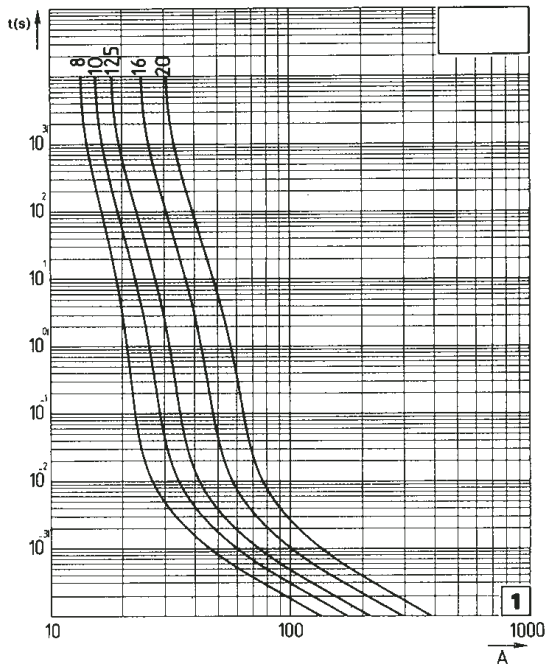
250V FA 6x32



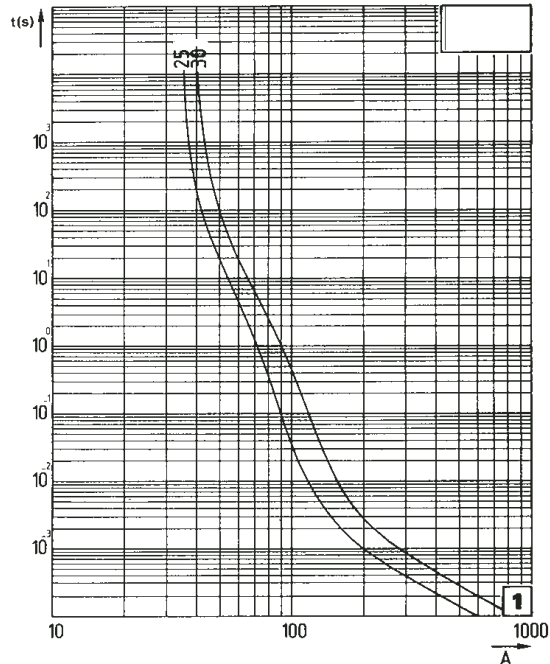
250V FA 6x32



250V FA 6x32



125V FA 6x32



I margin $\pm 12\%$. Actual prearcing time(s). R.M.S. Value of prearcing current (A).

Packaging: Blister per 50 pièces.

For a 500 pieces box packaging consult us.

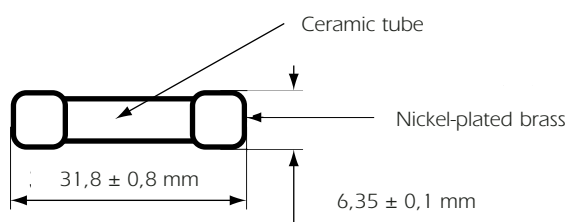


Very HRC Fuses 6x32 125V to 250V - SA Medium Time Lag

Approvals UL recognized E 76491

FROM 0,1 TO 30A

Dimensions



Fuses with filler
Max weight : 2,5 g

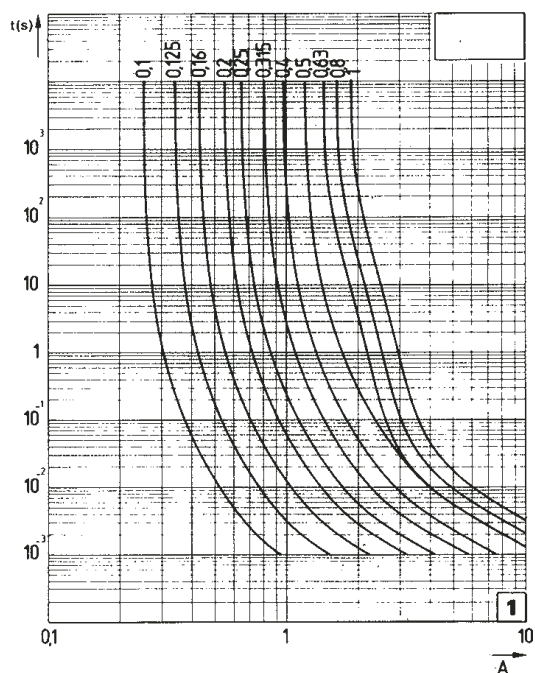
Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	250	0,100	200 kA 250 VAC cos φ ≥ 0,2	0,00077	0,0015	2	250 V SA 0,100 A 6x32	Q084424	MI6SA25V0,1
		0,125		0,002	0,0025	1,5	250 V SA 0,125 A 6x32	C086367	MI6SA25V0,125
		0,160		0,0046	0,009	1,3	250 V SA 0,160 A 6x32	Q084401	MI6SA25V0,16
		0,200		0,009	0,018	1,2	250 V SA 0,200 A 6x32	L084420	MI6SA25V0,2
		0,250		0,016	0,032	1,1	250 V SA 0,250 A 6x32	R084402	MI6SA25V0,25
		0,315		0,03	0,06	1	250 V SA 0,315 A 6x32	M084421	MI6SA25V0,315
		0,400		0,05	0,1	1	250 V SA 0,400 A 6x32	N084422	MI6SA25V0,4
		0,500		0,12	0,24	0,8	250 V SA 0,500 A 6x32	S084403	MI6SA25V0,5
		0,630		0,11	0,2	0,4	250 V SA 0,630 A 6x32	K084419	MI6SA25V0,63
		0,800		0,17	0,31	0,4	250 V SA 0,800 A 6x32	P084423	MI6SA25V0,8
		1,000		0,26	0,5	0,4	250 V SA 1,000 A 6x32	T084404	MI6SA25V1
		1,250		0,55	1	0,35	250 V SA 1,250 A 6x32	V084405	MI6SA25V1,25
		1,600		1,44	2,5	0,26	250 V SA 1,600 A 6x32	W084406	MI6SA25V1,6
		2,000		2,46	4,3	0,25	250 V SA 2,000 A 6x32	X084407	MI6SA25V2
		2,500		4,6	8	0,23	250 V SA 2,500 A 6x32	Y084408	MI6SA25V2,5
		3,150		11	20	0,16	250 V SA 3,150 A 6x32	Z084409	MI6SA25V3,15
		4,000		23	40	0,16	250 V SA 4,000 A 6x32	A084410	MI6SA25V4
		5,000		15,7	70	0,13	250 V SA 5,000 A 6x32	B084411	MI6SA25V5
		6,300		28	120	0,13	250 V SA 6,300 A 6x32	C084412	MI6SA25V6,3
		8		52,9	230	0,12	250 V SA 8,000 A 6x32	H093364	MI6SA25V8
		10		98,4	420	0,11	250 V SA 10,000 A 6x32	E084414	MI6SA25V10
		12,5		141	410	0,12	250 V SA 12,500 A 6x32	F084415	MI6SA25V12,5
		16		252	720	0,13	250 V SA 16,000 A 6x32	H084417	MI6SA25V16
		20		252	720	0,12	250 V SA 20,000 A 6x32	J084418	MI6SA25V20
	125	25	100 kA 125 VAC cos φ ≥ 0,2	700	1 500	0,09	125 V SA 25,000 A 6x32	T084427	MI6SA12,5V25
		30		1 090	2 350	0,09	125 V SA 30,000 A 6x32	V084428	MI6SA12,5V30

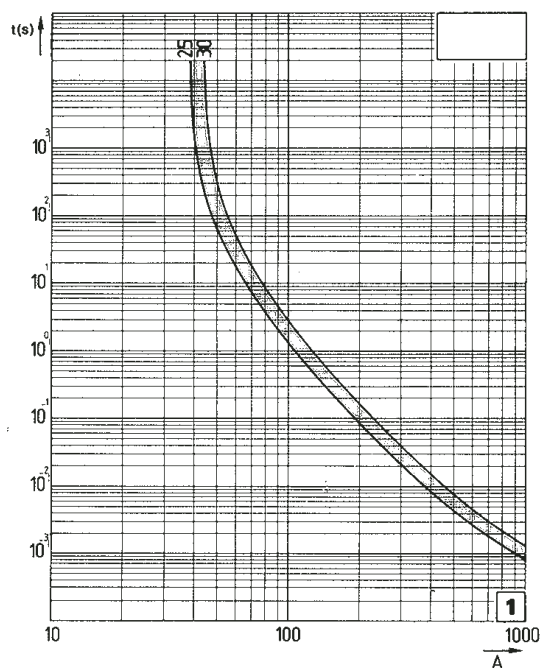
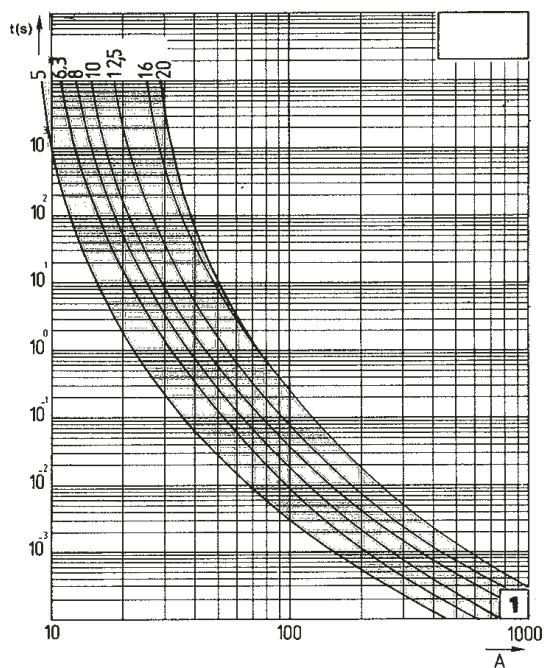
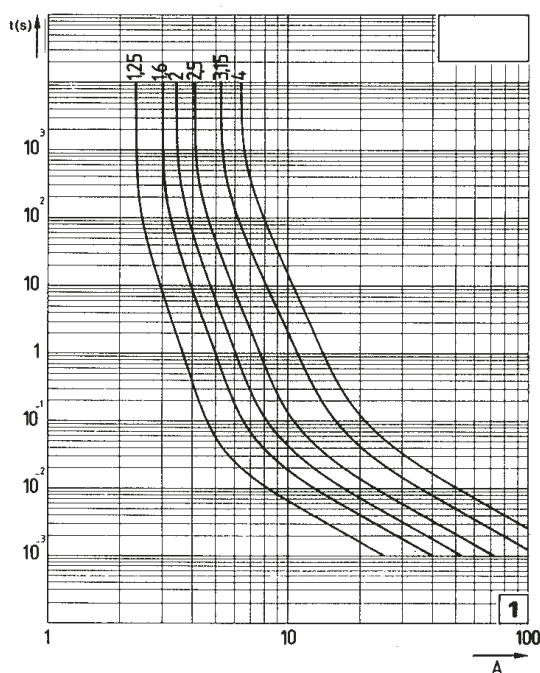
Ratings lower than 0,1A : please enquire.

125V to 250V - SA Medium Time Lag

250V SA 6x32



125V SA 6x32



12/04

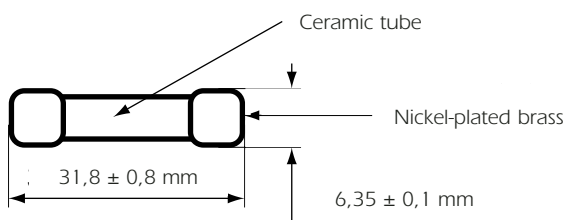


Very HRC Fuses 6x32 400V - FA/FB Very Fast Acting

Approvals UL recognized E 76491

FROM 0,1 TO 20A

Dimensions



Fuses with filler
Max weight : 2,5 g

Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	400	0,100	200 kA 400 VAC cos φ ≥ 0,2	0,00057	0,0016	2,75	400 V FA 0,100 A 6x32	H078920	MI6FA40V0,1
		0,125		0,00077	0,0021	2,60	400 V FA 0,125 A 6x32	F084369	MI6FA40V0,125
		0,160		0,002	0,006	2	400 V FA 0,160 A 6x32	M084352	MI6FA40V0,16
		0,200		0,0046	0,013	1,7	400 V FA 0,200 A 6x32	G084370	MI6FA40V0,2
		0,250		0,009	0,025	1,55	400 V FA 0,250 A 6x32	N084353	MI6FA40V0,25
		0,315		0,016	0,045	1,45	400 V FA 0,315 A 6x32	D084367	MI6FA40V0,315
		0,400		0,03	0,085	1,4	400 V FA 0,400 A 6x32	H084371	MI6FA40V0,4
		0,500		0,05	0,15	1,4	400 V FA 0,500 A 6x32	P084354	MI6FA40V0,5
		0,630		0,12	0,35	1,15	400 V FA 0,630 A 6x32	E084368	MI6FA40V0,63
		0,800		0,25	0,72	1	400 V FA 0,800 A 6x32	L084351	MI6FA40V0,8
		1,000		0,11	0,25	0,71	400 V FA 1,000 A 6x32	Q084355	MI6FA40V0,1
		1,250		0,26	0,6	0,55	400 V FA 1,250 A 6x32	R084356	MI6FA40V1,25
		1,600		0,39	0,9	0,65	400 V FA 1,600 A 6x32	S084357	MI6FA40V1,6
		2,000		0,81	1,9	0,55	400 V FA 2,000 A 6x32	T084358	MI6FA40V2
		2,500		1,44	3,2	0,52	400 V FA 2,500 A 6x32	V084359	MI6FA40V2,5
		3,150		2,46	5,5	0,53	400 V FA 3,150 A 6x32	W084360	MI6FA40V3,15
		4,000		4,6	10	0,48	400 V FA 4,000 A 6x32	X084361	MI6FA40V4
		5,000	150 kA 400 VAC cos φ ≥ 0,2	11	25	0,37	400 V FA 5,000 A 6x32	Y084362	MI6FA40V5
		6,300		1,1	12	0,22	400 V FA 6,300 A 6x32	Z084363	MI6FA40V6,3
		8		2	21	0,22	400 V FA 8,000 A 6x32	A084364	MI6FA40V8
		10		3,1	35	0,20	400 V FA 10,000 A 6x32	B084365	MI6FA40V10
		12,5		4,5	47	0,22	400 V FA 12,500 A 6x32	C084366	MI6FA40V12,5
		16*		5,3	55	0,29	400 V FB 16,000 A 6x32	K084373	MI6FB40V16
		20*				654	400 V FA 20,000 A 6x32	H203350	MI6FA40V20

*Rating out of standards.

Ratings lower than 0,1A : please enquire.

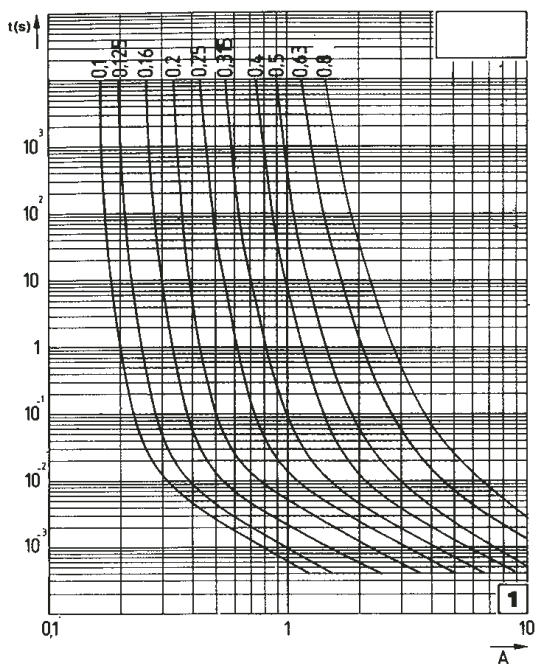
Very HRC Fuses

6x32

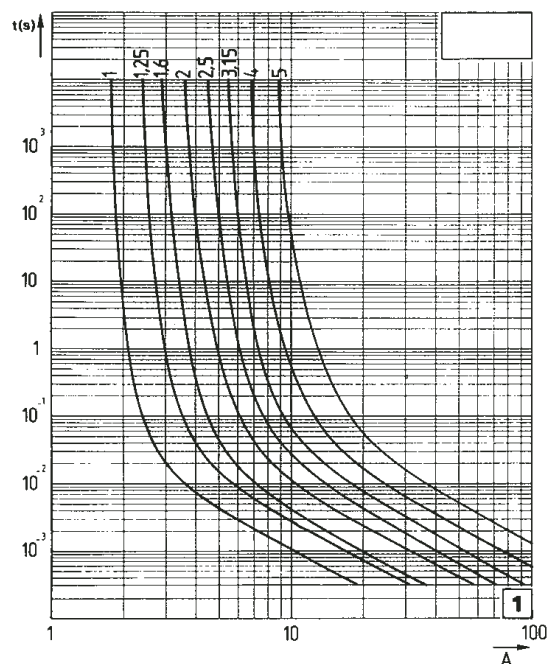
400V - FA/FB Very Fast Acting

Time-current characteristics

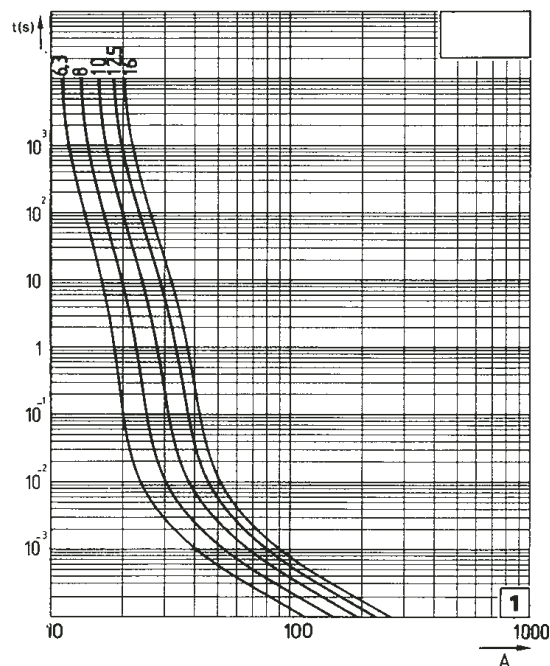
400V FA 6x32



400V FA 6x32



400V FA 6x32



I margin $\pm 12\%$. Actual prearcing time(s). R.M.S. Value of prearcing current (A).

Packaging: Blister per 50 pièces.

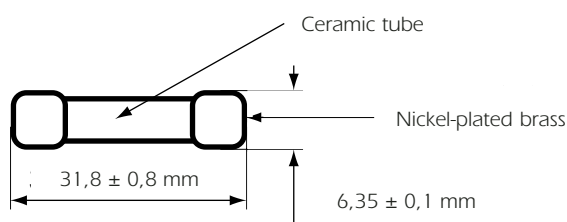
For a 500 pieces box packaging consult us.



Very HRC Fuses 6x32 400V - SA Medium Time Lag

FROM 0,1 TO 10A

Dimensions



Fuses with filler
Max weight : 2,5 g

Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation		Reference Number	Catalog Number
mm	VAC	A		A ² s		V				
6,3 x 32	400	0,100	50 kA 400 VAC cos φ ≥ 0,2	0,00077	0,0021	2	400 V SA	0,100 A 6x32	M078901	MI6SA40V0,1
		0,125		0,002	0,0037	1,5	400 V SA	0,125 A 6x32	N078902	MI6SA40V0,125
		0,160		0,0046	0,013	1,3	400 V SA	0,160 A 6x32	P078903	MI6SA40V0,16
		0,20		0,009	0,025	1,2	400 V SA	0,200 A 6x32	Q078904	MI6SA40V0,2
		0,25		0,016	0,045	1,1	400 V SA	0,250 A 6x32	R078905	MI6SA40V0,25
		0,315		0,03	0,085	1	400 V SA	0,315 A 6x32	S078906	MI6SA40V0,315
		0,40		0,05	0,15	1	400 V SA	0,400 A 6x32	D094418	MI6SA40V0,4
		0,50		0,12	0,35	0,8	400 V SA	0,500 A 6x32	T078907	MI6SA40V0,5
		0,63		0,11	0,25	0,4	400 V SA	0,630 A 6x32	V078908	MI6SA40V0,63
		0,80		0,17	0,38	0,4	400 V SA	0,800 A 6x32	W078909	MI6SA40V0,8
		1,00		0,26	0,60	0,4	400 V SA	1,000 A 6x32	X078910	MI6SA40V1
		1,25		0,55	1,2	0,35	400 V SA	1,250 A 6x32	Y078911	MI6SA40V1,25
		1,60		1,44	3,2	0,26	400 V SA	1,600 A 6x32	S095029	MI6SA40V1,6
		2,00		2,46	5,5	0,25	400 V SA	2,000 A 6x32	M078993	MI6SA40V2
		2,50		4,6	10	0,23	400 V SA	2,500 A 6x32	Z078912	MI6SA40V2,5
		3,15		11	25	0,16	400 V SA	3,150 A 6x32	M098244	MI6SA40V3,15
		4,0		23	50	0,16	400 V SA	4,000 A 6x32	R098248	MI6SA40V4
		5,0		15,7	70	0,14	400 V SA	5,000 A 6x32	S098249	MI6SA40V5
		6,3		28	120	0,14	400 V SA	6,300 A 6x32	A099107	MI6SA40V6,3
		8		35,4	155	0,12	400 V SA	8,000 A 6x32	C098258	MI6SA40V8
		10		52,9	230	0,12	400 V SA	10,000 A 6x32	B095037	MI6SA40V10

Ratings lower than 0,1A : please enquire.

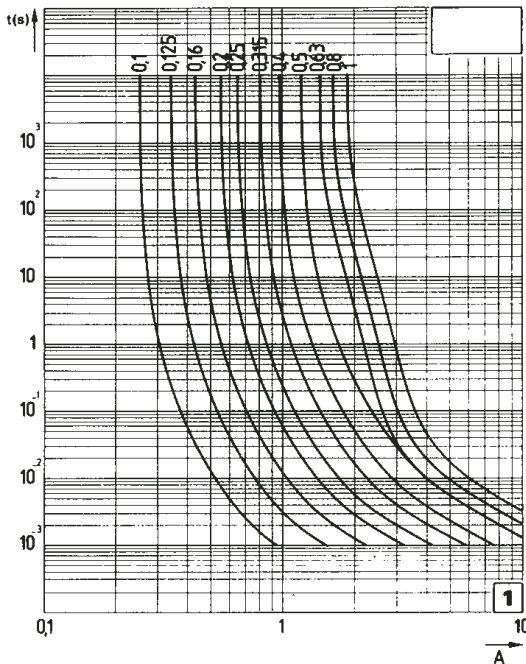
Very HRC Fuses

6x32

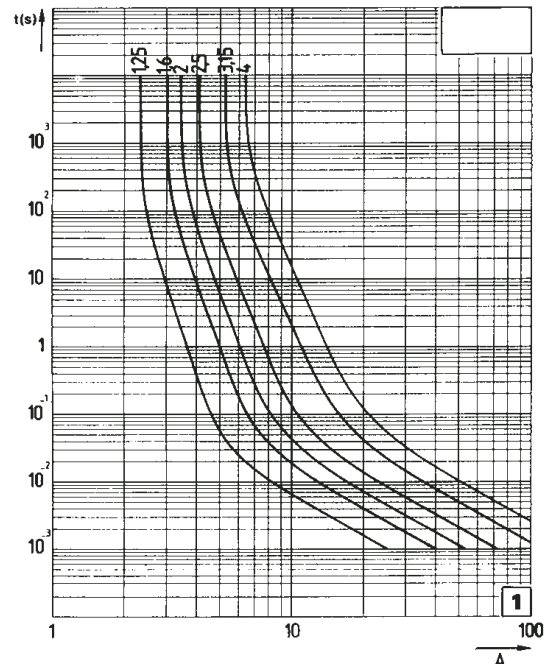
400V - SA Medium Time Lag

Time-current characteristics

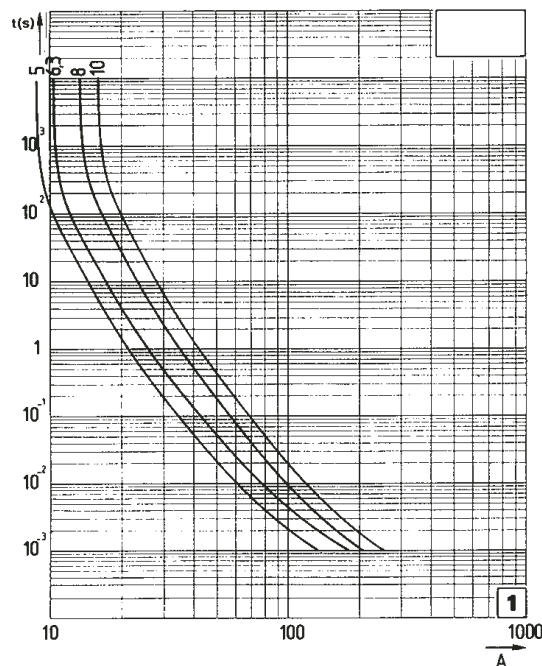
400V SA 6x32



400V SA 6x32



400V SA 6x32



I margin $\pm 12\%$. Actual pre-arcing time(s). R.M.S. Value of pre-arcing current (A).

Packaging: Blister per 50 pièces.

For a 500 pieces box packaging consult us.

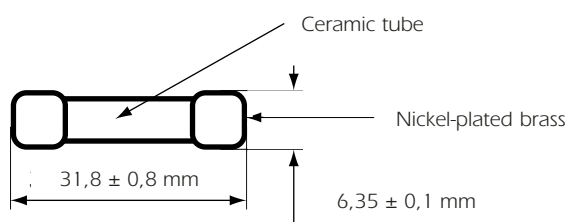


Very HRC Fuses 6x32 500V - FA Very Fast Acting

Approvals UL recognized E 76491

FROM 0,1 TO 16A

Dimensions



Fuses with filler
Max weight : 2,5 g



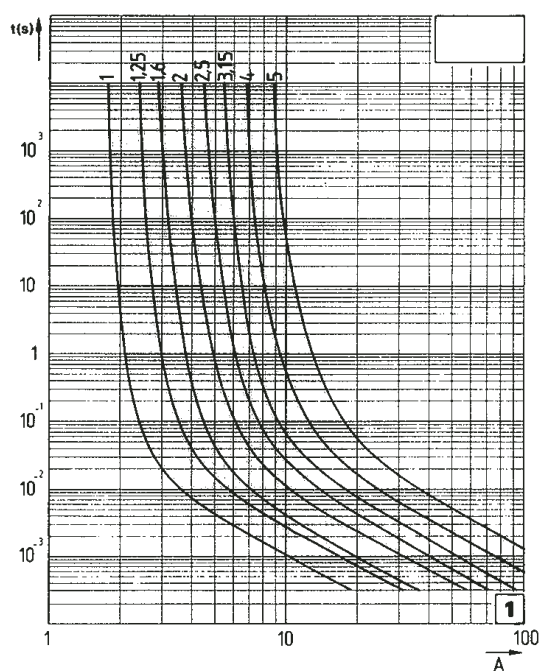
Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	500	0,100	200 kA 500 VAC cos φ ≥ 0,2	0,00057	0,002	2,75	500 V FA 0,100 A 6x32	L080464	MI6FA50V0,1
		0,125		0,00077	0,003	2,60	500 V FA 0,125 A 6x32	M084214	MI6FA50V0,125
		0,160		0,002	0,008	2	500 V FA 0,160 A 6x32	Y084201	MI6FA50V0,16
		0,200		0,0046	0,017	1,7	500 V FA 0,200 A 6x32	N084215	MI6FA50V0,2
		0,250		0,009	0,035	1,55	500 V FA 0,250 A 6x32	Z084202	MI6FA50V0,025
		0,315		0,016	0,060	1,45	500 V FA 0,315 A 6x32	A084203	MI6FA50V0,315
		0,400		0,03	0,11	1,4	500 V FA 0,400 A 6x32	P084216	MI6FA50V0,4
		0,500		0,05	0,20	1,4	500 V FA 0,500 A 6x32	B084204	MI6FA50V0,5
		0,630		0,12	0,45	1,15	500 V FA 0,630 A 6x32	C084205	MI6FA50V0,63
		0,800		0,25	0,92	1	500 V FA 0,800 A 6x32	L084213	MI6FA50V0,8
		1,000		0,11	0,30	0,71	500 V FA 1,000 A 6x32	D084206	MI6FA50V1
		1,250		0,26	0,75	0,55	500 V FA 1,250 A 6x32	E084207	MI6FA50V1,25
		1,600		0,39	1,1	0,65	500 V FA 1,600 A 6x32	F084208	MI6FA50V1,6
		2,000		0,81	2,2	0,55	500 V FA 2,000 A 6x32	G084209	MI6FA50V2
		2,500		1,44	4	0,52	500 V FA 2,500 A 6x32	H084210	MI6FA50V2,5
		3,150		2,46	7	0,53	500 V FA 3,150 A 6x32	X085442	MI6FA50V3,15
		4,000		4,6	14	0,48	500 V FA 4,000 A 6x32	Y085443	MI6FA50V4
		5,000	20 kA 500 VAC cos φ ≥ 0,2	11	30	0,37	500 V FA 5,000 A 6x32	Z085444	MI6FA50V5
		6,300		1,1	20	0,22	500 V FA 6,300 A 6x32	A085445	MI6FA50V6,3
		8		2	35	0,22	500 V FA 8,000 A 6x32	B085446	MI6FA50V8
		10		3,1	50	0,20	500 V FA 10,000 A 6x32	C085447	MI6FA50V10
		12,5		4,5	75	0,22	500 V FA 12,500 A 6x32	D085448	MI6FA50V12,5
		16		5,3	85	0,29	500 V FA 16,000 A 6x32	E085449	MI6FA50V16

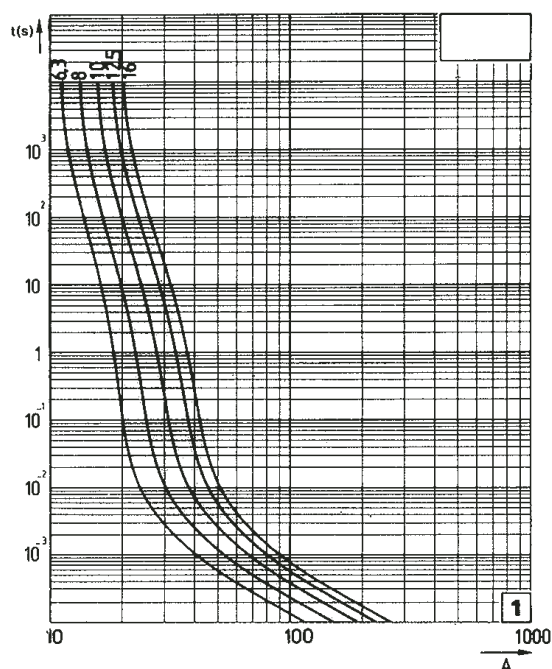
Ratings lower than 0,1A : please enquire.

500V - FA Very Fast Acting

500V FA 6x32



500V FA 6x32



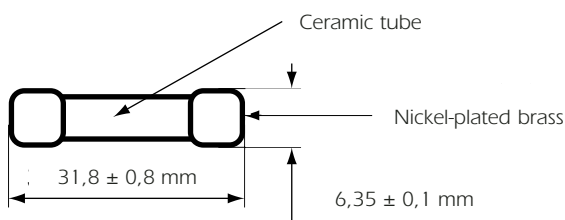
Packaging: Blister per 50 pièces.
For a 500 pieces box packaging consult us.



Very HRC Fuses 6x32 500V - SA Medium Time Lag

FROM 0,1 TO 10A

Dimensions



Fuses with filler
Max weight : 2,5 g

Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation		Reference Number	Catalog Number
mm	VAC	A		A ² s		V				
6,3 x 32	500	0,100	50 kA 500 VAC cos φ ≥ 0,2	0,00077	0,003	2	500 V SA	0,100 A 6x32	C078869	MI6SA50V0,1
		0,125		0,002	0,008	1,5	500 V SA	0,125 A 6x32	C098120	MI6SA50V0,125
		0,160		0,0046	0,017	1,3	500 V SA	0,160 A 6x32	D098121	MI6SA50V0,16
		0,20		0,009	0,035	1,2	500 V SA	0,200 A 6x32	D078870	MI6SA50V0,2
		0,25		0,016	0,060	1,1	500 V SA	0,250 A 6x32	E098122	MI6SA50V0,25
		0,315		0,03	0,11	1	500 V SA	0,315 A 6x32	F098123	MI6SA50V0,315
		0,40		0,05	0,2	1	500 V SA	0,400 A 6x32	G098124	MI6SA50V0,4
		0,50		0,12	0,45	0,8	500 V SA	0,500 A 6x32	H098125	MI6SA50V0,5
		0,63		0,11	0,3	0,4	500 V SA	0,630 A 6x32	J098126	MI6SA50V0,63
		0,80		0,17	0,5	0,4	500 V SA	0,800 A 6x32	K098127	MI6SA50V0,8
		1,00		0,26	0,75	0,4	500 V SA	1,000 A 6x32	L098128	MI6SA50V1
		1,25		0,55	1,5	0,35	500 V SA	1,250 A 6x32	M098129	MI6SA50V1,25
		1,60		1,44	4	0,26	500 V SA	1,600 A 6x32	N098130	MI6SA50V1,6
		2,00		2,46	7	0,25	500 V SA	2,000 A 6x32	P098131	MI6SA50V2
		2,50	10 kA 500 VAC cos φ ≥ 0,2	4,6	14	0,23	500 V SA	2,500 A 6x32	Y098208	MI6SA50V2,5
		3,15		11	30	0,16	500 V SA	3,150 A 6x32	F085450	MI6SA50V3,15
		4,0		23	60	0,16	500 V SA	4,000 A 6x32	G085451	MI6SA50V4
		5,0		15,7	80	0,14	500 V SA	5,000 A 6x32	E085610	MI6SA50V5
		6,3		28	150	0,14	500 V SA	6,300 A 6x32	F085611	MI6SA50V6,3
		8		35,4	180	0,12	500 V SA	8,000 A 6x32	G085612	MI6SA50V8
		10		52,9	265	0,12	500 V SA	10,000 A 6x32	H085613	MI6SA50V10

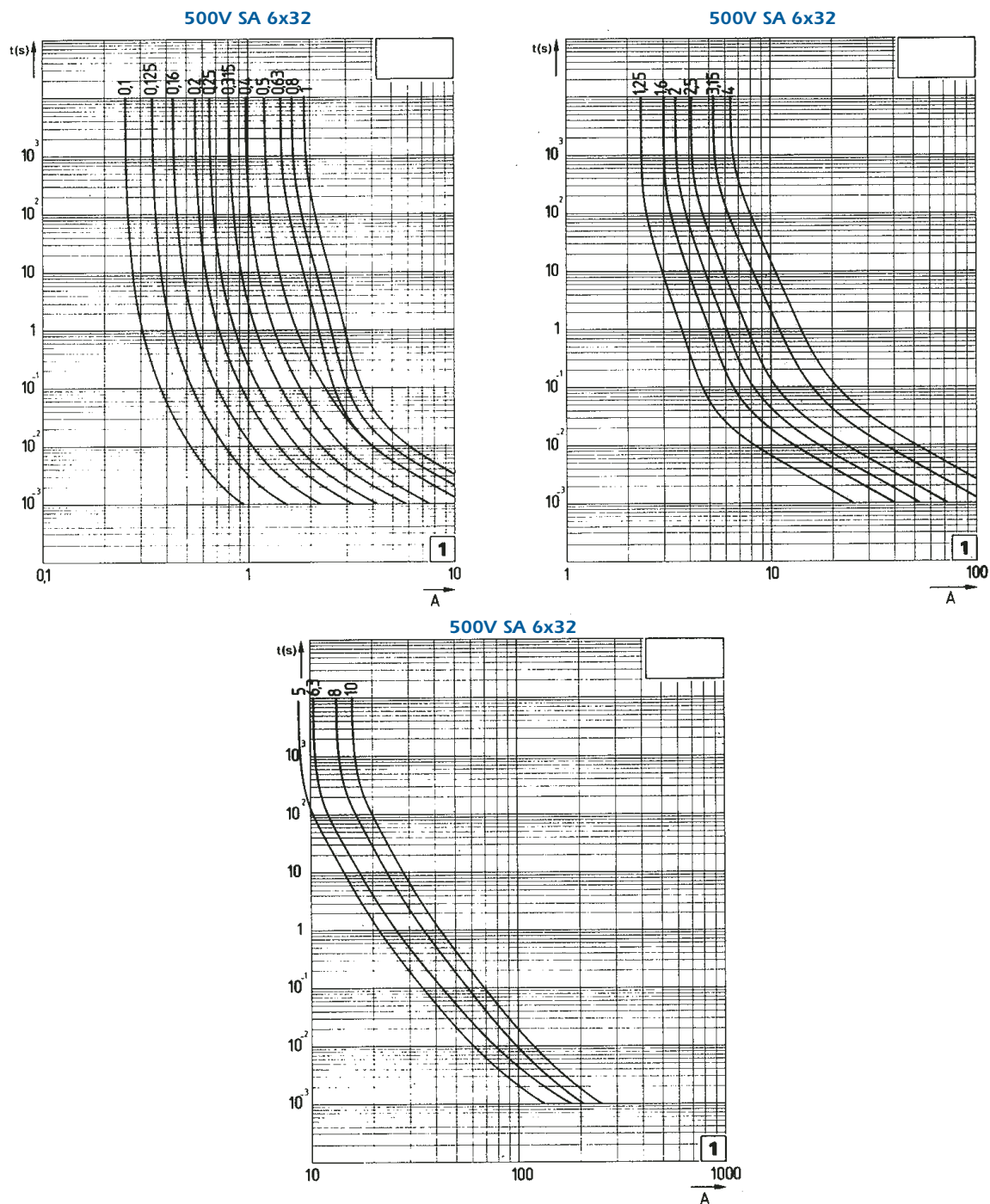
Ratings lower than 0,1A : please enquire.

Very HRC Fuses

6x32

500V - SA Medium Time Lag

Time-current characteristics



I margin $\pm 12\%$. Actual prearcing time(s). R.M.S. Value of prearcing current (A).

Packaging: Blister per 50 pièces.

For a 500 pieces box packaging consult us.

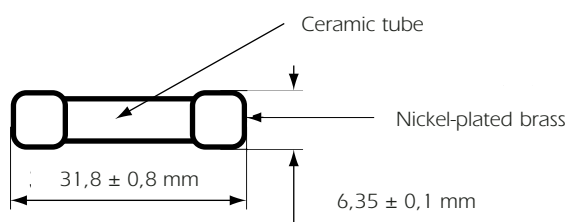


Very HRC Fuses 6x32 690V - FA Very Fast Acting

Approvals UL recognized E 76491

FROM 0,1 TO 2A

Dimensions



Fuses with filler
Max weight : 2,5 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	690	0,100	30 kA 690 V cos φ ≥ 0,2	0,00057	0,0037	2,75	690 V FA 0,100 A 6x32	Q093279	MI6FA69V0,1
		0,125		0,00077	0,005	2,60	690 V FA 0,125 A 6x32	S093281	MI6FA69V0,125
		0,160		0,002	0,014	2	690 V FA 0,160 A 6x32	V086452	MI6FA69V0,160
		0,200		0,0046	0,030	1,7	690 V FA 0,200 A 6x32	T086474	MI6FA69V0,200
		0,250		0,009	0,060	1,55	690 V FA 0,250 A 6x32	V093283	MI6FA69V0,250
		0,315		0,016	0,10	1,45	690 V FA 0,315 A 6x32	X093285	MI6FA69V0,315
		0,400		0,03	0,20	1,4	690 V FA 0,400 A 6x32	W086476	MI6FA69V0,400
		0,500		0,05	0,33	1,4	690 V FA 0,500 A 6x32	D086483	MI6FA69V0,500
		0,630		0,12	0,8	1,15	690 V FA 0,630 A 6x32	Z093287	MI6FA69V0,630
		0,800		0,18	1,2	1,15	690 V FA 0,800 A 6x32	D086437	MI6FA69V0,800
		1,000		0,11	0,48	0,71	690 V FA 1,000 A 6x32	H093295	MI6FA69V1
		1,250		0,17	0,76	0,7	690 V FA 1,250 A 6x32	B093289	MI6FA69V1,25
		1,600		0,39	1,7	0,65	690 V FA 1,600 A 6x32	D093291	MI6FA69V1,6
		2,000		0,81	3,5	0,55	690 V FA 2,000 A 6x32	F093293	MI6FA69V2

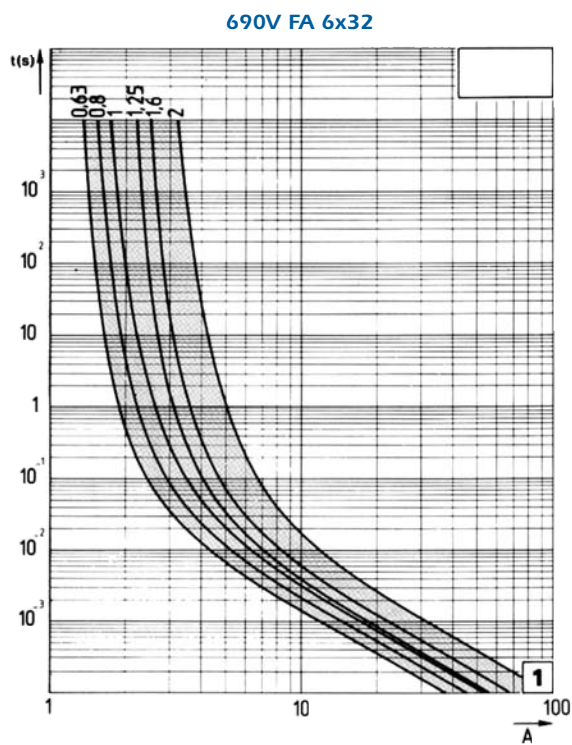
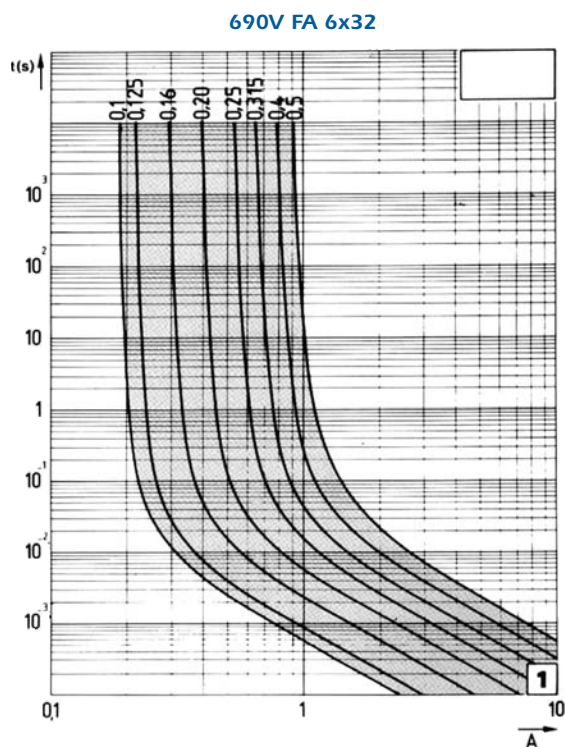
Ratings lower than 0,1A : please enquire.

Very HRC Fuses

6x32

690V - FA Very Fast Acting

Time-current characteristics



I margin $\pm 12\%$. Actual pre-arcing time(s). R.M.S. Value of pre-arcing current (A).

Packaging: Blister per 50 pièces.

For a 500 pieces box packaging consult us.

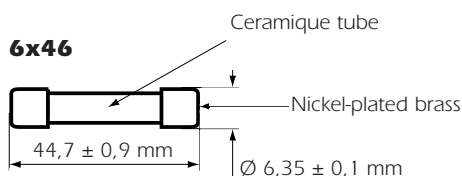
Ferraz-Shawmut speciality

FROM 0,1 TO 1A

Approvals UL recognized E 76491

FERRAZ speciality

Dimensions

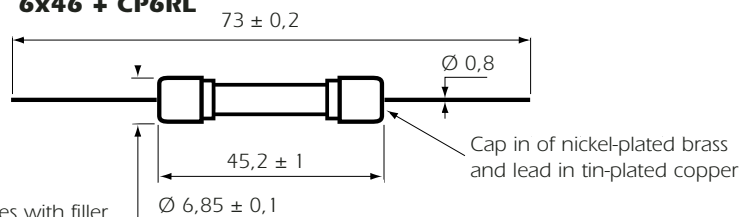


Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under Un	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation	6x46 References Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 46	1 000	0.100	30 kA 1000 VAC cos φ ≥ 0,2	0.0002	0.001	6.5	1 000 V FA 0,100A 6 x 46	G076458	MI6FA100V0,1
		0.125		0.0006	0.003	4.4	1 000 V FA 0,125A 6 x 46	H076459	MI6FA100V0,125
		0.160		0.0014	0.006	3.6	1 000 V FA 0,160A 6 x 46	J076460	MI6FA100V0,16
		0.200		0.0022	0.01	3.5	1 000 V FA 0,200A 6 x 46	K076461	MI6FA100V0,2
		0.250		0.004	0.02	3.2	1 000 V FA 0,250A 6 x 46	L076462	MI6FA100V0,25
		0.315		0.008	0.04	2.9	1 000 V FA 0,315A 6 x 46	M076463	MI6FA100V0,315
		0.400		0.017	0.08	2.5	1 000 V FA 0,400A 6 x 46	N076464	MI6FA100V0,4
		0.500		0.036	0.16	2.2	1 000 V FA 0,500A 6 x 46	P076465	MI6FA100V0,5
		0.630		0.59	0.35	1.3	1 000 V FA 0,630A 6 x 46	Q076466	MI6FA100V0,63
		0.800		0.110	0.6	1.2	1 000 V FA 0,800A 6 x 46	R076467	MI6FA100V0,8
		1.000		0.230	1.25	1	1 000 V FA 1,000A 6 x 46	P075660	MI6FA100V1

Ratings lower than 0,1A : please enquire.

6x46 + CP6RL



Fuses with filler
Max weight : 2,5 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under Un	[I ² t] Pre-arcing	[I ² t] Total clearing at Un	Max voltage drop at In	Designation 6x46 + CP6RL	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 46	1 000	0.100	30 kA 1000 VAC cos φ ≥ 0,2	0.0002	0.001	6.5	1 000 V FA 0,100A 6 x 46	W209733	MI6FAP100V0,1
		0.125		0.0006	0.003	4.4	1 000 V FA 0,125A 6 x 46	X209734	MI6FAP100V0,125
		0.160		0.0014	0.006	3.6	1 000 V FA 0,160A 6 x 46	Y209735	MI6FAP100V0,16
		0.200		0.0022	0.01	3.5	1 000 V FA 0,200A 6 x 46	Z209736	MI6FAP100V0,2
		0.250		0.004	0.02	3.2	1 000 V FA 0,250A 6 x 46	A209737	MI6FAP100V0,25
		0.315		0.008	0.04	2.9	1 000 V FA 0,315A 6 x 46	B209738	MI6FAP100V0,315
		0.400		0.017	0.08	2.5	1 000 V FA 0,400A 6 x 46	C209739	MI6FAP100V0,4
		0.500		0.036	0.16	2.2	1 000 V FA 0,500A 6 x 46	D209740	MI6FAP100V0,5
		0.630		0.59	0.35	1.3	1 000 V FA 0,630A 6 x 46	E209741	MI6FAP100V0,63
		0.800		0.110	0.6	1.2	1 000 V FA 0,800A 6 x 46	F209742	MI6FAP100V0,8
		1.000		0.230	1.25	1	1 000 V FA 1,000A 6 x 46	V209617	MI6FAP100V1

Ratings lower than 0,1A : please enquire.

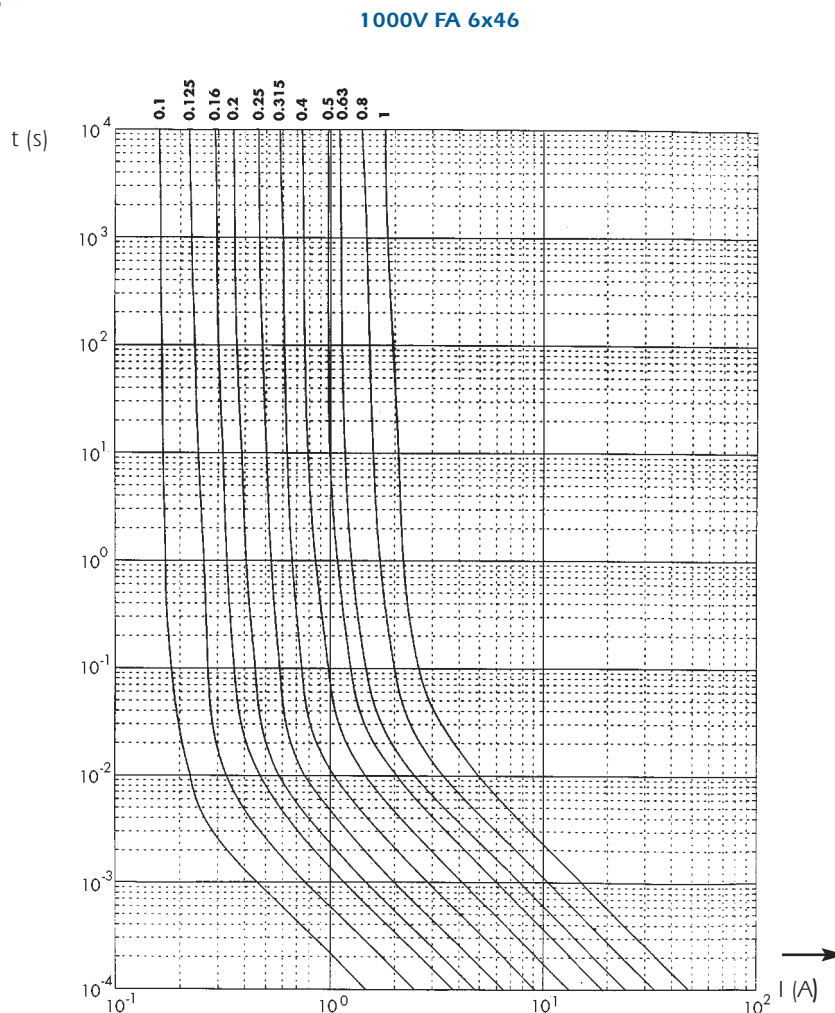
Very HRC Fuses

6x46

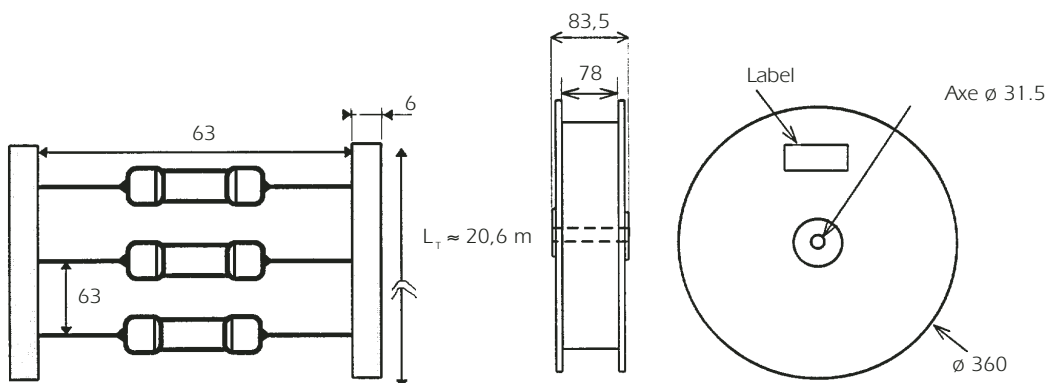
1000V - FA Very Fast Acting

Time-current characteristics

Tolerance for the mean pre-arcing current $\pm 12\%$.
These curves indicate, for each rated current, the pre-arcing time vs. the R.M.S. pre-arcing current



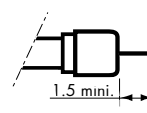
Packaging - Mounting: 6x46 plastic box 10 pieces (55x42x19). For a 500 pieces box packaging consult us.
6x46 + CP6RL in tape per 1500 pièces.



Installation instructions on PC board.

Soldering heat resistance :
according to IEC 68-2-20 / 260°C for 10 seconds.

Leads bending

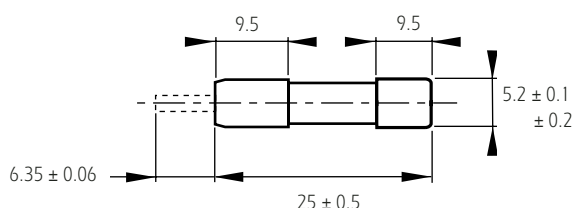


Very HRC Fuses 5x25/6x32 Fuses with striker 250V - F&M 5x25

Ferraz-Shawmut speciality

Approvals UL recognized E 76491

250V F
250V M



250VAC F 5x25 with trip-indicator Fast-acting Very High breaking capacity

Approvals	Voltage rating Un (VAC)	Rating (A)	Reference Number	Weight (g)	Pack.	Catalog Number
	250	1	D077812	2,5	20	MI5F25V1P
	250	1,6	T078999	2,5	20	MI5F25V1,6P
	250	2	V079000	2,5	20	MI5F25V2P
	250	2,5	W079001	2,5	20	MI5F25V2,5P

Approvals	Voltage rating Un (VAC)	Rating (A)	Reference Number	Weight (g)	Pack.	Catalog Number
	250	4	X079002	2,5	20	MI5F25V4P
	250	5	B076844	2,5	20	MI5F25V5P
	250	6,3	Y079003	2,5	20	MI5F25V6,3P
	250	10	E077813	2,5	20	MI5F25V10P

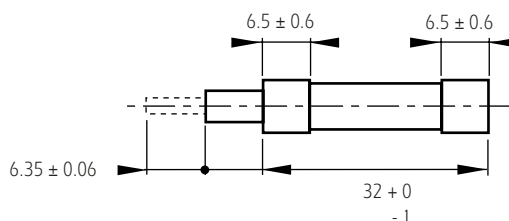
250VAC M 5x25 with trip-indicator Medium Time lag Very High breaking capacity

Approvals	Voltage rating Un (VAC)	Rating (A)	Reference Number	Weight (g)	Pack.	Catalog Number
	250	1	L079015	2,5	20	MI5M25V1P
	250	1,25	M079016	2,5	20	MI5M25V1,25P
	250	1,6	N079017	2,5	20	MI5M25V1,6P
	250	2	P079018	2,5	20	MI5M25V2P
	250	2,5	Q079019	2,5	20	MI5M25V2,5P

Approvals	Voltage rating Un (VAC)	Rating (A)	Reference Number	Weight (g)	Pack.	Catalog Number
	250	3,15	R079020	2,5	20	MI5M25V3,15P
	250	4	S079021	2,5	20	MI5M25V4 P
	250	6,3	T079022	2,5	20	MI5M25V6,3P
	250	10	Q075684	2,5	20	MI5M25V10P

Very HRC Fuses 5x25/6x32 Fuses with striker 125V to 400V - FA/FB & SA 6x32

400V FA/FB
400V SA



125-400VAC FA/FB 6x32 with trip-indicator Very Fast-acting Very High breaking capacity

Voltage rating Un (VAC)	Rating (A)	Reference Number	Weight (g)	Pack.	Catalog Number
400	0,8	J078921	3,5	10	MI6FA40V0,8P
400	1	J080393	3,5	10	MI6FA40V1P
400	1,25	A094415	3,5	10	MI6FA40V1,25P
400	1,6	K078922	3,5	10	MI6FA40V1,6P
400	2	K080394	3,5	10	MI6FA40V2P
400	2,5	W093169	3,5	10	MI6FA40V2,5P
400	3,15	D080641	3,5	10	MI6FA40V3,15P
400	4	D080917	3,5	10	MI6FA40V4P
400	5	H079771	3,5	10	MI6FA40V5P
400	6,3	C080916	3,5	10	MI6FA40V6,3P
400	8	B080915	3,5	10	MI6FA40V8P
400	10	X093170	3,5	10	MI6FA40V10P
400	12,5	Y093171	3,5	10	MI6FA40V12,5P
400	16	M080626	3,5	10	MI6FB40V16P
250	20	L098105	3,5	10	MI6FA25V20P
125	25	X098000	3,5	10	MI6FA12,5V25P
125	30	K081038	3,5	10	MI6FA12,5V30P

400VAC SA 6x32 with trip-indicator Medium-Time lag Very High breaking capacity

Voltage rating Un (VAC)	Rating (A)	Reference Number	Weight (g)	Pack.	Catalog Number
400	0,8	G099251	3,5	10	MI6SA40V0,8P
400	1	A079764	3,5	10	MI6SA40V1P
400	1,25	H094261	3,5	10	MI6SA40V1,25P
400	1,6	K094263	3,5	10	MI6SA40V1,6P
400	2	J089455	3,5	10	MI6SA40V2P
400	2,5	L094264	3,5	10	MI6SA40V2,5P
400	3,15	K089456	3,5	10	MI6SA40V3,15P
400	4	M094265	3,5	10	MI6SA40V4P
400	5	P094267	3,5	10	MI6SA40V5P
400	6,3	Z093172	3,5	10	MI6SA40V6,3P
400	8	Q094268	3,5	10	MI6SA40V8P
400	10	Y081027	3,5	10	MI6SA40V10P
250	12,5	T094271	3,5	10	MI6SA25V12,5P
250	16	W094273	3,5	10	MI6SA25V16P
250	20	X099472	3,5	10	MI6SA25V20P
125	25	X094274	3,5	10	MI6SA12,5V25P
125	30	J094285	3,5	10	MI6SA12,5V30P

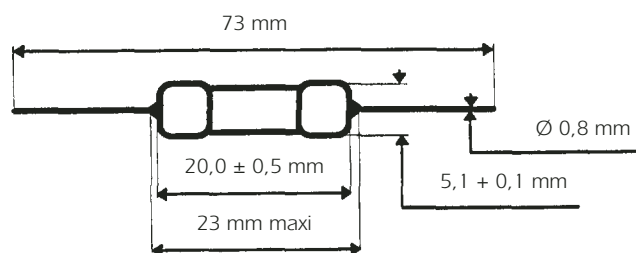


Axial leads 5x20 250V - FC "AL" Fast Acting

Electricals characteristics :
according to IEC 127-2 Standard Sheet 1

BETWEEN 0,16 TO 10A

Dimensions



Sand-filled fuses
Max weight : 1,5 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at 250 V	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
5 x 20	250	0,160	Along IEC 127 1500 A @ 250 VAC cos φ ≥ 0,7	0,0011	0,0025	1,6	250V FC 0,160 A 5x20 AL	L205032	MI5FCP25V0,16
		0,200		0,0018	0,004	1,45	250V FC 0,200 A 5x20 AL	M205033	MI5FCP25V0,20
		0,250		0,0035	0,008	1,3	250V FC 0,250 A 5x20 AL	N205034	MI5FCP25V0,25
		0,315		0,0072	0,016	1,15	250V FC 0,315 A 5x20 AL	E206061	MI5FCP25V0,31
		0,400		0,015	0,032	1,1	250V FC 0,400 A 5x20 AL	F206062	MI5FCP25V0,4
		0,500		0,032	0,066	1	250V FC 0,500 A 5x20 AL	P205035	MI5FCP25V0,5
		0,630		0,052	0,082	0,45	250V FC 0,630 A 5x20 AL	H206064	MI5FCP25V0,63
		0,800		0,098	0,16	0,4	250V FC 0,800 A 5x20 AL	G206063	MI5FCP25V0,8
		1,000	Along IEC 269.1 and 269.3 6 kA @ 250 VAC cos φ ≥ 0,2	0,2	0,32	0,37	250V FC 1,000 A 5x20 AL	Q205036	MI5FCP25V1
		1,250		0,11	0,35	0,55	250V FC 1,250 A 5x20 AL	R205037	MI5FCP25V1,25
		1,600		0,28	0,55	0,42	250V FC 1,600 A 5x20 AL	S205038	MI5FCP25V1,6
		2,000		0,55	1,2	0,38	250V FC 2,000 A 5x20 AL	T205039	MI5FCP25V2
		2,500		1,1	2,4	0,34	250V FC 2,500 A 5x20 AL	V205040	MI5FCP25V2,5
		3,150		2,5	5	0,28	250V FC 3,150 A 5x20 AL	W205041	MI5FCP25V3,15
		4,000		6,1	12	0,23	250V FC 4,000 A 5x20 AL	X205042	MI5FCP25V4
		5,000		11	22	0,21	250V FC 5,000 A 5x20 AL	Y205043	MI5FCP25V5
		6,300		25	45	0,18	250V FC 6,300 A 5x20 AL	Z205044	MI5FCP25V6,3
		8		72	130	0,13	250V FC 8,000 A 5x20 AL	A205045	MI5FCP25V8
		10		150	270	0,11	250V FC 10,00 A 5x20 AL	B205046	MI5FCP25V10

These fuses are not SEMKO approved. IEC 127 doesn't take into account 5x20 fuses with axial leads.

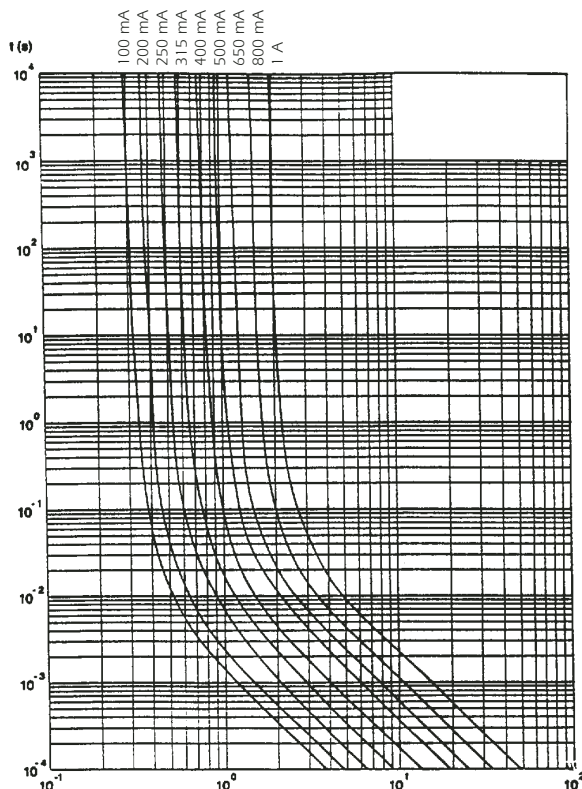
Axial leads

5x20

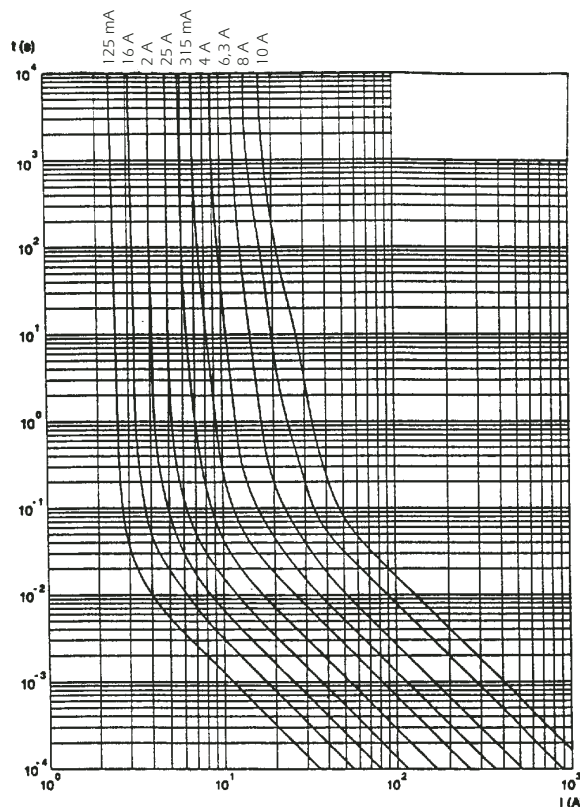
250V - FC "AL" Fast Acting

Time-current characteristics

250V FC 5x20 AL

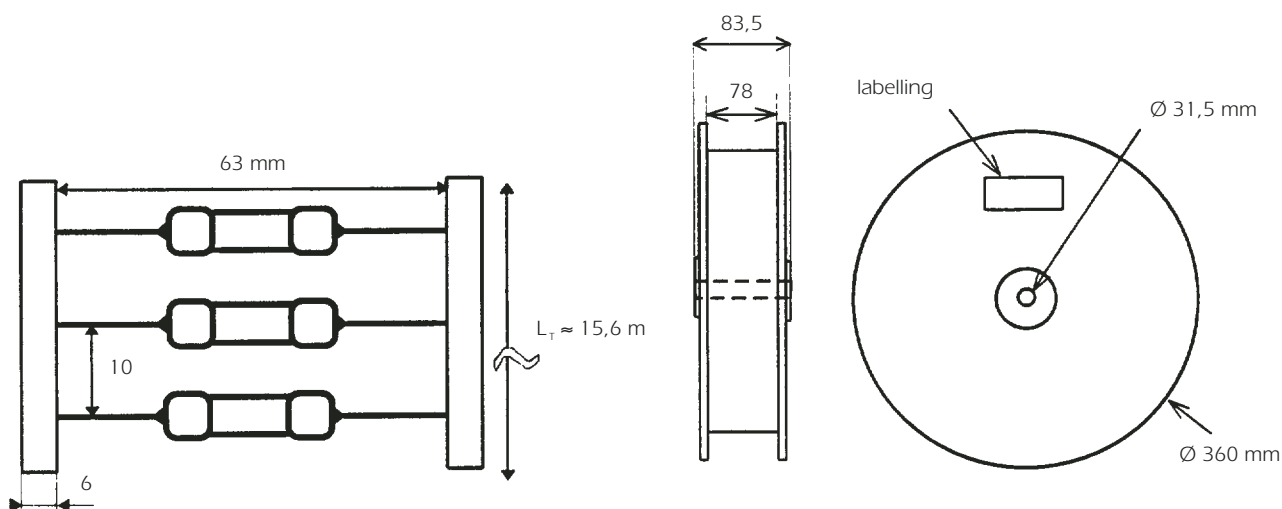


250V FC 5x20 AL



I margin $\pm 12\%$. Actual pre-arcing time(s). R.M.S. Value of pre-arcing current (A).

Packaging: in tape per 2000 pieces



Installation instruction

Soldering heat resistance : according IEC 68-2-20 / 260°C for 10 seconds.

Material:

Body: ceramic tube

Connection: Tin plated copper

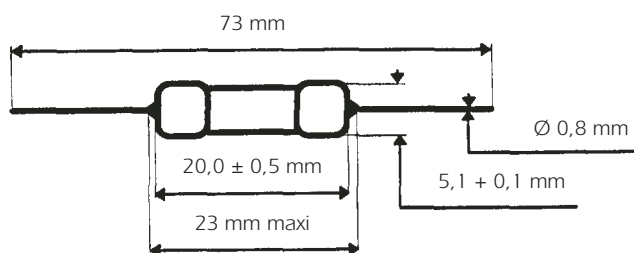


Axial leads 5x20 250V - FA/FB "AL" Very Fast Acting

Approvals UL recognized E 90660

BETWEEN 0,04 TO 6,3 A

Dimensions



Sand-filled fuses
Max weight : 1,5 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity	[I ² t] Pre-arcing	[I ² t] Total clearing at 250 V	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
5 x 20	250	0,040*	250 VAC	0,00013	0,0004	1,5	250V FB 0,040 A 5 x 20AL	Z204883	MI5FBP25V0,04
		0,050*	4 kA	0,00020	0,0006	1,5	250V FB 0,050 A 5 x 20AL	S206901	MI5FBP25V0,05
		0,063*	cos φ ≥ 0,7	0,00041	0,0012	1,3	250V FB 0,063 A 5 x 20AL	K205031	MI5FBP25V0,063
		0,080*		0,00077	0,0022	1,1	250V FB 0,080 A 5 x 20AL	C207899	MI5FBP25V0,08
		0,100*		0,00131	0,0037	1,1	250V FB 0,100 A 5 x 20AL	B206472	MI5FBP25V0,1
		0,125	250 VAC	0,00077	0,0021	1,7	250V FA 0,125 A 5 x 20AL	M205907	MI5FAP25V0,125
		0,160	30 kA	0,0020	0,006	1,3	250V FA 0,160 A 5 x 20AL	H208249	MI5FAP25V0,16
		0,200	cos φ ≥ 0,2	0,0046	0,013	1,1	250V FA 0,200 A 5 x 20AL	J208250	MI5FAP25V0,2
		0,250		0,009	0,025	1,0	250V FA 0,250 A 5 x 20AL	L205906	MI5FAP25V0,25
		0,315		0,016	0,045	0,90	250V FA 0,315 A 5 x 20AL	K208251	MI5FAP25V0,315
		0,400	for	0,03	0,085	0,85	250V FA 0,400 A 5 x 20AL	L208252	MI5FAP25V0,4
		0,500	approvals	0,05	0,15	0,80	250V FA 0,500 A 5 x 20AL	M208253	MI5FAP25V0,5
		0,630	I _c = 10 kA	0,12	0,35	0,70	250V FA 0,630 A 5 x 20AL	N208254	MI5FAP25V0,63
		0,800	under 250 VAC	0,25	0,72	0,60	250V FA 0,800 A 5 x 20AL	P208255	MI5FAP25V0,8
		1,000	cos φ ≥ 0,7	0,11	0,25	0,46	250V FA 1,000 A 5 x 20AL	Q208256	MI5FAP25V1
		1,250		0,26	0,65	0,36	250V FA 1,250 A 5 x 20AL	R208257	MI5FAP25V1,25
		1,600		0,39	0,9	0,42	250V FA 1,600 A 5 x 20AL	S208258	MI5FAP25V1,6
		2,000		0,81	1,9	0,37	250V FA 2,000 A 5 x 20AL	T208259	MI5FAP25V2
		2,500		1,44	3,2	0,34	250V FA 2,500 A 5 x 20AL	V208260	MI5FAP25V2,5
		3,150		2,46	5,5	0,33	250V FA 3,150 A 5 x 20AL	W208261	MI5FAP25V3,15
		4,000		4,6	10	0,31	250V FA 4,000 A 5 x 20AL	X208262	MI5FAP25V4
		5,000		11	25	0,24	250V FA 5,000 A 5 x 20AL	Y208263	MI5FAP25V5
		6,300		23	50	0,20	250V FA 6,300 A 5 x 20AL	Y208033	MI5FAP25V6,3

*Rating non approval

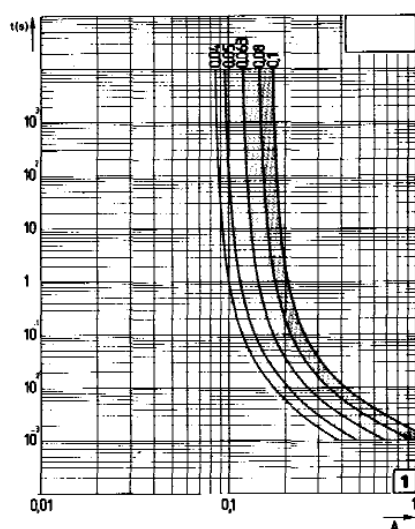
Axial leads

5x20

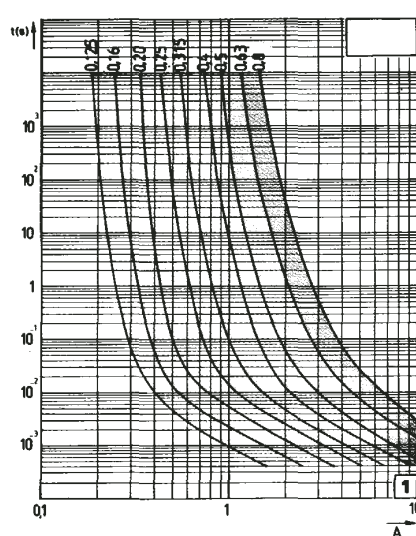
250V - FA/FB "AL" Very Fast Acting

Time-current characteristics

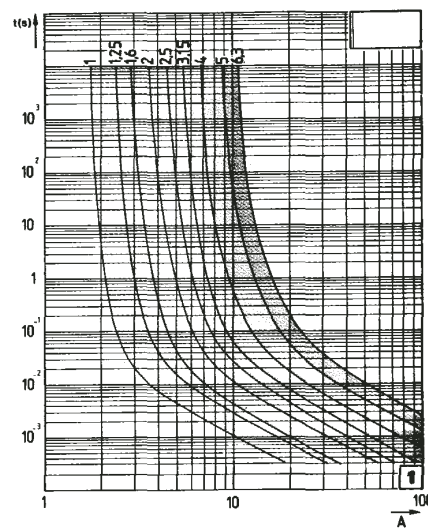
250V FB 5x20 AL



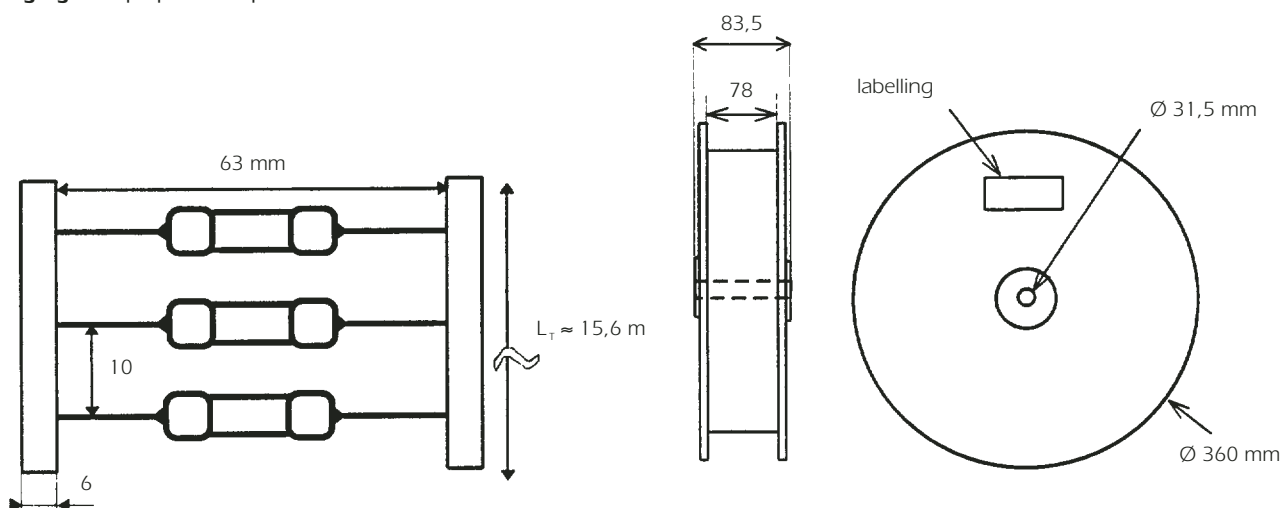
250V FA 5x20 AL



250V FA 5x20 AL



Packaging: in tape per 2000 pieces



Installation instruction

Soldering heat resistance : according IEC 68-2-20 / 260°C for 10 seconds.

Material:

Body: ceramic tube

Connection: Tin plated copper

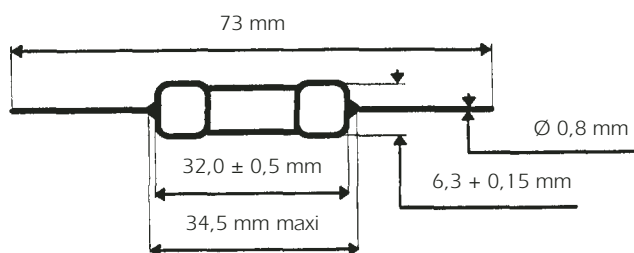


Axial leads 6x32 250V - FA "AL" Very Fast Acting

Approvals UL recognized E 76491

BETWEEN 0,1 TO 6,3 A

Dimensions



Max weight : 2,5 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 V AC	[I ² t] Pre-arcing	[I ² t] Total clearing at 250 V	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	250	0,100	200 kA cos φ ≥ 0,2	0,00057	0,0011	2,75	250V FA 0,100 A 6.32 AL	M208138	MI6FAP25V0,1
		0,125		0,00077	0,0015	2,6	250V FA 0,125 A 6.32 AL	N208139	MI6FAP25V0,125
		0,160		0,0020	0,004	2,0	250V FA 0,160 A 6.32 AL	P208140	MI6FAP25V0,16
		0,200		0,0046	0,009	1,7	250V FA 0,200 A 6.32 AL	Q208141	MI6FAP25V0,2
		0,250		0,009	0,018	1,55	250V FA 0,250 A 6.32 AL	R208142	MI6FAP25V0,25
		0,315		0,016	0,032	1,45	250V FA 0,315 A 6.32 AL	S208143	MI6FAP25V0,315
		0,400		0,03	0,06	1,40	250V FA 0,400 A 6.32 AL	T208144	MI6FAP25V0,4
		0,500		0,05	0,10	1,40	250V FA 0,500 A 6.32 AL	V208145	MI6FAP25V0,5
		0,630		0,12	0,24	1,15	250V FA 0,630 A 6.32 AL	W208146	MI6FAP25V0,63
		0,800		0,25	0,50	1,00	250V FA 0,800 A 6.32 AL	X208147	MI6FAP25V0,8
		1,000		0,11	0,20	0,71	250V FA 1,000 A 6.32 AL	Y208148	MI6FAP25V1
		1,250		0,26	0,50	0,55	250V FA 1,250 A 6.32 AL	Z208149	MI6FAP25V1,25
		1,600		0,39	0,7	0,65	250V FA 1,600 A 6.32 AL	C208152	MI6FAP25V1,6
		2,000		0,81	1,4	0,55	250V FA 2,000 A 6.32 AL	D208153	MI6FAP25V2
		2,500		1,44	2,5	0,52	250V FA 2,500 A 6.32 AL	E208154	MI6FAP25V2,5
		3,150		2,46	4,3	0,53	250V FA 3,150 A 6.32 AL	F208155	MI6FAP25V3,15
		4,000		4,6	8	0,48	250V FA 4,000 A 6.32 AL	G208156	MI6FAP25V4
		5,000		11	20	0,37	250V FA 5,000 A 6.32 AL	H208157	MI6FAP25V5
		6,300		23	40	0,31	250V FA 6,300 A 6.32 AL	Z208034	MI6FAP25V6,3

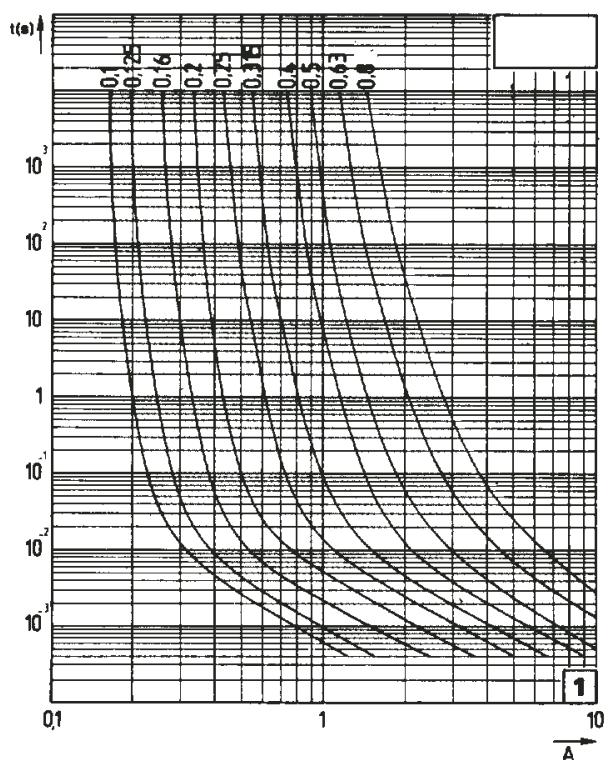
Axial leads

6x32

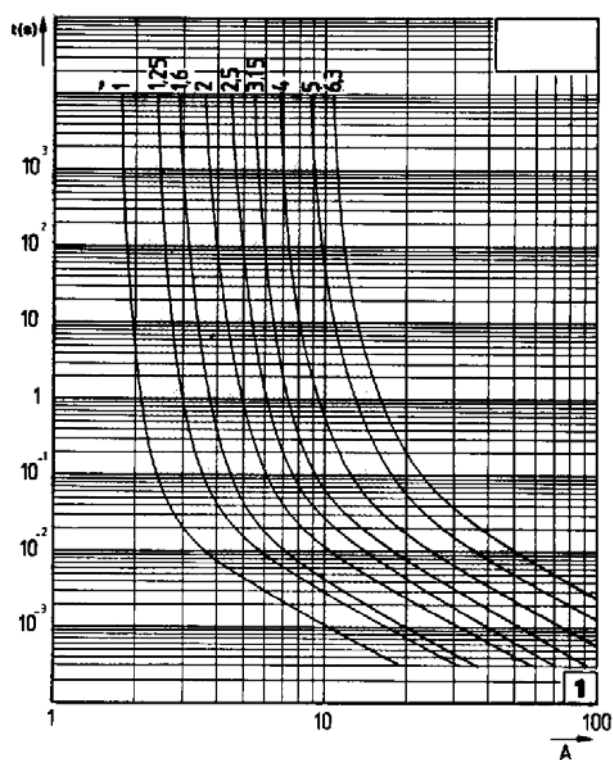
250V - FA "AL" Very Fast Acting

Time-current characteristics

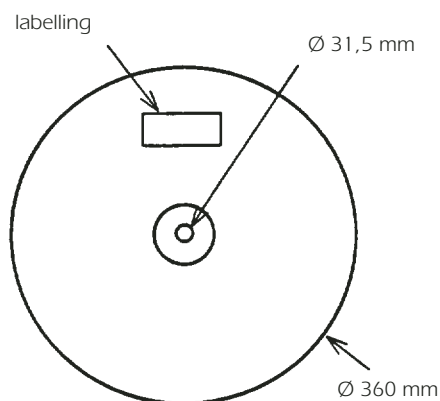
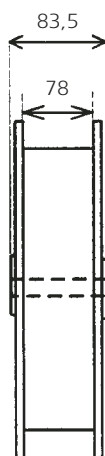
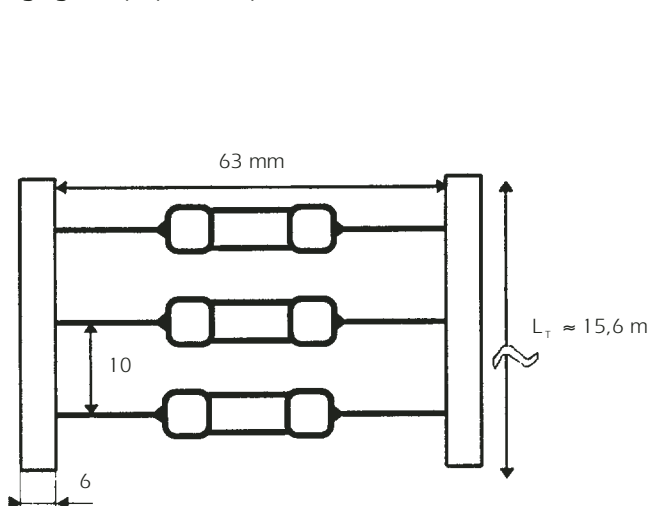
250V FA 6,3 x 32 AL



250V FA 6,3 x 32 AL



Packaging: in tape per 1500 pieces



Installation instruction

Soldering heat resistance : according IEC 68-2-20 / 260°C for 10 seconds.

Material:

Body: ceramic tube

Connection: Tin plated copper

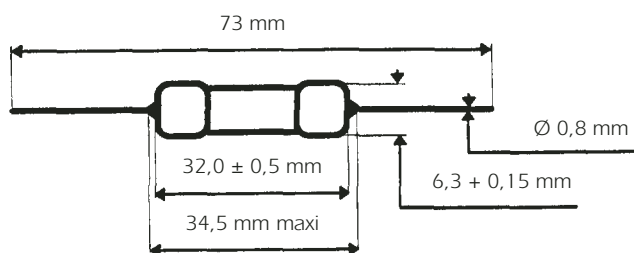


Axial leads 6x32 250V - SA "AL" Medium Time Lag

Approvals UL recognized E 76491

BETWEEN 0,1 TO 6,3 A

Dimensions



Max weight : 2,8 g



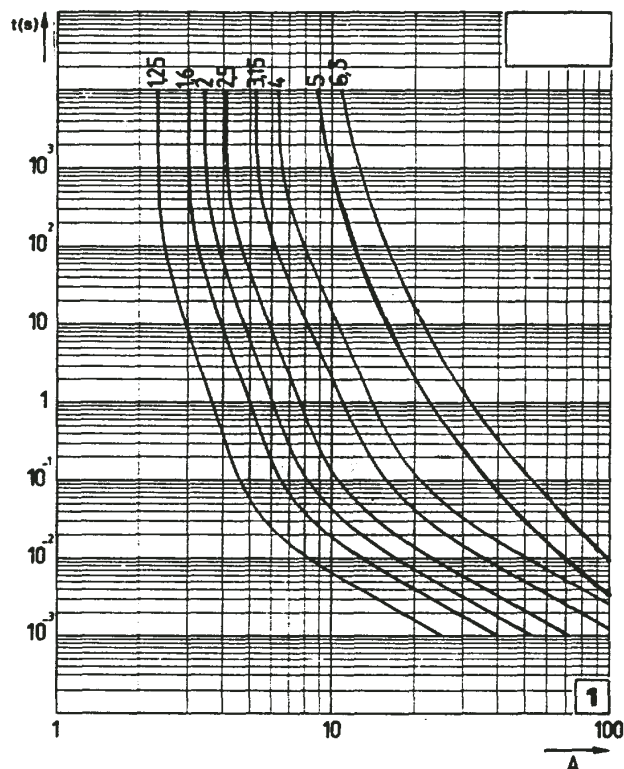
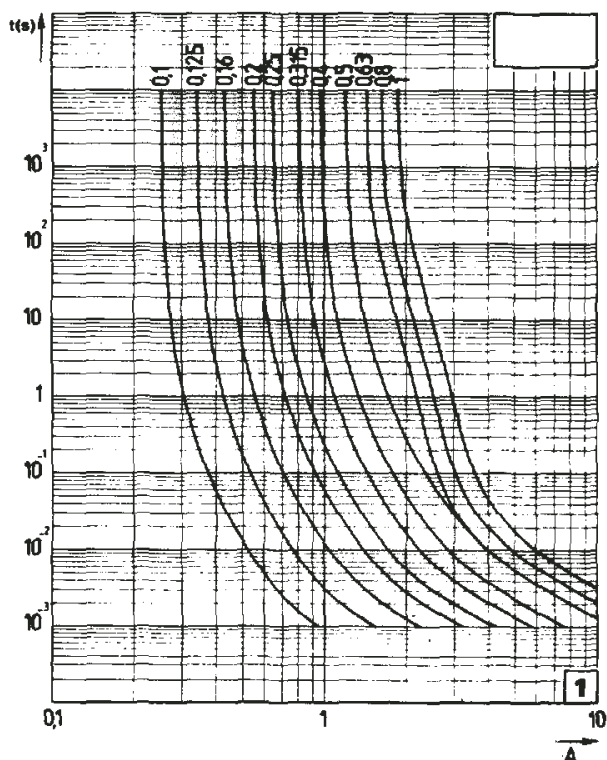
Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 250 V AC	[I ² t] Pre-arcing	[I ² t] Total clearing at 250 V	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	250	0,100	200 kA cos φ ≥ 0,2	0,00077	0,0015	2,0	250V SA 0,100 A 6.32 AL	N208231	MI6SAP25V0,1
		0,125		0,002	0,0025	1,5	250V SA 0,125 A 6.32 AL	P208232	MI6SAP25V0,125
		0,160		0,0046	0,009	1,3	250V SA 0,160 A 6.32 AL	Q208233	MI6SAP25V0,16
		0,200		0,009	0,018	1,2	250V SA 0,200 A 6.32 AL	R208234	MI6SAP25V0,2
		0,250		0,016	0,032	1,1	250V SA 0,250 A 6.32 AL	S208235	MI6SAP25V0,25
		0,315		0,03	0,06	1,0	250V SA 0,315 A 6.32 AL	T208236	MI6SAP25V0,315
		0,400		0,05	0,10	1,0	250V SA 0,400 A 6.32 AL	V208237	MI6SAP25V0,4
		0,500		0,12	0,24	0,80	250V SA 0,500 A 6.32 AL	W208238	MI6SAP25V0,5
		0,630		0,11	0,20	0,40	250V SA 0,630 A 6.32 AL	X208239	MI6SAP25V0,63
		0,800		0,17	0,31	0,40	250V SA 0,800 A 6.32 AL	Y208240	MI6SAP25V0,8
		1,000		0,26	0,50	0,40	250V SA 1,000 A 6.32 AL	Z208241	MI6SAP25V1
		1,250		0,55	1,0	0,35	250V SA 1,250 A 6.32 AL	A208242	MI6SAP25V1,25
		1,600		1,44	2,5	0,26	250V SA 1,600 A 6.32 AL	B208243	MI6SAP25V1,6
		2,000		2,46	4,3	0,25	250V SA 2,000 A 6.32 AL	C208244	MI6SAP25V2
		2,500		4,6	8	0,23	250V SA 2,500 A 6.32 AL	D208245	MI6SAP25V2,5
		3,150		11	20	0,16	250V SA 3,150 A 6.32 AL	E208246	MI6SAP25V3,15
		4,000		23	40	0,16	250V SA 4,000 A 6.32 AL	F208247	MI6SAP25V4
		5,000		15,7	70	0,13	250V SA 5,000 A 6.32 AL	G208248	MI6SAP25V5
		6,300		28	120	0,13	250V SA 6,300 A 6.32 AL	E208039	MI6SAP25V6,3

6x32

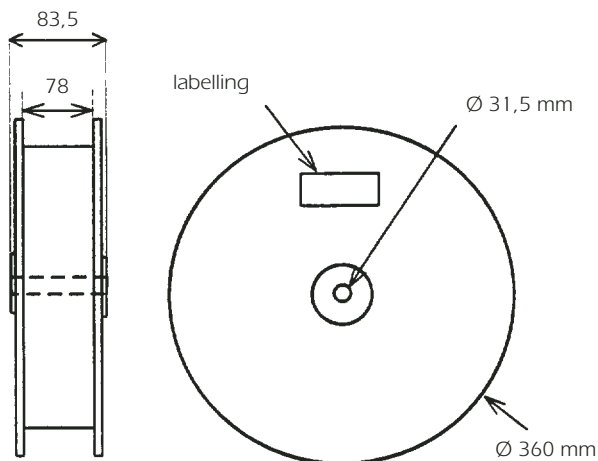
Time-current characteristics

250V SA 6,3x32 AL



Technical drawing of a three-strapped harness (L1) with dimensions:

- Horizontal distance between attachment points: 63 mm
- Vertical distance between attachment points: 10 mm
- Width of the harness: 6 mm
- Length of the harness: $L_1 \approx 20,6$ m



Soldering heat resistance : according IEC 68-2-20 / 260°C for 10 seconds.

Body: ceramic tube

Connection: Tin plated copper

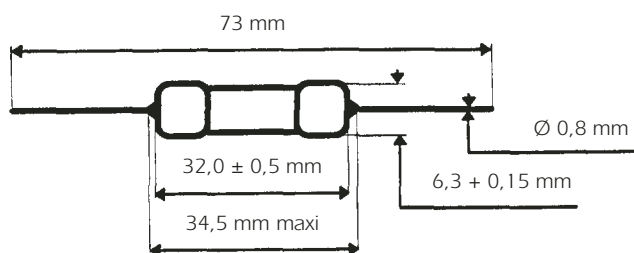


Axial leads 6x32 400V - FA "AL" Very Fast Acting

Approvals UL recognized E 76491

BETWEEN 0,1 TO 6,3 A

Dimensions



Max weight : 2,8 g



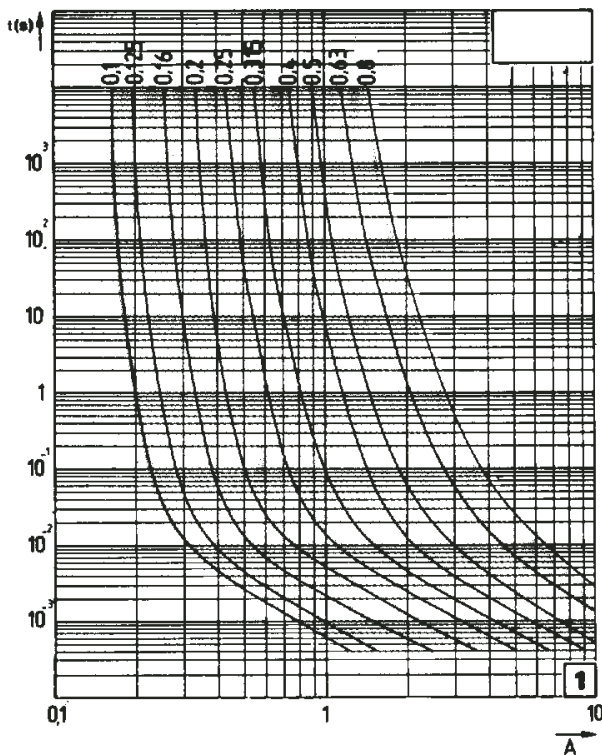
Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 400 V AC	[I ² t] Pre-arcing	[I ² t] Total clearing at 400 V	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	400	0,100	200 kA cos φ ≥ 0,2	0,00057	0,0016	2,75	400V FA 0,100 A 6.32 AL	E208177	MI6FA40V0,1
		0,125		0,00077	0,0021	2,6	400V FA 0,125 A 6.32 AL	F208178	MI6FAP40V0,125
		0,160		0,002	0,006	2,0	400V FA 0,160 A 6.32 AL	G208179	MI6FAP40V0,16
		0,200		0,0046	0,013	1,7	400V FA 0,200 A 6.32 AL	H208180	MI6FAP40V0,2
		0,250		0,009	0,025	1,55	400V FA 0,250 A 6.32 AL	J208181	MI6FAP40V0,25
		0,315		0,016	0,045	1,45	400V FA 0,315 A 6.32 AL	K208182	MI6FAP40V0,31
		0,400		0,03	0,085	1,40	400V FA 0,400 A 6.32 AL	L208183	MI6FAP40V0,4
		0,500		0,05	0,15	1,40	400V FA 0,500 A 6.32 AL	M208184	MI6FAP40V0,5
		0,630		0,12	0,35	1,15	400V FA 0,630 A 6.32 AL	N208185	MI6FAP40V0,63
		0,800		0,25	0,72	1,0	400V FA 0,800 A 6.32 AL	P208186	MI6FAP40V0,8
		1,000		0,11	0,25	0,71	400V FA 1,000 A 6.32 AL	Q208187	MI6FAP40V1
		1,250		0,26	0,6	0,55	400V FA 1,250 A 6.32 AL	R208188	MI6FAP40V1,25
		1,600		0,39	0,9	0,65	400V FA 1,600 A 6.32 AL	S208189	MI6FAP40V1,6
		2,000		0,81	1,9	0,55	400V FA 2,000 A 6.32 AL	T208190	MI6FAP40V2
		2,500		1,44	3,2	0,52	400V FA 2,500 A 6.32 AL	V208191	MI6FAP40V2,5
		3,150		2,46	5,5	0,53	400V FA 3,150 A 6.32 AL	W208192	MI6FAP40V3,15
		4,000		4,6	10	0,48	400V FA 4,000 A 6.32 AL	X208193	MI6FAP40V4
		5,000	150 kA cos φ ≥ 0,2	11	25	0,37	400V FA 5,000 A 6.32 AL	Y208194	MI6FAP40V5
		6,300		1,1	12	0,22	400V FA 6,300 A 6.32 AL	A208035	MI6FAP40V6,3

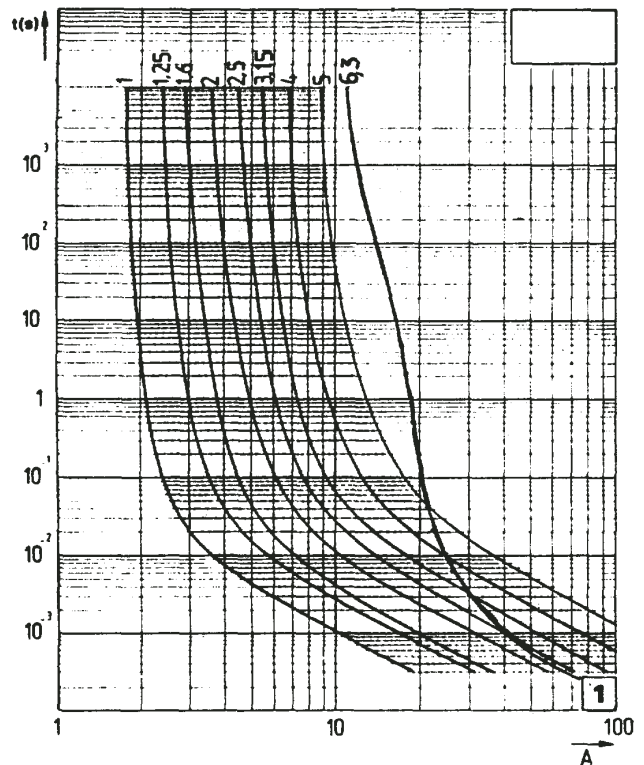
Axial leads 6x32 400V - FA "AL" Very Fast Acting

Time-current characteristics

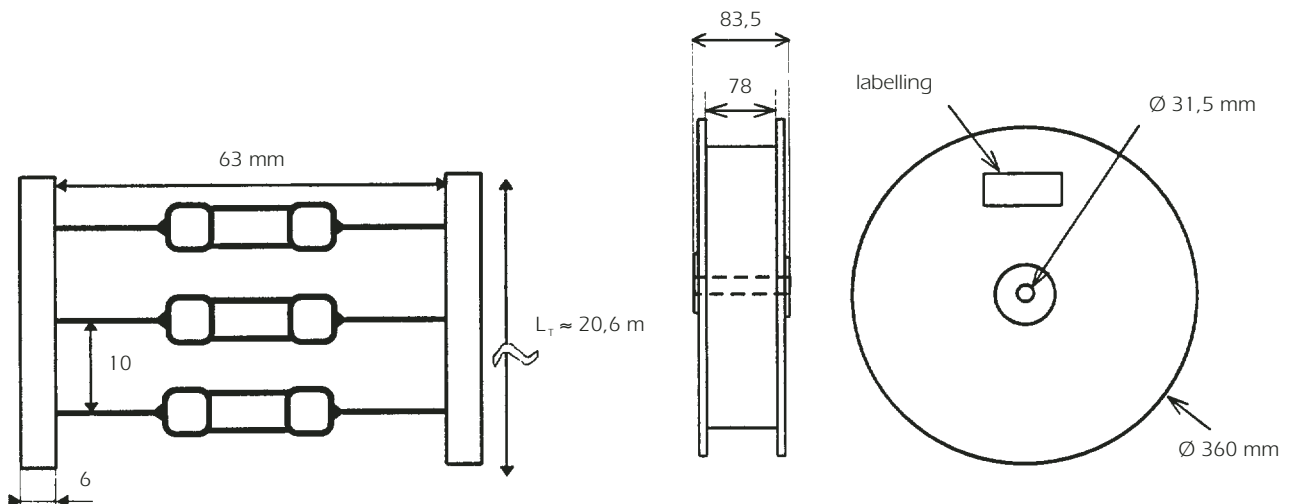
400V FA 6,3x32 AL



400V FA 6,3x32 AL



Packaging: in tape per 1500 pieces



Installation instruction

Soldering heat resistance : according IEC 68-2-20 / 260°C for 10 seconds.

Material:

Body: ceramic tube

Connection: Tin plated copper

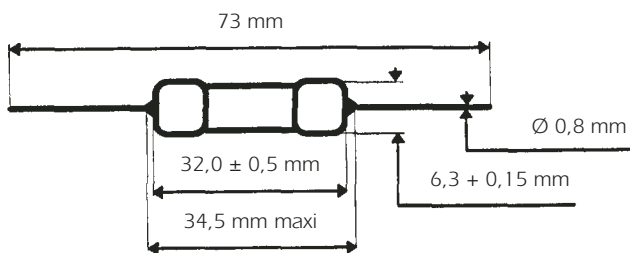


Axial leads 6x32 500V - FA "AL" Very Fast Acting

Approvals UL recognized E 76491

BETWEEN 0,1 TO 6,3 A

Dimensions



Max weight : 2,8 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 500 V AC	[I ² t] Pre-arcing	[I ² t] Total clearing at 500 V	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A ² s		V			
6,3 x 32	500	0,100	200 kA cos φ ≥ 0,2	0,00057	0,002	2,75	500V FA 0,100 A 6.32 AL	A208196	MI6FAP50V0,1
		0,125		0,00077	0,003	2,6	500V FA 0,125 A 6.32 AL	B208197	MI6FAP50V0,125
		0,160		0,002	0,008	2,0	500V FA 0,160 A 6.32 AL	C208198	MI6FAP50V0,16
		0,200		0,0046	0,017	1,7	500V FA 0,200 A 6.32 AL	D208199	MI6FAP50V0,2
		0,250		0,009	0,035	1,55	500V FA 0,250 A 6.32 AL	E208200	MI6FAP50V0,25
		0,315		0,016	0,060	1,45	500V FA 0,315 A 6.32 AL	F208201	MI6FAP50V0,315
		0,400		0,03	0,11	1,40	500V FA 0,400 A 6.32 AL	G208202	MI6FAP50V0,4
		0,500		0,05	0,20	1,40	500V FA 0,500 A 6.32 AL	H208203	MI6FAP50V0,5
		0,630		0,12	0,45	1,15	500V FA 0,630 A 6.32 AL	J208204	MI6FAP50V0,63
		0,800		0,25	0,92	1,0	500V FA 0,800 A 6.32 AL	K208205	MI6FAP50V0,8
		1,000		0,11	0,30	0,71	500V FA 1,000 A 6.32 AL	N207104	MI6FAP50V1
		1,250		0,26	0,75	0,55	500V FA 1,250 A 6.32 AL	M208207	MI6FAP50V1,25
		1,600		0,39	1,1	0,65	500V FA 1,600 A 6.32 AL	N208208	MI6FAP50V1,6
		2,000		0,81	2,2	0,55	500V FA 2,000 A 6.32 AL	P208209	MI6FAP50V2
		2,500		1,44	4	0,52	500V FA 2,500 A 6.32 AL	Q208210	MI6FAP50V2,5
		3,150		2,46	7	0,53	500V FA 3,150 A 6.32 AL	R208211	MI6FAP50V3,15
		4,000		4,6	14	0,48	500V FA 4,000 A 6.32 AL	S208212	MI6FAP50V4
		5,000	20 kA cos φ ≥ 0,2	11	30	0,37	500V FA 5,000 A 6.32 AL	T208213	MI6FAP50V5
		6,300		1,1	20	0,22	500V FA 6,300 A 6.32 AL	C208037	MI6FAP50V6,3

Miniature Fuses



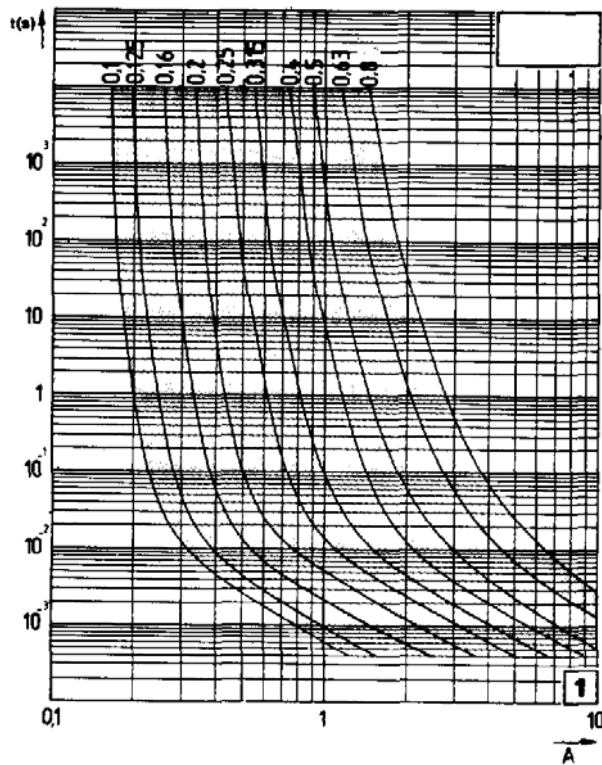
Axial leads

6x32

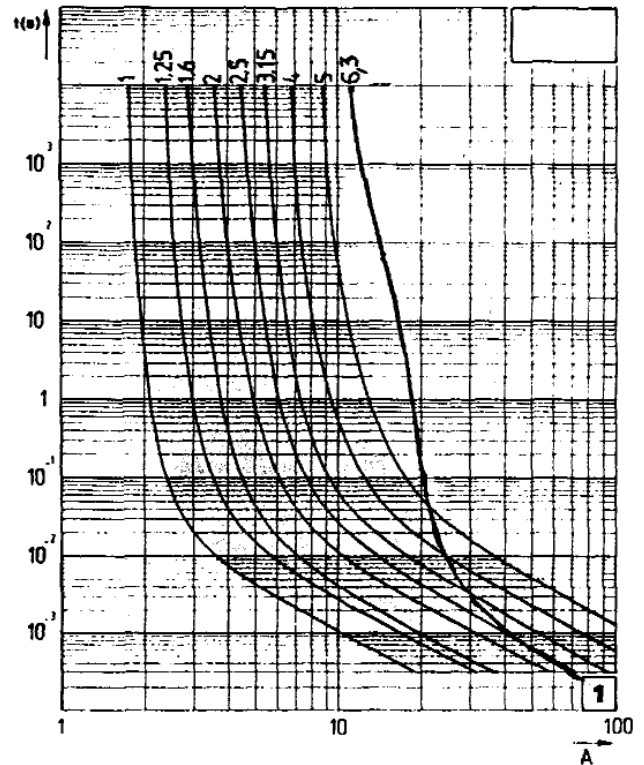
500V - FA "AL" Very Fast Acting

Time-current characteristics

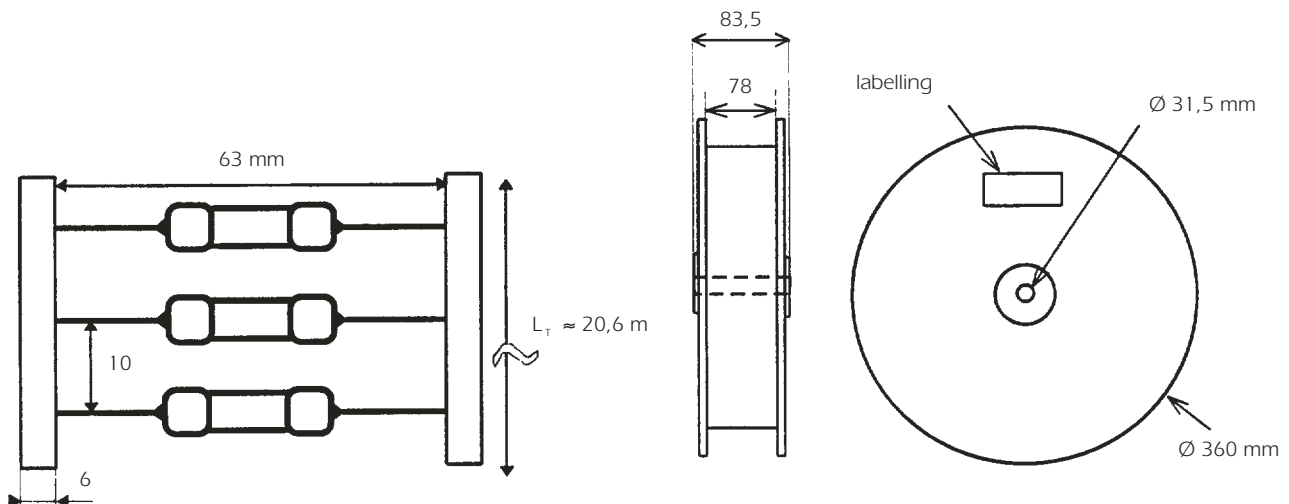
500V FA 6x32 AL



500V FA 6x32 AL



Packaging: in tape per 1500 pieces



Installation instruction

Soldering heat resistance : according IEC 68-2-20 / 260°C for 10 seconds.

Material:

Body: ceramic tube

Connection: Tin plated copper

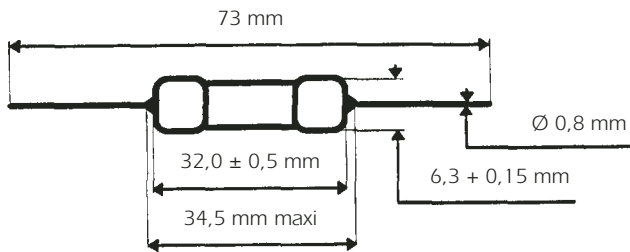


Axial leads 6x32 690V - FA "AL" Very Fast Acting

Approvals UL recognized E 76491

BETWEEN 0,1 TO 2 A

Dimensions



Max weight : 2,8 g



Basic Characteristics

Size	Rated Voltage	Rated Current	Breaking Capacity under 660 V AC	[I²t] Pre-arcing	[I²t] Total clearing at 660 V	Max voltage drop at I _n	Designation	Reference Number	Catalog Number
mm	VAC	A		A² s		V			
6,3 x 32	690	0,100	30 kA cos φ ≥ 0,2	0,00057	0,0037	2,75	690V FA 0,100 A 6.32 AL	V208214	MI6FAP69V0,1
		0,125		0,00077	0,005	2,6	690V FA 0,125 A 6.32 AL	W208215	MI6FAP69V0,125
		0,160		0,002	0,014	2,0	690V FA 0,160 A 6.32 AL	X208216	MI6FAP69V0,16
		0,200		0,0046	0,030	1,7	690V FA 0,200 A 6.32 AL	Y208217	MI6FAP69V0,2
		0,250		0,009	0,060	1,55	690V FA 0,250 A 6.32 AL	Z208218	MI6FAP69V0,25
		0,315		0,016	0,10	1,45	690V FA 0,315 A 6.32 AL	A208219	MI6FAP69V0,315
		0,400		0,03	0,20	1,40	690V FA 0,400 A 6.32 AL	B208220	MI6FAP69V0,4
		0,500		0,05	0,33	1,40	690V FA 0,500 A 6.32 AL	C208221	MI6FAP69V0,5
		0,630		0,12	0,8	1,15	690V FA 0,630 A 6.32 AL	D208222	MI6FAP69V0,63
		0,800		0,18	1,2	1,15	690V FA 0,800 A 6.32 AL	E208223	MI6FAP69V0,8
		1,000		0,11	0,48	0,75	690V FA 1,000 A 6.32 AL	F208224	MI6FAP69V1
		1,250		0,17	0,76	0,70	690V FA 1,250 A 6.32 AL	G208225	MI6FAP69V1,25
		1,600		0,39	1,7	0,65	690V FA 1,600 A 6.32 AL	Y206285	MI6FAP69V1,6
		2,000		0,81	3,5	0,55	690V FA 2,000 A 6.32 AL	D208038	MI6FAP69V2

690V - FA "AL" Very Fast Acting



Multi-Meter fuses 10x35 -10x38 FSM - 1000 V AC/DC

Ferraz Shawmut has developed a true 1000V AC/DC fuse designed to protect both analog and digital multi-meters.

These fuses cover all the industry's multi-meter requirements in three easy to use amperage ratings. Good for 1000 volts AC and DC, the FSM line of Ferraz Shawmut fuses are designed for the power electronics metering and controls market.

Features/Benefits

- For the protection of multi-meters
- 1000V AC/DC for full range protection
- 100% Current Rated for continuous current carrying capability
- Glass melamine body and plated terminals provide superior reliability and performance

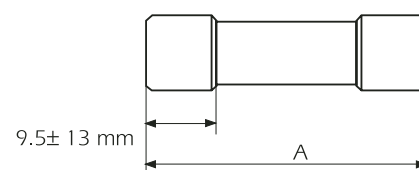
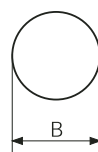
Highlights:

- Fast-Acting
- 1000 Volts AC/DC
- 20,000A Interrupting Rating @ 1000V AC/DC for all ratings
- (3) Ampere Ratings 44/100A, 11A, 15A
- Current-Limiting
- UL Recognized Component



Dimensions:

Catalog No.	A	B
FSM44/100	1.375"/35 mm	0.406
FSM11	1.500"/38 mm	0.406"
FSM15	1.500"/38 mm	0.406"



Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Reference Number
44/100	FSM44/100	W232480
11	FSM11	X232481
15	FSM15	Y232482

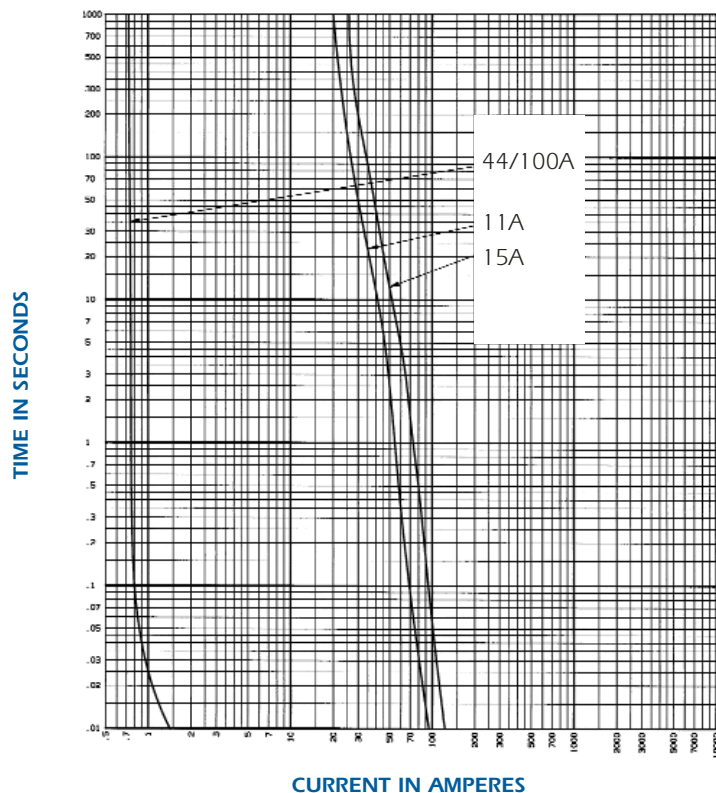
Cross Reference

Ferraz Shawmut **FSM** replaces the
Bussmann: DMM-B
Littelfuse: FLU

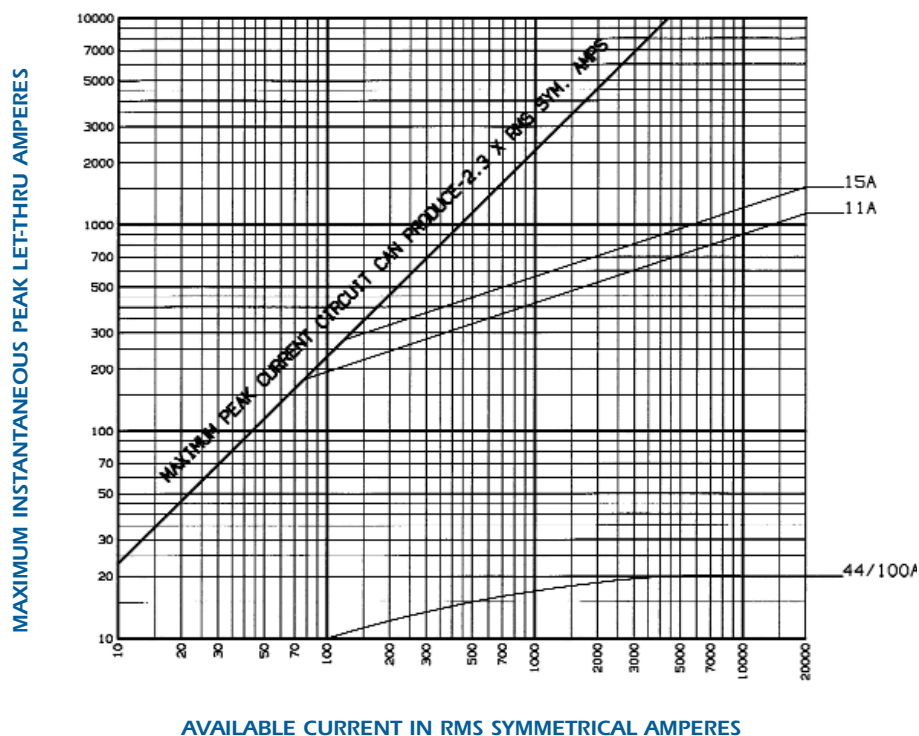
Miniature Fuses

Multi-Meter fuses
10x35 -10x38
FSM - 1000 V AC/DC

Melting current data



Peak Let-Thru current data



American Round Fuses

Form 101 Range

A15QS

Semiconductor Protection Fuses

A15QS Amp-trap® Form 101 Semiconductor Protection fuses were designed for the specific protection of diodes and other semiconductor devices rated 150VAC/DC. The A15QS product line's compact design is perfect for those applications that have limitations on available space.

Features/Benefits

- Low I²t minimizes damage to protected components on short circuit
- Controlled arc voltage reduces stress to circuit components during fuse clearing
- Choice of mounting types provides options for unique termination requirements



Ratings

- AC: 1-6000A
150VAC, 100kA I.R.
- DC: 1-6000A
150VDC, 100kA I.R.

Approvals

- UL Recognized Component
- AC: UL Guide No. JFHR2 (1-4000A)
- DC Tested to UL Standard 198L parameters (1-4000A)

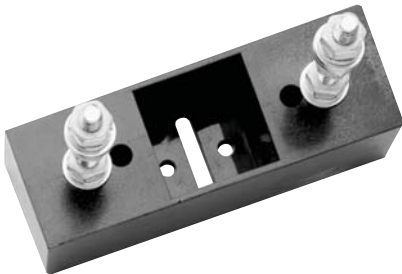
Highlights

- Fast Acting
- Current Limiting
- Low I²t
- Indicator Options Available

Applications

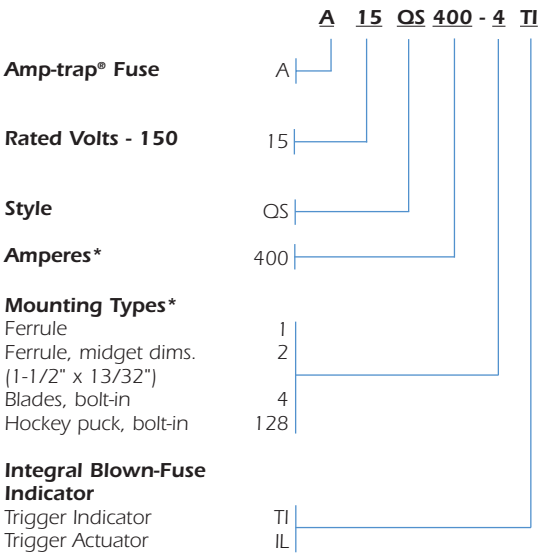
- Protection of heavy duty devices such as electrochemical rectifiers

Single Pole Fuse Blocks for A15QS Fuses



Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
1-30	30311	A212405
31-60	60306J	J211884
61-100	P243D	C219560
101-200	P243D	C219560
201-450	P243D	C219560
500-600	P243G	H222762

Catalog Numbering System



* For ampere ratings and types not listed, consult the factory.



Semiconductor (AC) fuses

American Round Fuses Form 101 Range A15QS

Semiconductor Protection Fuses

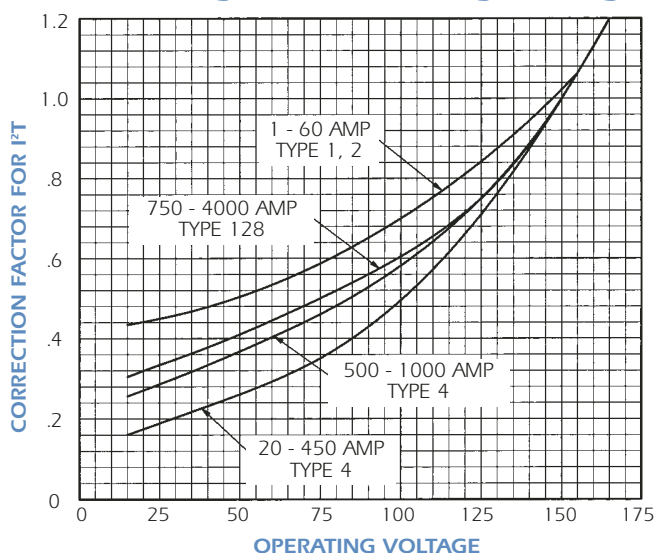
I²t Data-150VAC

Ampere Rating	Melting (A ² s X 10 ³)			Max Clearing I ² t @ 150VAC (A ² s X 10 ³)	Ampere Rating	Melting (A ² s X 10 ³)		Max Clearing I ² t @ 150VAC (A ² s X 10 ³)
	Body Style					Body Style		
	Type 2	Type 1	Type 4			Type 4	Type 128	
1	0.0001			0.0002	125	0.49		5.0
2	0.0007			0.001	130	0.53		5.3
3	0.002			0.003	150	0.72		6.8
4	0.005			0.007	175	1.0		9.0
5	0.008			0.012	200	1.3		11
6	0.015			0.022	225	1.7		14
7	0.001			0.011	250	1.9		15
8	0.001			0.015	275	2.4		19
10	0.002			0.019	300	2.9		22
12	0.003			0.030	350	4.1		32
15	0.005			0.042	400	5.1		40
20	0.009			0.072	450	6.4		50
25	0.017			0.14	500	15		90
30	0.032			0.25	550	18		108
35		0.045		0.21	600	20		130
40		0.060		0.28	700	25		220
45		0.074		0.34	800	34		290
50		0.10		0.47	900	46		400
60		0.18		0.80	1000	58		520
20			0.01	0.10	750		40	300
25			0.02	0.16	800		46	340
30			0.03	0.21	1000		72	540
35			0.04	0.29	1200		90	680
40			0.05	0.39	1500		160	1200
45			0.06	0.47	1600		160	1200
50			0.08	0.64	1800		202	1500
60			0.12	0.94	2000		250	1900
70			0.16	2.0	2500		422	3200
80			0.21	2.5	3000		640	4800
90			0.27	3.1	3500		1200	6500
100			0.33	3.6	4000		1400	8500

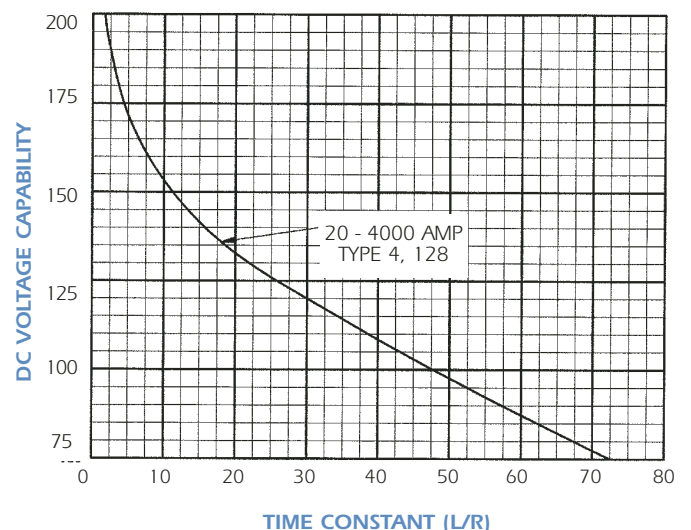
I²t Data-150VDC ; L/R=10ms

Ampere Rating	Clearing I ² t @ 150 VDC L/R =10ms (A ² s X 10 ³)	
	Type 4	Type 128
20	0.07	
25	0.11	
30	0.15	
35	0.20	
40	0.27	
45	0.33	
50	0.45	
60	0.66	
70	1.4	
80	1.8	
90	2.2	
100	2.5	
125	3.5	
130	3.7	
150	4.7	
175	6.3	
200	7.7	
225	9.8	
250	11	
275	13	
300	15	
350	22	
400	28	
450	35	
500	63	
550	76	
600	91	
700	150	
750		210
800	200	240
900	280	
1000	360	380
1200		470
1500		840
1600		840
1800		1000
2000		1300
2500		2200
3000		3400
3500		5200
4000		6800

Clearing I²t vs Working Voltage



DC Voltage vs Time Constant (L/R)



Semiconductor (AC) fuses



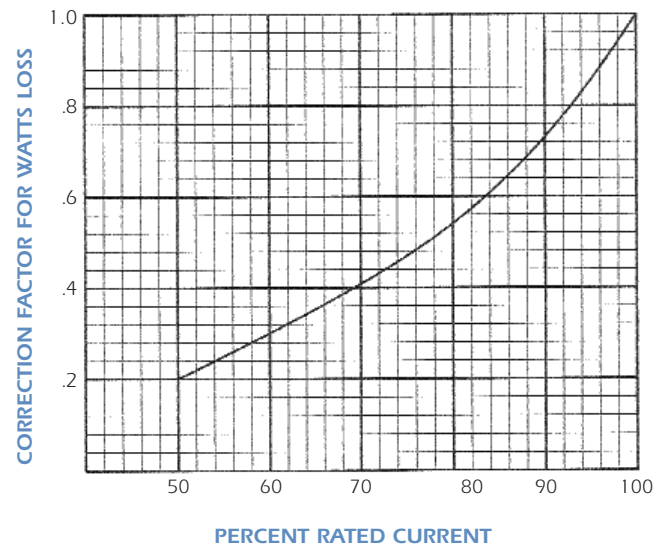
American Round Fuses Form 101 Range A15QS

Semiconductor Protection Fuses

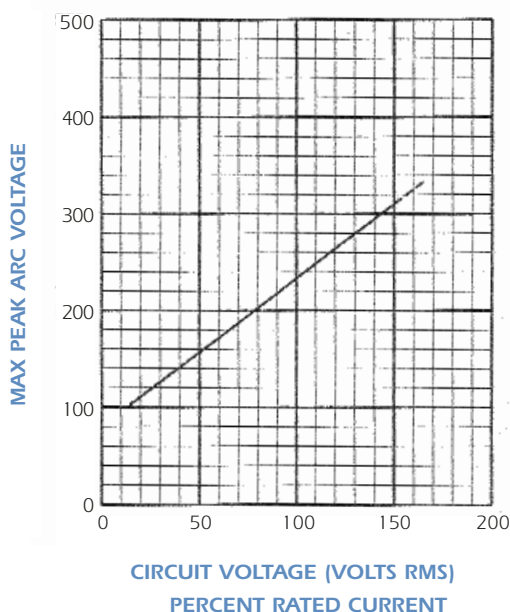
Watts Loss @ Rated Current

Ampere Rating	Watts Loss @ Rated Current (W)			Ampere Rating	Watts Loss @ Rated Current (W)	
	Type 2	Type 1	Type 4		Type 4	Type 128
1	0.68			100	10	
2	1.3			125	13	
3	1.7			130	14	
4	2.1			150	16	
5	2.8			175	20	
6	3.1			200	22	
7	2.2			225	25	
8	2.5			250	27	
10	2.6			275	30	
12	3.0			300	33	
15	3.0			350	40	
20	4.0			400	45	
25	5.2			450	50	
30	5.6			500	30	
35		9		550	33	
40		10		600	35	
45		12		700	50	
50		13		750		66
60		14		800	57	71
20			1.5	900	67	
25			2.0	1000	75	88
30			2.2	1200		100
35			2.6	1500		130
40			3.1	1600		132
45			3.4	1800		149
50			4.0	2000		165
60			4.7	2500		195
70			5.6	3000		240
80			8.0	3500		260
90			9.0	4000		270

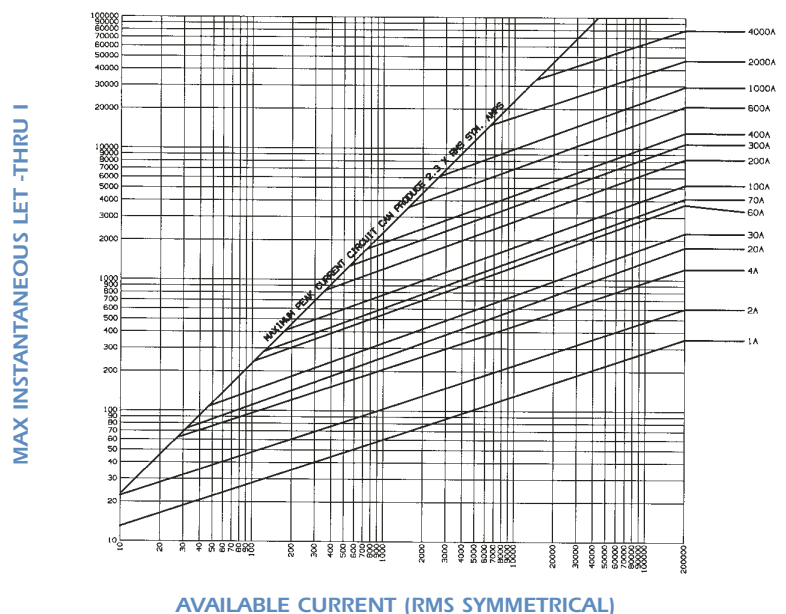
Watts Loss vs % Rated Current



Max ARC Voltage vs System Voltage



Peak Let Thru Data A15QS 1 to 4000

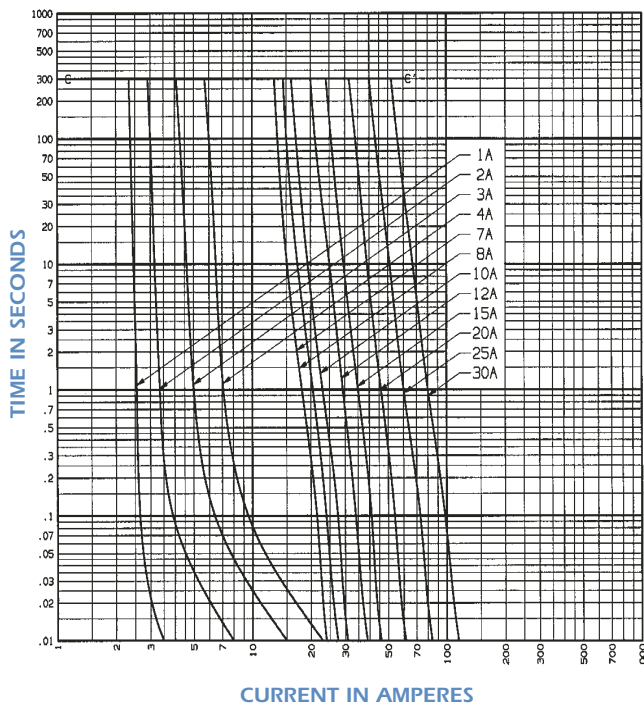




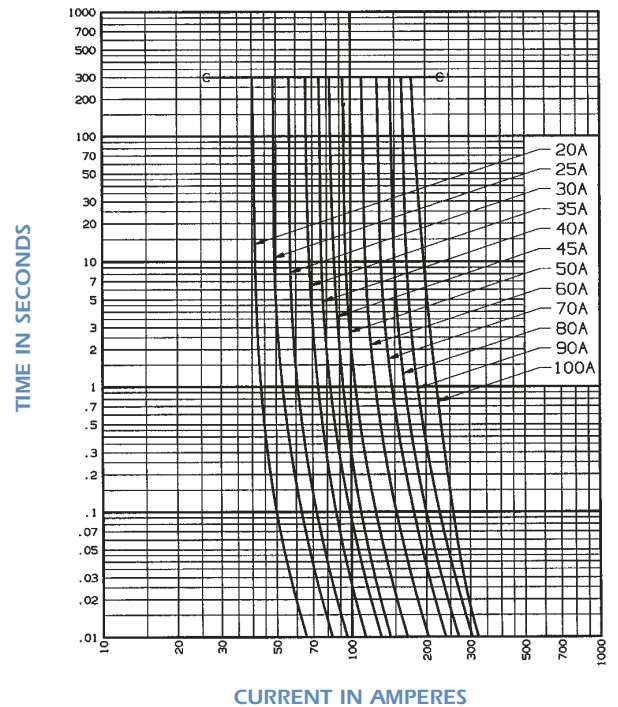
Semiconductor (AC) fuses

American Round Fuses Form 101 Range A15QS

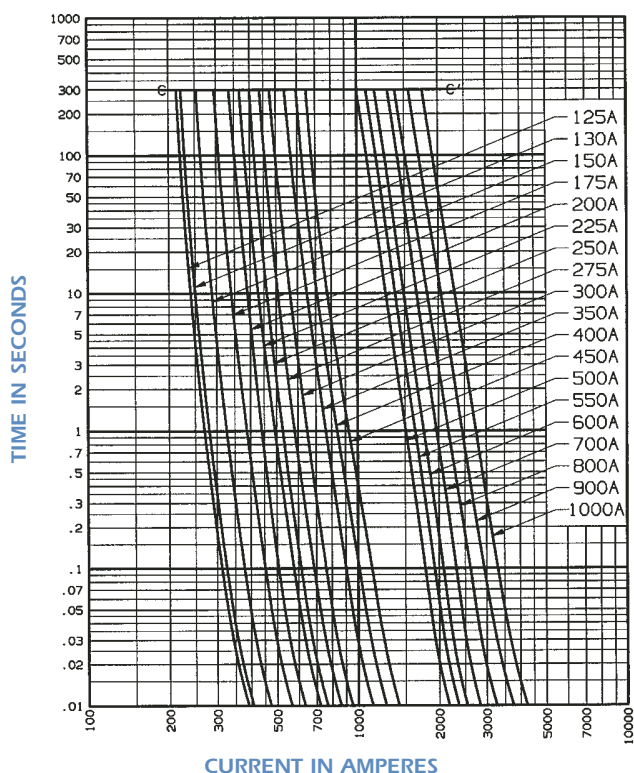
Melt Time - Current Data A15QS 1 to 30



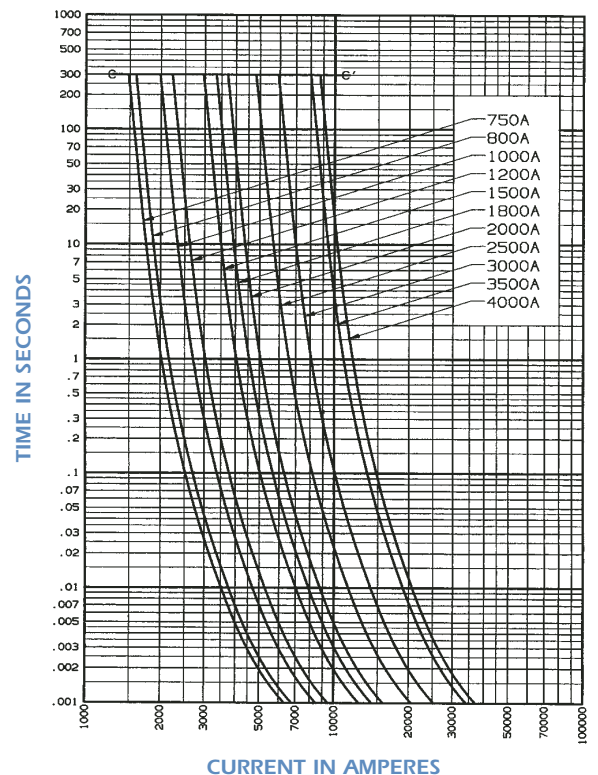
Semiconductor Protection Fuses
Melt Time - Current Data A15QS 20 to 100



Melt Time - Current Data A15QS 125 to 1000



Melt Time - Current Data A15QS 750 to 4000



Semiconductor (AC) fuses



American Round Fuses Form 101 Range A15QS

Semiconductor Protection Fuses Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.
1	A15QS1-2	D230072J	1	90	A15QS90-4	F232282J	2	2500	A15QS2500-128	R232361A	6
2	A15QS2-2	E230073J	1	100	A15QS100-4	J232285J	2	3000	A15QS3000-128	T232363C	6
3	A15QS3-2	F230074J	1	125	A15QS125-4	M232288J	2	3500	A15QS3500-128	W232365A	6
4	A15QS4-2	G230075J	1	130	A15QS130-4	Q232291J	2	4000	A15QS4000-128	Y232367A	6
5	A15QS5-2	H230076J	1	150	A15QS150-4	T232294J	2	5000	A15QS5000-128	B232370A	6
6	A15QS6-2	J230077J	1	200	A15QS200-4	Z232299J	2	6000	A15QS6000-128	A232369A	6
7	A15QS7-2	K230078J	1	250	A15QS250-4	C232302J	2	For Trigger Indicator (TI) and Trigger Actuator (IL) versions, please call us. For Ampere Rating and styles not listed, call Technical Services			
8	A15QS8-2	L230079J	1	300	A15QS300-4	D232303J	2				
10	A15QS10-2	N230081J	1	400	A15QS400-4	V232318J	2				
12	A15QS12-2	P230082J	1	450	A15QS450-4	Y232321J	2				
15	A15QS15-2	Q230083J	1	500	A15QS500-4	B232324E	2				
20	A15QS20-2	R230084J	1	600	A15QS600-4	H232330E	2				
25	A15QS25-2	S230085J	1	700	A15QS700-4	L232333E	2				
30	A15QS30-2	T230086J	1	800	A15QS800-4	R232338E	2				
35	A15QS35-1	V230087J	1	900	A15QS900-4	X232343E	2				
40	A15QS40-1	W230088J	1	1000	A15QS1000-4	A232346E	2				
45	A15QS45-1	X230089J	1	750	A15QS750-128	P232336A	6				
50	A15QS50-1	Y230090J	1	800	A15QS800-128	V232341A	6				
55	A15QS55-1	Z230091J	1	1000	A15QS51000-128	D232349A	6				
60	A15QS60-1	A230092J	1	1200	A15QS1200-128	F232351A	6				
70	A15QS70-4	Z230076J	2	1500	A15QS1500-128	H232353A	6				
80	A15QS80-4	C230079J	2	2000	A15QS2000-128	P232359A	6				

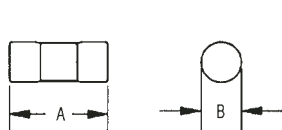


Figure 1

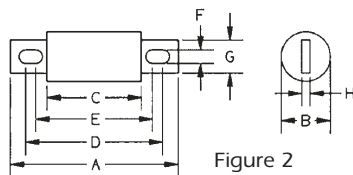


Figure 2

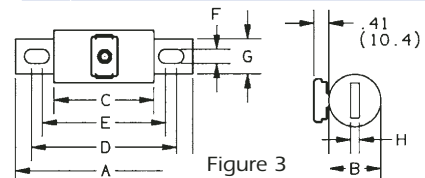


Figure 3

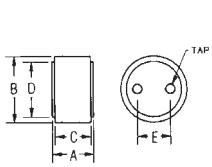


Figure 4

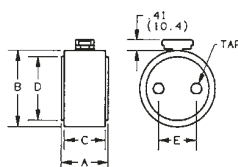


Figure 5

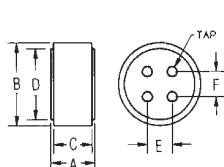


Figure 6

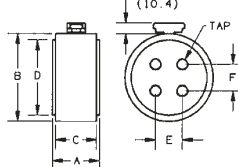


Figure 7

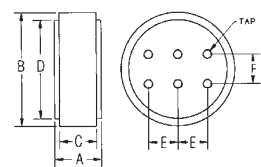


Figure 8

Dimensions

Outline Ref.	Mounting Type	Fig.	Dimensions - Inches (mm)								Tap
			A	B	C	D	E	F	G	H	
A15QS1 to 30	2	1	1.50 (38.1)	.41 (10.4)	-	-	-	-	-	-	-
A15QS35 to 60	1	1	2.00 (50.8)	.81 (20.6)	-	-	-	-	-	-	-
A15QS70 to 450	4, 4TI*, 4IL*	2, 3*	2.66 (67.6)	1.13 (28.7)	1.16 (29.5)	2.19 (55.6)	1.91 (48.5)	.31 (7.9)	.74 (22.4)	.13 (4.8)	-
A15QS500 to 1000	4, 4TI*, 4IL*	2, 3*	3.50 (88.9)	1.50 (38.1)	1.25 (31.8)	2.56 (65.0)	1.94 (49.3)	.41 (10.4)	1.00 (25.4)	.25 (6.4)	-
A15QS750 to 2000	128, 128IL*	4, 5*	1.88 (47.8)	2.00 (50.8)	1.63 (41.4)	1.75 (44.5)	1.00 (25.4)	-	-	-	3/8-24-1/2 Deep
A15QS2500 to 3000	128, 128IL*	4, 5*	1.88 (47.88)	3.00 (76.2)	1.63 (41.4)	2.50 (63.5)	1.50 (38.1)	-	-	-	1/2-20-1/2 Deep
A15QS3500 to 4000	128, 128IL*	6, 7*	1.88 (47.88)	3.50 (88.9)	1.63 (41.4)	3.00 (76.2)	1.06 (27.0)	1.06 (27.0)	-	-	1/2-20-1/2 Deep
A15QS5000 to 6000	128	8	2.38 (60.5)	5.75 (146)	1.88 (47.7)	5.00 (127)	1.50 (38.1)	1.50 (38.1)	-	-	1/2-20-1/2 Deep

* Optional Trigger Actuator (IL)



Semiconductor (AC) fuses

American Round Fuses Form 101 Range A30QS



Semiconductor Protection Fuses

A30QS Amp-Trap® Semiconductor Protection fuses are intended for the protection of Power Semiconductors such as Diodes, Phase Control SCR's and other Power Semiconductor devices. The A30QS is recommended for new applications providing solutions for your critical protection needs at 300V and less semiconductors.

Features/Benefits

- Low I^2t minimizes damage to protected components on short circuit
- Controlled arc voltage reduces stress to circuit components during fuse clearing
- Choice of mounting types helps in equipment design

Ratings

- AC: 1-4500A
300VAC, 200KA I.R.
- DC: 300VDC,
100KA I.R.
L/R= 10ms



Approvals

- UL Recognized Component
- AC: UL Guide No. JFHR2 (35-4500A) CSA

Highlights

- Fast Acting
- Current Limiting
- Low I^2t
- Indicator Options Available
- Superior DC Capabilities

Applications

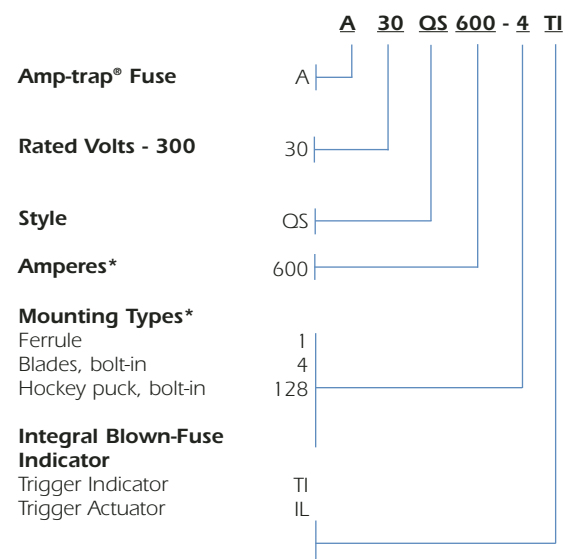
- Protection of 300 volts (or less) heavy duty rectifiers and similar heavy duty power supplies

Single Pole Fuse Blocks for A30QS Fuses



Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
1-30	70316	B223308
31-60	P243G	H222762
61-100	P243	T218517
101-200	P243	T218517
201-400	P243G	H222762
401-700	P243G	H222762

Catalog Numbering System



* For ampere ratings and types not listed, call Technical services.

American Round Fuses

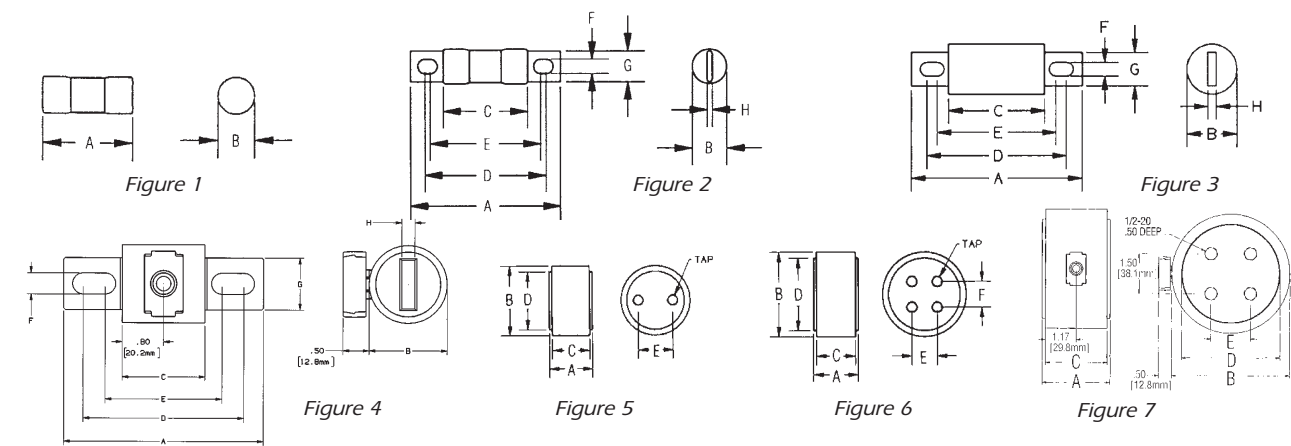
Form 101 Range

A30QS

Semiconductor Protection Fuses

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.
1	A30QS1-1	A230000	1	125	A30QS125-4	L226905	3	1600	A30QS1600-128	W226914	6
2	A30QS2-1	B230001	1	130	A30QS130-4	N226907	3	1800	A30QS1800-128	N230265	6
3	A30QS3-1	C230002	1	150	A30QS150-4	Q226909	3	2000	A30QS2000-128	D226921	6
4	A30QS4-1	D230003	1	175	A30QS175-4	Y226916	3	2500	A30QS2500-128	L226928	6
5	A30QS5-1	E230004	1	200	A30QS200-4	A226918	3	3000	A30QS3000-128	Q226932	6
6	A30QS6-1	F230005	1	225	A30QS225-4	F226923	3	3500	A30QS3500-128	V226936	6
7	A30QS7-1	G230006	1	250	A30QS250-4	H226925	3	4000	A30QS4000-128	B226942	6
8	A30QS8-1	H230007	1	275	A30QS275-4	A230276	3	4500	A30QS4500-128	F226946	6
10	A30QS10-1	K230009	1	300	A30QS300-4	W226937	3	5000	A30QS5000-128	G226970	6
12	A30QS12-1	L230010	1	350	A30QS350-4	S226934	3	For Trigger Indicator (TI) and Trigger Actuator (TA) versions, please call us.			
15	A30QS15-1	M230011	1	400	A30QS400-4	Y226939	3				
20	A30QS20-1	N230012	1	450	A30QS450-4	N226953	3	For Ampere Rating and styles not listed, call Technical Services			
25	A30QS25-1	P230013	1	500	A30QS500-4	H226948	3				
30	A30QS30-1	Q230014	1	550	A30QS550-4	L226948	3				
35	A30QS35-4	R230015	2	600	A30QS600-4	D226944	3				
40	A30QS40-4	S230016	2	700	A30QS700-4	V226959	3				
50	A30QS50-4	T230017	2	800	A30QS800-4	C226966	3				
60	A30QS60-4	V230018	2	700	A30QS700-128	T226958	5				
70	A30QS70-4	R226956	3	800	A30QS800-128	A226964	5				
80	A30QS80-4	Y226962	3	1000	A30QS1000-128	G226901	5				
90	A30QS90-4	E226968	3	1200	A30QS1200-128	J226903	5				
100	A30QS100-4	D226898	3	1500	A30QS1500-128	T226912	6				



Dimensions

Outline Ref.	Mounting Type	Fig.	Dimensions - Inches (mm)								Tap
			A	B	C	D	E	F	G	H	
A30QS1 to 30	1		2.00 (51)	0.56 (14)	-	-	-	-	-	-	-
A30QS35 to 60	4	2	3.19 (81)	.081 (21)	1.63 (41)	2.50 (64)	2.25 (58)	0.34 (9)	.72 (18)	0.13 (3)	-
A30QS70 to 800	4	3	3.13 (80)	1.22 (31)	1.63 (41)	2.44 (62)	2.31 (59)	0.31 (8)	1.00 (3)	0.19 (5)	-
A30QS225 70 700	4, 4IL*	3,4*	3.84 (98)	1.50 (38)	1.59 (40)	2.91 (74)	2.28 (58)	0.41 (10)	1.00 (25)	0.25 (6)	-
A30QS700 to 1200	128	5	2.59 (66)	3.00 (76)	2.34 (59)	2.50 (64)	1.50 (38)	-	-	-	3/8-24-1/2 Deep (2)
A30QS1500 to 2500	128, 128IL*	6, 7*	2.59 (66)	3.50 (89)	2.34 (59)	3.00 (76)	1.50 (38)	1.50 (38)	-	-	3/8-24-1/2 Deep (4)
A30QS3000 to 4500	128, 128IL*	6, 7*	2.59 (66)	4.50 (114)	2.34 (59)	3.75 (95)	1.50 (38)	1.50 (38)	-	-	1/2-20-1/2 Deep (4)

* Optional (IL) Actuator

07/05



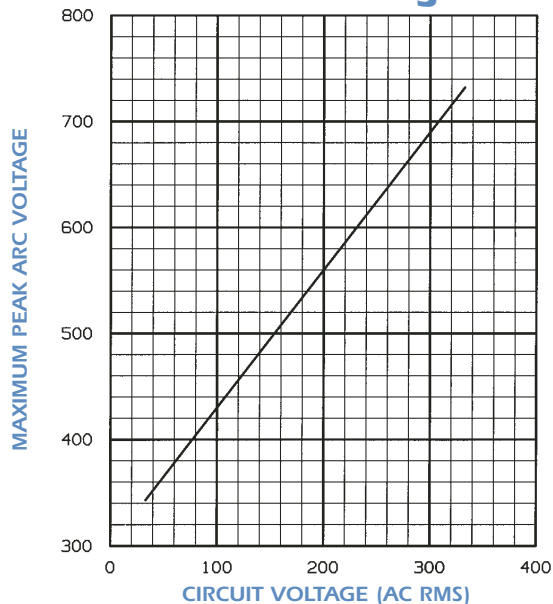
American Round Fuses Form 101 Range A30QS

I²t Data

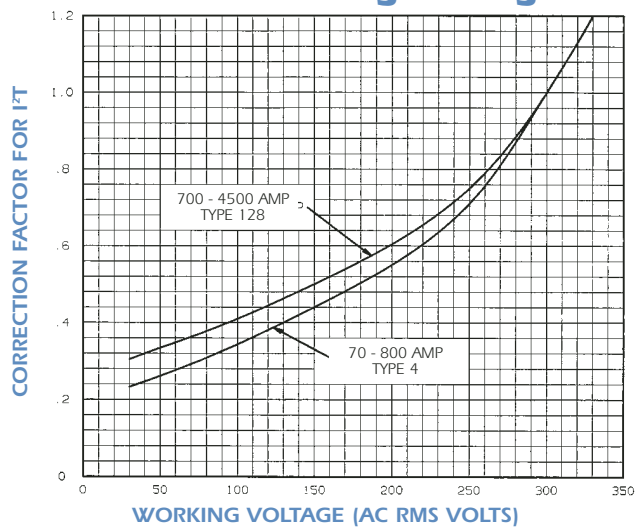
Ampere Rating	Melting I ² t (A ² s X 10 ³)	Max Clearing I ² t	
		@ 250VAC (A ² s X 10 ³)	@ 300VAC (A ² s X 10 ³)
1	0.0001	0.0002	0.0003
2	0.0004	0.0009	0.001
3	0.001	0.0018	0.002
4	0.002	0.0035	0.004
5	0.004	0.007	0.008
6	0.001	0.007	0.010
7	0.001	0.007	0.010
8	0.002	0.010	0.013
10	0.003	0.013	0.018
12	0.004	0.018	0.025
15	0.006	0.032	0.045
20	0.009	0.053	0.075
25	0.017	0.09	0.13
30	0.027	0.15	0.21
35	0.09	0.61	0.90
40	0.13	0.83	1.2
45	0.15	1.0	1.5
50	0.21	1.4	2.0
60	0.29	1.9	2.7
70	0.24	1.2	1.6
80	0.42	1.9	2.6
90	0.53	2.3	3.2
100	0.74	3.0	4.1
125	1.2	4.6	6.3
130	1.2	4.6	6.3
150	1.9	6.8	9.3

Ampere Rating	Melting I ² t (A ² s X 10 ³)	Max Clearing I ² t	
		@ 250VAC (A ² s X 10 ³)	@ 300VAC (A ² s X 10 ³)
175	2.1	7.6	10
200	3.0	11	15
225	3.6	16	22
250	4.4	19	25
275	5.6	23	31
300	6.9	27	37
350	12	45	62
400	16	61	83
450	25	95	130
500	30	120	160
550	36	140	190
600	47	170	230
700	50	190	260
800	67	240	330
900	83	290	380
1000	100	350	460
1200	200	680	880
1500	330	1100	1400
1600	390	1300	1690
1800	450	1500	2000
2000	590	2000	2600
2500	920	3100	4000
3000	1200	3600	4700
3500	1700	5000	6500
4000	2200	6600	8600
4500	2800	8400	11000

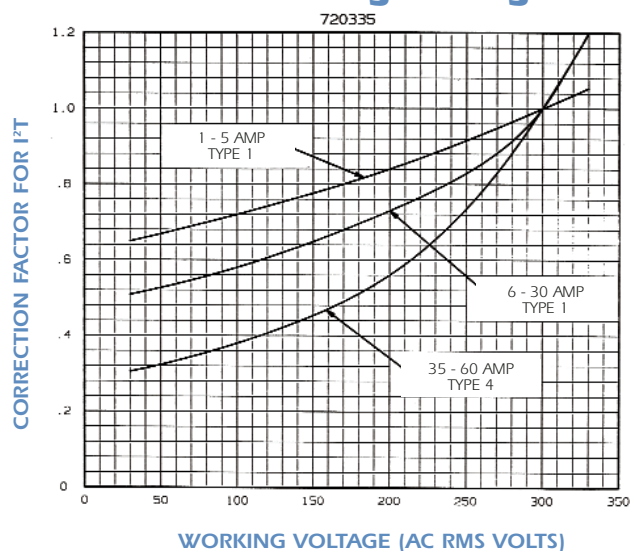
Peak Arc Voltage



I²t vs. Working Voltage



I²t vs. Working Voltage





American Round Fuses Form 101 Range A30QS

Semiconductor Protection Fuses

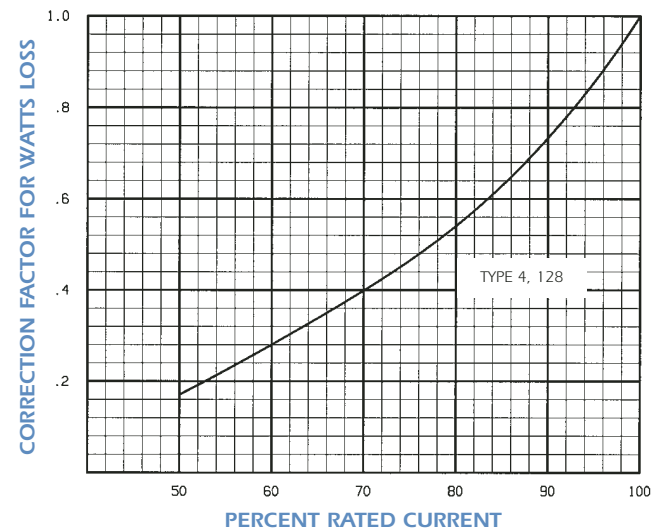
Watts Loss at Rated Current

Ampere Rating	Watts Loss (W)		Ampere Rating	Watts Loss (W)	
	Type 1	Type 4		Type 4	Type 128
1	0.9		175	27	
2	1.0		200	30	
3	1.4		225	33	
4	1.7		250	41	
5	2.0		275	44	
6	2.3		300	47	
7	2.6		350	49	
8	3.0		400	56	
10	4.0		450	53	
12	4.9		500	59	
15	6.4		550	65	
20	8.8		600	69	
25	10.5		700	90	73
30	12.4		800	108	84
35		6.4	900		94
40		7.0	1000		105
45		9.0	1200		110
50		9.9	1500		140
60		11.6	1600		150
70		11	1800		170
80		11	2000		190
90		13	2500		230
100		13	3000		340
125		16	3500		380
130		16	4000		450
150		19	4500		500

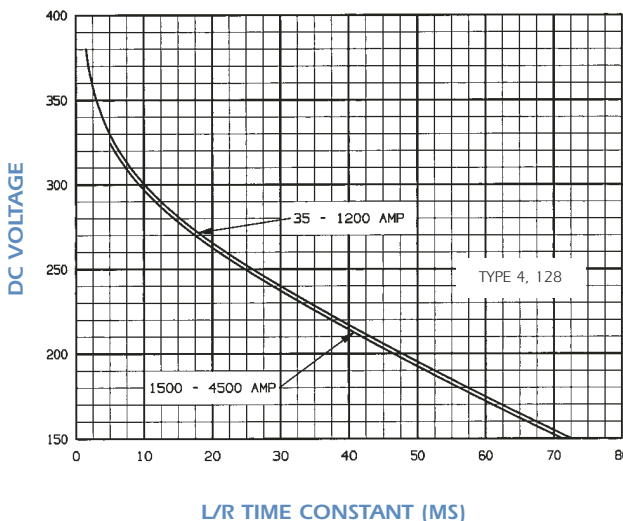
Clearing I²t at 300VDC, 100kA, L/R = 10ms

Ampere Rating	Clearing I²t (A²s X 10³)	Ampere Rating	Clearing I²t (A²s X 10³)
35	0.45	450	100
40	0.58	500	130
50	0.96	550	150
60	1.3	600	190
70	1.3	700	200
80	2.1	800	260
90	2.5	900	300
100	3.3	1000	360
125	5.0	1200	710
130	5.0	1500	1200
150	7.5	1600	1400
175	8.3	1800	1600
200	12	2000	2100
225	18	2500	3300
250	20	3000	4300
275	25	3500	5900
300	29	4000	7700
350	50	4500	9900
400	66		

Watts loss vs. Percent Rated Current



DC Voltage Capability vs. Circuit Time Constant (ms)



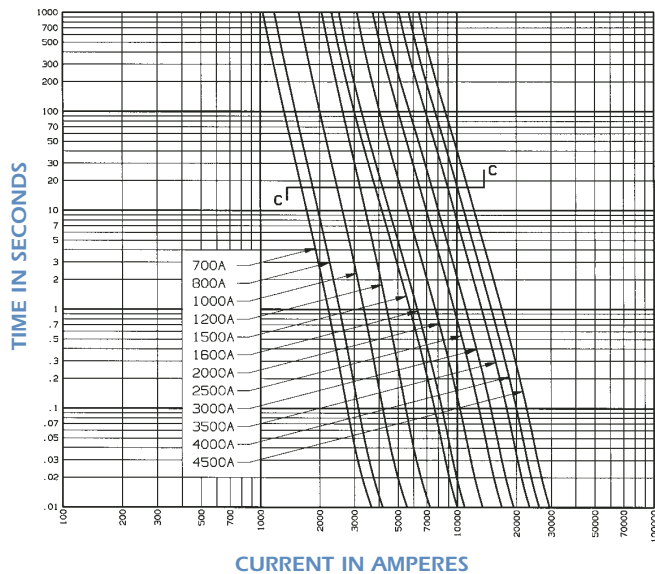


Semiconductor (AC) fuses

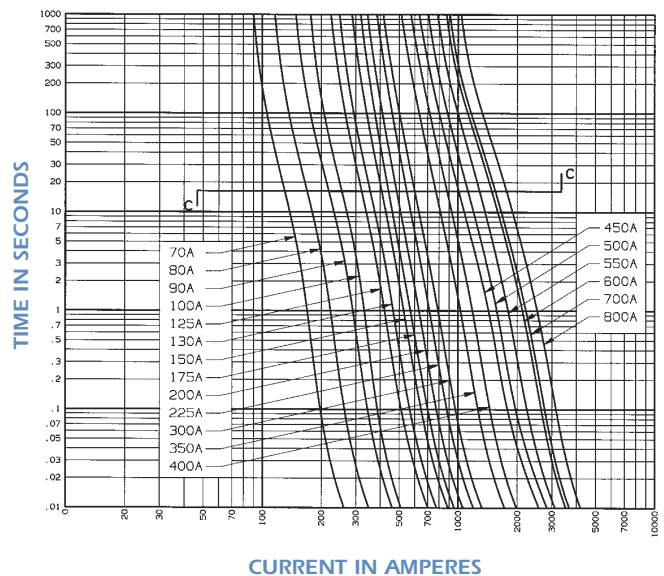
American Round Fuses Form 101 Range A30QS

Semiconductor Protection Fuses

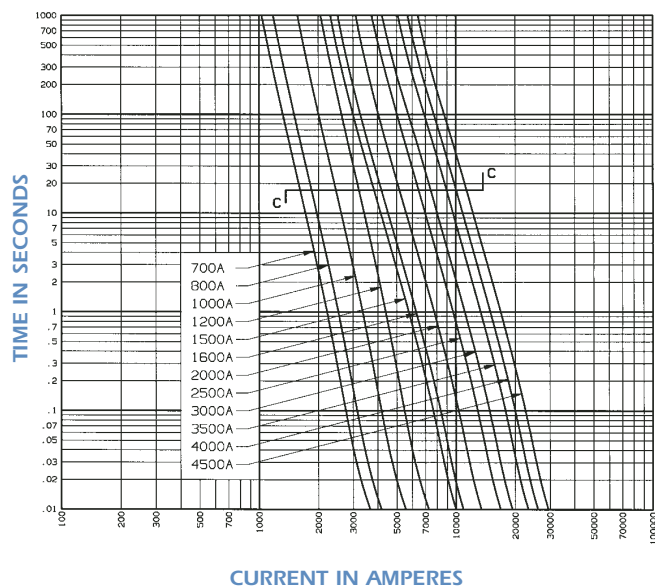
Melting Time - Current Data A30QS 1 to 60



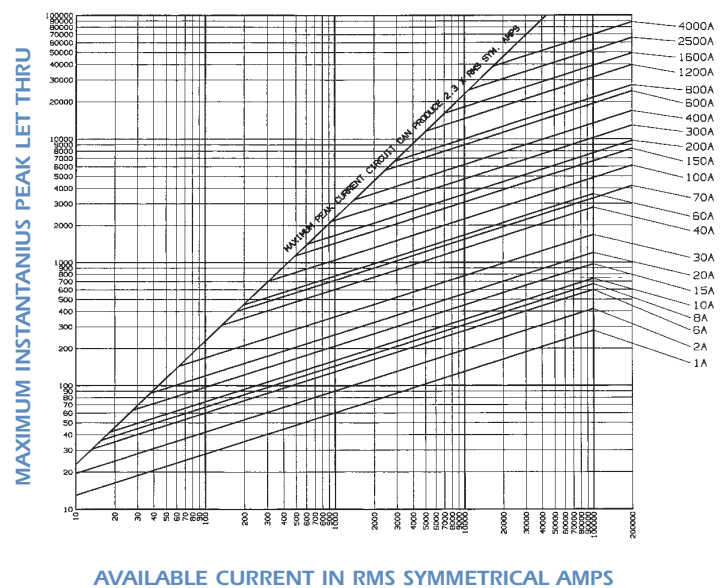
Melting Time - Current Data A30QS 70 to 800



Melting Time - Current Data A30QS 700 to 4500



Peak Let Thru Data







American Round Fuses Form 101 Range A50QS



Semiconductor Protection Fuses

A50QS Amp-trap® Form 101 fuses grew out of the need to improve the overall performance of semiconductor fuses in response to new equipment requirements. The A50QS encompasses the best protection features - lower I²t to provide better protection for equipment, longer life when subjected to cyclic loading and lower watts loss. A50QS is today's best choice for the protection of dynamic solid state equipment such as motor drives, inverters, UPS, etc

Features/Benefits

- Lowest I²t for greatest protection of semiconductor circuits
 - low watt loss for cooler operation
- Superior cycling ability gives an equipment design advantage
 - State of the art protection for 500 volt equipment
- ultra compact sizes allow down-sizing of existing equipment

Ratings

- AC: 35-60A
500VAC, 200kA I.R.

70-1200A
500VAC, 200kA I.R.

- DC: 35-1200A
500VDC, 100kA I.R.

Approvals

- UL Recognized Component
- AC: UL Guide No. JFHR2
- DC Tested to UL Standard 198L parameters (70-1200A)
- CSA Certified LR12636



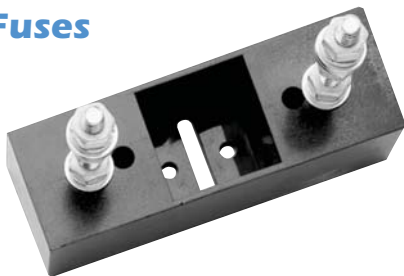
Highlights

- 500V AC/DC Rated
- Lowest I²t
- Low Watts Loss
- Superior Cycling Ability

Applications

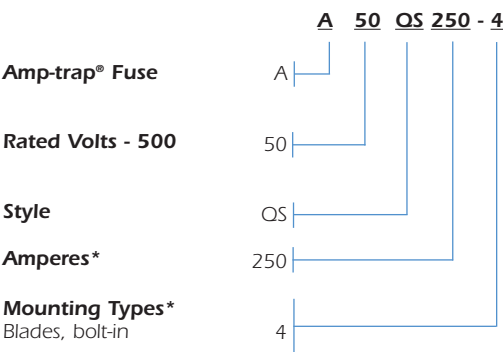
- Protection of 500V or less motor drives, UPS, inverters, etc.

Single Pole Fuse Blocks for A50QS Fuses



Fuse Ampere Rating	Mounting type	Fuse block	
		Catalog Number	Reference Number
35-200	4	P243E	X222016
225-600	4	P266C	K212897

Catalog Numbering System



* For ampere ratings and types not listed, call Technical services.

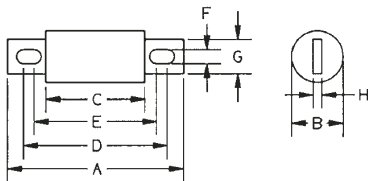


American Round Fuses Form 101 Range A50QS

Semiconductor Protection Fuses

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
35	A50QS35-4	Q214834	250	A50QS250-4	W211251
40	A50QS40-4	Y215853	300	A50QS300-4	D212799
50	A50QS50-4	W217392	350	A50QS350-4	T215343
60	A50QS60-4	A218937	400	A50QS400-4	B216362
70	A50QS70-4	B222664	450	A50QS450-4	E216871
80	A50QS80-4	L201513	500	A50QS500-4	L218418
90	A50QS90-4	X211252	600	A50QS600-4	Q219457
100	A50QS100-4	A216361	700	A50QS700-4	N223181
125	A50QS125-4	K218417	800	A50QS800-4	C202287
150	A50QS150-4	P219456	900	A50QS900-4	R212282
175	A50QS175-4	A222663	1000	A50QS1000-4	V217391
200	A50QS200-4	T200968	1200	A50QS1200-4	C217904
225	A50QS225-4	K201512			

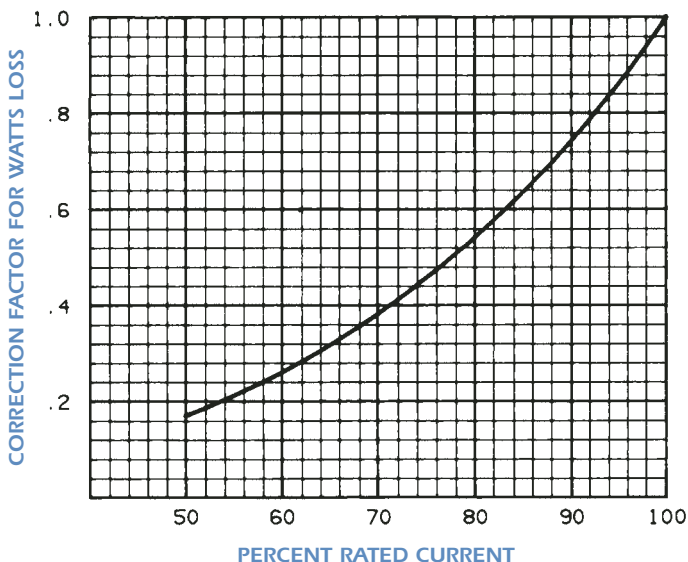


For ampere ratings and styles not listed, call Technical Services.

Dimensions

Catalog Number	Mounting Type	Dimensions - Inches (mm)							
		A	B	C	D	E	F	G	H
A50QS35 to 100	4	3.63 (92.2)	1.00 (25.4)	2.13 (54.1)	2.94 (74.7)	2.75 (69.9)	0.31 (7.9)	0.75 (19.1)	0.13 (3.3)
A50QS125 to 200	4	3.63 (92.2)	1.22 (31.0)	2.13 (54.1)	2.94 (74.7)	2.81 (71.4)	0.31 (7.9)	1.00 (25.4)	0.19 (4.8)
A50QS225 to 400	4	4.34 (110)	1.50 (38.1)	2.09 (53.1)	3.41 (86.6)	2.78 (70.6)	0.41 (10.4)	1.00 (25.4)	0.25 (6.4)
A50QS450 to 600	4	4.47 (114)	2.00 (50.8)	2.22 (56.4)	3.53 (89.7)	2.91 (73.9)	0.41 (10.4)	1.50 (38.1)	0.25 (6.4)
A50QS700 to 800	4	6.47 (164.3)	2.50 (63.5)	2.22 (56.4)	5.00 (127.0)	3.44 (87.3)	.53 (13.5)	1.50 (38.1)	.25 (6.4)
A50QS900 to 1200	4	6.97 (177.0)	3.00 (76.2)	3.22 (81.8)	5.47 (138.9)	4.47 (113.5)	.63 (15.9)	2.38 (60.3)	.44 (11.1)

Watts Loss vs. Percent Rated Current



Watts Loss at Rated Current

Ampere Rating	Watts Loss (W)	Ampere Rating	Watts Loss (W)
35	6	250	41
40	7	300	49
50	8	350	57
60	10	400	65
70	12	450	69
80	14	500	77
90	15	600	92
100	17	700	110
125	21	800	130
150	25	900	140
175	29	1000	160
200	33	1200	175
225	37		

Correction factor example:
At 80% rated current, watts loss equals .54 times watts loss at rated current.

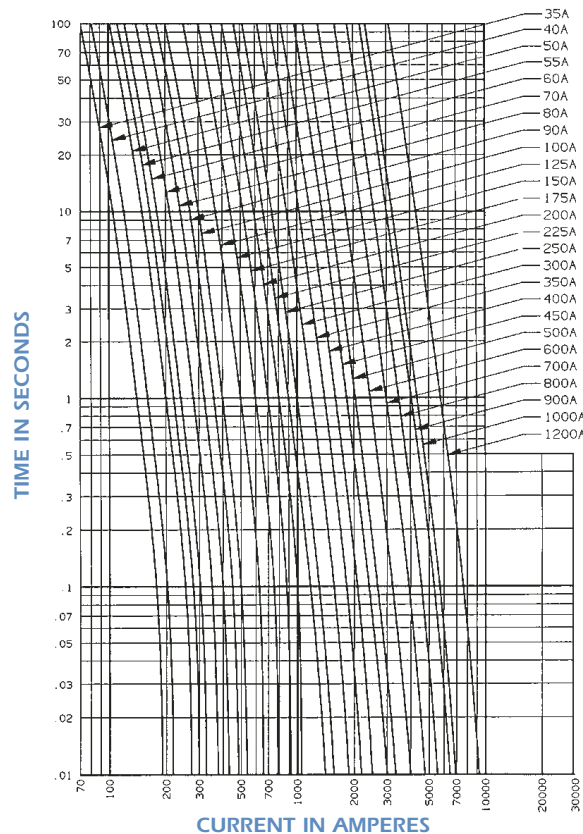


Semiconductor (AC) fuses

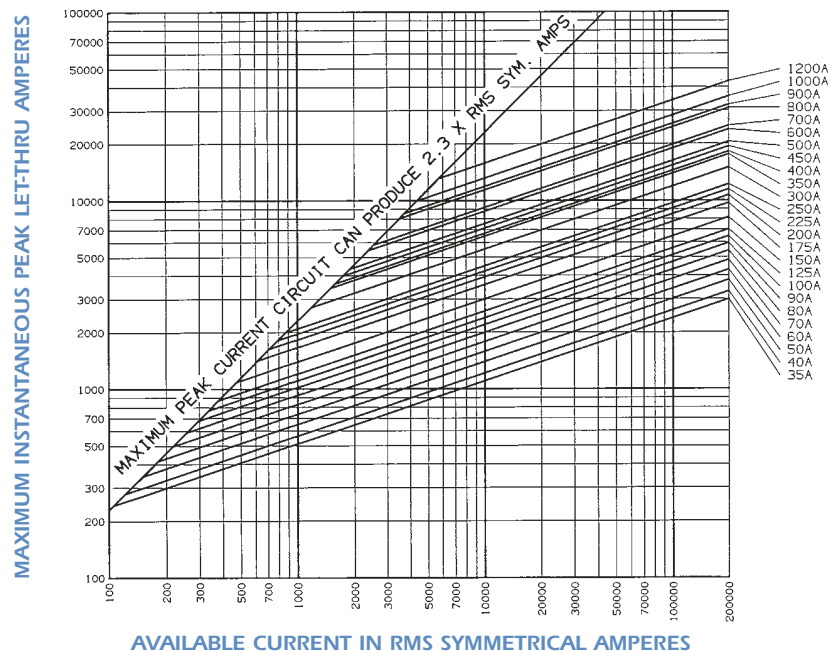
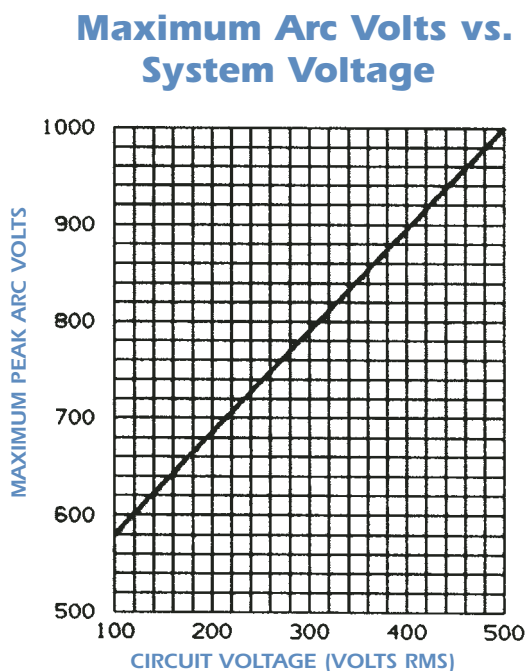
American Round Fuses Form 101 Range A50QS

Semiconductor Protection Fuses

A50QS35 to 1200 Melting Time - Current Data, 500V Fuses



Peak Let-Thru Current Data - A50QS35 to 1200, 500 Volts AC



Semiconductor (AC) fuses



American Round Fuses Form 101 Range A50QS

Semiconductor Protection Fuses

I²t Data – 500 Volts AC

Fuse Ampere Rating	Melting I ² t (A ² s X 10 ³)	I ² t data	
		Max Clearing I ² t @ 500 VAC	
		1 fuse (fig A) (A ² s X 10 ³)	2 Fuses in series (A ² s X 10 ³)(fig B)
35	.09	.56	.34
40	.11	.69	.4
50	.18	1.1	.68
60	.25	1.6	.94
70	.31	1.9	1.1
80	.43	2.6	1.5
90	.57	3.6	2.1
100	.74	4.4	2.7
125	.94	5.6	3.4
150	1.5	9	5.4
175	2.5	15	9
200	3.3	20	12
225	4.1	25	15
250	4.9	29	18
300	9.2	55	33
350	15	88	53
400	16	98	59
450	21	130	76
500	26	160	94
600	37	220	130
700	53	270	160
800	72	360	220
900	98	500	300
1000	112	560	330
1200	200	930	550

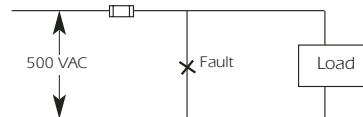


Fig. A

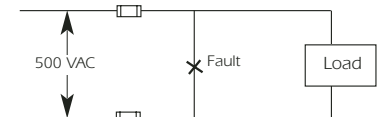
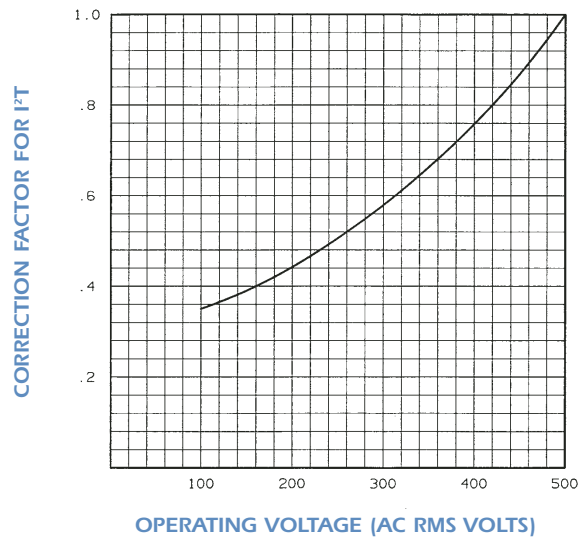


Fig. B

Clearing I²t vs. AC Operating Voltage

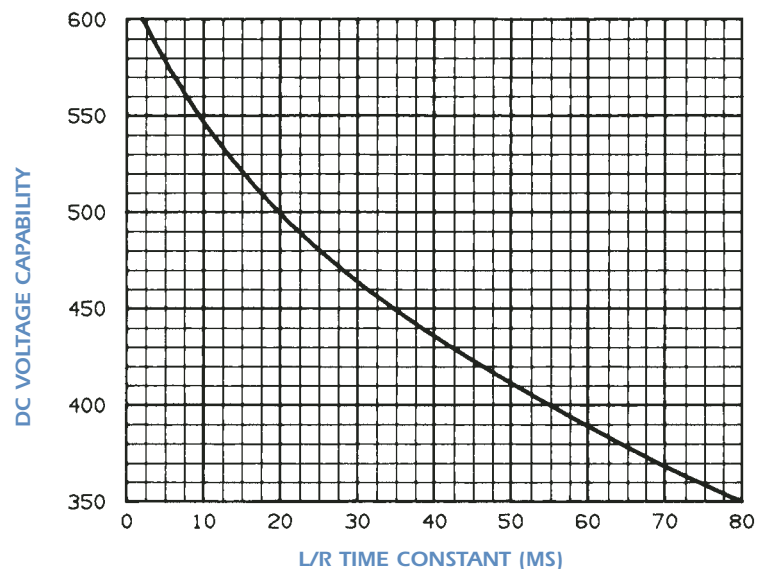


Clearing I²t at 500V DC, 100kA, L/R = 10 ms

Ampere Rating	Clearing I ² t (A ² s X 10 ³)	Ampere Rating	Clearing I ² t (A ² s X 10 ³)
35	.48	250	25
40	.58	300	47
50	1.0	350	75
60	1.3	400	83
70	1.6	450	110
80	2.2	500	130
90	3.0	600	190
100	3.8	700	220
125	4.8	800	260
150	7.7	900	350
175	13	1000	430
200	17	1200	660

DC Application: A50QS Fuses have been designed for both AC and DC operation. A50QS fuses (70-600) have UL Component Recognition at 500V DC and have been tested to circuit parameters as defined in Standard 198L.

DC Voltage Capability vs. Time Constant





Semiconductor (AC) fuses

American Round Fuses Form 101 Range A50P



Semiconductor Protection Fuses

A50P Amp-trap® Form 101 Semiconductor Protection fuses were developed for DC drives, uninterruptable power supplies and similar applications requiring better protection (lower I^2t) and superior reliability. The A50P is typically used for replacement.

Features/Benefits

- Low I^2t minimizes damage to protected components on short circuit
- Controlled arc voltage reduces stress to circuit components during fuse clearing
- Choice of mounting types provides helps in equipment design

Ratings

- AC: 10-1200A
500VAC, 100kA I.R.
- DC: 35-1000A
450VDC, 79kA I.R.
L/R = 10ms

Approvals

- UL Recognized Component
- AC: UL Guide
No. JFHR2 (10-800A)
- DC : UL Guide
No. JFHR2 (35-800A)

Highlights

- Very Fast Acting
- Current Limiting
- Lowest I^2t
- Indicator Options Available

Applications

- Protection of DC drives, UPS and other equipment of 500 volts or less

* Contact technical services for applications data.

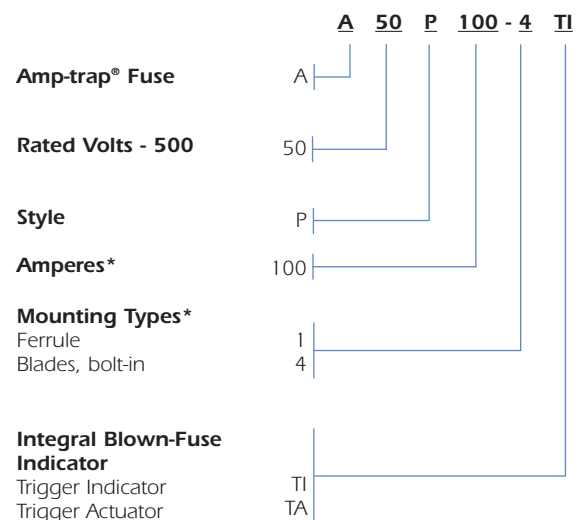


Single Pole Fuse Blocks for A50P Fuses



Fuse Ampere Rating	Mounting type	Fuse block	
		Catalog Number	Reference Number
10-30	1	70306	W219071
35-60	4	P243G	H222762
70-200	4	P243E	X222016
225-600	4	P266C	K212897

Catalog Numbering System



* For ampere ratings and types not listed, consult the factory.

American Round Fuses

Form 101 Range

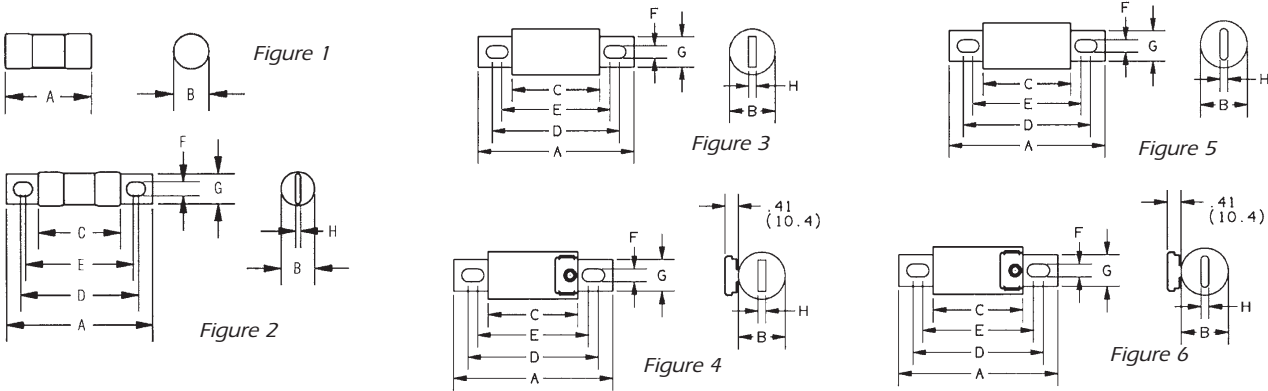
A50P

Semiconductor Protection Fuses

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ref Number	Outline Fig.
10	A50P10-1	C216869	1
15	A50P15-1	B217903	1
20	A50P20-1	Y218935	1
25	A50P25-1	G219978	1
30	A50P30-1	Z222662	1
35	A50P35-4	W202281	2
40	A50P40-4	E211765	2
50	A50P50-4	C212798	2
60	A50P60-4	P214833	2

For ampere ratings from 70 to 1200 see A50QS series



Dimensions

Catalog Number	Mounting Type	Fig.	Dimensions - Inches (mm)							
			A	B	C	D	E	F	G	H
A50P10 to 30	1	1	2.00 (50.8)	0.56 (14.2)	-	-	-	-	-	-
A50P35 to 60	1DS*	1	2.25 (57.2)	0.81 (20.6)	-	-	-	-	-	-
A50P35 to 60	4	2	3.19 (81.0)	0.81 (20.6)	1.63 (41.4)	2.50 (63.5)	2.25 (57.2)	0.34 (8.6)	0.72 (18.3)	0.13 (3.3)
A50P70 to 100	4	3	3.63 (92.2)	1.00 (25.4)	2.13 (54.1)	2.94 (74.7)	2.81 (71.4)	0.31 (7.9)	0.75 (19.1)	0.13 (3.3)
A50P125 to 200	4, 4TA**	3, 4**	3.63 (92.2)	1.22 (31.0)	2.13 (54.1)	2.94 (74.7)	2.81 (71.4)	0.31 (7.9)	1.00 (25.4)	0.19 (4.8)
A50P225 to 400	4, 4TA**	3, 4**	4.34 (110)	1.50 (38.1)	2.09 (53.1)	3.41 (86.6)	2.78 (70.6)	0.41 (10.4)	1.00 (25.4)	0.25 (6.4)
A50P450 to 600	4, 4TA**	3, 4**	4.47 (114)	2.00 (50.8)	2.22 (56.4)	3.53 (89.7)	2.91 (73.9)	0.41 (10.4)	1.50 (38.1)	0.25 (6.4)
A50P700 to 800	4, 4TA**	5, 6**	6.47 (164)	2.50 (63.5)	2.22 (56.4)	4.63 (118)	4.31 (109)	0.53 (13.5)	2.00 (50.8)	0.38 (9.7)
A50P900 to 1200	4	3	6.97 (177)	3.00 (76.2)	3.22 (81.8)	4.97 (126)	*** ***	0.63 (16.0)	2.38 (60.5)	0.44 (11.1)

* Use with 60306J fuse block.
** Optional Trigger Actuator (TA)
*** Mounting hole is round, diameter F.



Semiconductor (AC) fuses

American Round Fuses Form 101 Range A60Q



Semiconductor Protection Fuses

A60Q Amp-trap® Form 101 Semiconductor Protection fuses feature the only 600 volt AC/DC rating in the industry of similar size (1-1/2" x 13/32") fuses protecting semiconductors. A60Q also has the lowest I^2t of all similar fuses and excellent cycling ability. Applications include inverters and small equipment requiring extremely fast response to faults, without the need to carry sustained heavy overloads.

Features/Benefits

- Lowest I^2t of any fuse this size for greater protection
- Excellent cycling ability gives advantage in equipment design
- 600V AC/DC rated

Ratings

- AC: 5-40A
600VAC, 200kA I.R.
- DC: 5-40A
600VDC, 100kA I.R.
L/R = 10ms

Approvals

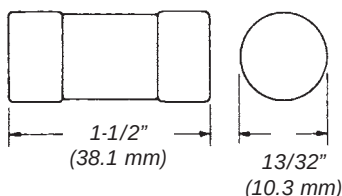
- UL Recognized Component
- AC: UL Guide JFHR2
File E60314
- DC : UL File
E60314

Highlights

- 600VAC/DC Rated
- Extremely Fast Acting
- Current Limiting
- Lowest I^2t
- Excellent Cycling Ability

Applications

- Protection of small inverters and drives, and equipment requiring the highest degree of protection



Catalog Numbering System

	A	60	Q	30	- 2
Amp-trap® Fuse	A				
Rated Volts - 600		60			
Style			Q		
Amperes*				30	
Mounting Types* Ferrule, midget dims. (1-1/2" X 13/32") (10,3 X 38 mm)					2

Fuse holders for A60Q fuses

USM Series .Ultrasafe™ Fuse Holders
303 Series .Midget Fuse Blocks

Semiconductor (AC) fuses



American Round Fuses Form 101 Range A60Q

Semiconductor Protection Fuses

**I²t at 600VDC,
100kA, L/R = 10 ms**

Ampere Rating	Clearing I ² t (A ² s)
5	40
8	42
10	70
12	90
15	110
20	200
25	260
30	520
35	780
40	1100

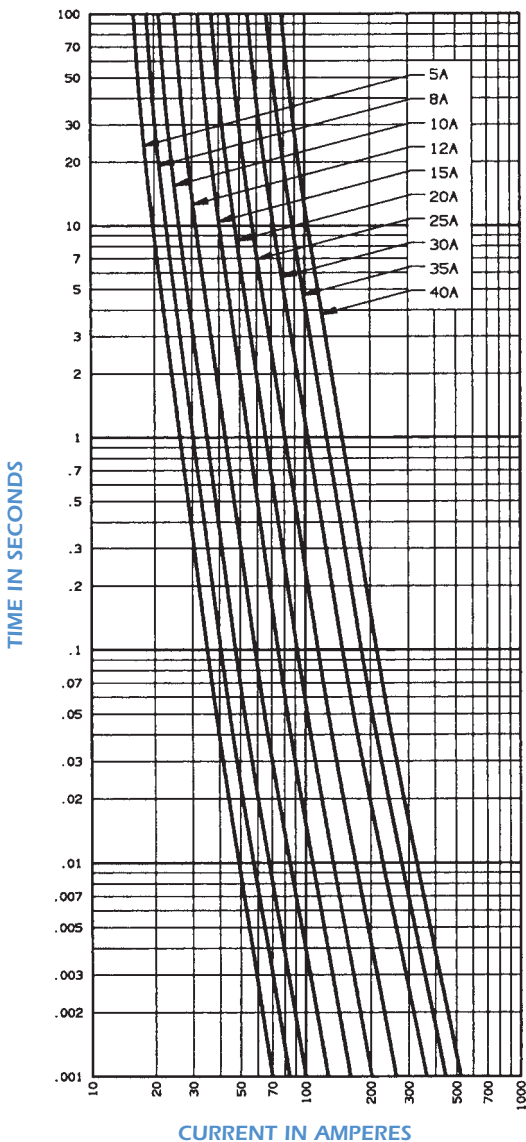
**I²t at 600VAC,
100kA**

Ampere Rating	Melting I ² t (A ² s)	Clearing I ² t (A ² s)
5	5	60
8	6.5	70
10	10	110
12	17	150
15	26	180
20	41	330
25	69	440
30	132	860
35	197	1300
40	276	1800

Watts Loss Data

Ampere Rating	Watts Loss @ 80% Rating (W)	Watts Loss @ 100% Rating (W)
5	0.5	0.7
8	0.7	1.1
10	0.9	1.5
12	1.3	2.0
15	1.9	3.0
20	2.6	4.4
25	2.9	5.3
30	3.0	5.8
35	3.3	6.4
40	3.6	7.0

5 to 40A Melting Time – Current Data, 600V Fuses

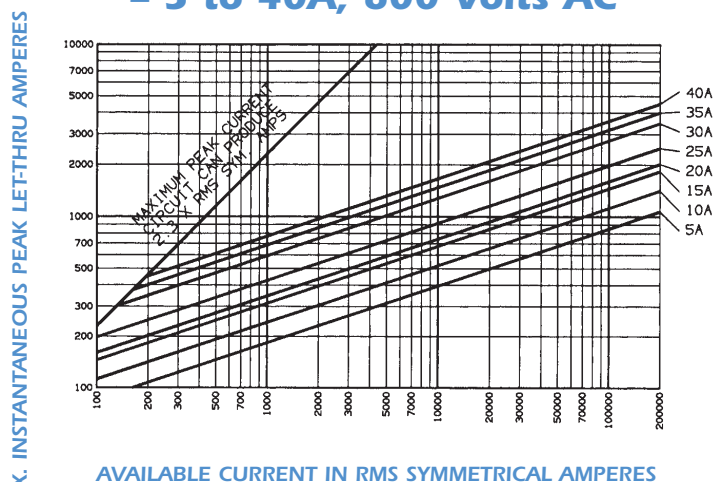


Standard Fuse Ampere ratings, catalog and reference Numbers

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
5	A60Q5-2	E217400	20	A60Q20-2	B214338
6	A60Q6-2	E217913	25	A60Q25-2	Z214842
8	A60Q8-2	T218425	30	A60Q30-2	E215859
10	A60Q10-2	Z212289	35	A60Q35-2	J216369
12	A60Q12-2	M212807	40	A60Q40-2	E218879
15	A60Q15-2	X213322			

For ampere ratings and styles not listed, ask sales agent

Peak Let-Thru Current Data – 5 to 40A, 600 Volts AC





American Round Fuses Form 101 Range A60X



Semiconductor Protection Fuses

A60X Amp-trap® Form 101 Semiconductor Protection fuses are popular for the protection of higher voltage heavy rectifiers such as traction rectifiers. They can carry long sustained overloads common with heavy duty apparatus. 700A through 2000A sizes are of compact, hockey-puck design, able to provide high power protection in a small space.

Features/Benefits

- Low I^2t minimizes damage to protected components on short circuit
- Controlled arc voltage reduces stress to circuit components during fuse clearing
- Choice of mounting types helps in equipment design

Ratings

- AC: 1-2000A
600V, 100kA I.R.

Approvals

- UL Recognized Component
- AC: UL Guide
No.JFHR2 (35-800A)

Highlights

- Fast Acting
- Current Limiting
- Low I^2t
- Indicator Options Available

Applications

- Protection of heavy traction and electro chemical as well as rectifiers and other heavy-duty equipment

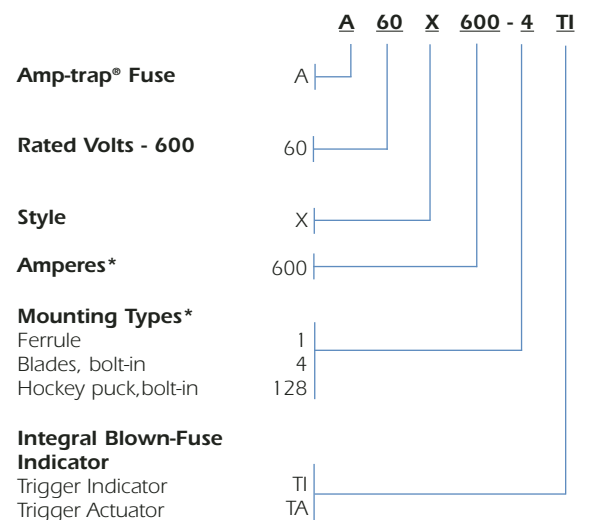


Single Pole Fuse Blocks for A60X Fuses



Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
1-30	60306	V211871
31-60	P243C	M219040
61-100	P243C	M219040
101-200	P243C	M219040
201-400	P266A	Y212380
401-600	P266A	Y212380

Catalog Numbering System



* For ampere ratings and types not listed, consult the factory.

Semiconductor (AC) fuses

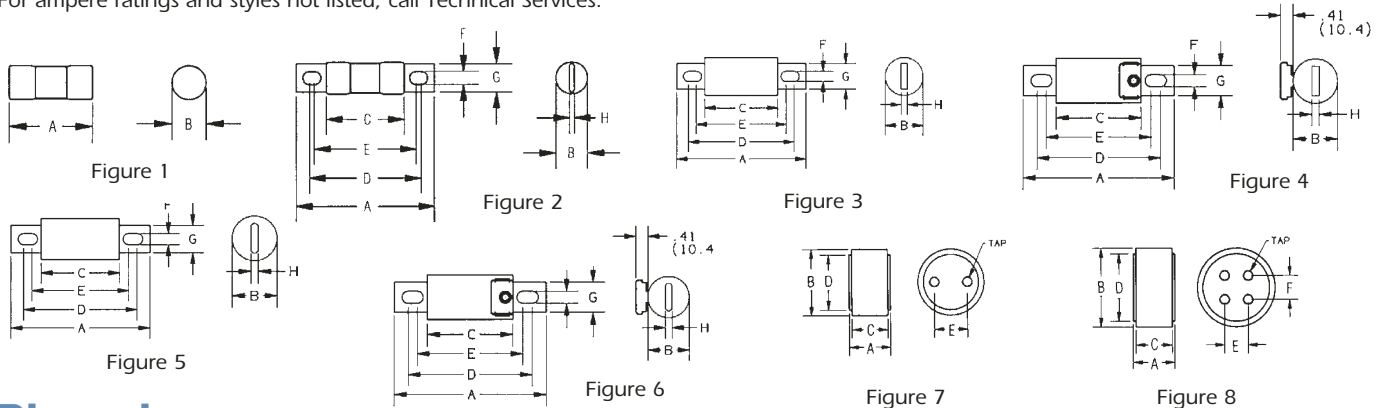


American Round Fuses Form 101 Range A60X

Semiconductor Protection Fuses Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.
1	A60X1-1	R201518	1	70	A60X70-4	Y214335	3	400	A60X400-4	B215856	3
2	A60X2-1	Y212288	1	80	A60X80-4	B217397	3	400	A60X400-4TA	A217396	4
3	A60X3-1	P213821	1	80	A60X80-4TA	Q218422	4	450	A60X450-4	P218421	3
4	A60X4-1	A215349	1	90	A60X90-4	Q201517	3	450	A60X450-4TA	V219461	4
5	A60X5-1	L217912	1	100	A60X100-4	D202288	3	500	A60X500-4	E222667	3
6	A60X6-1	Q219986	1	100	A60X100-4TA	G211767	4	500	A60X500-4TA	P201516	4
7	A60X7-1	C200976	1	125	A60X125-4	S214836	3	600	A60X600-4	K211770	3
8	A60X8-1	S201519	1	125	A60X125-4TA	D216364	4	600	A60X600-4TA	J212804	4
10	A60X10-1	D202633	1	150	A60X150-4	G216873	3	700	A60X700-4	G216367	5
12	A60X12-1	D211258	1	150	A60X150-4TA	N218420	4	700	A60X700-128	C215857	7
15	A60X15-1	M211772	1	175	A60X175-4	Q223183	3	800	A60X800-4	T223186	5
20	A60X20-1	L212806	1	200	A60X200-4	H211768	3	800	A60X800-4TA	A200974	6
25	A60X25-1	W213321	1	200	A60X200-4TA	G212802	4	800	A60X800-128	F218942	7
30	A60X30-1	A214337	1	225	A60X225-4	T214837	3	1000	A60X1000-128	S212283	8
35	A60X35-4	Y214841	2	250	A60X250-4	Z217395	3	1200	A60X1200-128	Q213316	8
40	A60X40-4	M216878	2	250	A60X250-4TA	D218940	4	1500	A60X1500-128	C218939	8
45	A60X45-4	D217399	2	300	A60X300-4	N201515	3	1600	A60X1600-128	L219982	8
50	A60X50-4	S218424	2	300	A60X300-4TA	V212285	4	1800	A60X1800-128	Z211254	8
55	A60X55-4	Y219464	2	350	A60X350-4	X214334	3	2000	A60X2000-128	K213817	8
60	A60X60-4	G222669	2	350	A60X350-4TA	X215346	4				

For ampere ratings and styles not listed, call Technical Services.



Dimensions

Outline Reference.	Mounting Type	Fig.	Dimensions - Inches (mm)								Tap
			A	B	C	D	E	F	G	H	
A60X1 to 30	1	1	5.00 (127)	.81 (20.6)	-	-	-	-	-	-	-
A60X35 to 60	4	2	4.38 (111)	.81 (20.6)	2.78 (70.6)	3.69 (93.7)	3.44 (87.4)	.34 (8.6)	.72 (18.3)	.13 (3.3)	-
A60X70 to 100	4, 4TI*, 4TA	3, 4*	4.41 (112)	1.00 (25.4)	2.91 (73.9)	3.72 (94.5)	3.59 (91.2)	.31 (7.9)	.75 (19.1)	.13 (3.3)	-
A60X125 to 200	4, 4TI*, 4TA	3, 4*	4.41 (112)	1.22 (31.0)	2.91 (73.9)	3.72 (94.5)	3.59 (91.2)	.31 (7.9)	1.00 (25.4)	.19 (4.8)	-
A60X225 to 400	4, 4TI*, 4TA	3, 4*	5.13 (130)	1.50 (38.1)	2.88 (73.2)	4.19 (106)	3.56 (90.4)	.41 (10.4)	1.00 (25.4)	.25 (6.4)	-
A60X450 to 600	4, 4TI*, 4TA	3, 4*	5.13 (130)	2.00 (50.8)	2.88 (73.2)	4.06 (103)	3.69 (93.7)	.41 (10.4)	1.50 (38.1)	.25 (6.4)	-
A60X700 to 800	4, 4TA*	5, 6*	7.25 (184)	2.50 (63.5)	3.00 (76.2)	5.94 (151)	4.56 (116)	.53 (13.5)	2.00 (50.8)	.38 (9.7)	-
A60X700 to 800	128	7	4.00 (102)	3.00 (76.2)	3.75 (95.3)	2.50 (63.5)	1.50 (38.1)	-	-	-	3/8-24-1/2 Deep
A60X1000 to 1200	128	8	4.00 (102)	3.50 (88.9)	3.75 (95.3)	3.00 (76.2)	1.50 (38.1)	1.50 (38.1)	-	-	3/8-24-1/2 Deep
A60X1500 to 2000	128	8	4.00 (102)	4.50 (114)	3.75 (95.3)	3.75 (95.3)	1.50 (38.1)	1.50 (38.1)	-	-	3/8-20-1/2 Deep

* Optional Trigger Actuator (TA)



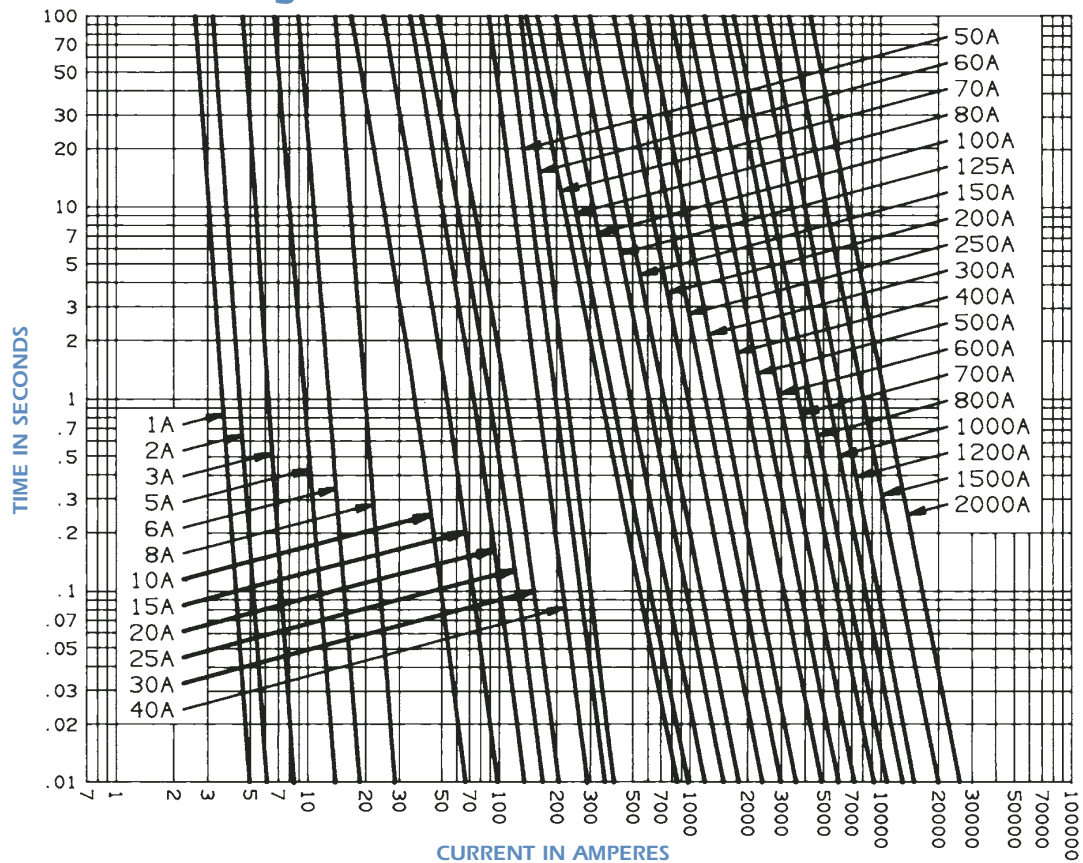
Semiconductor (AC) fuses

American Round Fuses Form 101 Range A60X

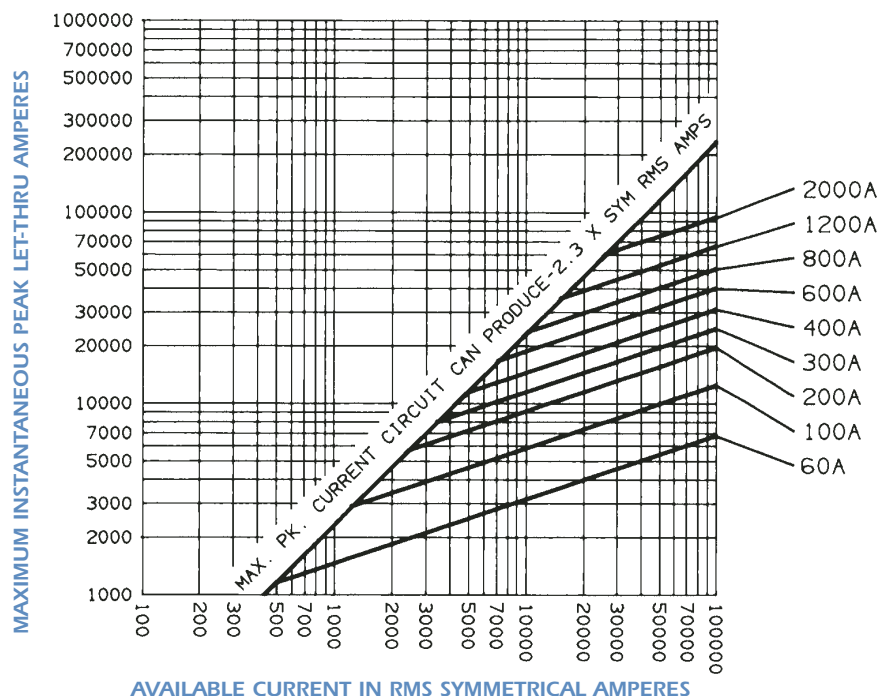
Semiconductor Protection Fuses

A60X1 to 2000

Melting Time – Current Data, 600V Fuses



Peak Let-Thru Current Data – A60X60 to 2000, 600 Volts AC



Semiconductor (AC) fuses



American Round Fuses Form 101 Range A60X

Semiconductor Protection Fuses

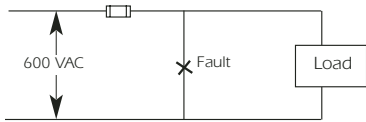


Fig. A

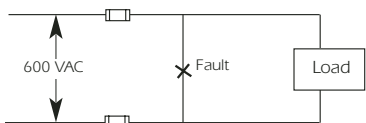


Fig. B

I²t Data – 600 Volts AC, 100kA

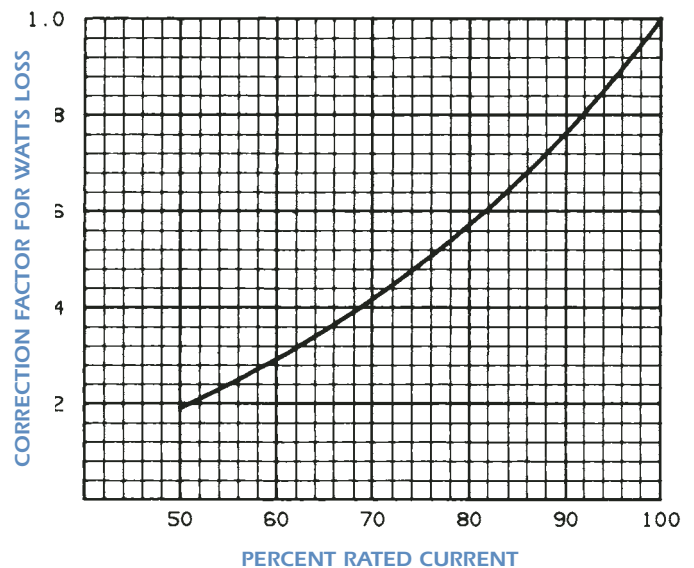
Fuse Ampere Rating	Melting (A ² s)	I ² t data Clearing at 600V	
		1 Fuse (Fig. A) (A ² s)	2 Fuses in series(Fig. B) (A ² s)
1	.06	.11	.09
2	.22	.45	.36
3	.50	1.0	.80
4	.90	1.8	1.4
5	1.4	2.8	2.2
6	2.0	4.0	3.2
7	2.7	5.4	4.3
8	3.6	7.1	5.7
10	16	40	30
12	22	64	48
15	35	100	70
20	60	170	130
25	95	275	210
30	140	400	290
35	270	1,800	1,200
40	350	2,400	1,600
45	450	3,000	2,000
50	550	3,600	2,400
60	800	5,400	3,600
70	4,000	13,000	9,800
80	5,300	17,000	13,000
90	6,700	22,000	16,000
100	8,300	27,000	20,000
125	13,000	42,000	31,000
150	19,000	60,000	45,000
175	25,000	80,000	61,000
200	33,000	110,000	80,000
225	42,000	140,000	100,000
250	52,000	170,000	125,000
300	75,000	240,000	180,000
350	100,000	340,000	240,000
400	130,000	490,000	320,000
450	170,000	620,000	400,000
500	210,000	770,000	500,000
600	300,000	1,100,000	720,000
700	430,000	1,700,000	1,000,000
800	560,000	2,250,000	1,400,000
1000	875,000	3,500,000	2,200,000
1200	1,250,000	5,000,000	3,100,000
1500	2,000,000	7,900,000	4,900,000
1600	2,200,000	9,000,000	5,600,000
1800	2,800,000	11,000,000	7,100,000
2000	3,500,000	14,000,000	8,900,000

Watts Loss @ Rated Current

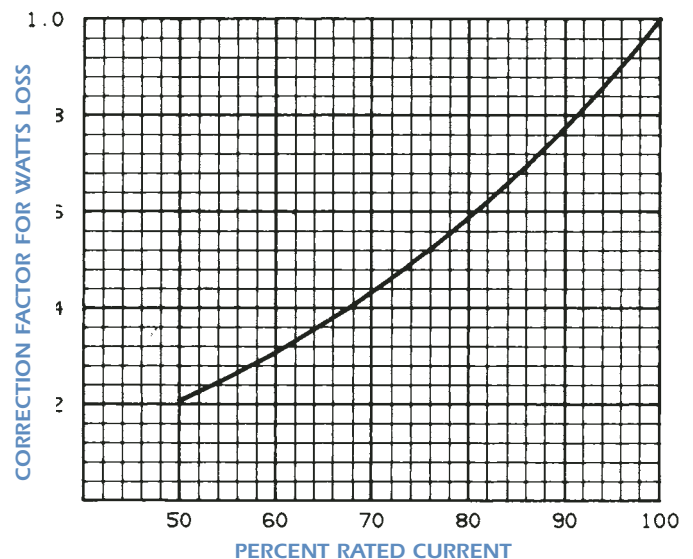
Ampere Rating	Watts Loss (W)	Ampere Rating	Watts Loss (W)	Ampere Rating	Watts Loss (W)
10	3.8	100	11	700*	57
15	4.5	125	12	700**	52
20	4.0	150	14	800*	67
25	7.3	175	16	800**	59
30	8.7	200	19	1000	72
35	5.2	225	21	1200	86
40	6.3	300	29	1500	107
50	7.4	350	35	1600	117
60	9.1	400	37	1800	133
70	7.6	450	42	2000	148
80	8.9	500	47	2500	183
90	9.7	600	56		

*Type 4 **Type 128

Watts Loss vs. % Rated Current (Types 1 & 4)



Watts Loss vs. % Rated Current (Type 128)





American Round Fuses Form 101 Range A70QS



French Cylindrical Semiconductor Protection Fuses

These Premium Amp-trap® French Cylindrical Semiconductor Fuses are an extension of the popular A70QS product line. They are solid-fill 14mm and 22mm fuses, IEC rated 690VAC, 200kA Interrupting and 700VDC, 100kA interrupting at 10ms time constant. In addition, these fuses have an 890 VDC rating for capacitor discharge applications up to 2.5ms time constant. All ampere ratings are available with a striker. Applications include small inverter drives and UPS systems, with superior I²t for improved protection and performance.

Features/Benefits

- International 14x51mm (2"x9/16") and 22x58mm (2-1/4"x13/16") sizes for worldwide acceptance
- Ferrule mount up to 100A for design versatility
- Very low I²t for improved semiconductor protection
- 690V IEC rated, tested at 760VAC; can be used up to 750VAC in U.S.
- 700VDC rated for dc protection of equipment with L/R ≤10ms/c
- Superior cycling ability for longer life on difficult cyclic loading applications
- aR characteristic for semiconductor short- circuit protection

Ratings

- AC: 10-100A
690VAC, 200kA I.R.
- IEC tested at 760VAC
- DC: 700VDC, 100kA I.R.
L/R=10ms
890VDC, 127kA I.R.
L/R=2.5ms

Approvals

- UL Recognized Component
- CSA Certified
- IEC 269-4 Compliance

Highlights

- 14 x 51 and 22 x 58 sizes
- 690VAC IEC Rated (760VAC Max.)
- 700VDC rated
- Superior Cycling Ability
- Low Watts Loss
- Optional Striker for Visual/Remote Indication

Applications

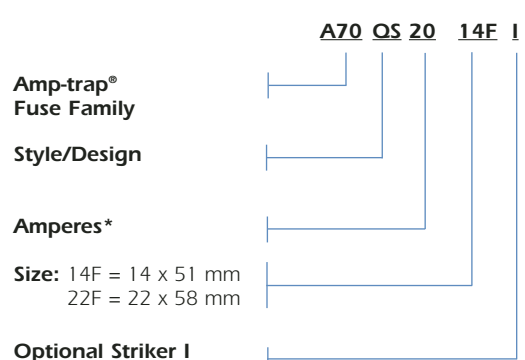
- Small inverters, UPS systems, motor drives and similar 700V or less equipment



Mounting:

- US14 or US22 "finger-safe" IP 20 grade holders, DIN rail or screw mount, with striker actuated microswitch indication available.
- 703 Series open fuse blocks

Catalog Numbering System



American Round Fuses

Form 101 Range

A70QS

French Cylindrical

Semiconductor Protection Fuses

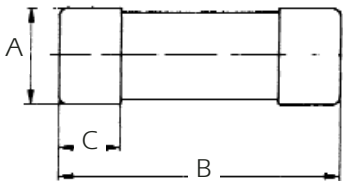
Ratings and Application Data

Body Size (mm)	Ampere Rating (A)	Melting I ² t (A ² s X 10 ³)	Max. Clearing I ² t @ 700VAC (A ² s X 10 ³)	Watts Loss @ Rated Current (W)	Catalog Number	
					No Striker	With Striker
14 x 51	6	0.0013	0.017	2.0	A70QS6-14F	A70QS6-14FI
	8	0.0024	0.027	2.8	A70QS8-14F	A70QS8-14FI
	10	0.0043	0.04	3.5	A70QS10-14F	A70QS10-14FI
	12	0.0054	0.06	4.4	A70QS12-14F	A70QS12-14FI
	16	0.0132	0.10	4.8	A70QS16-14F	A70QS16-14FI
	20	0.027	0.16	5.2	A70QS20-14F	A70QS20-14FI
	25	0.053	0.27	5.8	A70QS25-14F	A70QS25-14FI
	32	0.098	0.50	7.0	A70QS32-14F	A70QS32-14FI
	40	0.13	0.70	10.7	A70QS40-14F	A70QS40-14FI
	50	0.28	1.50	11.6	A70QS50-14F	A70QS50-14FI
22 x 58	10	0.0043	0.025	4.0	A70QS10-22F	A70QS10-22FI
	15	0.008	0.049	6.2	A70QS15-22F	A70QS15-22FI
	20	0.013	0.076	8.0	A70QS20-22F	A70QS20-22FI
	25	0.02	0.125	10.0	A70QS25-22F	A70QS25-22FI
	32	1.04	0.27	11.0	A70QS32-22F	A70QS32-22FI
	40	1.09	0.48	13.0	A70QS40-22F	A70QS40-22FI
	50	0.16	0.80	14.9	A70QS50-22F	A70QS50-22FI
	63	0.35	1.85	16.0	A70QS63-22F	A70QS63-22FI
	70	0.52	2.80	16.5	A70QS70-22F	A70QS70-22FI
	80	0.73	3.80	17.8	A70QS80-22F	A70QS80-22FI
	90	1.10	5.64	17.0	A70QS90-22F	A70QS90-22FI
	100	1.56	8.00	19.0	A70QS100-22F	A70QS100-22FI

*100kA, L/R = 11.6ms

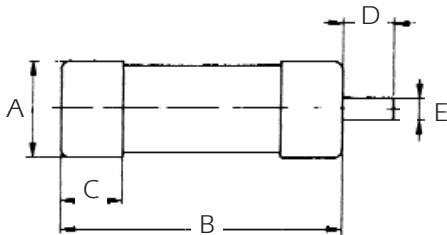
No Striker

Fuse Size	Dimensions-mm		
	A	B	C
14 X 51	14	51	14
22 X 58	22	58	16



With Striker

Fuse Size	Dimensions-mm				
	A	B	C	D	E
14 X 51	14	51	14	7.5	3.8
22 X 58	22	58	16	7.5	3.8



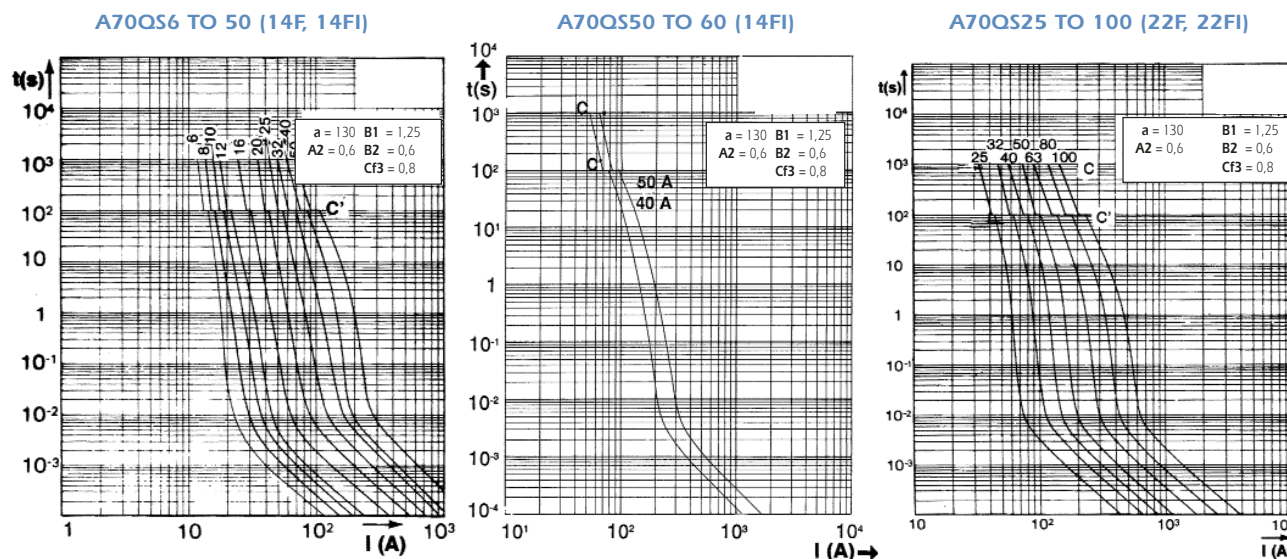


Semiconductor (AC) fuses

American Round Fuses Form 101 Range A70QS

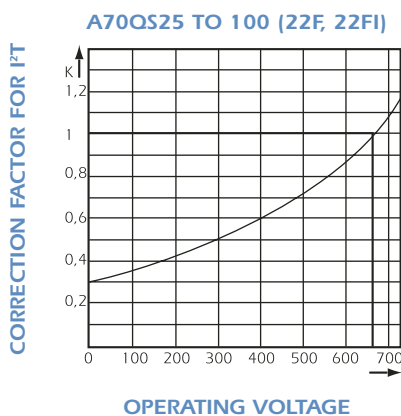
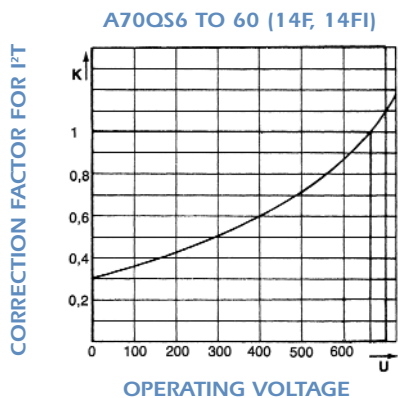
French Cylindrical Semiconductor Protection Fuses

Melting Time-Current Data

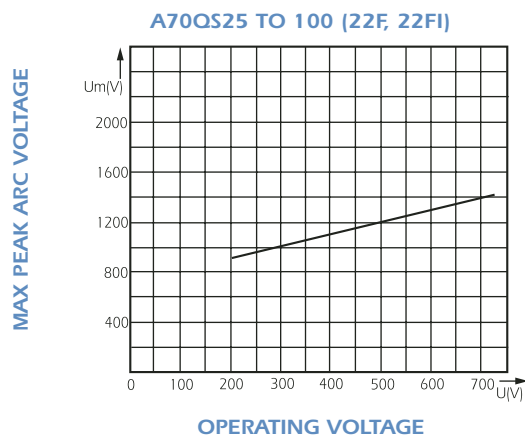
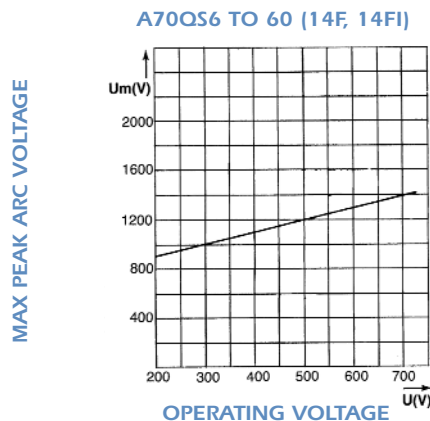


These curves indicate, for each rated current, the pre-arcing (melting) time vs. the R.M.S. current.

Clearing I^2t vs. Operating Voltage



Peak arc voltage vs. Operating Voltage

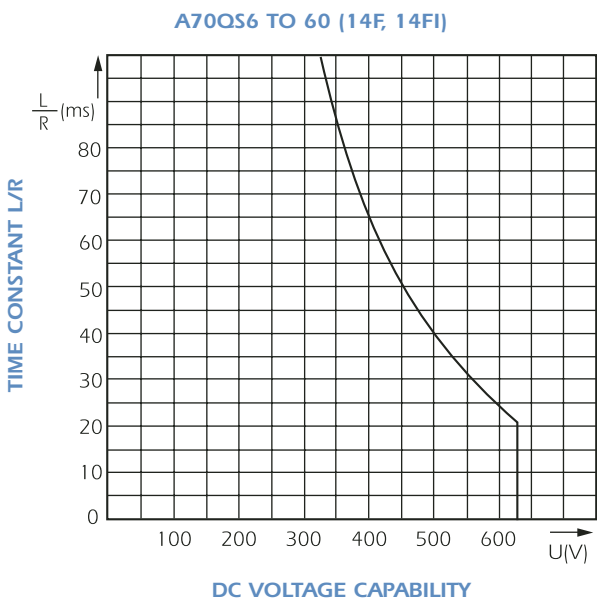




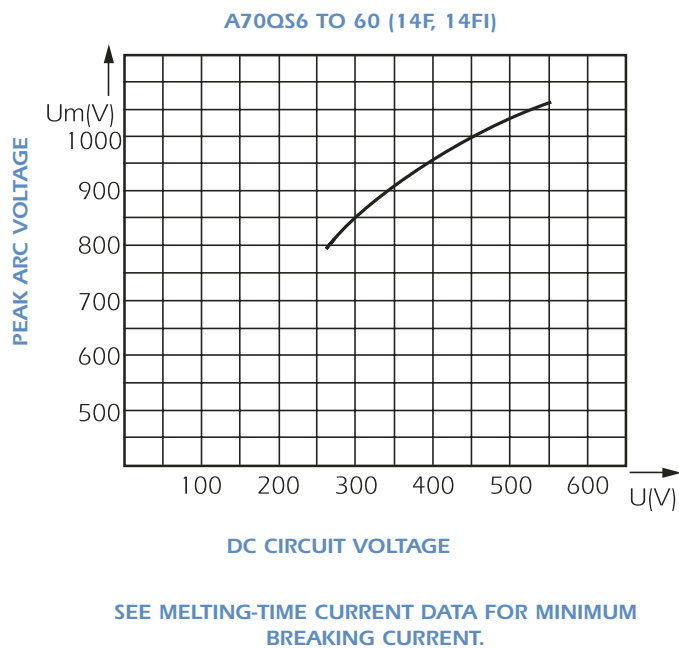
American Round Fuses Form 101 Range A70QS

French Cylindrical Semiconductor Protection Fuses

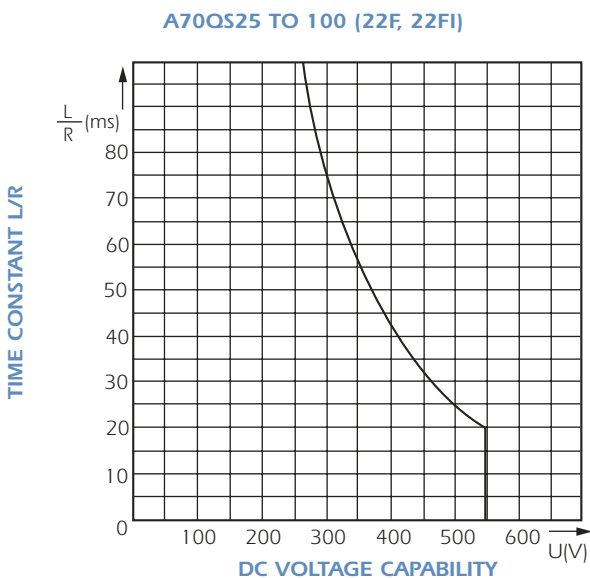
D.C. Applications Data DC Voltage Capabilities vs. Time Constant



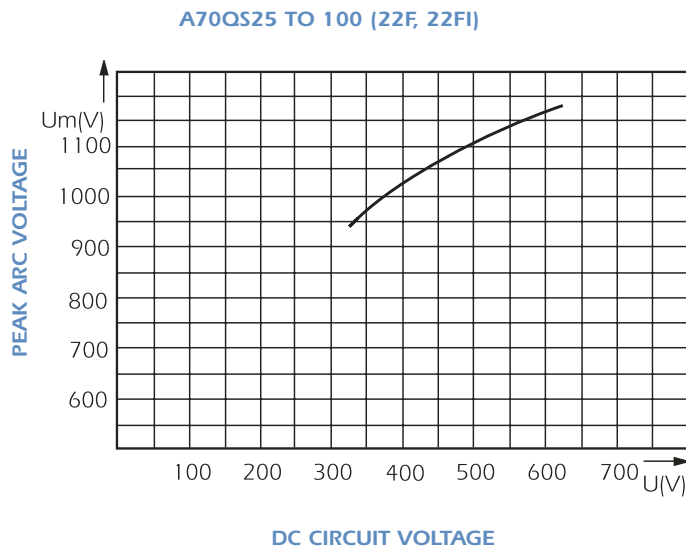
Peak Arc voltage vs. DC circuit voltage



DC Voltage Capabilities vs. Time Constant



Peak Arc voltage vs. DC circuit voltage



These curves provide the DC voltage capability of the fuse as a function of circuit time constant.

(L/R ratio)

These curves show the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U .



American Round Fuses Form 101 Range A70QS



Semiconductor Protection Fuses

A70QS Amp-trap® Semiconductor Protection fuses were developed in response to the need for improved overall performance of 700 volt semiconductor fuses for new equipment requirements. A70QS fuses have lower I^2t for better protection, longer life when subjected to cyclic loading, plus lower watts loss. A70QS is the best choice to protect dynamic solid state equipment such as motor drives, UPS, etc.

Features/Benefits

- Very Low I^2t for improved protection of equipment
 - Superior cycling ability for long, reliable life on high cyclic loading
 - Low watts loss for cooler operation
- 700V AC/DC rating gives greater design versatility
 - Ultra compact sizes allow down-sizing of existing equipment

Ratings

- AC: 35-800A
700VAC, 200kA I.R.
- DC: 35-800A
700VDC, 100kA I.R.
L/R = 10ms

Approvals

- UL Recognized
Component AC/DC
- AC: GuideNo.JFHR2
- DC: Tested to UL
Standard 198L
Parameters (35-800A)
- CSA Certified
File LR 12636

Highlights

- 700V AC/DC Rated
- Very low I^2t
- Low Watts Loss
- Superior Cycling Ability

Applications

- Protection of 700V
less motor drives,
UPS, inverters, etc.

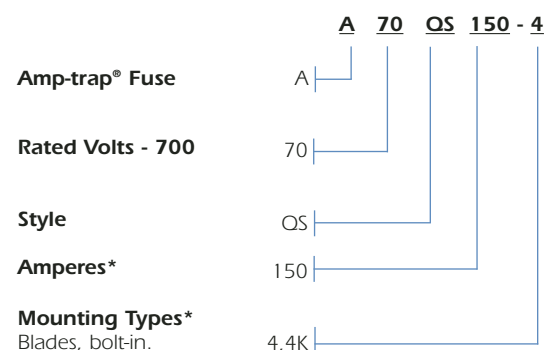


Single Pole Fuse Blocks for A70QS Fuses



Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
35-200	P243C	M219040
225-600	P266A	Y212380
700-800	15C 375	

Catalog Numbering System



* for ampere ratings and types not listed, consult the factory.

Semiconductor (AC) fuses



American Round Fuses Form 101 Range A70QS

Semiconductor Protection Fuses

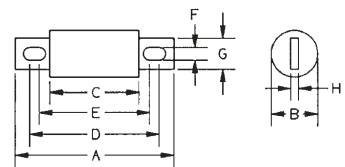
Standard Fuse Ampere Ratings, Catalog and Reference Numbers

Ampere Rating	Catalog Number	Ref. Number	Ampere Rating	Catalog Number	Ref. Number	Ampere Rating	Catalog Number	Ref. Number	Ampere Rating	Catalog Number	Ref. Number
35	A7OQS35-4	D202748	100	A7OQS100-4	G214343	200	A7OQS200-4	V212814	450	A7OQS450-4K	H215356
40	A7OQS40-4	Y213829	125	A7OQS125-4	L215865	200	A7OQS200-4K	E213329	500	A7OQS500-4	A218431
50	A7OQS50-4	T217919	125	A7OQS125-4K	Q216375	250	A7OQS250-4	L217406	500	A7OQS500-4K	R218952
60	A7OQS60-4	H219473	150	A7OQS150-4	P218950	300	A7OQS300-4	Q218951	600	A7OQS600-4	Y219993
70	A7OQS70-4	B201527	150	A7OQS150-4K	F219471	350	A7OQS350-4	M211266	600	A7OQS600-4K	P222676
80	A7OQS80-4	X212816	175	A7OQS175-4	A223192	400	A7OQS400-4	J214345	700	A7OQS700-4	E202772
90	A7OQS90-4	K214346	175	A7OQS175-4K	J200982	450	A7OQS450-4	F214848	800	A7OQS800-4	Z213830

For ampere ratings and styles not listed, ask sales agent. Mounting Type 4; note exception 4k

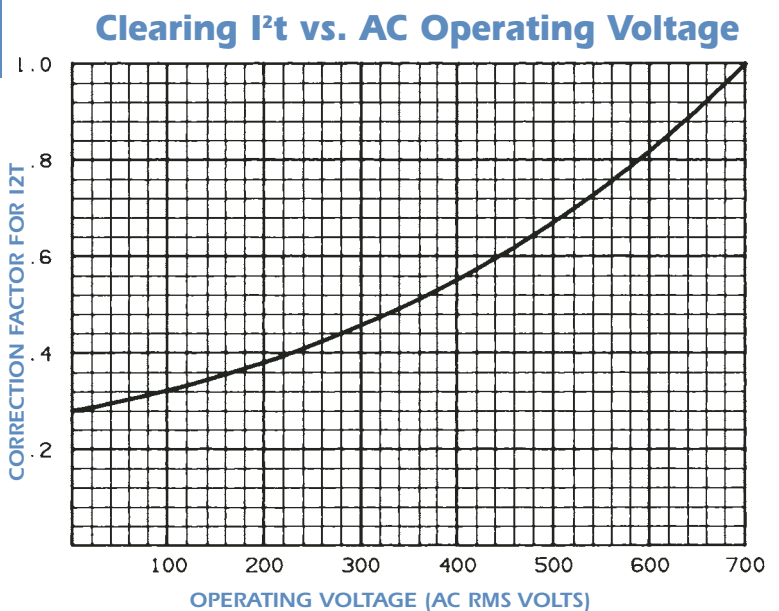
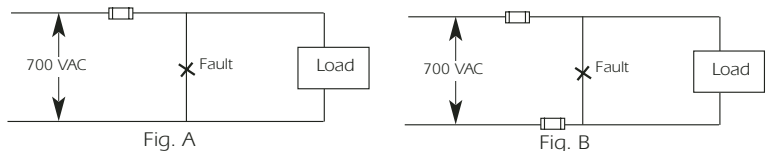
Dimensions

Catalog Number	Mounting Type	Dimensions - Inches (mm)							
		A	B	C	D	E	F	G	H
A7OQS35 to 100	4	4.38 (111)	1.00 (25.4)	2.88 (73.0)	3.69 (93.6)	3.50 (88.9)	0.31 (7.9)	0.75 (19.0)	0.13 (3.2)
A7OQS125 to 200	4	4.38 (111)	1.22 (31.0)	2.88 (73.0)	3.69 (93.6)	3.56 (90.5)	0.31 (7.9)	1.00 (25.4)	0.19 (4.8)
A7OQS125 to 200	4K	5.09 (129)	1.22 (31.0)	2.88 (73.0)	4.19 (106)	3.50 (88.0)	0.41 (10.3)	1.00 (25.4)	0.19 (4.8)
A7OQS225 to 400	4	5.09 (129)	1.50 (38.1)	2.84 (72.2)	4.16 (106)	3.53 (89.7)	0.40 (10.3)	1.50 (38.1)	0.25 (6.4)
A7OQS450 to 600	4	5.09 (129)	2.00 (50.8)	2.84 (72.2)	4.16 (106)	3.53 (89.7)	0.41 (10.3)	1.50 (38.1)	0.25 (6.4)
A7OQS450 to 600	4K	7.09 (180)	2.00 (50.8)	2.84 (72.2)	6.16 (156)	3.53 (89.7)	0.53 (13.5)	1.50 (38.1)	0.25 (6.4)
A7OQS700 to 800	4	7.09 (180)	2.50 (63.5)	2.84 (72.2)	5.28 (134)	4.91 (125)	0.53 (13.5)	2.00 (50.8)	0.38 (9.5)



I²t Data – 700 Volts AC, 100kA

Fuse Ampere Rating	Melting $\times 10^3 \text{ A}^2\text{s}$	I ² t data clearing at 700V AC	
		1 Fuse (Fig. A) $\times 10^3 \text{ A}^2\text{s}$	2 Fuses in series (Fig. B) $\times 10^3 \text{ A}^2\text{s}$
35	0.13	0.47	0.27
40	0.16	0.58	0.33
50	0.24	0.86	0.49
60	0.32	1.2	0.69
70	0.50	1.8	1.0
80	0.65	2.3	1.3
90	0.83	3.0	1.7
100	1.0	3.6	2.1
125	2.1	6.9	4.0
150	3.3	11	6.3
175	4.2	14	8.0
200	5.9	19	11
225	9.0	30	17
250	12.6	42	24
300	16.7	55	32
350	21.5	72	41
400	29.7	99	57
450	36.7	125	72
500	47.1	160	92
600	65.2	222	127
700	103.6	332	190
800	135.3	433	248





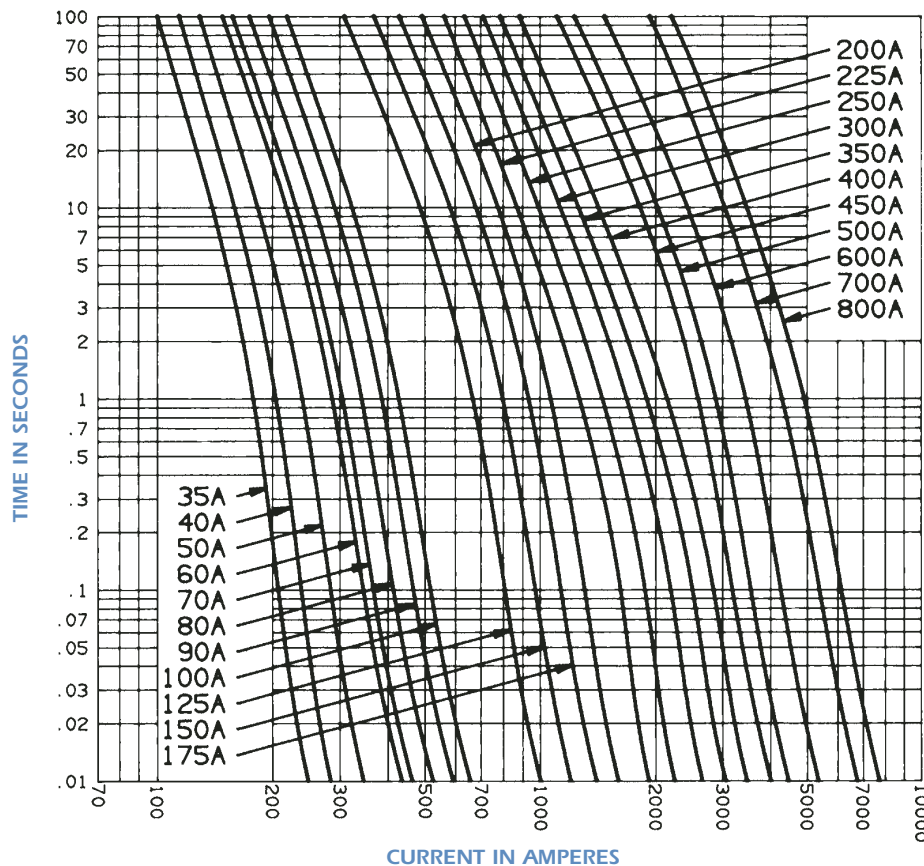
Semiconductor (AC) fuses

American Round Fuses Form 101 Range A70QS

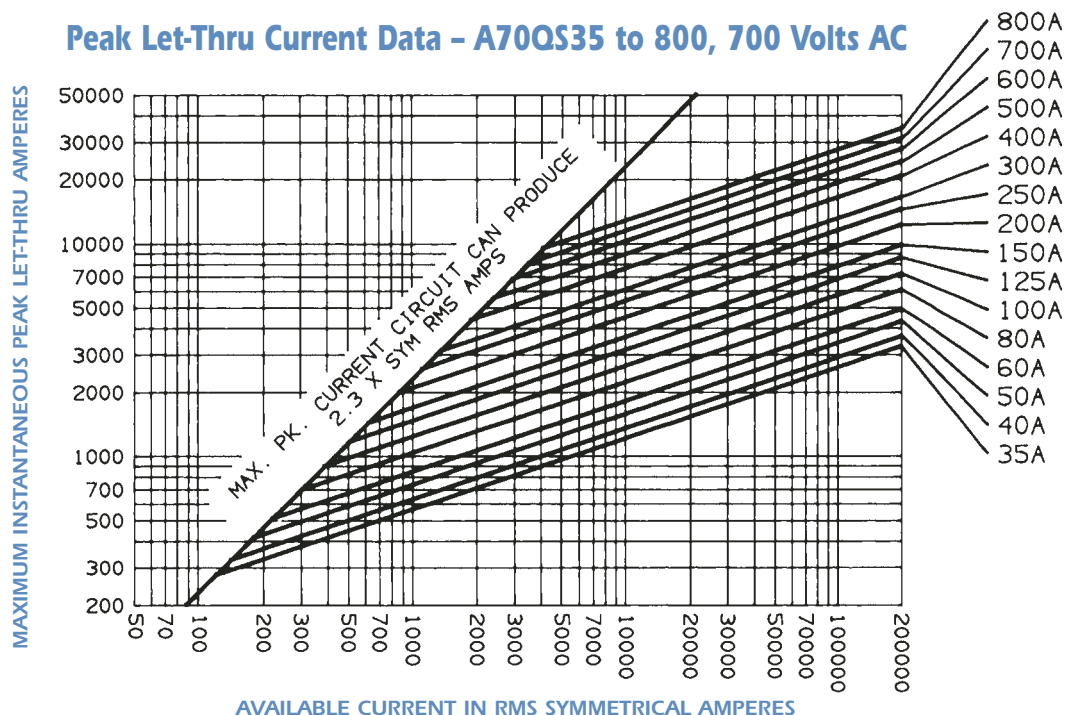
Semiconductor Protection Fuses

A70QS35 to 800

Melting Time – Current Data, 700V Fuses



Peak Let-Thru Current Data – A70QS35 to 800, 700 Volts AC



Semiconductor (AC) fuses



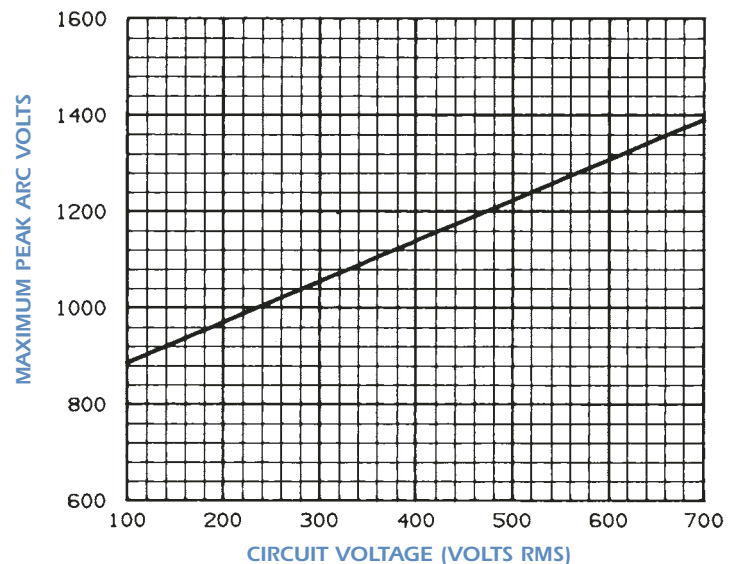
American Round Fuses Form 101 Range A70QS

Semiconductor Protection Fuses

Clearing I^2t at 700V DC,
100kA, L/R = 10 ms

Ampere Rating	Clearing I^2t (A ² s x 10 ³)
35	0.25
40	0.35
50	0.60
70	1.3
80	1.8
90	2.4
100	3.1
125	5.3
150	8.1
175	12
200	16
225	21.5
250	27.5
300	42
350	63
400	85
450	115
500	150
600	201
700	325
800	450

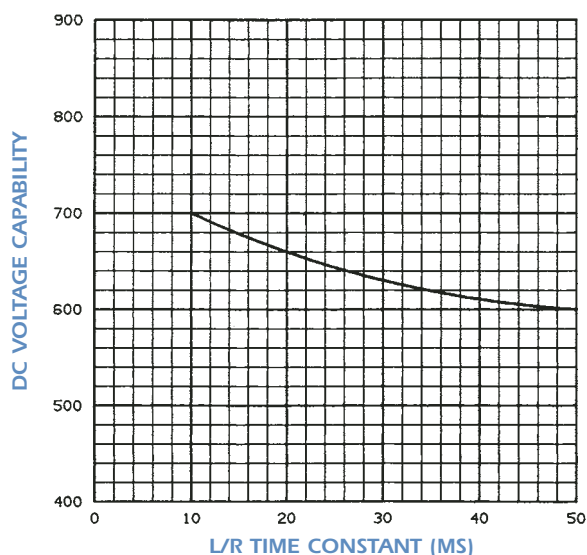
Maximum Arc Volts vs. System Voltage



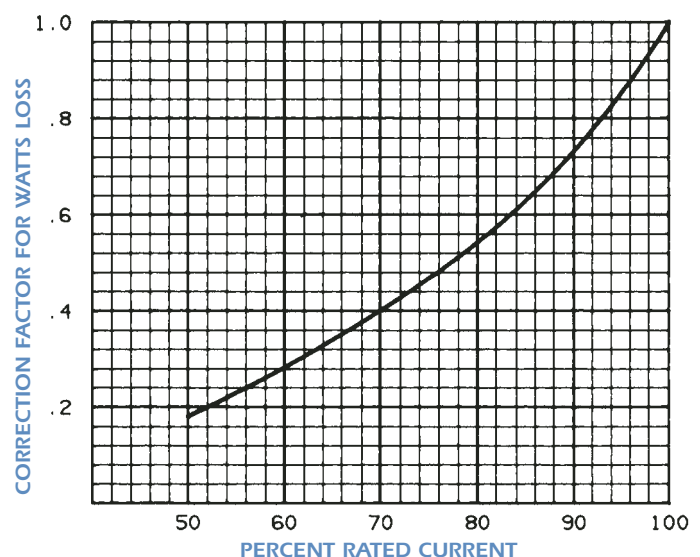
Watts Loss at Rated Current

Ampere Rating	Watts Loss (W)	Ampere Rating	Watts Loss (W)
35	6.2	200	41
40	7.5	225	37
50	9.8	250	42
60	12	300	53
70	15	350	64
80	18	400	75
90	20	450	78
100	24	500	92
125	22	600	116
150	29	700	125
175	35	800	143

DC Voltage Capability vs. Time Constant



Watts Loss vs. % Rated Current





Semiconductor (AC) fuses

American Round Fuses Form 101 Range A70P



Semiconductor Protection Fuses

A70P Amp-trap® Form 101 Semiconductor Protection fuses were developed for higher voltage AC and DC drives, UPS systems, reduced voltage motor starters and similar applications where lower I^2t and superior reliability were needed. A70P is a very popular fuse, available in a wide range of ratings.

Features/Benefits

- Low I^2t minimizes damage to protected components on short circuit
- Controlled arc voltage reduces stress to circuit components during fuse clearing
- Choice of mounting types helps in equipment design

Ratings

- AC: 10-1000A
700VAC, 100kA I.R.
- DC: 10-800A
650VDC, 100kA I.R.
L/R = 10ms

Approvals

- UL Recognized Component
- AC: GuideNo.JFHR2 (10-1000A)
- DC: Tested to UL Standard 198L Parameters (10-800A)

Highlights

- Very Fast Acting
- Current Limiting
- Low I^2t
- Indicator Options Available

Applications

- Protection of 700V or less DC drives, UPS, inverters, reduced voltage starters, etc.

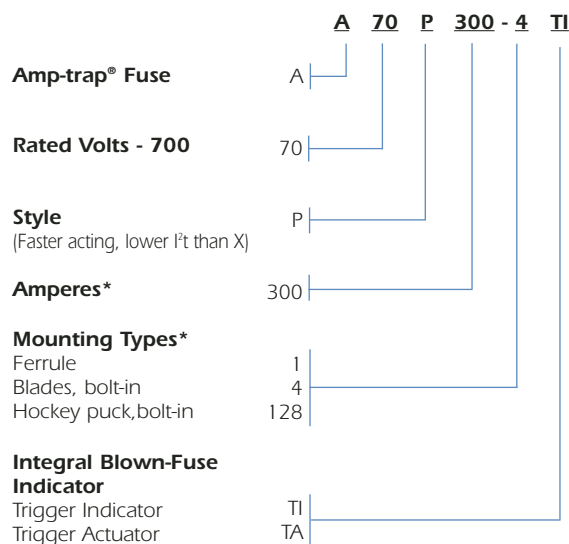


Single Pole Fuse Blocks for A70P Fuses



Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
10-30 (Type 1)	70316	B223308
31-60	P243C	M219040
61-100	P243C	M219040
101-200	P266A	Y212380
201-400	P266A	Y212380
401-600	P266F	S213410
601-800	1SC375	Q210579B

Catalog Numbering System



* For ampere ratings and types not listed, ask sales agent.

Semiconductor (AC) fuses



American Round Fuses Form 101 Range A70P

Semiconductor Protection Fuses Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.
10	A70P10-1	R212811	1	80	A70P80-4	V219990	3	300	A70P300-4	P212809	3
10	A70P10-4	B213326	2	80	A70P80-4TA	L222673	4	350	A70P350-4	C215351	3
15	A70P15-1	F214342	1	80	A70P80-4TI	Z223191	3	400	A70P400-4	L218947	3
15	A70P15-4	C214845	2	90	A70P90-4	J211263	3	400	A70P400-4TA	Y223190	4
20	A70P20-1	D215352	1	100	A70P100-4	J218945	3	400	A70P400-4TI	F200979	3
25	A70P25-1	N216373	1	100	A70P100-4TA	R219987	4	450	A70P450-4	W201522	3
25	A70P25-4	S216883	2	125	A70P125-4	P211774	3	500	A70P500-4	H211262	3
30	A70P30-1	J217404	1	125	A70P125-4TA	N212808	4	600	A70P600-4	H215862	3
30	A70P30-4	R217917	2	150	A70P150-4	A214843	3	600	A70P600-4TA	M216372	4
35	A70P35-4	D214340	3	150	A70P150-4TA	B215350	4	600	A70P600-4TI	R216882	3
40	A70P40-4	Q216881	3	150	A70P150-4TI	F215860	3	700	A70P700-4	M218948	5
40	A70P40-4TA	P217915	4	175	A70P175-4	N217914	3	700	A70P700-4TI	C219468	5
40	A70P40-4TI	W218427	3	200	A70P200-4	K218946	3	800	A70P800-4	G200980	5
50	A70P50-4	W202695	3	200	A70P200-4TA	A219466	4	800	A70P800-4TI	X202696	5
60	A70P60-4	A213325	3	200	A70P200-4TI	S219988	3	900	A70P900-4	D212293	6
60	A70P60-4TA	S213824	4	225	A70P225-4	E200978	3	1000	A70P1000-4	D200977	6
60	A70P60-4TI	E214341	3	250	A70P250-4	V201521	3	1200	A70P1200-4	F211260	7
70	A70P70-4	H217403	3	250	A70P250-4TA	G211261	4				
70	A70P70-4TI	Q217916	3	250	A70P250-4TI	Q211775	3				

For ampere ratings and styles not listed, call Technical Services.

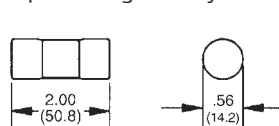


Figure 1

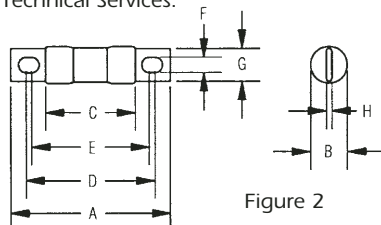


Figure 2

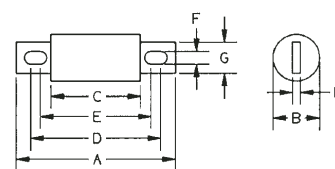


Figure 3

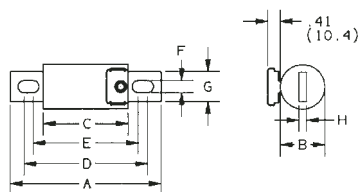


Figure 4

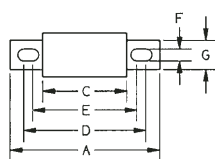


Figure 5

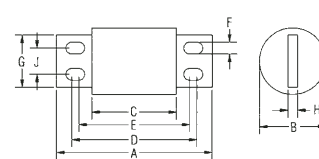


Figure 6

Dimensions

Outline Reference.	Mounting Type	Fig.	Dimensions - Inches (mm)									
			A	B	C	D	E	F	G	H	J	K
A70P10 to 30	1	1	2.00 (50.8)	.56 (14.2)	-	-	-	-	-	-	-	-
A70P10 to 30	4	2	2.88 (73.2)	.56 (14.2)	1.88 (47.8)	2.50 (63.5)	-	.27 (6.9)	.41 (10.4)	-	-	-
A70P35 to 60	4, 4TA*, 4TI	3, 4*	4.38 (111)	1.00 (25.4)	2.88 (73.2)	3.69 (93.7)	3.56 (90.4)	.31 (7.9)	.75 (19.1)	.06 (1.5)	-	-
A70P70 to 100	4, 4TA*, 4TI	3, 4*	4.38 (111)	1.22 (31.0)	2.88 (73.2)	3.69 (93.7)	3.56 (90.4)	.31 (7.9)	1.00 (25.4)	.19 (4.8)	-	-
A70P125 to 200	4, 4TA*, 4TI	3, 4*	5.09 (129)	1.50 (38.1)	2.84 (72.1)	4.16 (106)	3.53 (89.7)	.41 (10.4)	1.00 (25.4)	.25 (6.4)	-	-
A70P225 to 400	4, 4TA*, 4TI	3, 4*	5.09 (129)	2.00 (50.8)	2.84 (72.1)	4.16 (106)	3.53 (89.7)	.41 (10.4)	1.50 (38.1)	.24 (6.4)	-	-
A70P450 to 600	4, 4TA*, 4TI	3, 4*	7.09 (180)	2.50 (63.5)	2.84 (72.1)	5.25 (133)	4.94 (125)	.53 (13.5)	2.00 (50.8)	.38 (9.7)	-	-
A70P700 to 800	4, 4TI	5	6.81 (173)	2.88 (73.2)	3.31 (84.1)	5.31 (135)	-	.63 (16.0)	2.00 (50.8)	.38 (9.7)	.31 (7.9)	-
A70P900 to 1000	4, 4TI	6	7.59 (193)	3.50 (88.9)	3.84 (97.5)	5.97 (152)	5.22 (133)	.63 (16.0)	2.75 (69.9)	.50 (12.7)	1.38 (35.1)	-
A70P1200	4	7	10.84 (275.4)	4.5 (114.3)	3.84 (97.6)	6.84 (173.7)	5.84 (148.3)	9.34 (237.3)	9.59 (243.6)	3.5 (88.9)	.63 (15.9)	.75 (19.1)

* Optional Trigger Actuator (TA)



Semiconductor (AC) fuses

American Round Fuses Form 101 Range A70Q



Semiconductor Protection Fuses

A70Q Amp-trap® Semiconductor Protection fuses were developed for inverter applications requiring extremely low I²t. A70Q fuses provide the most responsive protection for applications not required to sustain heavy overloads.

Features/Benefits

- Lowest I²t of any fuse in this voltage rating for best overall protection
- 700V AC, 650V DC rating allows protection of greater variety of circuits
- Solid fill technology for extra reliability in performance

Ratings

- AC: 35-600A
700VAC, 100kA I.R.
- DC: 35-600A
650VDC, 100kA I.R.
L/R = 10ms

Approvals

- UL Recognized Component
- AC: GuideNo.JFHR2
- DC: Tested to UL Standard 198L Parameters (35-600A)

Highlights

- Extremely Fast Acting
- Current Limiting
- Lowest I²t

Applications

- Protection of inverters and other equipment requiring the best AC or DC protection in this voltage range

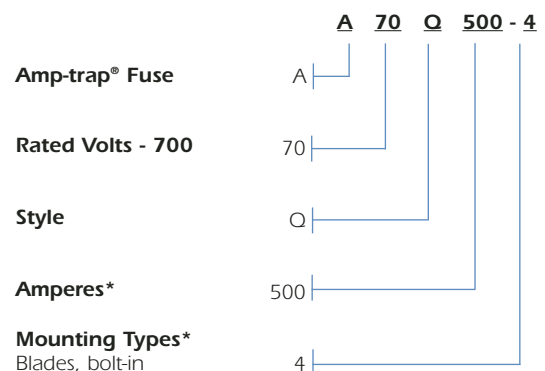


Single Pole Fuse Blocks for A70Q Fuses



Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
35-100	P243C	M219040
125-400	P266A	Y212380
450-600	P266F	S213410

Catalog Numbering System



* For ampere ratings and types not listed, ask sales agent.



American Round Fuses Form 101 Range A70Q

Semiconductor Protection Fuses

Standard Fuse Ampere Ratings

Ampere Rating	Catalog Number	Reference Number
35	A70Q35-4	D214846
40	A70Q40-4	T216884
50	A70Q50-4	N218949
60	A70Q60-4	W219991
70	A70Q70-4	R202714
80	A70Q80-4	K211264
90	A70Q90-4	V211779
100	A70Q100-4	Y218429
125	A70Q125-4	D219469
150	A70Q150-4	H200981
175	A70Q175-4	Y202697
200	A70Q200-4	T211778
250	A70Q250-4	S212812
300	A70Q300-4	V213826
350	A70Q350-4	E215353
400	A70Q400-4	K217405
450	A70Q450-4	S217918
500	A70Q500-4	E219470
600	A70Q600-4	M222674

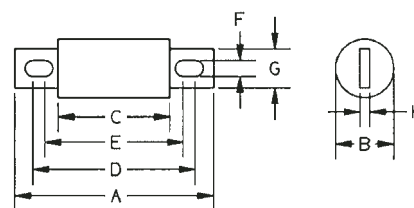


Figure 1

For ampere ratings and styles not listed, call Technical Services.

Dimensions

Catalog Number	Mounting Type	Dimensions - Inches (mm)							
			A	B	C	D	E	F	G
A70Q35 to 60	4	4.37 (111)	1.22 (31.0)	1.96 (49.8)	3.69 (93.7)	2.91 (73.9)	.34 (8.6)	1.00 (25.4)	.19 (4.8)
A70Q70 to 100	4	4.37 (111)	1.22 (31.0)	1.96 (49.8)	3.69 (93.7)	2.91 (73.9)	.41 (10.4)	1.00 (25.4)	.19 (4.8)
A70Q125 to 200	4	5.09 (129)	1.50 (38.1)	1.96 (49.8)	4.16 (106)	2.91 (73.9)	.41 (10.4)	1.00 (25.4)	.25 (6.4)
A70Q250 to 400	4	5.09 (129)	2.00 (50.8)	1.96 (49.8)	4.00 (102)	2.94 (74.7)	.56 (14.2)	1.50 (38.1)	.25 (6.4)
A70Q450 to 600	4	7.09 (180)	2.50 (63.5)	1.96 (49.8)	5.72 (145)	3.25 (82.6)	.56 (14.2)	2.00 (50.8)	.38 (9.7)



Semiconductor (AC) fuses

American Round Fuses Form 101 Range A100P



Semiconductor Protection Fuses

A100P Amp-trap® Form 101 Semiconductor Protection fuses are rated 1000V, extending the range of protection for UPS systems, AC and DC drives, reduced voltage motor starters and similar applications where lower I²t and superior reliability are needed. With ratings from 15 through 1000 amperes, a wide range of high voltage applications can be served.

Features/Benefits

- Low I²t minimizes damage to protected components on short circuit
- Controlled arc voltage reduces stress to circuit components during fuse clearing
- Wide range of ampere ratings

Ratings

- AC: 15-30A
1000VAC, 100kA I.R.
35-1000A
1000VAC, 100kA I.R.
- DC: 15-1000A
750VDC, 100kA I.R.

Approvals

- UL Recognized Component
- AC: UL Guide No. JFHR2 (60-800A)
- DC: Ferraz Shawmut Certified

Highlights

- Fast Acting
- Current Limiting
- Low I²t
- Optional Trigger Indicator

Applications

- Protection of UPS systems AC/DC drives, reduced voltage motor starters and other 1000V or less semiconductor devices
- Spare markets only for new installations, refer to PC range

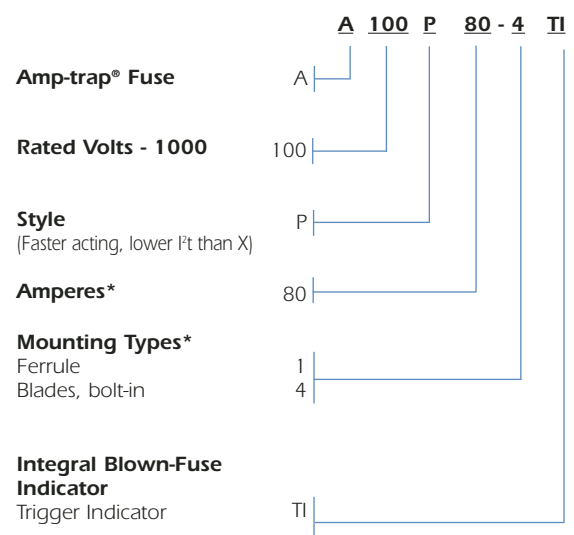


Single Pole Fuse Blocks for A100P Fuses



Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
35-100	P266G	Z214428
125-400	P266L	J215955

Catalog Numbering System





American Round Fuses Form 101 Range A100P

Semiconductor Protection Fuses

Standard Fuse Ampere Ratings, Catalog and Reference Numbers

Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.	Ampere Rating	Catalog Number	Ref Number	Outline Fig.
15	A100P15-1	D222643	1	80	A100P80-4TI	Y202191	2	350	A100P350-4	Q201494	2
20	A100P20-1	Y212265	1	100	A100P100-4	A215832	2	350	A100P350-4TI	X202190	2
25	A100P25-1	J216852	1	100	A100P100-4TI	E216342	2	400	A100P400-4	Z212266	2
30	A100P30-1	E218918	1	125	A100P125-4	D218917	2	400	A100P400-4TI	Y213300	2
35	A100P35-4	S223162	2	125	A100P125-4TI	-	2	500	A100P500-4	W214816	3
40	A100P40-4	A211232	2	150	A100P150-4	R223161	2	500	A100P500-4TI	C215834	3
50	A100P50-4	Q213799	2	150	A100P150-4TI	Y200949	2	600	A100P600-4	A217373	3
50	A100P50-4TI	Y214312	2	200	A100P200-4	J212781	2	600	A100P600-4TI	Q218399	3
60	A100P60-4	G216344	2	200	A100P200-4TI	X213299	2	650	A100P650-4	F218919	4
60	A100P60-4TI	K216853	2	225	A100P225-4	F216343	2	700	A100P700-4	T223163	4
65	A100P65-4	-	2	250	A100P250-4	Z217372	2	800	A100P800-4	B211233	4
70	A100P70-4TI	-	2	300	A100P300-4	T219437	2	800	A100P800-4TI	L212783A	4
80	A100P80-4	R201495	2	300	A100P300-4TI	E222644	2	1000	A100P1000-4	Y217371	5

For ampere ratings and styles not listed, ask sales agent. All of these catalog and reference numbers are without TI

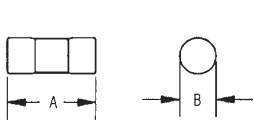


Figure 1

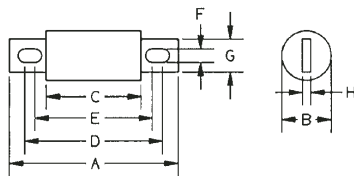


Figure 2

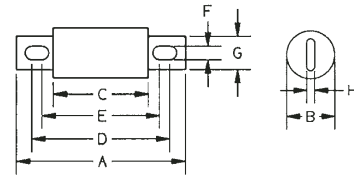


Figure 3

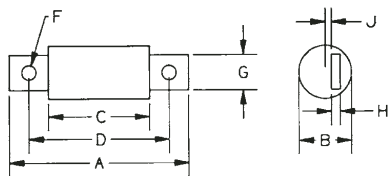


Figure 4

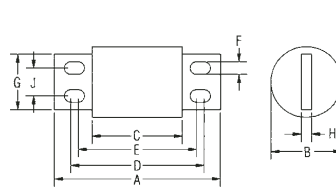


Figure 5

Dimensions

Catalog Number	Mounting Type	Fig.	Dimensions - Inches (mm)								
			A	B	C	D	E	F	G	H	J
A100P15 to 30	1	1	2.63 (66.8)	0.56 (14.2)	-	-	-	-	-	-	-
A100P35 to 60	4, 4TI	2	5.00 (127)	1.00 (25.4)	3.50 (173)	4.31 (109)	4.19 (106)	0.31 (7.9)	0.75 (19.1)	0.13 (3.3)	-
A100P65 to 100	4, 4TI	2	5.00 (127)	1.22 (31.0)	3.50 (173)	4.31 (109)	4.19 (106)	0.31 (7.9)	1.00 (25.4)	0.19 (4.8)	-
A100P125 to 200	4, 4TI	2	5.72 (145)	2.00 (50.8)	3.47 (88.1)	4.78 (121)	4.16 (106)	0.41 (10.4)	1.00 (25.4)	0.25 (6.4)	-
A100P225 to 400	4, 4TI	2	5.72 (145)	2.00 (50.8)	3.47 (88.1)	4.78 (121)	4.16 (106)	0.41 (10.4)	1.50 (38.1)	0.25 (6.4)	-
A100P500 to 600	4, 4TI	3	7.72 (196)	2.50 (63.5)	3.47 (88.1)	5.88 (149)	5.56 (141)	0.53 (13.5)	2.00 (50.8)	0.38 (9.7)	-
A100P650 to 800	4, 4TI	4	7.44 (189)	2.88 (73.2)	3.94 (100)	5.94 (151)	-	0.63 (16.0)	2.00 (50.8)	0.38 (9.7)	0.31 (7.9)
A100P1000	4	5	8.22 (209)	3.50 (88.9)	4.47 (114)	6.59 (167)	5.84 (148)	0.63 (16.0)	2.75 (69.9)	0.50 (12.7)	1.38 (35.1)

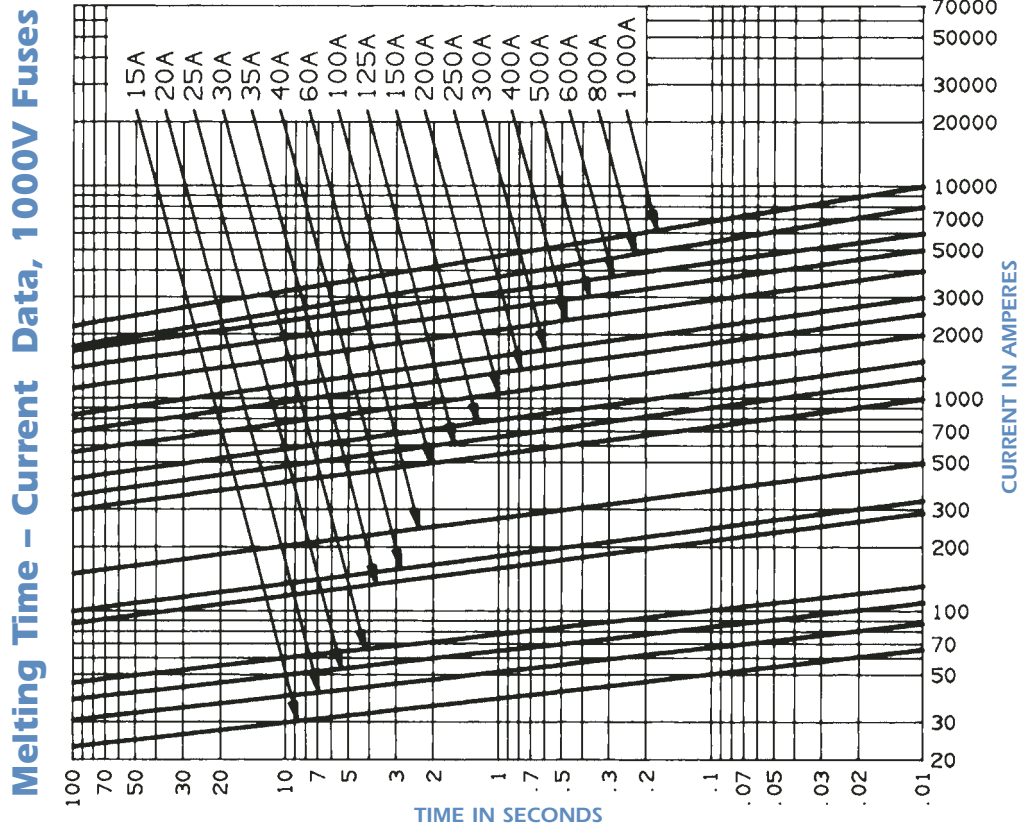


Semiconductor (AC) fuses

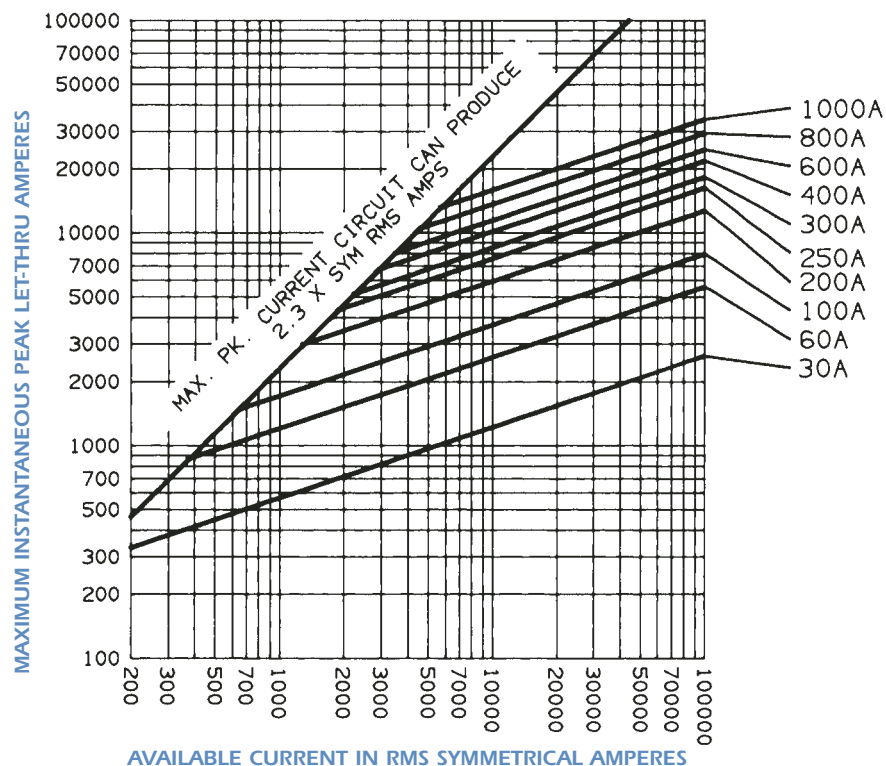
American Round Fuses Form 101 Range A100P

Semiconductor Protection Fuses

A100P15 to 1000



Peak Let-Thru Current Data - A100P30 to 1000, 1000 Volts AC



Semiconductor (AC) fuses

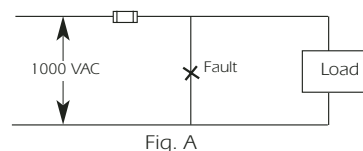


American Round Fuses Form 101 Range A100P

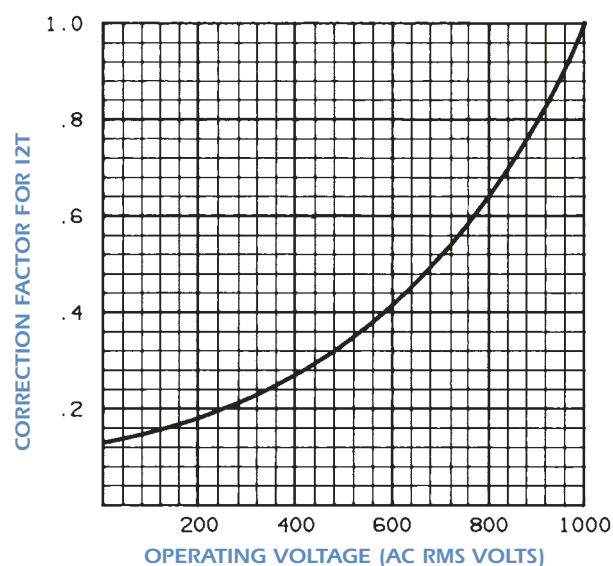
Semiconductor Protection Fuses

I²t Data – 1000 Volts AC, 100kA

Ampere Rating	I ² t Data	
	Melting (A ² x10 ³)	Clearing @1000VAC (fig A) (A ² x10 ³)
15	.023	.6
20	.03	.8
25	.047	1.3
30	.057	1.5
35	.29	2.2
40	.38	2.9
50	.60	4.5
60	.86	6.5
65	1.0	7.6
70	1.2	8.8
80	1.5	12
100	2.4	18
125	3.8	28
150	5.4	41
200	9.6	72
225	12	91
250	15	110
300	22	160
350	29	220
400	38	290
500	600	450
600	86	650
650	100	760
700	120	880
800	150	1,200
1,000	240	1,900



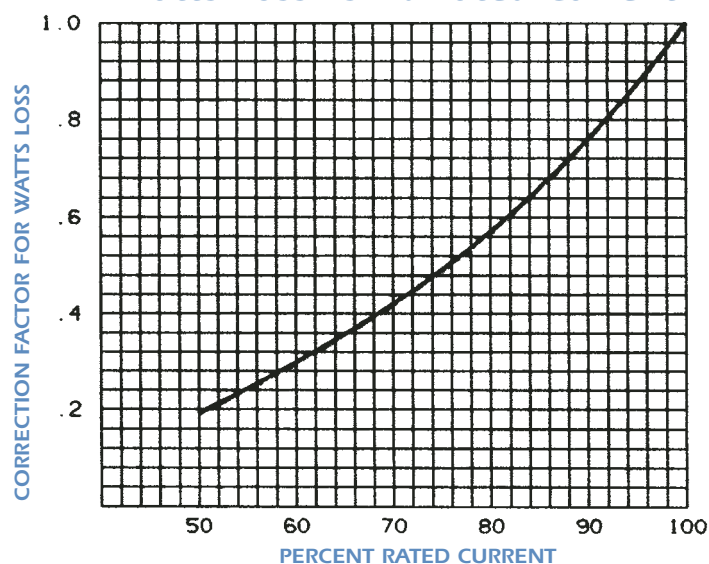
Clearing I²t vs. AC Operating Voltage



Watts Loss at Rated Current

Ampere Rating	Watts Loss (W)	Ampere Rating	Watts Loss (W)
15	3.4	225	40
20	5.9	250	45
25	9	300	55
30	12.8	350	65
35	7.3	400	70
40	8.3	500	90
50	11	600	110
60	13	650	120
70	13	700	125
80	14	800	140
100	18	1000	190
125	23		
150	28		
200	36		

Watts Loss vs. % Rated Current





Semiconductor (AC) fuses

American Round Fuses Form 101 Range A120X



Semiconductor Protection Fuses

A120X Amp-trap® Form 101 Semiconductor Protection fuses, rated 1/2A through 30A, 1200VAC are popular for use in traction drive auxiliary circuits and similar applications.

A120X fuses are also suitable for use on 1000VDC auxiliary circuits with low time constants.

Features/Benefits

- 1000 Volt DC rated for wide range of circuits
- Compact size fits in where competitive sizes will not fit

Ratings

- AC: 1/2-30A
1200VAC, 100kA I.R.
- DC: 1/2-30A
1000VDC, 100kA I.R.
L/R = 10ms

Approvals

- Ferraz Shawmut Certified

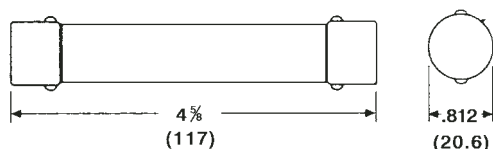
Highlights

- Fast Acting
- Current Limiting
- Low I²t
- Compact Size

Applications

- Protection of traction drive auxiliary circuits, etc.

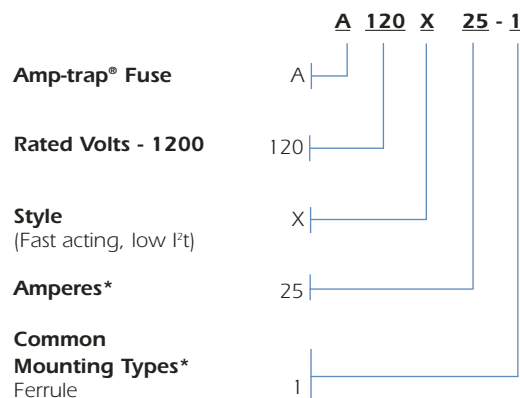
Dimensions - In (mm)



Single Pole Fuse Blocks for A120X Fuses

Fuse Ampere Rating	Fuse block	
	Catalog Number	Reference Number
1/2-30	P292	T216976

Catalog Numbering System



* For ampere ratings and types not listed, ask sales agent.

Standard Fuse Ampere Ratings, Catalog and Reference Numbers

Ampere Rating	Catalog Number	Reference Number	Ampere Rating	Catalog Number	Reference Number
1/2	A120X1/2-1	T218954	6	A120X6-1	W216380
1	A120X1-1	C218433	10	A120X10-1	K219475
2	A120X2-1	E223196	15	A120X15-1	R222678
3	A120X3-1	P211268	20	A120X20-1	M200985
4	A120X4-1	Z212818	25	A120X25-1	E202864
5	A120X5-1	J214851	30	A120X30-1	Z211783

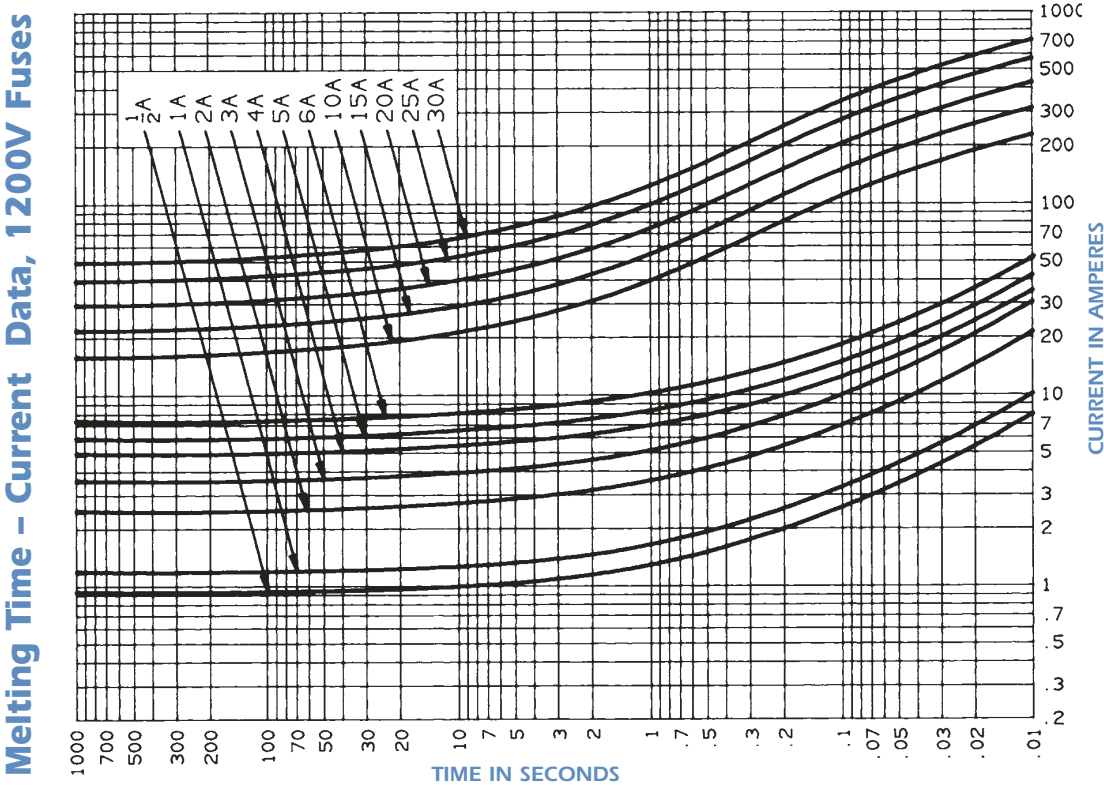
American Round Fuses

Form 101 Range

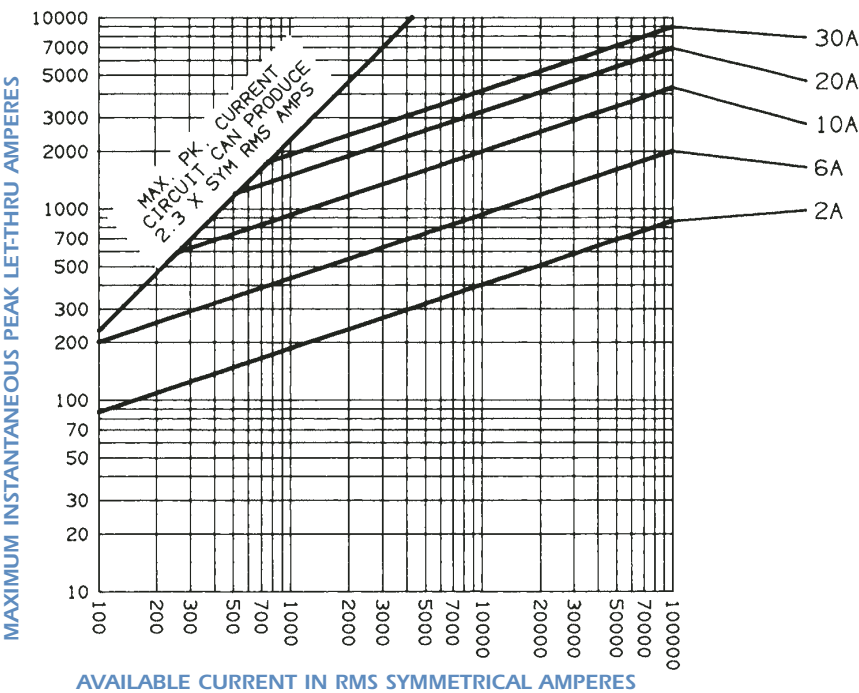
A120X

Semiconductor Protection Fuses

A120X1/2 to 30



Peak Let-Thru Current Data – A120X2 to 30, 1200 Volts AC



I²t at 1200VAC,
100kA

Fuse Ampere Rating	I ² t data	
	Melting (A ² s)	Clearing (A ² s)
1/2	.10	1.9
1	.40	7.5
2	4.3	30
3	8.9	69
4	10	120
5	18	190
6	29	280
10	500	970
15	1100	2100
20	2000	3700
25	3100	5700
30	4400	8300



Semiconductor (AC) fuses

American Round Fuses Form 101 Range A150X



Semiconductor Protection Fuses

A150X Amp-trap® Form 101 Semiconductor Protection fuses, rated up to 1000A, 1500VAC are suitable for Traction drive and auxiliary circuits and for High Voltage Heavy duty rectifier applications. A150X fuses are suitable for use up to 1500VDC on circuits depending on time constant.

Features/Benefits

- 1500 Volt AC rated for wide range of applications
 - Heavy Duty Links
 - Rugged Fiberglass Body

Ratings

- AC: 1A to 1000A
1500VAC, 100kA I.R.
- DC: 1A to 1000A
1000VDC, 100kA I.R.
L/R = 1000ms

Approvals

- Ferraz Shawmut
Certified

Highlights

- Fast Acting
- Current Limiting
- Low I^2t

Applications

- Protection of traction
drive auxiliary circuits,
etc.

Outline Ref.	Mounting Type	Fig	Dimensions - Inches (mm)									
A	B	C	D	E	F	G	H	J				
A150X1 to 30	1	1										
A150X15 to 60	4	2	7.15 (182)	1.21 (31)	5.62 (143)	6.46 (164)	6.34 (161)	0.31 (8)	1.00 (25)	0.18 (3)	-	-
A150X70 to 100	4	2	7.87 (127)	1.50 (31)	5.62 (173)	6.93 (176)	6.31 (160)	0.40 (10)	1.00 (25)	.025 (6)	-	-
A150X125 to 300	4	2	7.87 (145)	2.00 (38)	5.62 (88)	6.93 (176)	6.31 (160)	0.40 (10)	1.50 (38)	0.25 (6)	-	-
A150X400 to 600	4	2	9.75 (145)	2.50 (51)	6.62 (88)	8.31 (211)	8.06 (205)	0.56 (14)	2.00 (51)	0.25 (6)	-	-
A150X800 to 1000	4	3	9.87 (251)	3.50 (89)	6.12 (155)	8.03 (204)	7.71 (196)	0.56 (14)	2.75 (70)	0.37 (9)	1.37 (35)	-



Figure 1

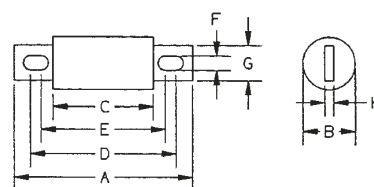


Figure 2

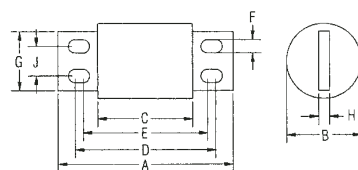


Figure 3

Standard Fuse Ampere Ratings, Catalog Numbers

Ampere Rating	Catalog Number	Ref. Number	Outline Fig.	Ampere Rating	Catalog Number	Ref. Number	Outline Fig.
1	A150X1-1	J213333	1	90	A150X90-4	R215364	2
15	A150X15-1	Q200988	1	100	A150X100-4	Q215869	2
15	A150X15-4	F201531	2	125	A150X125-4	M219477	2
20	A150X20-1	R215870	1	150	A150X150-4	K213334	2
20	A150X20-4	C216892	2	175	A150X175-4	C213833	2
25	A150X25-4	E218435	2	200	A150X200-4	A217925	2
30	A150X30-1	V222681	1	250	A150X250-4	N219478	2
30	A150X30-4	J223200	2	300	A150X300-4	G201532	2
35	A150X35-4	C211786	2	400	A150X400-4	Q214351	2
40	A150X40-4	D213834	2	450	A150X450-4	Y216382	2
50	A150X50-4	S217412	2	500	A150X500-4	B217926	2
60	A150X60-4	D219998	2	600	A150X600-4	K223201	2
70	A150X70-4	N212302	2	800	A150X800-4	N214855	2
80	A150X80-4	E213835	2	1000	A150X1000-4		2

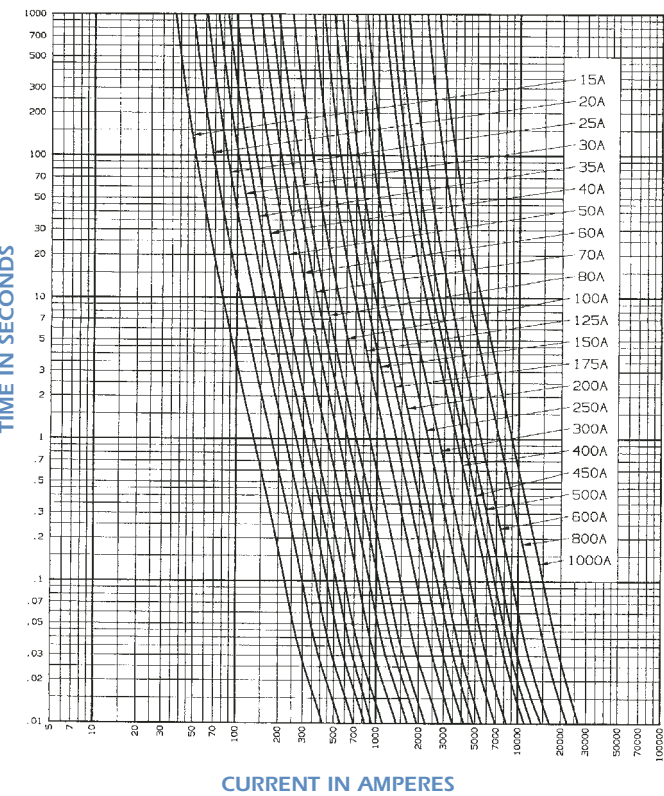
American Round Fuses

Form 101 Range

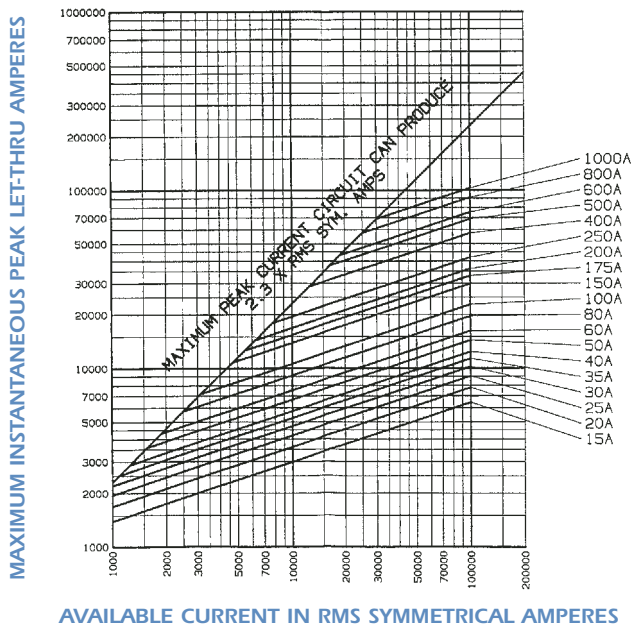
A150X

Semiconductor Protection Fuses

Melting Time - Current Data, 1500V Fuses



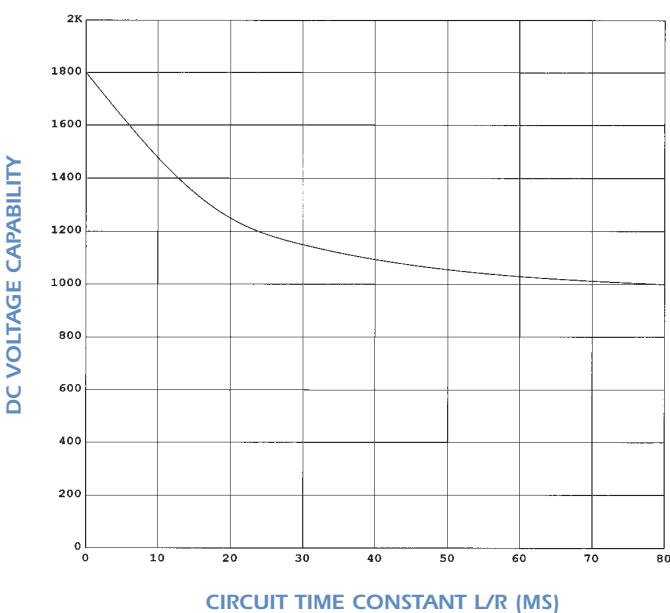
Peak Let-Thru Data - A150X15 to 1000, 1500 VAC



I²t Data - 1500 VAC, 100kA

Ampere Rating	Pre-arc I ² t (A ² x 10 ³)	Total I ² t Data at 1500VAC (A ² S x 10 ³)
15	1.4	2.94
20	2.5	5.25
25	3.8	8.04
30	5.5	11.6
35	7.5	15.8
40	9.8	20.6
50	15.3	32.1
60	22	46.2
70	31	62
80	40	80
90	50	100
100	61	128
125	100	215
150	138	290
175	188	395
200	245	515
250	383	804
300	551	1157
400	980	2057
450	1240	2603
500	1530	3213
600	2204	4629
800	3918	8829
1000	6122	12860

DC Voltage Capacity VS. Time constant





American Round Fuses Other American Fuses A25Z-2



Semiconductor Protection Fuses

A25Z "Type 2" Amp-trap® midget fuses are primarily used for semiconductor protection. They have a 300 volt rating and are highly current-limiting fuses, with midget dimensions. (Not for Branch Circuit Protection).

Features/Benefits

- Extremely fast acting for upgrades of existing circuit protection
- Low I^2t for semiconductor protection
- Can be used with ULTRASAFE™ fuse holders

Ratings

- AC: 1-30A
300VAC, 100kA I.R.

Approvals

- Ferraz Shawmut
Certified

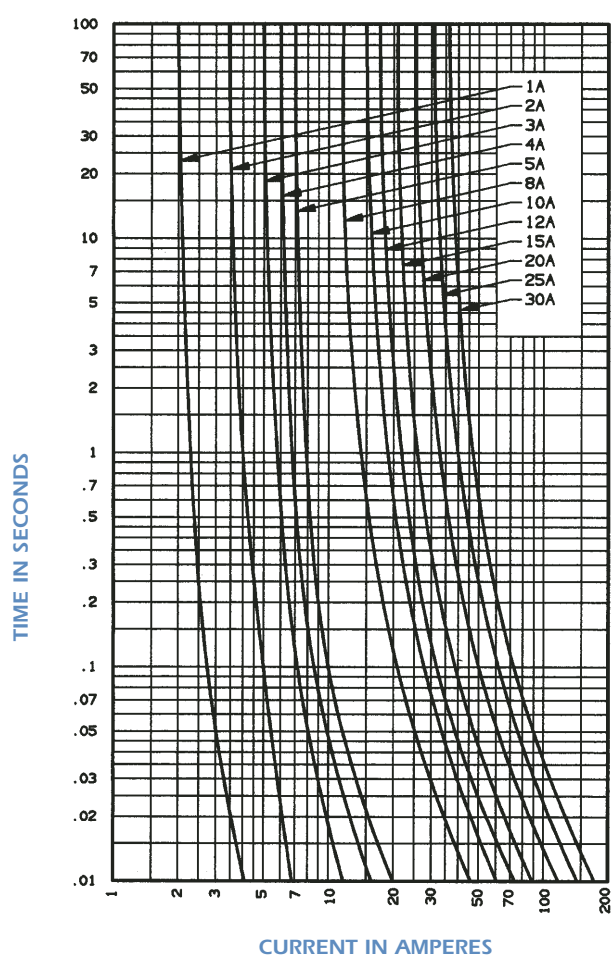
Highlights

- 300 Volt Rated
- Current Limiting
- I^2t Rated

Applications

- Semiconductor
Protection

Melting Time - Current Data 1 - 30 Amperes, 300 Volts AC



Standard Fuse Ampere Ratings, Clearing I^2t

Ampere Rating	Catalog Number	Reference Number	Clearing I^2t AT 250V
1	A25Z1-2	S211133	.27
2	A25Z2-2	R213202	1.5
3	A25Z3-2	S214721	3.4
4	A25Z4-2	A215740	6.9
5	A25Z5-2	G216252	8.7
8	A25Z8-2	E216756	26
10	A25Z10-2	J211654	40
12	A25Z12-2	Q212166	58
15	A25Z15-2	G212687	90
20	A25Z20-2	J213701	160
25	A25Z25-2	P214212	250
30	A25Z30-2	W215230	360





American Round Fuses Other American Fuses A070gRB



Semiconductor Protection Fuses

The A070gRB is a fast acting, full range fuse utilized in the protection of inverters, UPS and other discrete semi-conductor devices

Features/Benefits

- International 10 X 38 mm (1 1/2 X 13/32) size for worldwide acceptance
- Ferrule mount 1 to 30A for design versatility
- Low I^2t for improved semiconductor protection
- gR Class according to VDE 636-23 and IEC 269.4

Ratings

- AC: 1-30A
160kA, 700V
- DC: 550VDC,
L/R = 10mS

Approvals

- UL Recognized Component
- IEC 269-4 Compliance
- AC: UL Guide No. JFHR2

Highlights

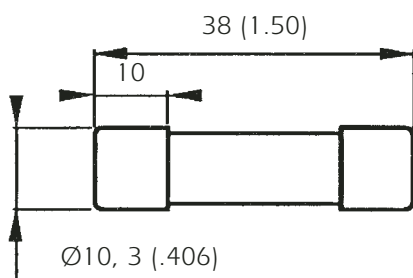
- Extremely Fast Acting
- Current Limiting
- Low I^2t
- Excellent Cycling Capability
- gR

Applications

- Protection of small inverters, UPS systems, motor drives and similar 700v or less equipment



Dimensions



Note: Fuses labels have both European and American references.

Fuse holders for A070gRB fuses

USM SeriesULTRASAFE™ Fuse Holders
303 SeriesMidget Fuse Blocks



American Round Fuses

Other American Fuses

A070gRB



Semiconductor Protection Fuses

Body Size (mm)	Ampere Rating	Rated Voltage (VAC)	Melting I ² t (A ² s)	Clearing I ² t @ Rated Voltage (A ² s)	Watts Loss		Catalog Number	Reference Number
					@ 80% Rated Current	@ 100% Rated Current		
10 X 38	1	700	0.066	0.32	0.57	1	A070GRB01T13	W330000
	1.25		0.115	0.4	0.7	1.25	A070GRB1.25T13	X330001
	1.5		0.185	0.63	0.81	1.5	A070GRB1.5T13	Y330002
	2		0.42	1.43	1.1	2	A070GRB2T13	Z330003
	2.5		0.88	3	1.15	2.1	A070GRB02.5T13	A330004
	3		1.55	5.1	1.25	2.3	A070GRB03T13	B330005
	4		4	13.2	1.35	2.6	A070GRB04T13	C330006
	5		8.6	27.5	1.4	2.7	A070GRB05T13	D330007
	6		15	48.5	1.5	2.9	A070GRB06T13	E330008
	8		3.3	36.3	1.35	2.4	A070GRB08T13	F330009
	10		5.4	60.5	1.85	3.4	A070GRB10T13	G330010
	12.5		8.5	90.2	1.9	3.4	A070GRB12.5T13	H330011
	16		16	160	2.3	4.1	A070GRB16T13	J330012
	20		30	275	2.4	4.3	A070GRB20T13	K330013
	25		58	520	2.7	4.7	A070GRB25T13	L330014
	30		96	815	2.9	5	A070GRB30T13	M330015

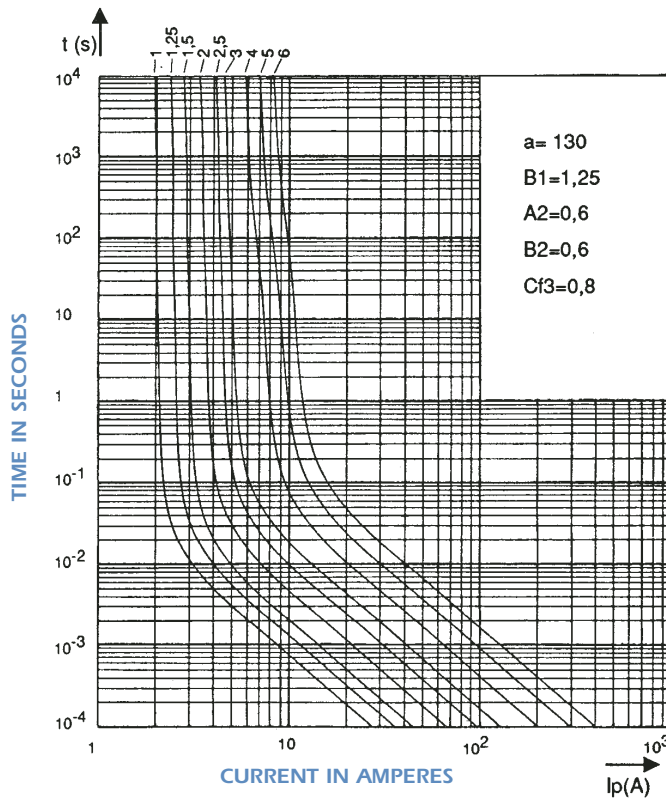


Semiconductor (AC) fuses

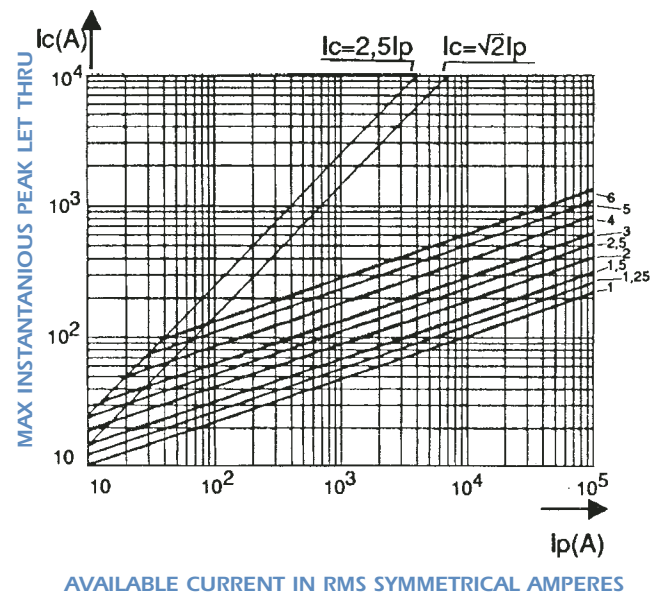
American Round Fuses
Other American Fuses
A070gRB

Semiconductor Protection Fuses

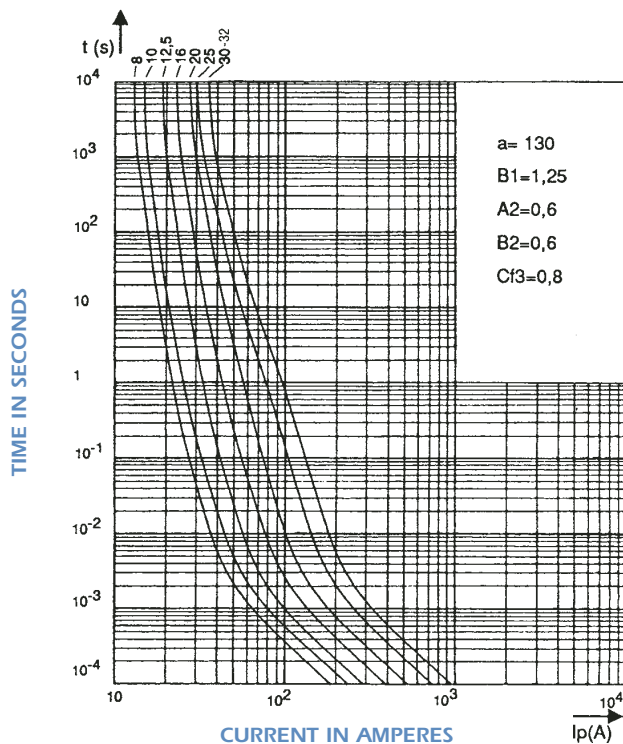
Melting Time Current Data (1 to 6A)



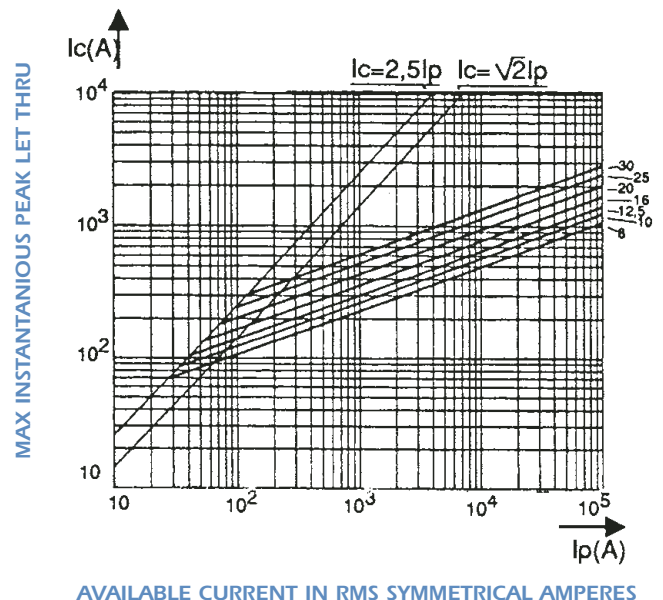
Peak Let Thru Current Data (1 to 6A)



Melting Time Current Data (8 to 30A)



Peak Let Thru Current Data (8 to 30A)

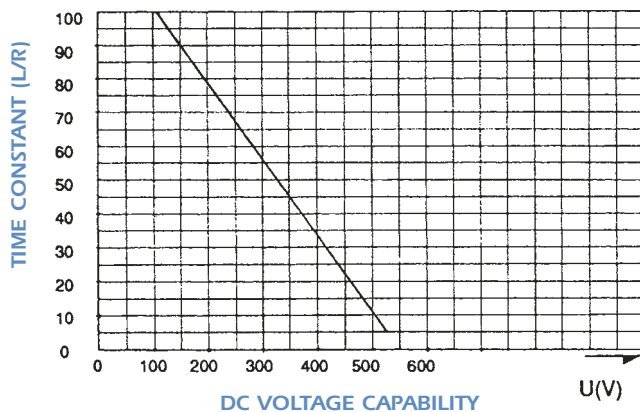




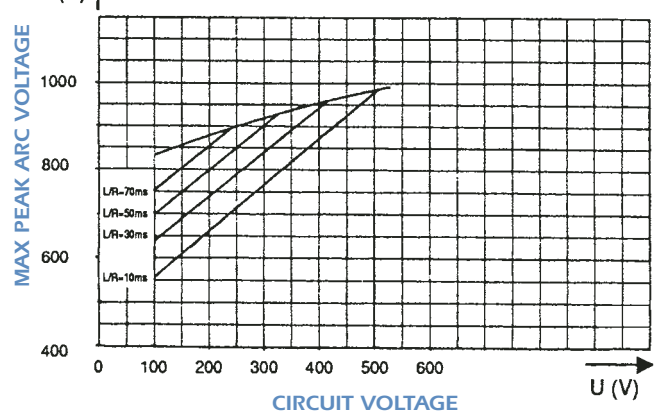
American Round Fuses Other American Fuses A070gRB

Semiconductor Protection Fuses

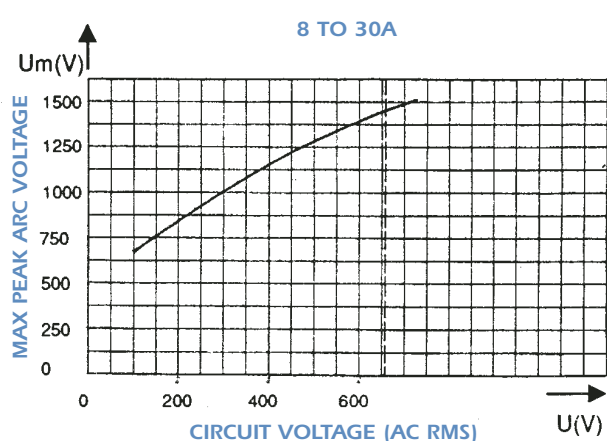
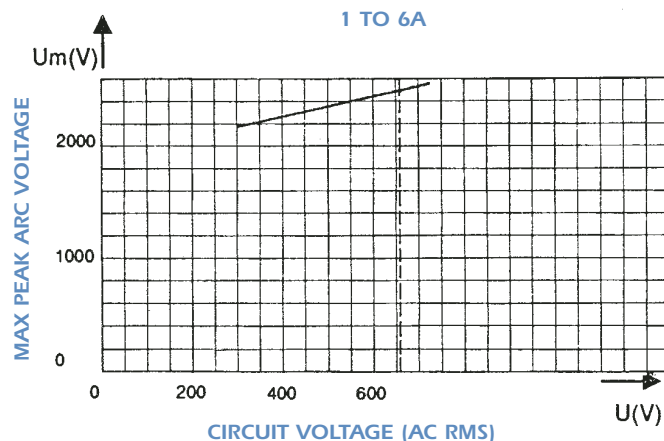
$L/R(\text{ms})$ ↑ **DC Voltage Capability vs. Time Constant**



$U_m(\text{V})$ ↑ **DC Peak Arc Voltage**

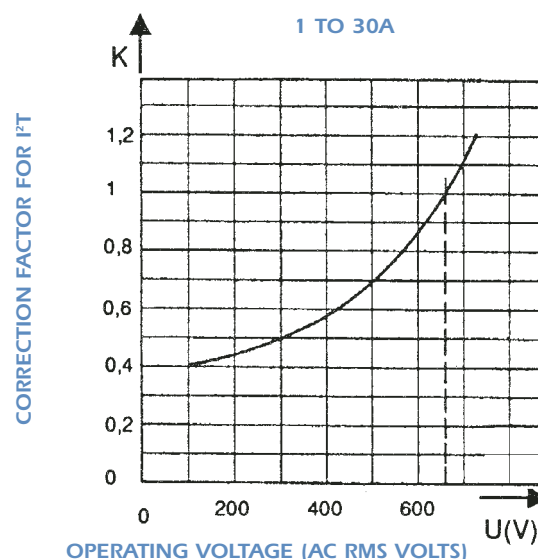


Maximum Arc Volts vs. System Voltage



Determines the peak arc voltage across fuse terminals as a function of applied voltage

Clearing I^2t vs. AC operating voltage



Correction factor to determine clearing I^2t of a fuse below its related voltage.

Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 500 to 690 VAC DIN 000

GERMAN STANDARD
gRB - URB from 20 to 400 A
Size: 000

- EXTREMELY HIGH BREAKING CAPACITY FUSES: PROTECTION OF POWER SEMICONDUCTORS ACCORDING TO IEC 60269-1 and 4
- 690V VOLTAGE RATING (RATING 20 TO 400 A)
- gR CLASS (gRB RATINGS 20 TO 125 A) ACCORDING TO VDE 636-23
- CLEARING ALL OVERLOADS
- IMPROVING SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION WITH ALL FUSES
- aR CLASS (URB RATINGS 80 TO 400 A) ACCORDING TO VDE 636-23 AND IEC 60269.4
- ALL MODELS COMPLYING WITH DIN 43653-00C ARE WITH OR WITHOUT BLOWN FUSE INDICATION WITH TRIP INDICATOR
- MODEL COMPLYING WITH DIN 43620 (00C) STANDARD WITH BLOWN FUSE INDICATION - WITH TRIP INDICATOR



Main Characteristics

Voltage rating U_N (VAC)	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2tp (A ² s)	Total clearing $I^2t @ 660V$ I^2tt (A ² s)	Watts loss		Tested Breaking Capacity	Estimated Breaking Capacity
					0.8 I_N	I_N		
690	gRB	16	8,2	60	-	5,6	200 k A @ 690 V	300 k A @ 690 V
		20	12	80	3.8	7		
		25	20	150	5.0	9		
		32	39	270	5.5	10		
		40	70	460	6.6	12		
		50	102	730	7.7	14		
		63	210	1500	8.8	16		
		80	475	2900	9.9	18		
		100	970	6000	11	20		
690	URB	125	1900	11800	11.6	21	200 k A @ 690 V	300 k A @ 690 V
		80	390	2500	11.6	21		
		100	690	4200	12.7	23		
		125	1300	8900	14.3	26		
		160	2700	16000	17.0	31		
		200	5250	31500	19.8	36		
500	URB	250	9900	52000	24.8	45	120 k A @ 500 V	
		315	15500	82000	31.9	58		
		350	22400	110000*	31.9	58		
		400	33200	160000*	36.3	66		

* @ U_N

Minimum operating voltage for blown fuse indicator: 20 V

Minimum operating voltage for trip-indicator: 20 V

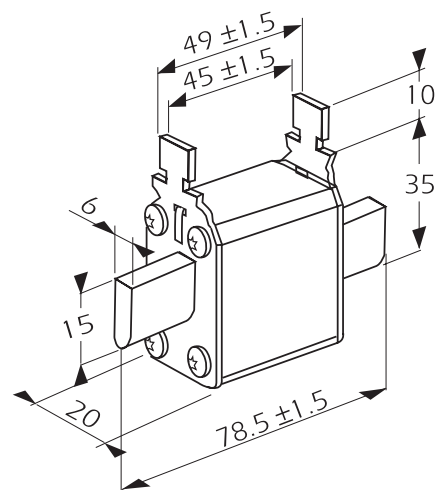
Semiconductor (AC) fuses



Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 500 to 690 VAC DIN 000

German standard blade-type DIN 43620 with trip-indicator

Current rating	Designation	Ref. Number	I/N*	Catalog Number
16	6,9 GRB 000 PV016	Y210609	1	PC000GB69V16PV
20	6,9 GRB 000 PV020	Z210610	1	PC000GB69V20PV
25	6,9 GRB 000 PV025	A210611	1	PC000GB69V25PV
32	6,9 GRB 000 PV032	B210612	1	PC000GB69V32PV
40	6,9 GRB 000 PV040	C210613	1	PC000GB69V40PV
50	6,9 GRB 000 PV050	D210614	1	PC000GB69V50PV
63	6,9 GRB 000 PV063	E210615	1	PC000GB69V63PV
80	6,9 GRB 000 PV080	F210616	1	PC000GB69V80PV
100	6,9 GRB 000 PV100	G210617	1	PC000GB69V100PV
125	6,9 GRB 000 PV125	H210618	0,9	PC000GB69V125PV



Microswitches
MS 4L 2-5 B6 + PRES Ref. F210156
MS 4L 2-5 B2 + PRES Ref. G210157

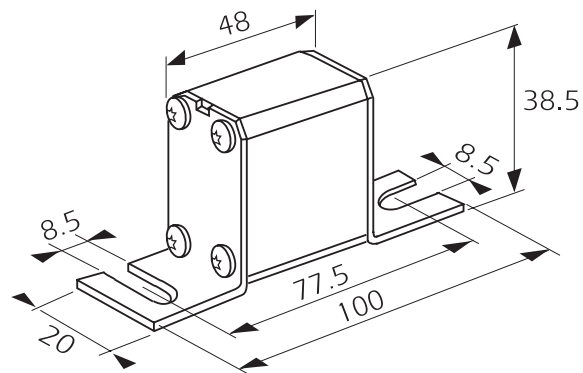
Weight: 150g
Packaging: 3 pieces

* Fuse base: 00-EP Ref Number F215170
Pull out grip handle: Ref Number K217244

German standard without blown fuse indicator



Current rating	Designation	Ref. Number	I/N*	Catalog Number
16	6,9 GRB 000 D08/016	L330060	1	DN000GB69V16
20	6,9 GRB 000 D08/020	D330030	1	DN000GB69V20
25	6,9 GRB 000 D08/025	E330031	1	DN000GB69V25
32	6,9 GRB 000 D08/032	F330032	1	DN000GB69V32
40	6,9 GRB 000 D08/040	G330033	1	DN000GB69V40
50	6,9 GRB 000 D08/050	H330034	1	DN000GB69V50
63	6,9 GRB 000 D08/063	J330035	1	DN000GB69V63
80	6,9 GRB 000 D08/080	A330073	1	DN000GB69V80
100	6,9 GRB 000 D08/100	S330112	1	DN000GB69V100
125	6,9 GRB 000 D08/125	T330113	0,9	DN000GB69V125
80	6,9 URB 000 D08/080	K330036	1	DN000UB69V80
100	6,9 URB 000 D08/100	L330037	1	DN000UB69V100
125	6,9 URB 000 D08/125	M330038	0,9	DN000UB69V125
160	6,9 URB 000 D08/160	N330039	0,85	DN000UB69V160
200	6,9 URB 000 D08/200	P330040	0,85	DN000UB69V200
250	6,9 URB 000 D08/250	Q330041	0,8	DN000UB69V250
315	6,9 URB 000 D08/315	R330042	0,7	DN000UB69V315
350	5 URB 000 D08/350	V330114	0,7	DN000UB50V350
400	5 URB 000 D08/400	D330191	0,65	DN000UB50V400



* Fuse base: SI 000 DIN 80
Ref. Number: C220710

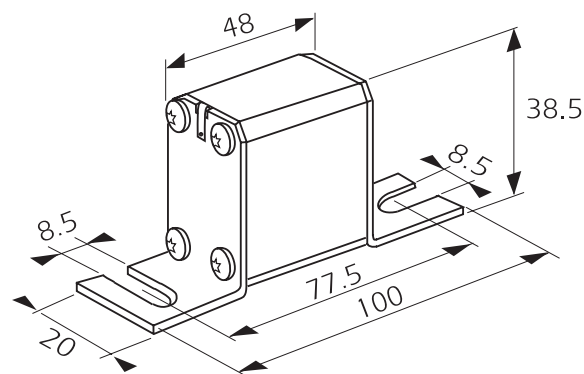
Weight: 130 g
Packaging: 6 pieces

Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 500 to 690 VAC DIN 000

German standard with blown fuse indicator



Current rating	Designation	Ref. Number	I/I_N^* fuse base	Catalog Number
16	6,9 gRB 000 D08V/016	C330190	1	DN000GB69V16V
20	6,9 gRB 000 D08V/020	P330017	1	DN000GB69V20V
25	6,9 gRB 000 D08V/025	Q330018	1	DN000GB69V25V
32	6,9 gRB 000 D08V/032	R330019	1	DN000GB69V32V
40	6,9 gRB 000 D08V/040	S330020	1	DN000GB69V40V
50	6,9 gRB 000 D08V/050	T330021	1	DN000GB69V50V
63	6,9 gRB 000 D08V/063	V330022	1	DN000GB69V63V
80	6,9 gRB 000 D08V/080	G330102	1	DN000GB69V80V
100	6,9 gRB 000 D08V/100	Q330110	1	DN000GB69V100V
125	6,9 gRB 000 D08V/125	R330111	0,9	DN000GB69V125V
80	6,9 URB 000 D08V/080	W330023	1	DN000UB69V80V
100	6,9 URB 000 D08V/100	X330024	1	DN000UB69V100V
125	6,9 URB 000 D08V/125	Y330025	0,95	DN000UB69V125V
160	6,9 URB 000 D08V/160	Z330026	0,85	DN000UB69V160V
200	6,9 URB 000 D08V/200	A330027	0,85	DN000UB69V200V
250	6,9 URB 000 D08V/250	B330028	0,8	DN000UB69V250V
315	6,9 URB 000 D08V/315	C330029	0,7	DN000UB69V315V
350	5 URB 000 D08V/350	W330115	0,7	DN000UB69V350V
400	5 URB 000 D08V/400	E330192	0,65	DN000UB69V400V



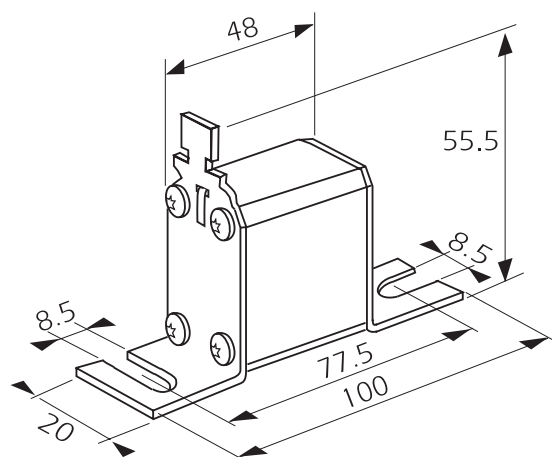
Weight: 130 g
Packaging: 6 pieces

Fuse base: SI 000 DIN 80 Ref. Number : C 20710

German standard with trip-indicator



Current rating	Designation	Ref. Number	I/I_N^* fuse base	Catalog Number
16	6,9 gRB 000 D08L/016	X330277	1	DN000GB69V16L
20	6,9 gRB 000 D08L/020	J330173	1	DN000GB69V20L
25	6,9 gRB 000 D08L/025	K330174	1	DN000GB69V25L
32	6,9 gRB 000 D08L/032	L330175	1	DN000GB69V32L
40	6,9 gRB 000 D08L/040	M330176	1	DN000GB69V40L
50	6,9 gRB 000 D08L/050	N330177	1	DN000GB69V50L
63	6,9 gRB 000 D08L/063	P330178	1	DN000GB69V63L
80	6,9 gRB 000 D08L/080	Q330179	1	DN000GB69V80L
100	6,9 gRB 000 D08L/100	R330180	1	DN000GB69V100L
125	6,9 gRB 000 D08L/125	S330181	0,9	DN000GB69V125L
80	6,9 URB 000 D08L/080	T330182	1	DN000UB69V80L
100	6,9 URB 000 D08L/100	V330183	1	DN000UB69V100L
125	6,9 URB 000 D08L/125	W330184	0,95	DN000UB69V125L
160	6,9 URB 000 D08L/160	X330185	0,85	DN000UB69V160L
200	6,9 URB 000 D08L/200	Y330186	0,85	DN000UB69V200L
250	6,9 URB 000 D08L/250	Z330187	0,8	DN000UB69V250L
315	6,9 URB 000 D08L/315	A330188	0,7	DN000UB69V315L
350	5 URB 000 D08L/350	B330189	0,7	DN000UB69V350L
400	5 URB 000 D08L/400	F330193	0,65	DN000UB69V400L



Weight: 130 g
Packaging: 6 pieces

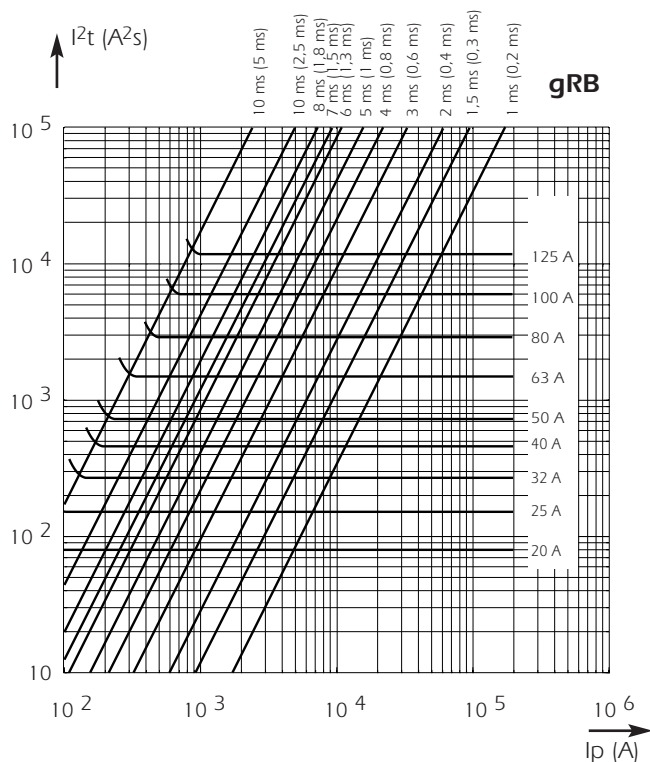
Microswitch
MC 4L 2-5 B6 + PRES Ref. Number : F210156
MC 4L 2-5 B2 + PRES Ref. Number : G210157
Fuse base: SI 000 DIN 80 Ref. Number : C 20710

Semiconductor (AC) fuses

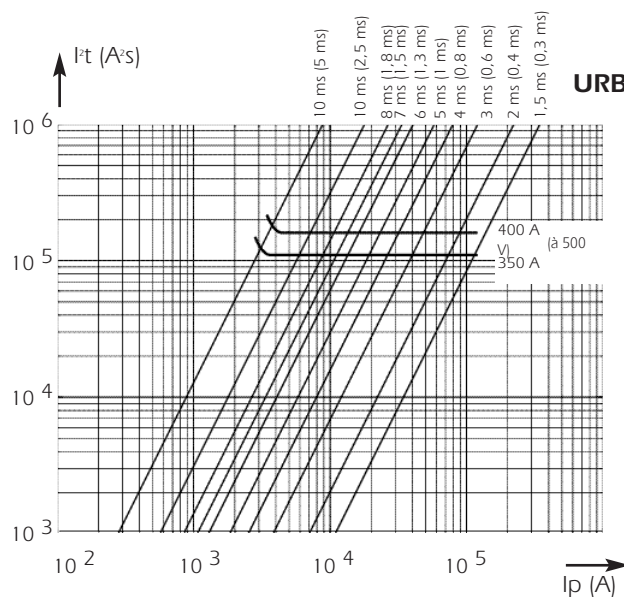
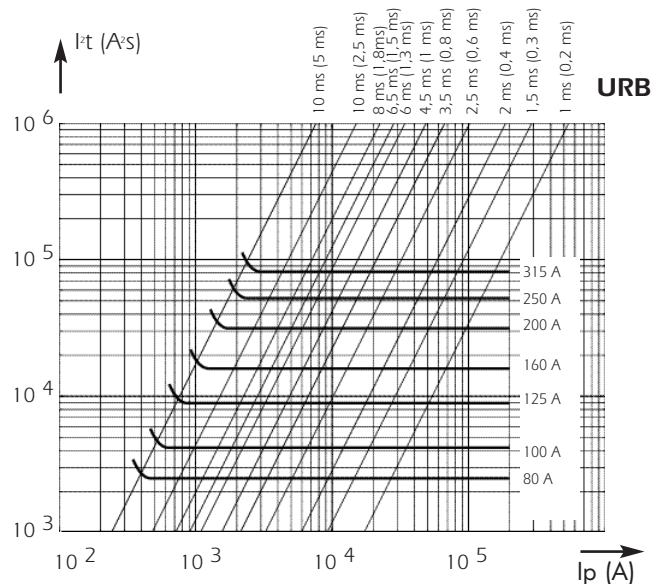


Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 500 to 690 VAC DIN 000

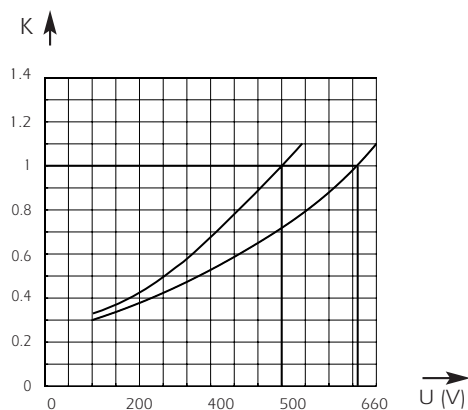
Total clearing I^2t



Above: Horizontal curves show, for each rated current, values of total clearing I^2t (I^2t_{tt}) as a function of prospective current I_p . @ UN with $\cos \phi = 0.15$. Oblique lines indicate total clearing duration T_t , with associated pre-arcing duration in brackets.

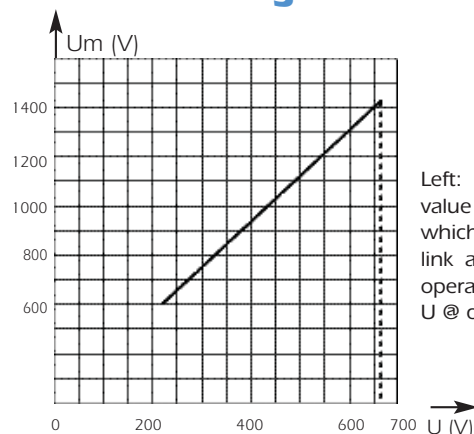


I^2t corrective factor



Above: Mean curves show variation of total clearing time (I^2t) and total clearing duration T_t as a function of operating voltage U .

Peak arc voltage

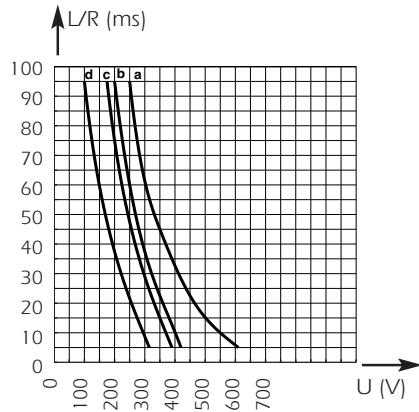


Left: Curve shows peak value U_m of arc voltage which appears across fuse link as a function of the operating voltage U @ $\cos \phi = 0.15$

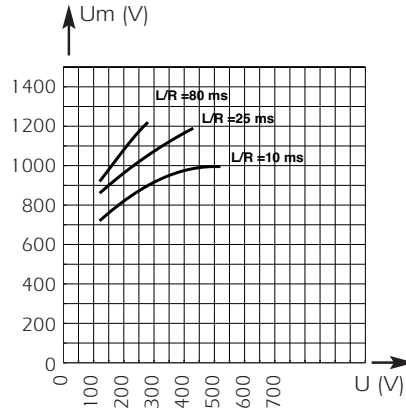
Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 500 to 690 VAC DIN 000

DC Application data



Above: Curves indicate permissible value of time constant L/R as a function of DC working voltage.
Curve a: Ratings from 20 to 160 A
Curve b: Rating 200 A
Curve c: Ratings from 250 to 315 A
Curve d: Ratings from 350 to 400 A

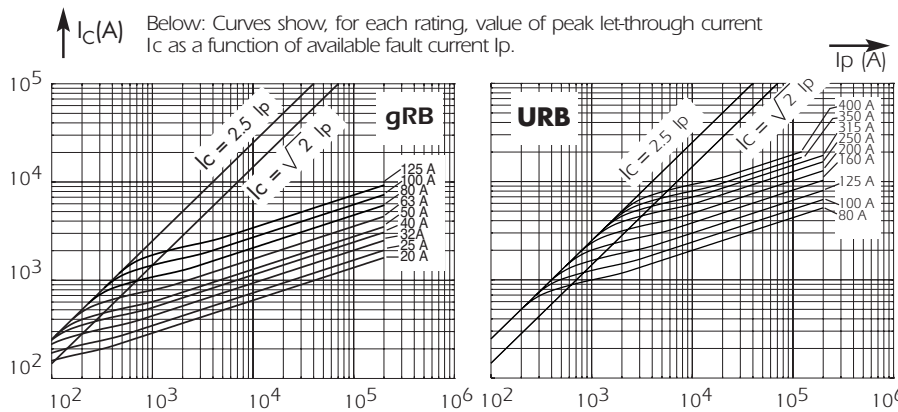


Above: Curves indicates peak arc voltage U_m which may appear across fuse terminals at working voltage U .

Rated current (A)	Curve	I_{pm} (A)
20	a	60
25	a	65
32	a	90
40	a	120
50	a	150
63	a	200
80	a	270
100	a	370
125	a	500
160	a	700
200	b	1200
250	c	1800
315	c	2200
350	d	2600
400	d	3100

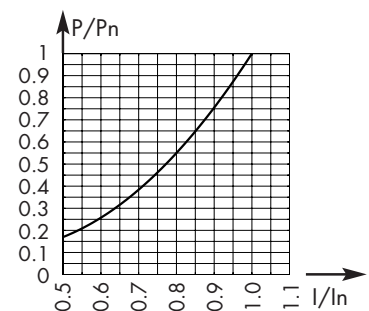
I_{pm} values give minimum DC interrupting current in amps.

Current limitation curves



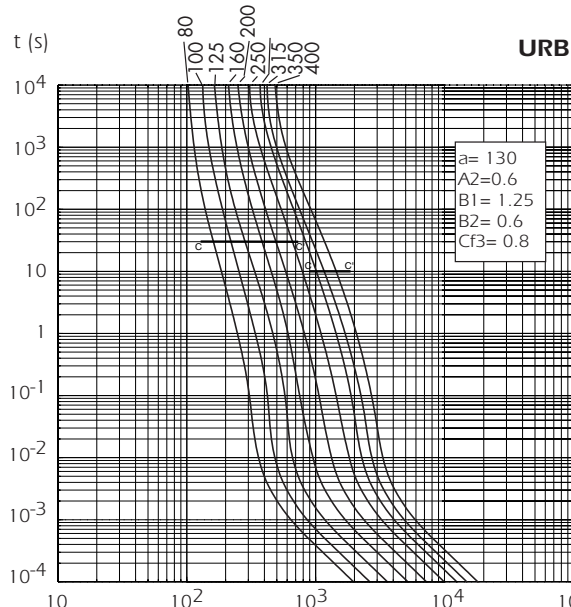
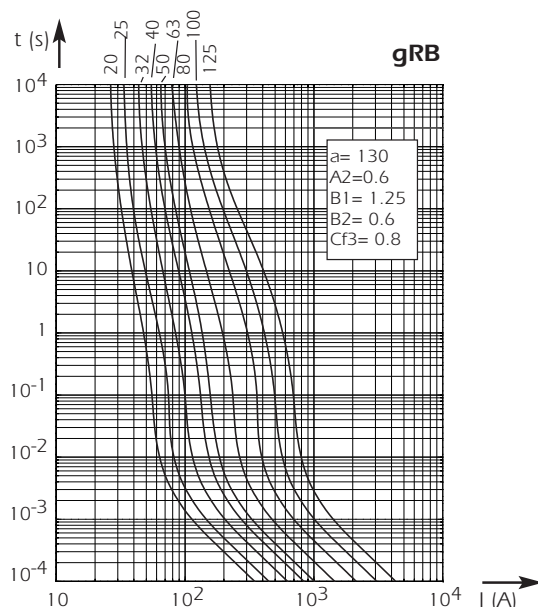
Below: Curves show, for each rating, value of peak let-through current I_c as a function of available fault current I_p .

Watts loss



Above: Curve enables computation of power losses P for an IN-rated fuse as a function of R.M.S. current I (as a multiple of I_N for steady state operation)

Time vs current characteristics



Left: Curves show, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current

Tolerance for mean pre-arcing current $\pm 8\%$.

Semiconductor (AC) fuses



Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 600 to 690 VAC DIN 00

gRB-URB from 16 to 450 A
Size: 00



EXTREMELY HIGH BREAKING CAPACITY FUSES:
PROTECTION OF POWER SEMICONDUCTORS
AS PER IEC STANDARD 60269.1 AND 4

690 V VOLTAGE RATING

gR CLASS (gRB RATINGS 16 to 160 A) AS PER VDE 636-23
- CLEARING ALL OVERLOADS
- IMPROVING SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION WITH ALL FUSES

aR CLASS (URB RATINGS 16 TO 450 A) ACCORDING TO
VDE 636-23 AND IEC 60269-4

CONNECTIONS ACCORDING TO
- DIN 43653/00 80 AND 110 mm BETWEEN AXES
- DIN 43620/00 SOLID BLADES

WITH AN INDICATING PAWL ACTIVATING A MICROSWITCH IF NEEDED



Main Characteristics

Voltage rating U_N (V)	Class	Current rating I_N (A)	Pre-arcing I_t @ 1 ms I_{tp} (A,s)	Total clearing I_t total @ U_N I_{tt} (A,s)	Watts loss		Tested Breaking Capacity	Estimated Breaking Capacity
					0.8 IN	IN		
690	gRB	16	8	61	2.7	5	200 k A @ 690 V	300 k A @ 690 V
		20	12	86	3.3	6		
		25	18	140	4.4	8		
		32	39	250	6.0	11		
		40	68	450	7.1	13		
		50	116	750	8.8	16		
		63	210	1400	9.9	18		
		80	525	3000	10.5	19		
		100	970	5400	10.7	19.5		
		125	1710	9600	13.2	24		
		160	4270	22400	13.7	25		
	URB	16	7	52	3.8	7	200 k A @ 690 V	300 k A @ 690 V
		20	10	75	5.0	9		
		25	15	120	6.0	11		
		32	32	210	8.2	15		
		40	61	400	9.9	18		
		50	102	700	11.5	21		
		63	177	1200	12.6	23		
		80	390	2200	13.8	25		
		100	692	3900	15.4	28		
		125	1170	6600	18.1	33		
		160	2680	14 000	19.8	36		
		200	4690	24 000	23.1	42		
		250	8300	42 500	27.5	50		
		315	17 520	81 000	31.9	58		
		350 ■	25 450	118 000	33.0	60		
		400 ■	33 200	150 000	38.5	70		
600	URB	450 **	51 850	196 000	40.7	74	200 k A @ 600 V	300 k A @ 600 V

NOTE: voltage rating of 350-400-450 A rated fuses is defined with a CC' curve at 1 second limited by minimum breaking current.

■ Voltage rating: 690 V with CC' at 1s - 450 V with CC' at 10 s

** Voltage rating: 600 V with CC' at 1s - 450 V with CC' at 10 s

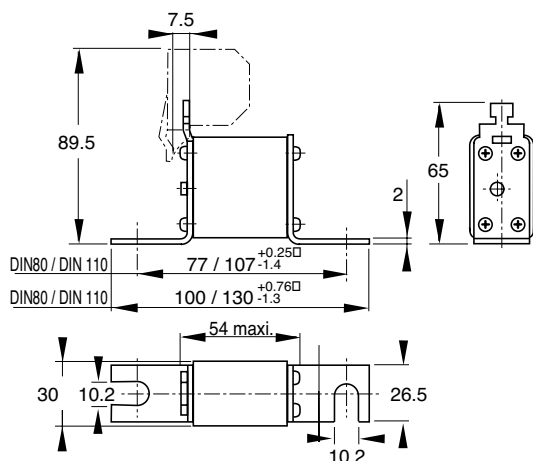
Minimum operating voltage for trip indicator = 20 V

Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 600 to 690 VAC DIN 00

German standard as per DIN43653/00C - DIN 80 & 110

gRB - DIN 80

Current rating	Designation	Ref. Number	I/I_N^* fuse base	Catalog Number
16	6,9 gRB 00 D08L 016	S330273	1	DN00GB69V16L
20	6,9 gRB 00 D08L 020	S330227	1	DN00GB69V20L
25	6,9 gRB 00 D08L 025	T330228	1	DN00GB69V25L
32	6,9 gRB 00 D08L 032	V330229	1	DN00GB69V32L
40	6,9 gRB 00 D08L 040	W330230	1	DN00GB69V40L
50	6,9 gRB 00 D08L 050	X330231	1	DN00GB69V50L
63	6,9 gRB 00 D08L 063	Y330232	1	DN00GB69V63L
80	6,9 gRB 00 D08L 080	Z330233	1	DN00GB69V80L
100	6,9 gRB 00 D08L 100	A330234	1	DN00GB69V100L
125	6,9 gRB 00 D08L 125	B330235	0.9	DN00GB69V125L
160	6,9 gRB 00 D08L 160	C330236	0.9	DN00GB69V160L



Weight: 140 g(D08) - 190 g(D11)

Packaging: 3 pieces

Microswitches: MC 4L 2.5 B6 + PRES - Ref. Number: F210156

MC 4L 2.5 B2 + PRES - Ref. Number: G210157

Fuse-base: SI 00 DIN 80 - Ref. Number: Q098040

URB - DIN 80

Current rating	Designation	Ref. Number	I/I_N^* fuse base	Catalog Number
16	6,9 URB 00 D08L 016	V330275	1	DN00UB69V16L
20	6,9 URB 00 D08L 020	T330274	1	DN00UB69V20L
25	6,9 URB 00 D08L 025	M330268	1	DN00UB69V25L
32	6,9 URB 00 D08L 032	N330269	1	DN00UB69V32L
40	6,9 URB 00 D08L 040	P330270	1	DN00UB69V40L
50	6,9 URB 00 D08L 050	Q330271	1	DN00UB69V50L
63	6,9 URB 00 D08L 063	R330272	1	DN00UB69V63L
80	6,9 URB 00 D08L 080	D330237	1	DN00UB69V80L
100	6,9 URB 00 D08L 100	E330238	1	DN00UB69V100L
125	6,9 URB 00 D08L 125	F330239	0.9	DN00UB69V125L
160	6,9 URB 00 D08L 160	G330240	0.85	DN00UB69V160L
200	6,9 URB 00 D08L 200	H330241	0.85	DN00UB69V200L
250	6,9 URB 00 D08L 250	J330242	0.80	DN00UB69V250L
315	6,9 URB 00 D08L 315	K330243	0.75	DN00UB69V315L
350	6,9 URB 00 D08L 350	L330244	0.75	DN00UB69V350L
400	6,9 URB 00 D08L 400	M330245	0.70	DN00UB69V400L
450	6 URB 00 D08L 450	N330246	0.65	DN00UB60V450L

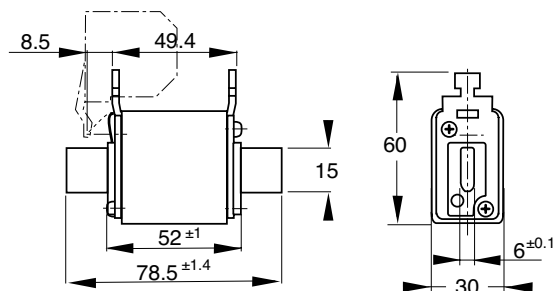
gRB - DIN 110

Current rating	Designation	Ref. Number	I/I_N^* fuse base	Catalog Number
16	6,9 gRB 00 D11L 016	W330276	1	DN00GB69V16D1L
20	6,9 gRB 00 D11L 020	P330247	1	DN00GB69V20D1L
25	6,9 gRB 00 D11L 025	Q330248	1	DN00GB69V25D1L
32	6,9 gRB 00 D11L 032	R330249	1	DN00GB69V32D1L
40	6,9 gRB 00 D11L 040	S330250	1	DN00GB69V40D1L
50	6,9 gRB 00 D11L 050	T330251	1	DN00GB69V50D1L
63	6,9 gRB 00 D11L 063	V330252	1	DN00GB69V63D1L
80	6,9 gRB 00 D11L 080	W330253	1	DN00GB69V80D1L
100	6,9 gRB 00 D11L 100	X330254	1	DN00GB69V100D1L
125	6,9 gRB 00 D11L 125	Y330255	0.9	DN00GB69V125D1L
160	6,9 gRB 00 D11L 160	Z330256	0.9	DN00GB69V160D1L

URB - DIN 110

Current rating	Designation	Ref. Number	I/I_N^* fuse base	Catalog Number
80	6,9 URB 00 D11L 80	A330257	1	DN00UB69V80D1L
100	6,9 URB 00 D11L 100	B330258	1	DN00UB69V100D1L
125	6,9 URB 00 D11L 125	C330259	0.9	DN00UB69V125D1L
160	6,9 URB 00 D11L 160	D330260	0.85	DN00UB69V160D1L
200	6,9 URB 00 D11L 200	E330261	0.85	DN00UB69V200D1L
250	6,9 URB 00 D11L 250	F330262	0.80	DN00UB69V250D1L
315	6,9 URB 00 D11L 315	G330263	0.75	DN00UB69V315D1L
350	6,9 URB 00 D11L 350	H330264	0.75	DN00UB69V350D1L
400	6,9 URB 00 D11L 400	J330265	0.70	DN00UB69V400D1L
450	6 URB 00 D11L 450	K330266	0.65	DN00UB60V450D1L

German standard as per DIN43620/00



Weight: 210 g

Packaging: 3 pieces

Microswitches: MC 4L 2.5 B2 + PRES - Ref. Number: G210157 or

MC 4L 2.5 B6 + PRES - Ref. Number: F210156

Fuse-base: 00EP - Ref. Number : F215170

Current rating	Designation	Ref. Number	I/I_N^* fuse base	Catalog Number
16	6,9 gRB 00 PV/016	L330267	1	PC00GB69V16PV
20	6,9 gRB 00 PV/020	W330207	1	PC00GB69V20PV
25	6,9 gRB 00 PV/025	X330208	1	PC00GB69V25PV
32	6,9 gRB 00 PV/032	Y330209	1	PC00GB69V32PV
40	6,9 gRB 00 PV/040	Z330210	1	PC00GB69V40PV
50	6,9 gRB 00 PV/050	A330211	1	PC00GB69V50PV
63	6,9 gRB 00 PV/063	B330212	0.90	PC00GB69V63PV
80	6,9 gRB 00 PV/080	C330213	0.90	PC00GB69V80PV
100	6,9 gRB 00 PV/100	D330214	0.90	PC00GB69V100PV
125	6,9 gRB 00 PV/125	E330215	0.85	PC00GB69V125PV
160	6,9 gRB 00 PV/160	F330216	0.85	PC00GB69V160PV

For curves see pages

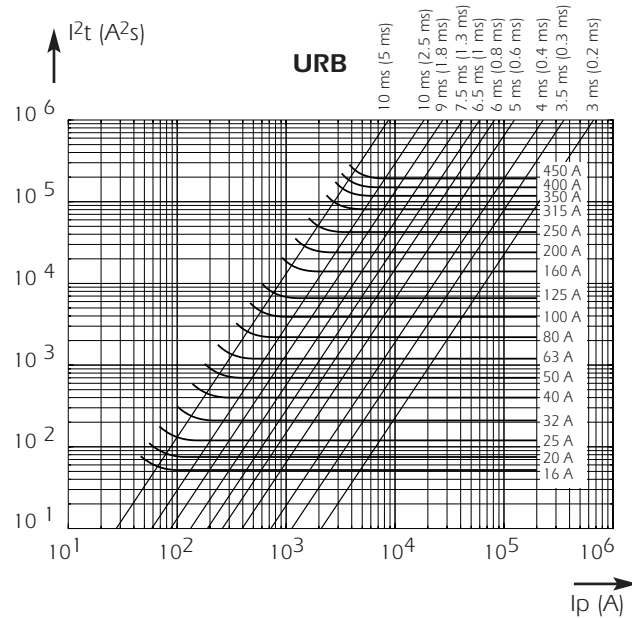
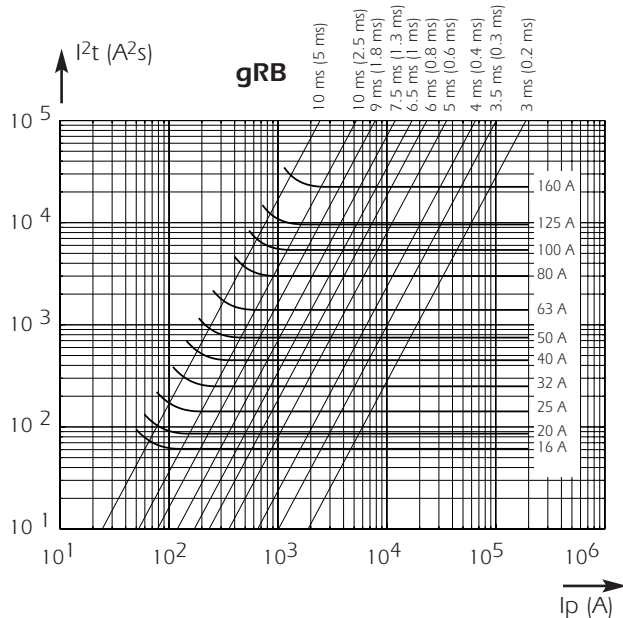
I/I_N : Ratio RMS steady current / current rating for fuses in base.

Semiconductor (AC) fuses



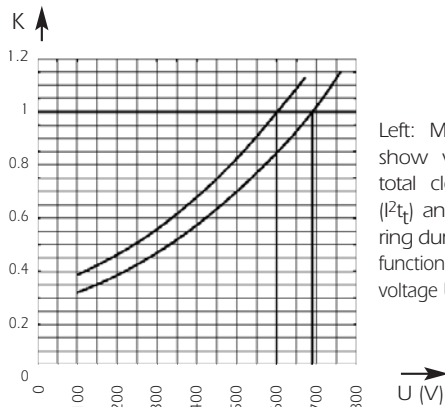
Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 600 to 690 VAC DIN 00

Total clearing I^2t



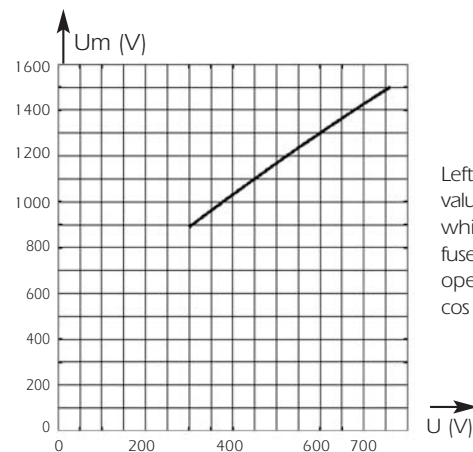
Above: horizontal curves show, for each rated current, maximum values of total clearing I^2t (I^2t_t) as a function of prospective current I_p . @ UN with $\cos\varphi = 0.15$.
Oblique lines indicate total clearing duration T_t , with associated pre-arcing duration shown in brackets.

I^2t corrective factor



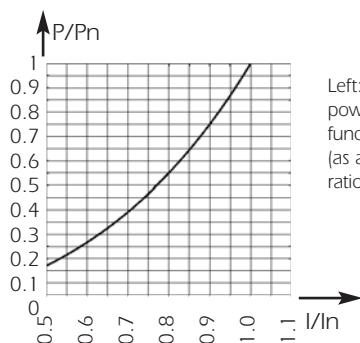
Left: Mean curves show variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .

Peak arc voltage



Left: Curve shows peak value U_m of the arc voltage which appears across fuse-link as a function of operating voltage U @ $\cos\varphi = 0.15$

Watts loss

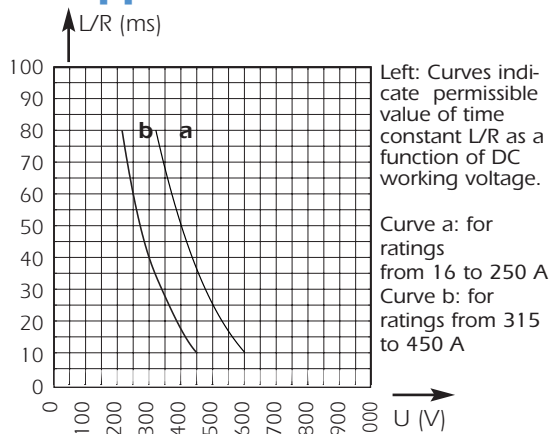


Left: Curve enables computation of power losses P for a I_N -rated fuse as a function of R.M.S. current I (as a multiple of I_N for steady state operation)

Semiconductor (AC) fuses

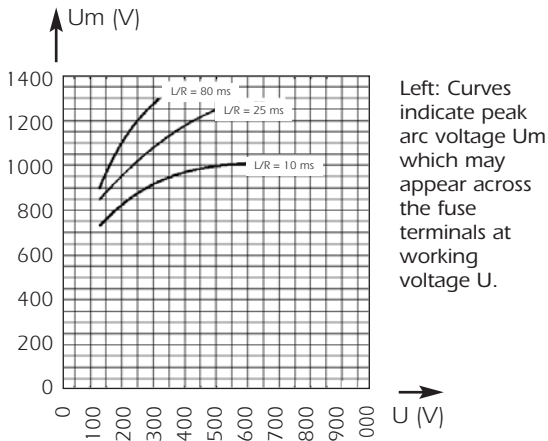
Protistor® Square-body Fuses PSC gR/aR sizes 000/00 gR/aR - 600 to 690 VAC DIN 00

DC Application data

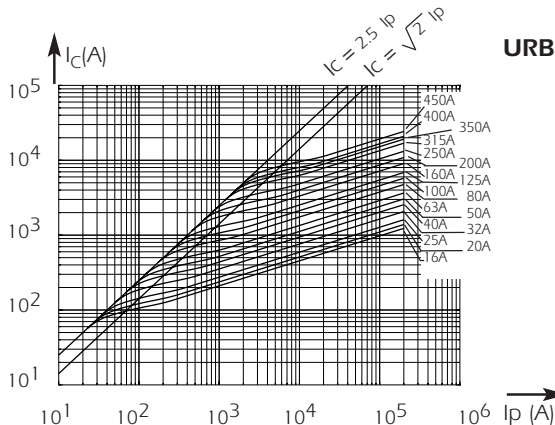
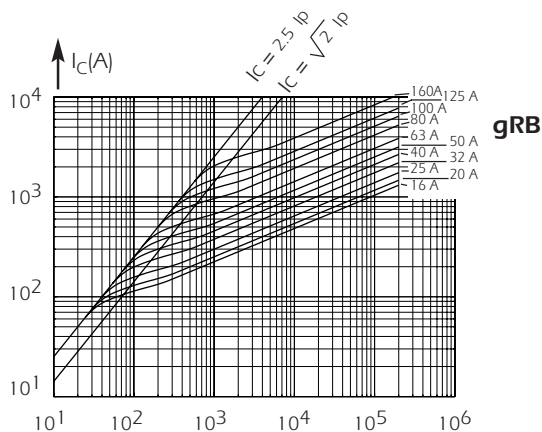


Rated current	Curve	I _{pm} gRB	I _{pm} (A) URB
16	a	32	32
20	a	40	40
25	a	50	50
32	a	64	64
40	a	80	80
50	a	100	100
63	a	126	126
80	a	160	170
100	a	200	220
125	a	250	280
160	a	320	390
200	a		510
250	a		650
315	b		840
350	b		1770
400	b		2040
450	b		2250

I_{pm} values give minimum DC interrupting current in amps.

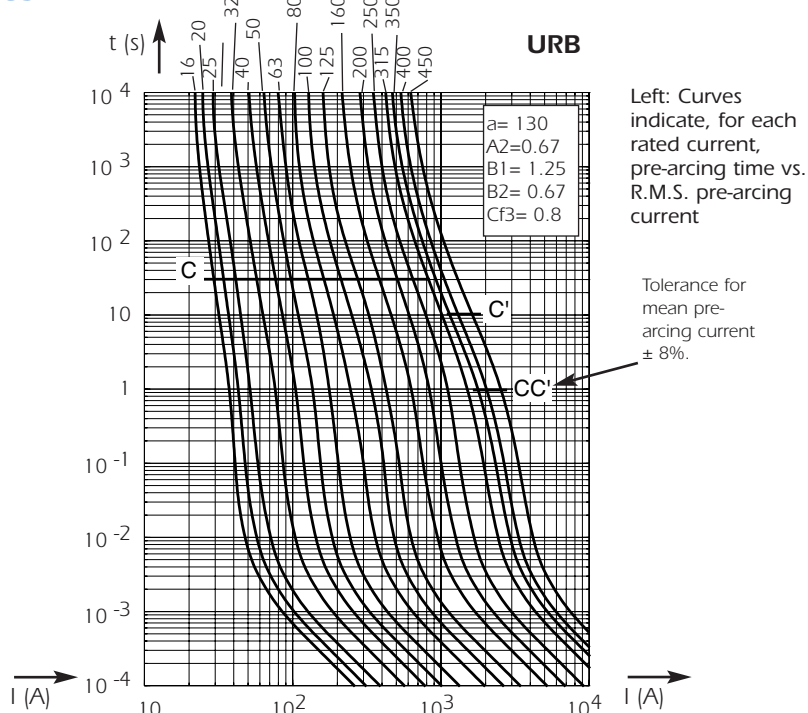
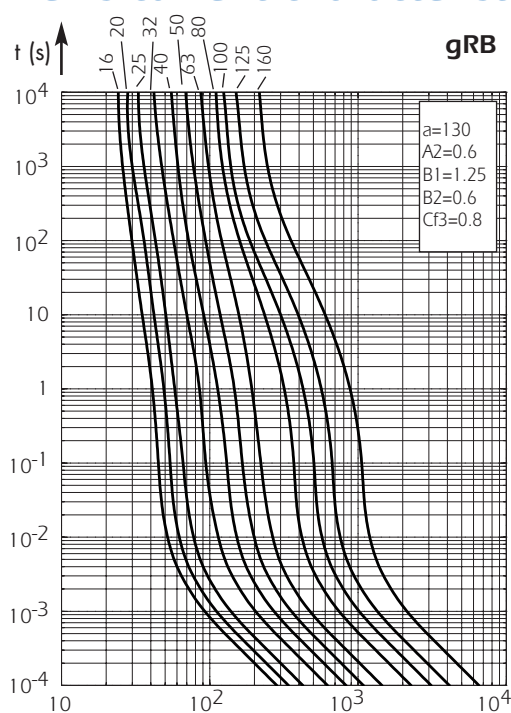


Current limitation curves



Above: Curves show, for each rating, value of peak let-through current I_c as a function of available fault current I_p .

Time vs current characteristics





Protistor® Square-body Fuses

PSC gR/aR sizes 000/00

Microswitches for PSC sizes 000/00 and NH Fuses

MICROSWITCH SYSTEMS ADAPTED TO THE FOLLOWING FUSES:

- PSC sizes 000/00 (brackets) DIN43653
- NH Fuses (plain blades) see details in "General Purpose IEC Fuses" section
- NH plain blades 690 VAC Protistor square-body Fuses

MS 4L 2-5



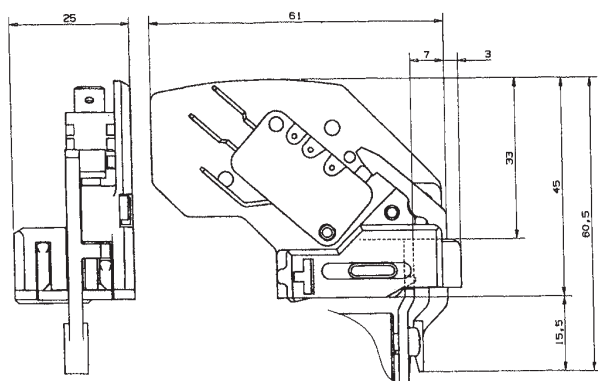
Main Characteristics

Code	AC Insulation voltage rating (***)	Positive operating voltage/current	Current rating	Current	Interrupting rating						AC voltage withstand test (*)	Impulse voltage test Uimp1.2/50 µs (**)	Fire class according to UL 94
					Non inductive circuit			Inductive circuit : L/R = 25ms					
					30V	110V	250V	30V	110V	250V			
MS 4L 2-5 B2 + Pres	1000 V	20 V 100 mA	5 A	50 Hz DC	4A	4A	5A	-	5A	5 A	12 kV 8 kV	16 kV 13 kV	V0
MS 4L 2-5 B6 + Pres	1000 V	20 V 50 mA	10 A	50/60 Hz DC	10 A	10 A	10 A	10 A	10 A	10 A	8 kV	10 kV	V0
					8 A	0,4 A	0,2 A	4 A	0,2 A	0,1 A			

* Between power circuit and microswitch terminals as per IEC 60 and 694 and NFC 64010 (50/60 Hz 1 min duration in dry air)

** Between power circuit and microswitch terminals Uimp: impulse voltage as per IEC 60947-1

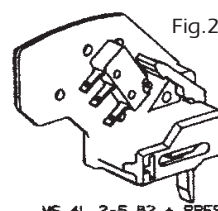
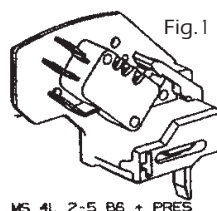
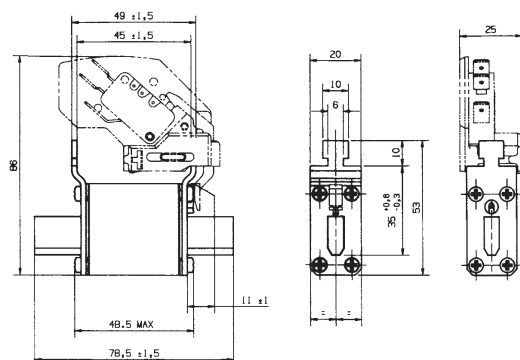
*** Between power circuit and microswitch terminals



Designation	Ref. Number	Weight (g)	Pack.	Catalog Number
MS 4L 2-5 B6 + PRES (Fig. 1) ⁽¹⁾	F210156	30	3	MS 4L2-5B6PRES
MS 4L 2-5 B2 + PRES (Fig. 2) ⁽²⁾	G210157	26	3	MS 4L2-5B2PRES

Automatically resettable, these microswitch systems indicate fuse presence (PRES) and proper mounting.

In case of improper mounting or fuse melting, this is indicated (terminal 1-4 closed)



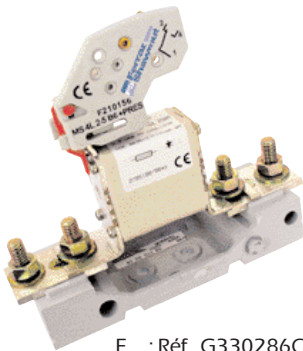
- (1) 6.3 mm clips
(2) 2.8 mm clips



Protistor® Square-body Fuses PSC gGR sizes 000/00 gGR - 690 VAC DIN 00/000 (full range)



F : Réf. D302108
MC: Réf. F210156C



F : Réf. G330286C
PF : Réf. Q098040C
MC: Réf. F210156C

gGr: two functions

A combination of: Power supply cable protection (gG curve)

- Compliance with the standardized gate values for gG curves as per EN 60269-2,
- Low power dissipation, similar to a gG fuse, no current derating in holders,
- No derating for variable currents,
- Good withstand to overloads,
- Same thermal definition as a gG curve,
- Unnecessary to dimension the cable cross sectional area large in comparison to UR protection,
- Range designed for the new voltage of 690V $\pm$ 10%.

Power semi-conductor protection (Fast R curve)

- Fast curve for fault currents and short-circuit currents under 20 In,
- Tested breaking capacity 100 kA (00) or 170 kA (000) at 690 V,
- Very current limiting, which in turn limits electrodynamic forces in the circuit downstream,
- Low I^2t
- Compact footprint: only one fuse instead of two or a relay plus a fuse,
- DC performances 360 to 550V for I/R = 10 ms,
Semi-conductor protection checked in the same way as a fuse.

Applications: "off-board" protection

- AC and DC speed governor,
- Soft starter,
- Static relay,
- Current regulator,
- Inverter (IGBT module disconnecter in parallel),
Battery.

Connection technologies offered

- Solid blades (as per DIN 43620) with visual blown fuse indicator and striker to actuate a microswitch, MS4L2-5B + PRES (ref. F210156C or G210157C),
- DIN 80 brackets (as per DIN 43653) with visual blown fuse indicator and striker indicator to actuate a microswitch, MS4L2-5B + PRES.
- With these two technologies the designer can choose a fuse according to the types of holders desired.

Semiconductor (AC) fuses



Protistor® Square-body Fuses PSC gGR sizes 000/00 gGR - 690 VAC DIN 00/000 (full range)

- EN 60269-2-1 compliant
- Compliance with gG gate values on melting and not melting
- Low dissipated power
- No derating for variable current
- Good withstand to repeated overloading
- Withstand to exceptional overloads (same as Protistor fuses)
- Cable protection



Functionalities

Two functions:

- to protect cables from overloads,
- to protect semi-conductors from short-circuits.

Electrical characteristics

Size 000

Voltage Rating (VAC)	Size	Current Rating I _n (A)	Preacting I _t @ 1 ms I _{tp} (A ² s)	Total I _t (A ² s)		Power losses @ I _n (W)	Tested breaking capacity	Estimated breaking capacity
				@ U _n	@ 400V			
690	000	16	45	280	230	2.5		
		20	60	380	310	3		
		25	130	830	700	3.5		
		32	210	1350	1150	4	170 kA	200 kA
		40	350	2200	1900	5	@	@
		50	550	3500	3000	6	690 V	690 V
		63	1000	6100	5150	7		
		80	1700	11000	9200	8		
		100	3900	25000	21000	9		

Size 00

Voltage Rating (VAC)	Size	Current Rating I _n (A)	Preacting I _t @ 1 ms I _{tp} (A ² s)	Total I _t (A ² s)		Power losses @ I _n (W)	Tested breaking capacity	Estimated breaking capacity
				@ U _n	@ 400V			
690	00	16	45	280	230	2.5		
		20	60	390	290	3.2		
		25	120	750	560	4		
		32	240	1550	1150	5		
		40	350	2250	1680	5.5		
		50	540	3500	2600	6.5	100 kA	200 kA
		63	1060	6750	5000	7.6	@	@
		80	1900	12100	9000	9.5	690 V	690 V
		100	3900	24150	18000	11		
		125	6950	45000	33500	13		
		160	13500	82000	61000	16		
		200	27600	160000	120000	18		

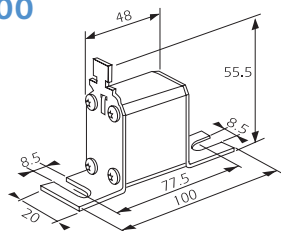
Protistor® Square-body Fuses

PSC gGR sizes 000/00

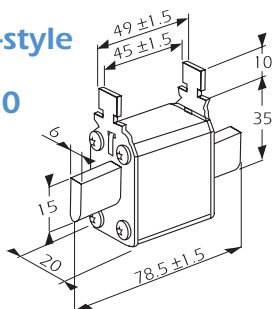
gGR - 690 VAC DIN 00/000 (full range)

Size 000

German standard
DIN 43653/000
DIN 80

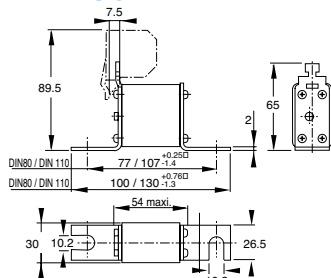


German blade-style
fuse standard
DIN 43620/000

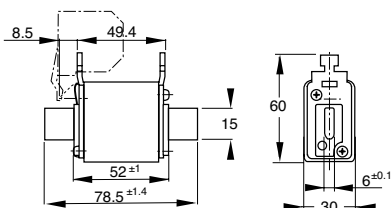


Size 00

German standard
43653/00 - DIN 80



German blade-style
fuse standard 43620/00



No derating:

I/in = I_{rms} of use/fuse rating

In the different holders = no derating

Microswitches:

Ref. F210156: 6.3 mm clips

Ref. G210156: 2.8 mm clips

690 V gGR fuse holders and supports

Current [A]	Designation	Ref. Number	I/in*	Weight [g]	Pack.	Catalog Number
16	6,9 gGR 000 D08L 016	H302112	1	120	3	DN000GR69V16L
20	6,9 gGR 000 D08L 020	J302113	1	120	3	DN000GR69V20L
25	6,9 gGR 000 D08L 025	K302114	1	120	3	DN000GR69V25L
32	6,9 gGR 000 D08L 032	L302115	1	120	3	DN000GR69V32L
40	6,9 gGR 000 D08L 040	M302116	1	120	3	DN000GR69V40L
50	6,9 gGR 000 D08L 050	N302117	1	120	3	DN000GR69V50L
63	6,9 gGR 000 D08L 063	P302118	1	120	3	DN000GR69V63L
80	6,9 gGR 000 D08L 080	Q302119	1	120	3	DN000GR69V80L
100	6,9 gGR 000 D08L 100	R302120	1	120	3	DN000GR69V100L
Microswitch		F210156				MS4L2-5B6PRES
		G210157				MS4L2-5B2PRES

16	6,9 gGR 000 PV 016	X302102	1	150	3	NH000GR69V16PV
20	6,9 gGR 000 PV 020	Y302103	1	150	3	NH000GR69V20PV
25	6,9 gGR 000 PV 025	Z302104	1	150	3	NH000GR69V25PV
32	6,9 gGR 000 PV 032	A302105	1	150	3	NH000GR69V32PV
40	6,9 gGR 000 PV 040	B302106	1	150	3	NH000GR69V40PV
50	6,9 gGR 000 PV 050	C302107	1	150	3	NH000GR69V50PV
63	6,9 gGR 000 PV 063	D302108	1	150	3	NH000GR69V63PV
80	6,9 gGR 000 PV 080	E302109	1	150	3	NH000GR69V80PV
100	6,9 gGR 000 PV 100	F302110	1	150	3	NH000GR69V100PV
Microswitch		F210156				MS4L2-5B6PRES
		G210157				MS4L2-5B2PRES
Extractor handle		P215592			1	NH HANDLE

20	6,9 gGR 00 D08L 020	T330297	1	140	3	DN00GR69V20L
25	6,9 gGR 00 D08L 025	V330298	1	140	3	DN00GR69V25L
32	6,9 gGR 00 D08L 032	W330299	1	140	3	DN00GR69V32L
40	6,9 gGR 00 D08L 040	X330300	1	140	3	DN00GR69V40L
50	6,9 gGR 00 D08L 050	Y330301	1	140	3	DN00GR69V50L
63	6,9 gGR 00 D08L 063	G330286	1	140	3	DN00GR69V63L
80	6,9 gGR 00 D08L 080	H330287	1	140	3	DN00GR69V80L
100	6,9 gGR 00 D08L 100	J330288	1	140	3	DN00GR69V100L
125	6,9 gGR 00 D08L 125	K330289	1	140	3	DN00GR69V125L
160	6,9 gGR 00 D08L 160	L330290	1	140	3	DN00GR69V160L
200	6,9 gGR 00 D08L 200	M330291	1	140	3	DN00GR69V200L
Microswitch		F210156				MS4L2-5B6PRES
		G210157				MS4L2-5B2PRES

20	6,9 gGR 00 PV 020	N330292	1	210	3	NH00GR69V20PV
25	6,9 gGR 00 PV 025	P330293	1	210	3	NH00GR69V25PV
32	6,9 gGR 00 PV 032	Q330294	1	210	3	NH00GR69V32PV
40	6,9 gGR 00 PV 040	R330295	1	210	3	NH00GR69V40PV
50	6,9 gGR 00 PV 050	S330296	1	210	3	NH00GR69V50PV
63	6,9 gGR 00 PV 063	A330280	1	210	3	NH00GR69V63PV
80	6,9 gGR 00 PV 080	B330281	1	210	3	NH00GR69V80PV
100	6,9 gGR 00 PV 100	C330282	1	210	3	NH00GR69V100PV
125	6,9 gGR 00 PV 125	D330283	1	210	3	NH00GR69V125PV
160	6,9 gGR 00 PV 160	E330284	1	210	3	NH00GR69V160PV
200	6,9 gGR 00 PV 200	F330285	1	210	3	NH00GR69V200PV
Microswitch		F210156 (only)				MS4L2-5B6PRES
Extractor handle		P215592			1	NH HANDLE

Type of fuse	Nb. poles	References for mounting on 35 mm DIN rail	References for panel mounting
Solid blades size 000/00 IPXX	1	R216192	F215170
	2	F218758	A217212
	3	V219277	F217723
	4	Z223007	S219275
Solid blades size 000/00 IP20 w/o microswitch	1	S218240	-
	3	S229119	-
DIN 80 bracket size 000 IPXX	1	-	C220710
DIN 80 bracket size 00 IPXX	1	-	Q098040
DIN 80 blades size 000 IP20 w/o microswitch	1	B227218	-
DIN 80 blades size 000 IP20 for microswitch	1	C227219	-
DIN 80 blades size 00 IP20 w/o microswitch	1	V227672	-
DIN 80 blades size 00 IP20 for microswitch	1	W227673	-
ITCP range	1		



Protistor® Square-body Fuses

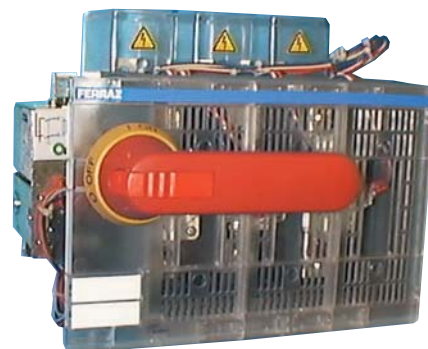
PSC gGR sizes 000/00

gGR - 690 VAC DIN 00/000 (full range)



F : Réf. D302108C
MC: Réf. F210156C

F : Réf. G330286C
PF : Réf. Q098040C
MC: Réf. F210156C



ITCP : Réf. G210410A
F : Réf. M330291C

Choice and references of gGR fuse holders

	Type of support	Characteristics	Nb. Poles	Solid blade size 000/00		DIN 80 bracket		Fuse microswitch (2)		
				Reference Number	Fuse extraction handle	Size 000	Size 00			
CEI 60269-2	Fuse holders	No protection (1) Screw connection for eye lug or bar for 35 mm DIN rail	1 2 3 4	R216192 F218758 V219277 Z223007	P215592			F2101546 or G210157		
		No protection (1) Screw connection for eye lug or bar on panels	1 2 3 4	F215170 A217212 F217723 S219275		P215592	C220710	Q098040	F210156 or G210157	
		Protect led to IP20 Screw connection for eye lug or bar for DIN rail	1 3	S218240 S229119			P215592	W/o microswitch B227218 C227219		
			1					For microswitch V227672 W227673		
		CEI 60947-3	Switch disconnecter	Horizontal Linocur AC23	2		N216626 N222882 B218685 C201781 Y212035 W213574	P215592 P215592 P215592		
					3					
			Switch with front control handle	ITC 160M III 00 Front handle Inside/outside Complete	3	K227824	P215592			
ITC 250 III 00 front Handle	3			F210409	P215592					
Switch with side control handle	ITC 160M III 00 Side handle Outside Complete		3	J227823	P215592					
ITCP	ITCP		3		P215592	G210410	G210410			

(1) No protection against accidental contact with live parts IPXX.

(2) F210156C microswitch: 6.3 mm clips

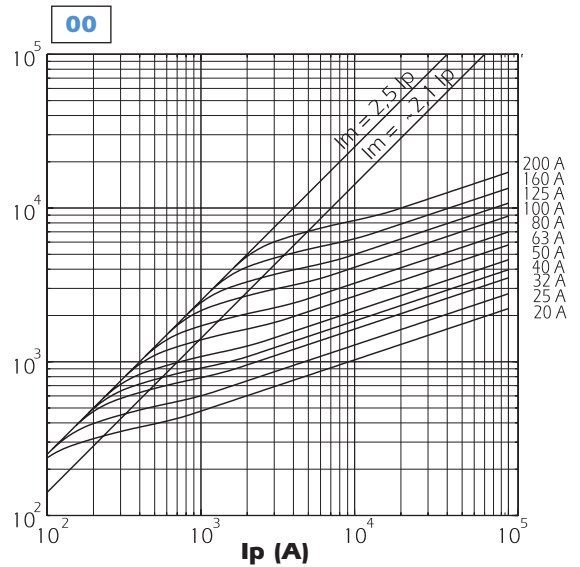
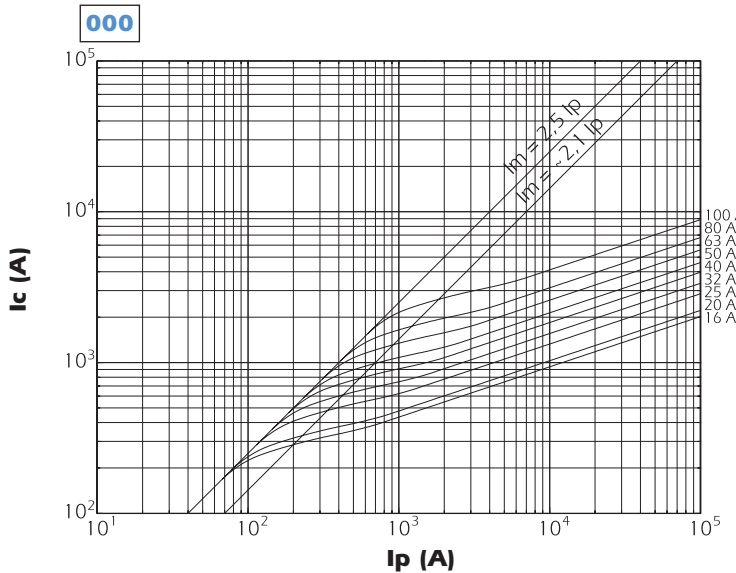
G210157C microswitch: 2.8 mm clips



Semiconductor (AC) fuses

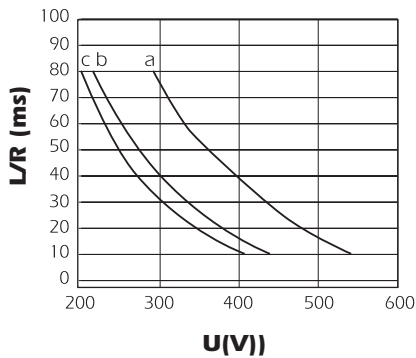
Protistor® Square-body Fuses PSC gGR sizes 000/00 gGR - 690 VAC DIN 00/000 (full range)

Amplitude of current interrupted



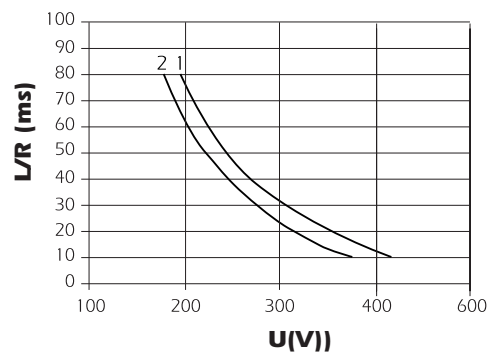
DC working voltage possibilities

Size 00



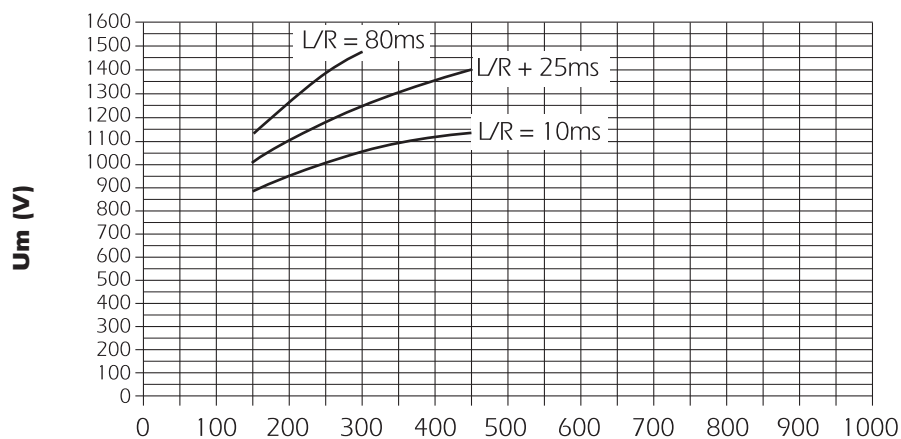
I_n	Curve
16 A	a
20 A	a
25 A	a
32 A	a
40 A	a
50 A	a
63 A	a
80 A	b
100 A	c
125 A	c
160 A	b
200 A	c

Size 000



I_n	Curve
16 A	1
20 A	1
25 A	1
32 A	1
40 A	1
50 A	1
63 A	2
80 A	2
100 A	2

Size 00 and Size 000



Semiconductor (AC) fuses

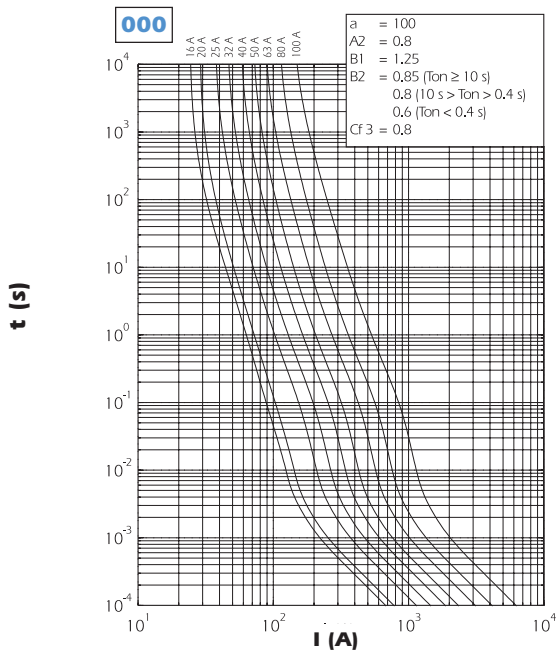


Protistor® Square-body Fuses

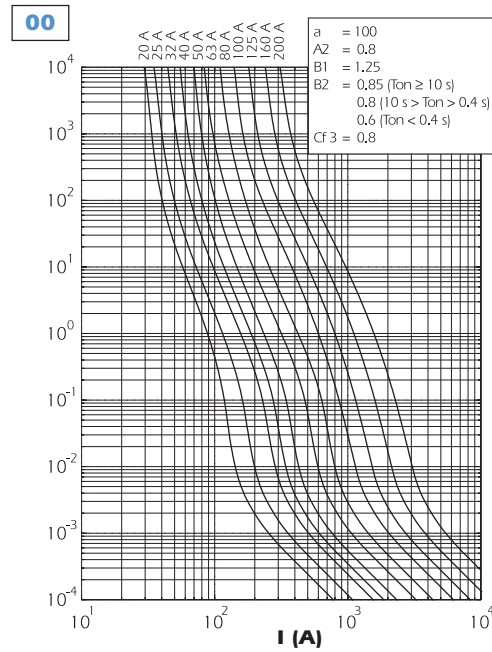
PSC gGR sizes 000/00

gGR - 690 VAC DIN 00/000 (full range)

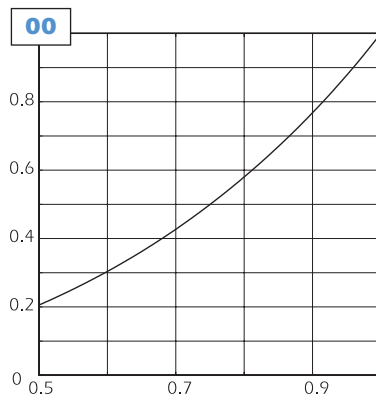
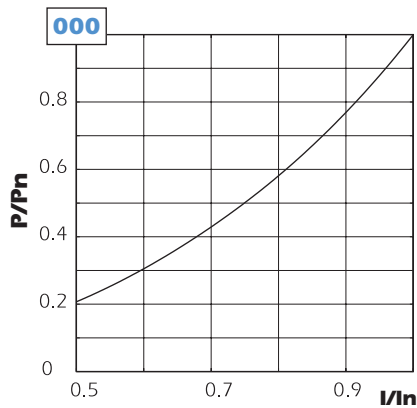
Time/current characteristics



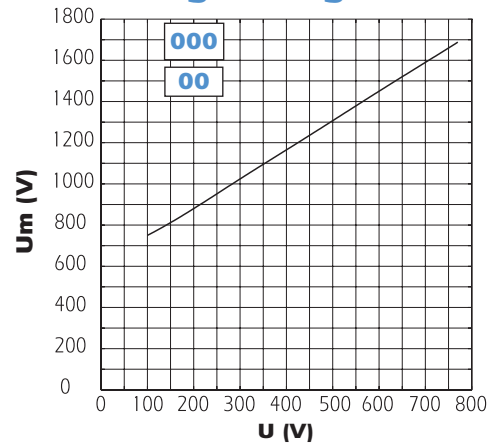
TOLERANCE ON PRE-ARCING CURRENT +/- 8%



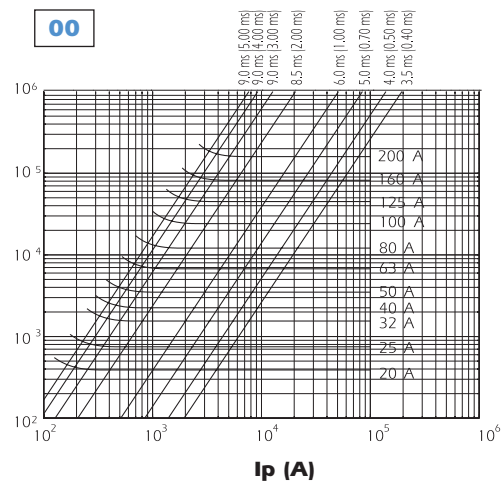
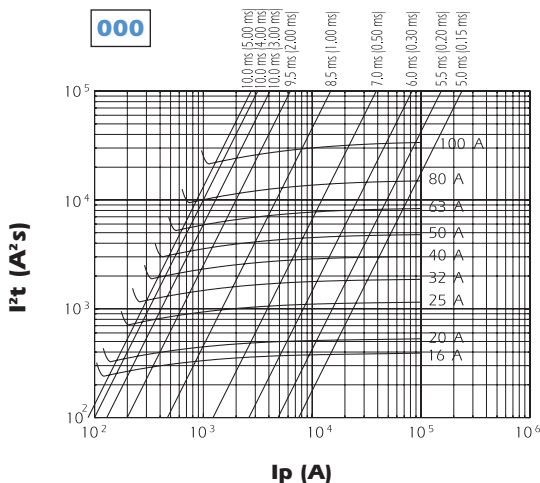
Dissipated power



Breaking voltage



Maximum total operating I²t and total operating time

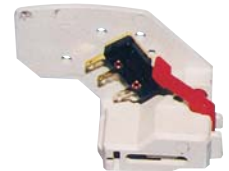


Protistor® Square-body Fuses PSC gR/aR sizes 000/00 Microswitches for PSC sizes 000/00 and NH

MICROSWITCH SYSTEMS ADAPTED TO THE FOLLOWING FUSES:

- PSC sizes 000/00 (brackets) DIN43653
- NH Fuses (plain blades) see details in "General Purpose IEC Fuses" section
- NH plain blades 690 VAC Protistor square-body Fuses

MS 4L 2-5



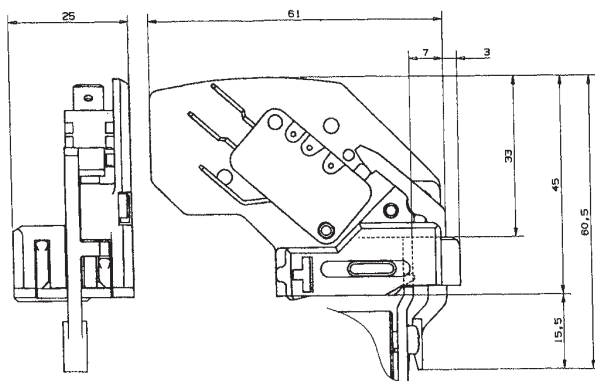
Main Characteristics

Code	AC Insulation voltage rating (***)	Positive operating voltage/current	Current rating	Current	Interrupting rating						AC voltage withstand test (*)	Impulse voltage test Uimp1.2/50 µs (**)	Fire class according to UL 94
					Non inductive circuit			Inductive circuit : L/R = 25ms					
					30V	110V	250V	30V	110V	250V			
MS 4L 2-5 B2 + Pres	1000 V	20 V 100 mA	5 A	50 Hz DC	4A -	4A -	5A -	- -	5A 2 A	5 A 0,4 A	12 kV 8 kV	16 kV 13 kV	V0
MS 4L 2-5 B6 + Pres	1000 V	20 V 50 mA	10 A	50/60 Hz DC	10 A 8 A	10 A 0,4 A	10 A 0,2 A	10 A 4 A	10 A 0,2 A	10 A 0,1 A	8 kV	10 kV	V0

* Between power circuit and microswitch terminals as per IEC 60 and 694 and NFC 64010 (50/60 Hz 1 min duration in dry air)

** Between power circuit and microswitch terminals Uimp: impulse voltage as per IEC 60947-1

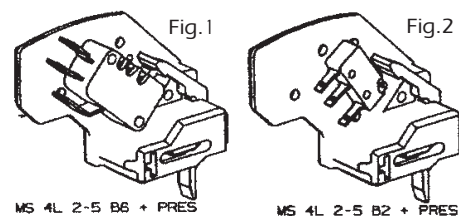
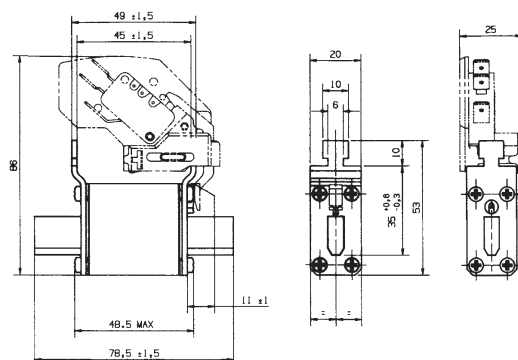
*** Between power circuit and microswitch terminals



Designation	Ref. Number	Weight (g)	Pack.	Catalog Number
MS 4L 2-5 B6 + PRES (Fig. 1) ⁽¹⁾	F210156	30	3	MS 4L2-5B6PRES
MS 4L 2-5 B2 + PRES (Fig. 2) ⁽²⁾	G210157	26	3	MS 4L2-5B2PRES

Automatically resettable, these microswitch systems indicate fuse presence (PRES) and proper mounting.

In case of improper mounting or fuse melting, this is indicated (terminal 1-4 closed)



- (1) 6.3 mm clips
(2) 2.8 mm clips



Other Protistor® Fuses Ferrule Fuses 10x38 gRB - 690VAC

690V AC
gRB - from 1 up to 30 A
Size: 10x38



The fuse preselection table below indicates: 

- rated current (or rating) I_N
- pre-arcing I^2t (I^2t_D) at 1 ms
- total operating I^2t (I^2t_t) at 690V, $\cos \varphi=0.15$, and for a total operating time from 8 to 10 ms
- dissipated power P_N at the rated current I_N , and at 0.8 I_N , in steady state
- Nominal breaking capacity, checked by tests made in accordance with IEC standard.

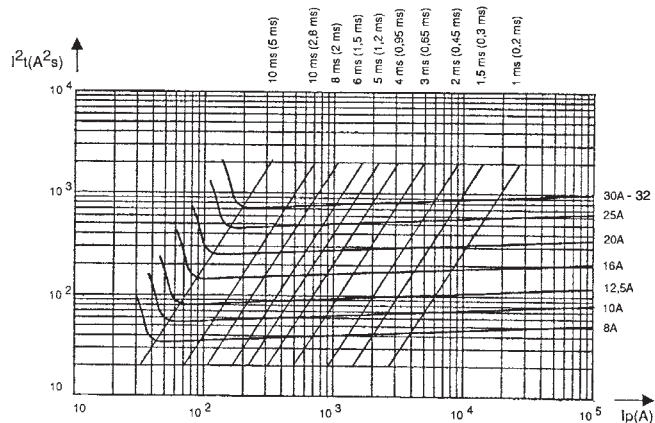
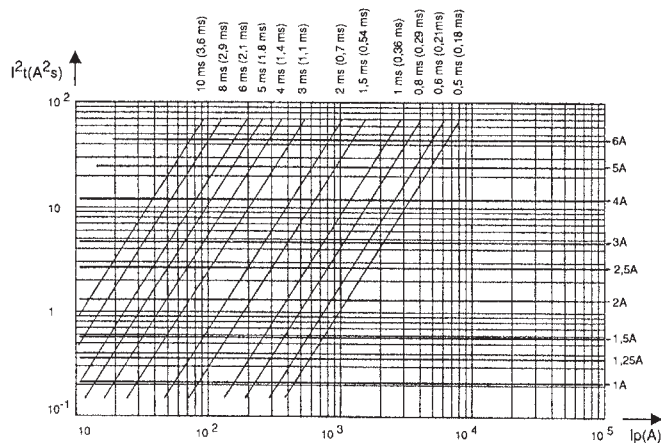
Voltage Rating (VAC)	Rated current	Pre-arcing I²t	Total I²t at 660VAC	Dissipated power		Peak arc voltage (V)	Breaking capacity I (kA)
	In (A)	I²tp (A2s)	I²tt (A2s)	at In (W)	at 0.8 In (W)		
690	1	0,075	0,28	0,9	0,52	2500	160 kA 690 V (IEC)
	1,25	0,115	0,36	1,25	0,7		
	1,5	0,185	0,57	1,5	0,81		
	2	0,42	1,3	2	1,1		
	2,5	0,88	2,7	2,1	1,15		
	3	1,55	4,6	2,3	1,25		
	4	4	12	2,6	1,35		
	5	8,6	25	2,7	1,4	1450	
	6	15	44	2,9	1,5		
	8	3,3	33	2,4	1,35		
	10	5,4	55	3,4	1,85		
	12,5	8,5	82	3,4	1,9		
	16	16	145	4,1	2,3		
	20	230	250	4,3	2,4		
	25	58	470	4,7	2,7		
	30 (32*)	96	740	5	2,9		

* Non approval rating

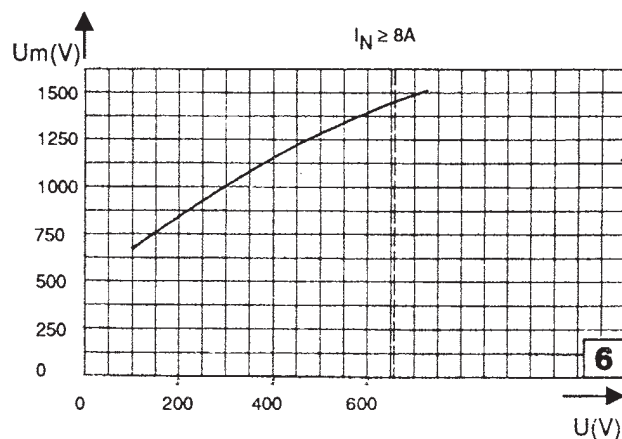
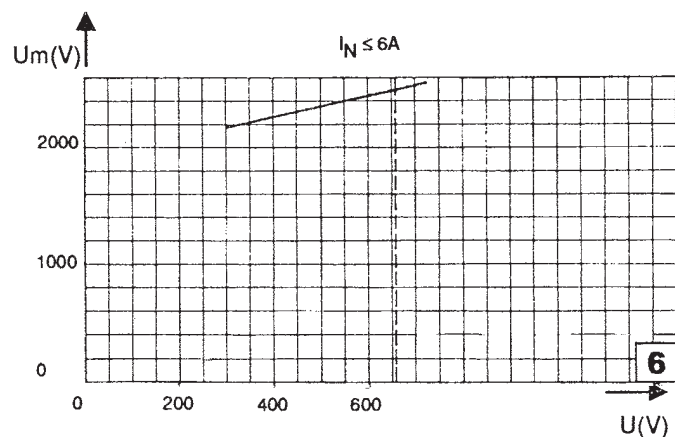
Semiconductor (AC) fuses

Other Protistor® Fuses French Ferrule 10x38 gRB - 690VAC

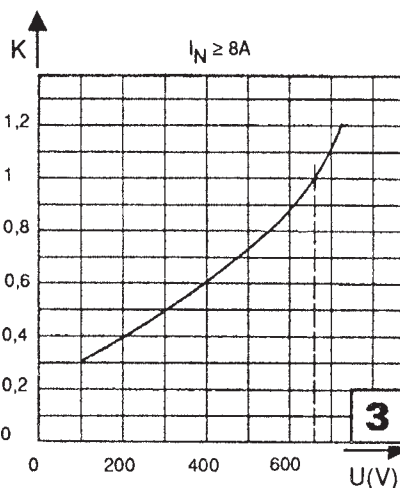
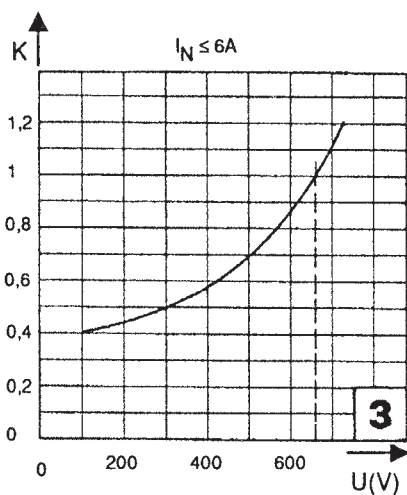
Maximum values of total operating I^2t and total operating times



Arc voltage

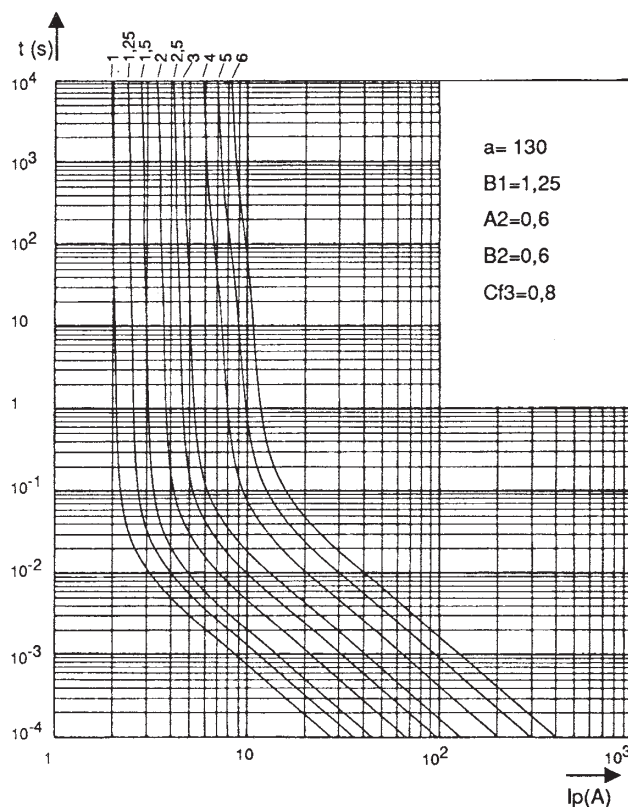


Multiplier coefficient

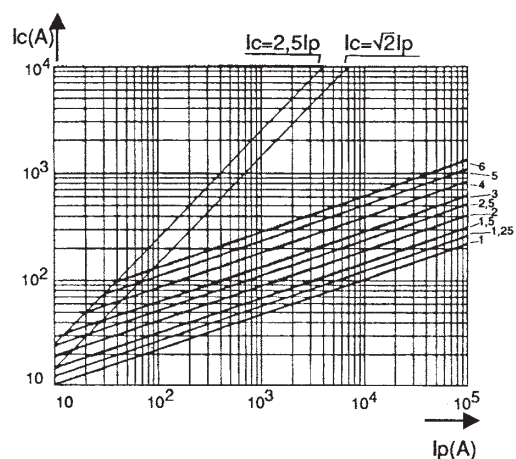


Other Protistor® Fuses Ferrule Fuses 10x38 gRB - 690VAC

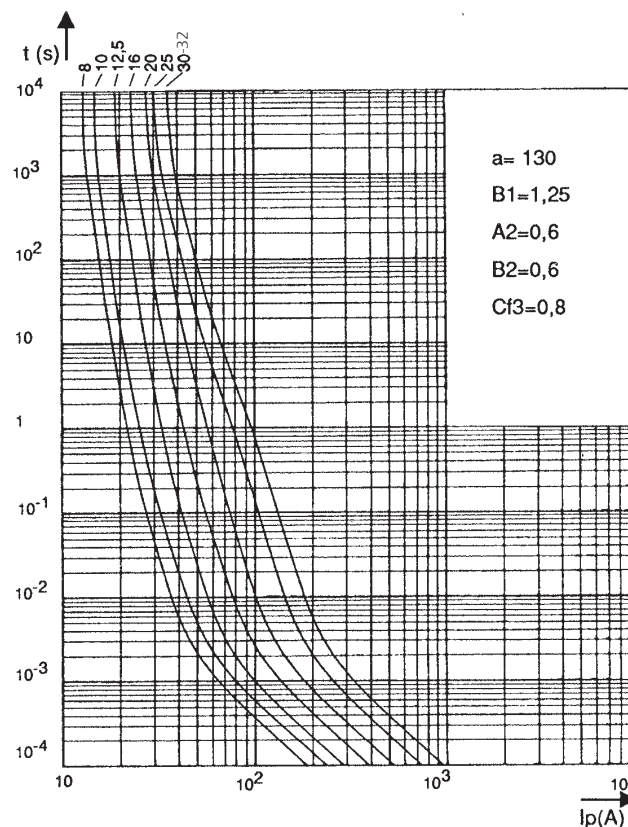
Time-current characteristics (1 to 6 A)



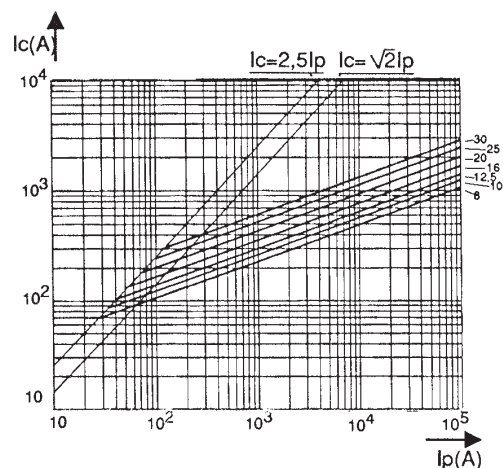
Cut-off characteristics



Time-current characteristics (8 to 30 A)



Cut-off characteristics



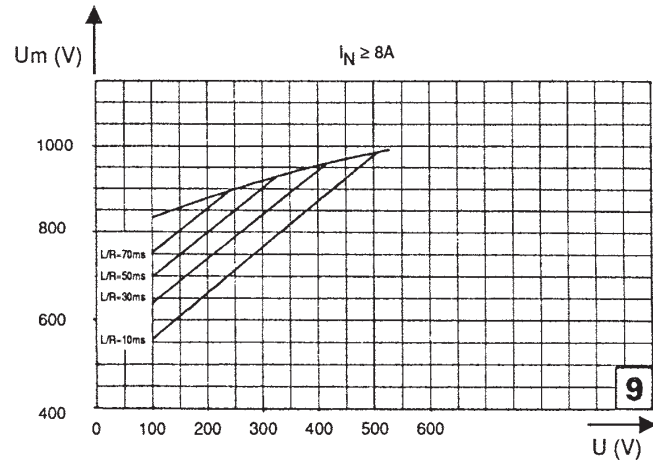
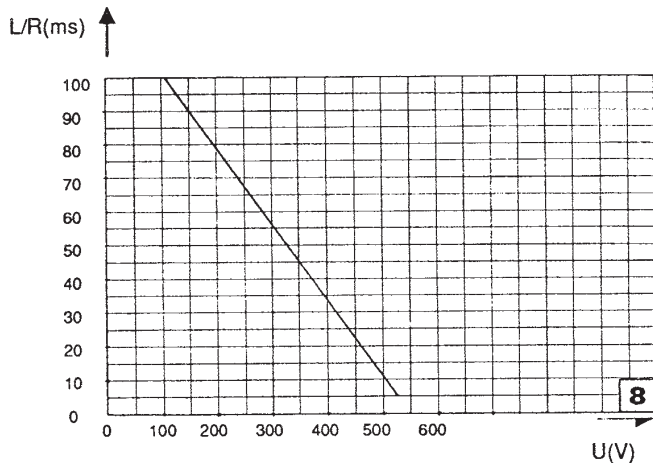
Other Protistor® Fuses Ferrule Fuses 10x38 gRB - 690VAC

Dimensions / Reference / Ref. No. 

Rating (A)	Designation	Ref. Number	Catalog Number
1	6,9 gRC 10-01 - A070 gRC 01 T13	Z330279	FR10GB69V1
1,25	6,9 gRB 10-1,25 - A070 gRB 1.25 T13	X330001	FR10GB69V1.25
1,5	6,9 gRB 10-1,5 - A070 gRB 1.5 T13	Y330002	FR10GB69V1.5
2	6,9 gRB 10-02 - A070 gRB 02 T13	Z330003	FR10GB69V2
2,5	6,9 gRB 10-2,5 - A070 gRB 2.5 T13	A330004	FR10GB69V2.5
3	6,9 gRB 10-03 - A070 gRB 03 T13	B330005	FR10GB69V3
4	6,9 gRB 10-04 - A070 gRB 04 T13	C330006	FR10GB69V4
5	6,9 gRB 10-05 - A070 gRB 05 T13	D330007	FR10GB69V5
6	6,9 gRB 10-06 - A070 gRB 06 T13	E330008	FR10GB69V6
8	6,9 gRB 10-08 - A070 gRB 08 T13	F330009	FR10GB69V8
10	6,9 gRB 10-10 - A070 gRB 10 T13	G330010	FR10GB69V10
12,5	6,9 gRB 10-12,5 - A070 gRB 12.5 T13	H330011	FR10GB69V12.5
16	6,9 gRB 10-16 - A070 gRB 16 T13	J330012	FR10GB69V16
20	6,9 gRB 10-20 - A070 gRB 20 T13	K330013	FR10GB69V20
25	6,9 gRB 10-25 - A070 gRB 25 T13	L330014	FR10GB69V25
30	6,9 gRB 10-30 - A070 gRB 30T13	M330015	FR10GB69V30
32*	6,9 gRB 10-32 - A070 gRB 32T13	Y330278	FR10GB69V32

* Non approval rating

DC working voltage possibilities



↑ Above: Curve indicating the maximum time constant L/R of the fault path as a function of the DC voltage U, for the rated currents from 1 to 30 A of this range.

Time-current characteristics: Curves indicate, for each rated current, pre-arcing time as a function of RMS value of pre-arcing current I.

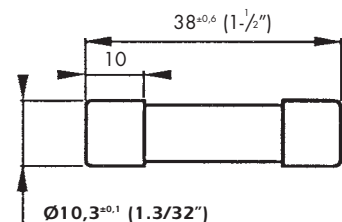
Tolerances on this current:
±10% = ratings from 1 to 6 A
±9% = ratings from 8 to 30 A

Fuses with "gR" characteristics can eliminate all overloads.

They do not show any minimum breaking capacity but limit currents of non-operation or operation in compliance with standard VDE 636/23.

Cut off characteristics: Curves indicate, for each rated current, the peak value Ic that the current may reach as a function of prospective fault current Ip.

Without trip-indicator
Max. weight 10g
Packaging: per 10 pieces



Other Protistor® Fuses

Ferrule Fuses

10x38 URB/URD/URL - 500 to 600 VAC



Extremely high breaking capacity fuses:
Protection of power semiconductors complying with IEC standard 60269.1 and 4.

500 - 600 VAC voltage rating

aR-CLASS according to VDE 636-23 IEC 60269-4

Without blown fuse indication 0.10 up to 0,80 A**

With trip-indicator (1 to 30 A), a Ferraz Shawmut speciality*

Main Characteristics

Voltage rating U_N (VAC)	Class	Current rating I_N (A)	Pre-arcing I^2t @ 1 ms I^2tp (A²s)	Total clearing I^2t @ U_N I^2tt (A²s)	Watts loss		Tested breaking capacity
					0.8 I_N	I_N	
600 V without blown fuse indicator	URD **	100 mA		1.2 10 ⁻³	0.23	0.4	200 kA @ 600 V
		125 mA		2.3 10 ⁻³	0.25	0.44	
		160 mA		5.2 10 ⁻³	0.28	0.48	
		200 mA		8 10 ⁻³	0.34	0.58	
		250 mA		18 10 ⁻³	0.35	0.60	
		315 mA		33 10 ⁻³	0.42	0.73	
		400 mA		56 10 ⁻³	0.46	0.80	
		500 mA		0.100	0.46	0.80	
		630 mA		0.18	0.52	0.90	
		800 mA		0.44	0.58	1	
500 V with trip-indicator	URD	1 A	0.40	3.6	2.8	0.5	50 kA @ 500 V
		1.25 A	0.13	1.7	0.52	0.91	
		1.6 A	0.31	2.2	0.58	1	
		2 A	0.65	3.1	0.63	1.1	
		2.5 A	1.65	5.9	0.63	1.1	
		3.15 A	2.80	9	0.86	1.5	
		4 A	5.30	16	1.1	1.8	
		5 A	12.7	36	1.1	1.8	
	URD	6 A	1.3	47	0.73	1.35	50 kA @ 500 V
		8 A	2.3	80	0.83	1.55	
		10 A	3.6	110	1	1.9	
		12 A	5.25	150	1.3	2.3	
		16 A	9.30	200	1.7	3.1	
		20 A	16	290	1.7	3.2	
	URL	25 A	37	580	2.9	4.25	50 kA @ 500 V
		30 A	58	900	3.5	5.1	

* minimum operating voltage for trip-indicator: 20 V

** higher ratings without blown fuse indicator see 10x38gRB - 690 VAC



Other Protistor® Fuses

Ferrule Fuses

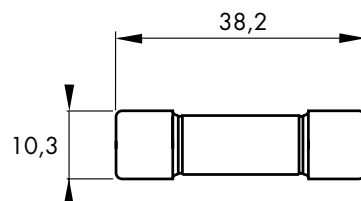
10x38 URB/URD - 500 to 600 VAC

10.3x38 - Without blown fuse indicator

Current Rating	Designation	Ref. Number	Catalog Number
100 mA	A 060 URD 0.100T13	H077632	A060UD0.100T13
125 mA	A 060 URD 0.125T13	J077633	A060UD0.125T13
160 mA	A 060 URD 0.160T13	K077634	A060UD0.160T13
200 mA	A 060 URD 0.200T13	L077635	A060UD0.200T13
250 mA	A 060 URD 0.250T13	M077636	A060UD0.250T13
315 mA	A 060 URD 0.315T13	N077637	A060UD0.315T13
400 mA	A 060 URD 0.400T13	P077638	A060UD0.400T13
500 mA	A 060 URD 0.500T13*	Q077639	A060UD0.500T13
630 mA	A 060 URD 0.630T13*	R077640	A060UD0.630T13
800 mA	A 060 URD 0.800T13*	S077641	A060UD0.800T13

* UL Recognized 

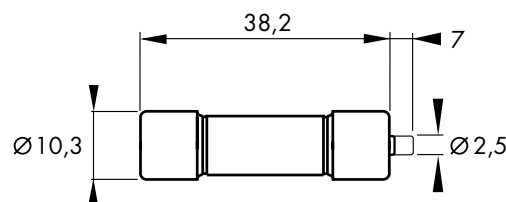
Fuses mounted in clips or fuse disconnectors



10.3x38 - With trip-indicator

Current Rating	Designation	Ref. Number	Catalog Number
1 A	A 050 URD 001 T13 I	P076925	A050URD1T13I
1.25 A	A 050 URD 001.2 T13 I	H076597	A050URD1.2T13I
1.6 A	A 050 URD 001.6 T13 I	G076596	A050URD1.6T13I
2 A	A 050 URD 002 T13 I	Q076926	A050URD2T13I
2.5 A	A 050 URD 002.5 T13 I	F076595	A050URD2.5T13I
3.15 A	A 050 URD 003 T13 I	R076927	A050URD3T13I
4 A	A 050 URD 004 T13 I	S076928	A050URD4T13I
5 A	A 050 URD 005 T13 I	T076929	A050URD5T13I
6 A	A 050 URB 006 T13 I	V076930	A050URB6T13I
8 A	A 050 URB 008 T13 I	W076931	A050URB8T13I
10 A	A 050 URB 010 T13 I	X076932	A050URB10T13I
12 A	A 050 URB 012 T13 I	Y076933	A050URB12T13I
16 A	A 050 URB 016 T13 I	Z076934	A050URB16T13I
20 A	A 050 URB 020 T13 I	A076935	A050URB20T13I
25 A	A 050 URL 025 T13 I	B076936	A050URL25T13I
30 A	A 050 URL 030 T13 I	C076937	A050URL30T13I

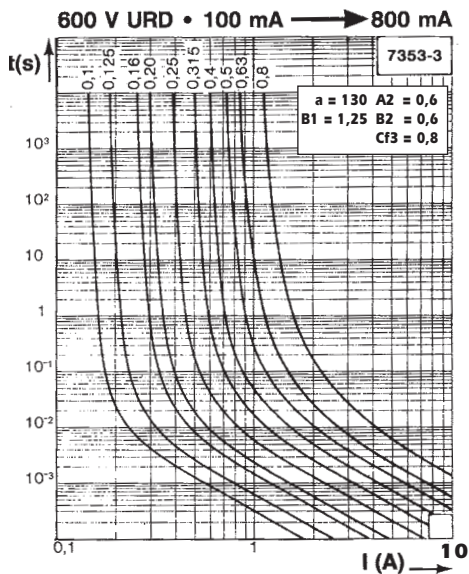
Fuses with trip indicator mounted in clips



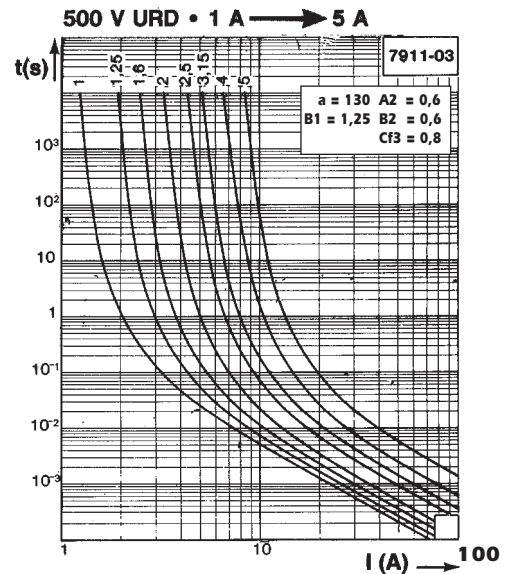
Electrical characteristics

Time vs current characteristics

WITHOUT BLOWN FUSE INDICATOR

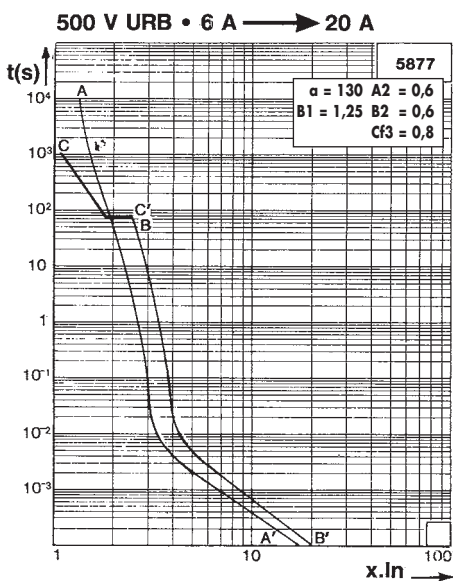


WITH TRIP INDICATOR

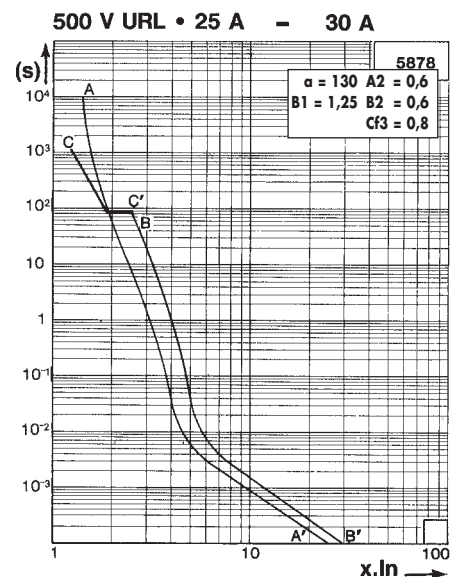


These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.
 Tolerance for mean pre-arcing current $\pm 10\%$

WITH TRIP INDICATOR



WITH TRIP INDICATOR



These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.
 as a multiple of current rating.

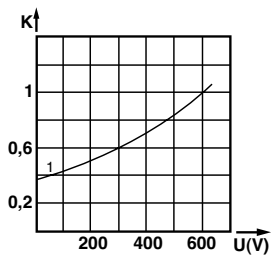
Other Protistor® Fuses

Ferrule Fuses

10x38 URB/URD - 500 to 600 VAC

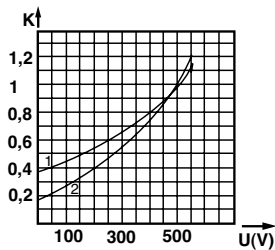
Corrective factor - Peak arc voltage

Corrective factor



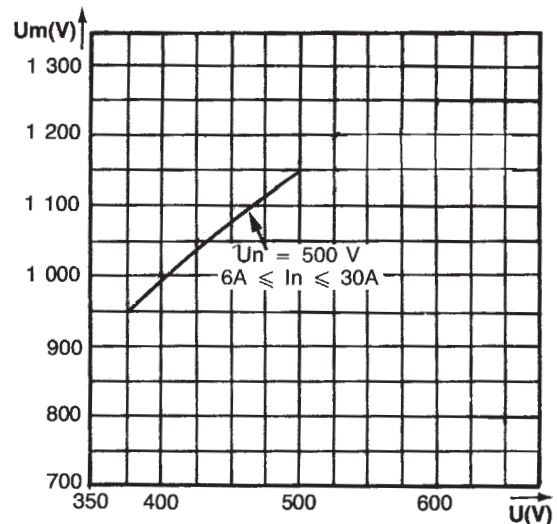
600 V UR
1 : 0.1 up to 0.8 A

These mean curves show the variation of the total clearing time ($I^2 t_t$) and the total clearing duration t_t as a function of operating voltage U .



500 V UR
1 : 1 up to 5 A
2 : 6 up to 30 A

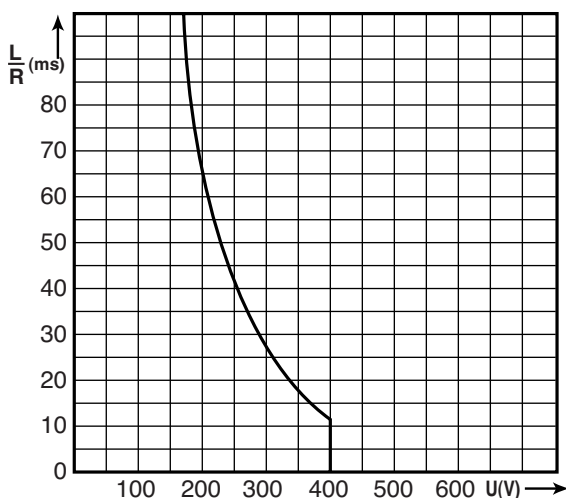
Peak arc voltage



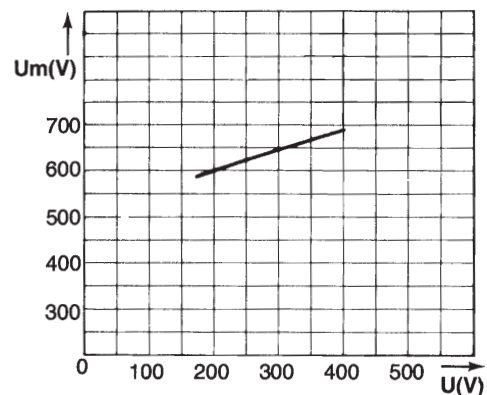
This curve shows the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U @ $\cos \varphi = 0.15$.

D.C. Application data for fuses with trip indicator

500 V URD $I_N \geq 6A$



500 V URD $I_N \geq 6A$



This curve shows the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U .

Other Protistor® Fuses

Ferrule Fuses

14x51 gRC(URC) - 600 V to 690 VAC



600 - 690 V ~
gRC - URC from 1 to 63 A
Size: 14 x 51

EXTREMELY HIGH BREAKING CAPACITY FUSES: PROTECTION OF SEMICONDUCTORS
COMPLYING WITH IEC STANDARD 60269.1 AND 4

600V - 690 V VOLTAGE RATING (CURRENT RATING 1 TO 50 A)
AS PER IEC 33

gR CLASS (CURRENT RATING 1 TO 50 A) AS PER VDE 636-23

- CLEARING ALL OVERLOADS
- IMPROVED SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION AMONG ALL DISTRIBUTION CIRCUIT FUSES

aR CLASS (CURRENT RATING 63 A) ACCORDING TO VDE 636-23 AND IEC 60269.4

TWO MODELS: WITH OR WITHOUT TRIP-INDICATOR

gRC fuses FROM 8 TO 50 A are 700VAC-DC UL Recognized 

Main Characteristics

Voltage rating U_N U_V	Class	Current rating I_N (A)	Pre-arcing I^2t @ 1 ms I^2t_p (A ² s)	Total clearing I^2t @ U_N I^2t_t (A ² s)	Watts loss		Tested Breaking capacity	Estimated Breaking capacity
					$0.8 I_N$	I_N		
690	gRC	1	0.8/0.31*	3.5/1.4*	0.17	0.35	100k A @ 690 V	300k A @ 690 V
		2	1.5/1*	6.7/4.3*	0.33	0.60		
		4	7.2/6.7*	33/30*	0.77	1.4		
		6	1.4	19	1.3	2.5		
		8	2.4	30	1.5	3.0		
		10	4.3	44	1.75	3.3		
		12	5.4	65	2.25	4.25		
		16	13	110	2.5	4.8		
		20	27	175	2.75	5.25		
		25	53	300	3.0	5.8		
		32	97	550	3.5	7.0		
		40	210	1210	4.5	8.8		
		50	390	2250	5.0	10		
600	URC	63	440	2200	8.0	16	100k A @ 600 V	300k A @ 600 V

* I^2t values for fuses without trip-indicator.

Minimum operating voltage for the trip-indicator : 20 V

See Gears and Fuse gears section

Semiconductor (AC) fuses

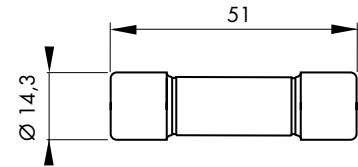
Other Protistor® Fuses

Ferrule Fuses

14x51 gRC(URC) - 600 V to 690 VAC

14 X 51 Without trip-indicator

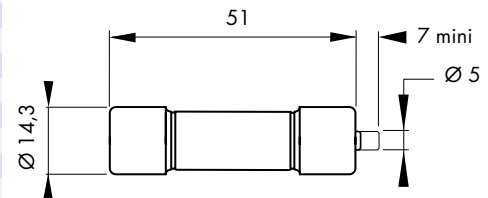
Current Rating	Designation	Ref. Number	Catalog Number
1	6.900 Cp gRC 14.51 1	E221080	FR14GC69V1
2	6.900 Cp gRC 14.51 2	H081473	FR14GC69V2
4	6.900 Cp gRC 14.51 4	J081474	FR14GC69V4
6	6.900 Cp gRC 14.51 6	T220909	FR14GC69V6
8	6.900 Cp gRC 14.51 8	S220908	FR14GC69V8
10	6.900 Cp gRC 14.51 10	R220907	FR14GC69V10
12	6.900 Cp gRC 14.51 12	Q220906	FR14GC69V12
16	6.900 Cp gRC 14.51 16	P220905	FR14GC69V16
20	6.900 Cp gRC 14.51 20	E220735	FR14GC69V20
25	6.900 Cp gRC 14.51 25	N220904	FR14GC69V25
32	6.900 Cp gRC 14.51 32	W220819	FR14GC69V32
40	6.900 Cp gRC 14.51 40	M220903	FR14GC69V40
50	6.900 Cp gRC 14.51 50	L220902	FR14GC69V50



Weight: 18 g
Packaging: 10 pieces

14 X 51 With trip-indicator

1	6.921 Cp gRC 14.51 1	F221081	FR14GC69V1T
2	6.921 Cp gRC 14.51 2	L081476	FR14GC69V2T
4	6.921 Cp gRC 14.51 4	F081517	FR14GC69V4T
6	6.921 Cp gRC 14.51 6	B220939	FR14GC69V6T
8	6.921 Cp gRC 14.51 8	A220938	FR14GC69V8T
10	6.921 Cp gRC 14.51 10	Z220937	FR14GC69V10T
12	6.921 Cp gRC 14.51 12	Y220936	FR14GC69V12T
16	6.921 Cp gRC 14.51 16	X220935	FR14GC69V16T
20	6.921 Cp gRC 14.51 20	W220934	FR14GC69V20T
25	6.921 Cp gRC 14.51 25	V220933	FR14GC69V25T
32	6.921 Cp gRC 14.51 32	V220818	FR14GC69V32T
40	6.921 Cp gRC 14.51 40	M220949	FR14GC69V40T
50	6.921 Cp gRC 14.51 50	N220950	FR14GC69V50T
63	6.21 Cp URC 14.51 63	V220910	FR14UC60V63T

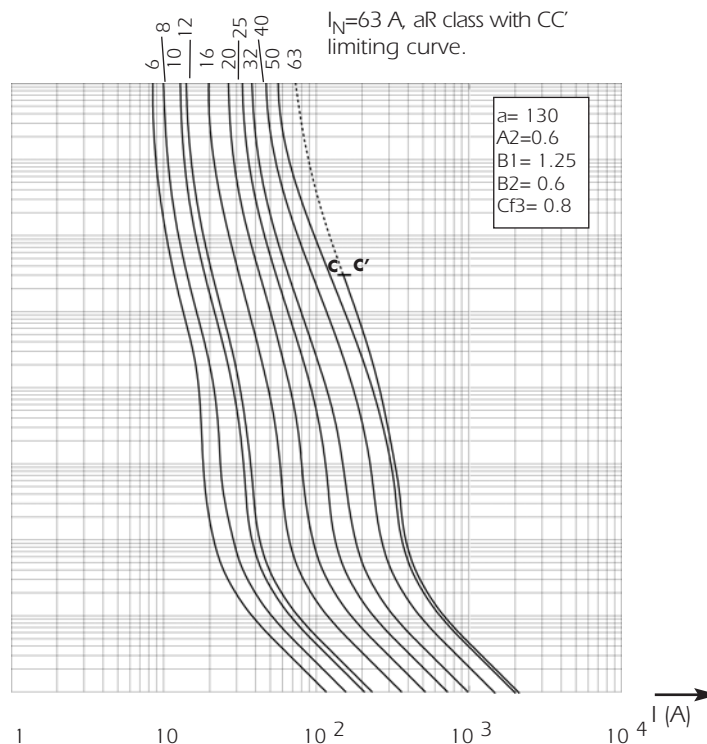
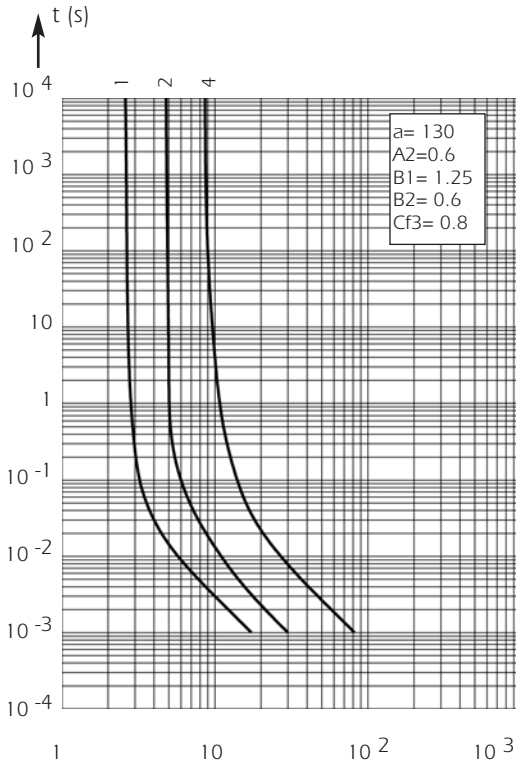


Weight: 18 g
Packaging: 10 pieces



except 1 to 6 and 63A rating

Time vs current characteristics



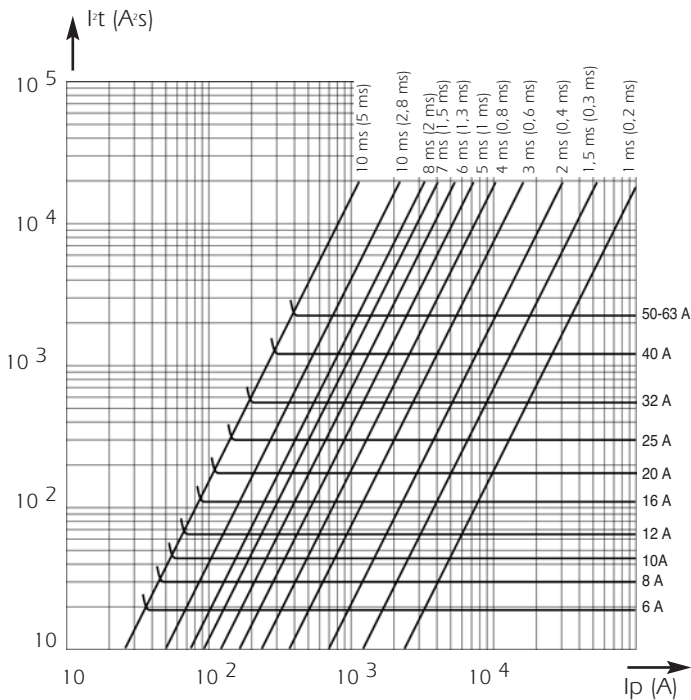
These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current

Tolerance for mean pre-arcing current
± 10% for current rating 1, 2, 4 A
± 8% for current rating 6 to 63 A

Other Protistor® Fuses Ferrule Fuses

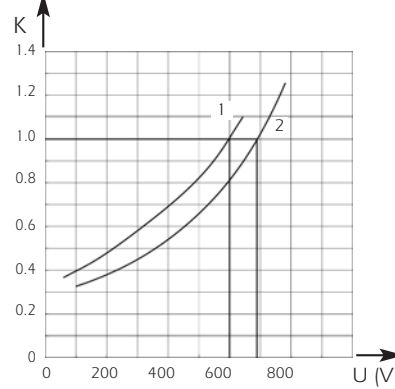
14x51 gRC(URC) - 600 V to 690 VAC

Total clearing I^2t



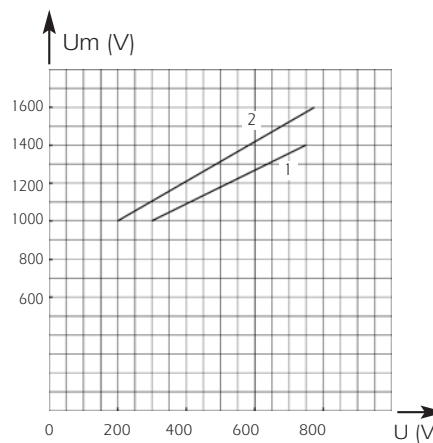
Horizontal curves show maximum values of total clearing I^2t (I^2t_t) for each rated current as a function of prospective current I_p @ 690 V. $\cos\phi = 0.15$ (for 63 A @ 600 V. $\cos\phi = 0.15$). Oblique lines indicate total clearing duration T_t , with associated pre-arcing duration in brackets.

I^2t corrective factor



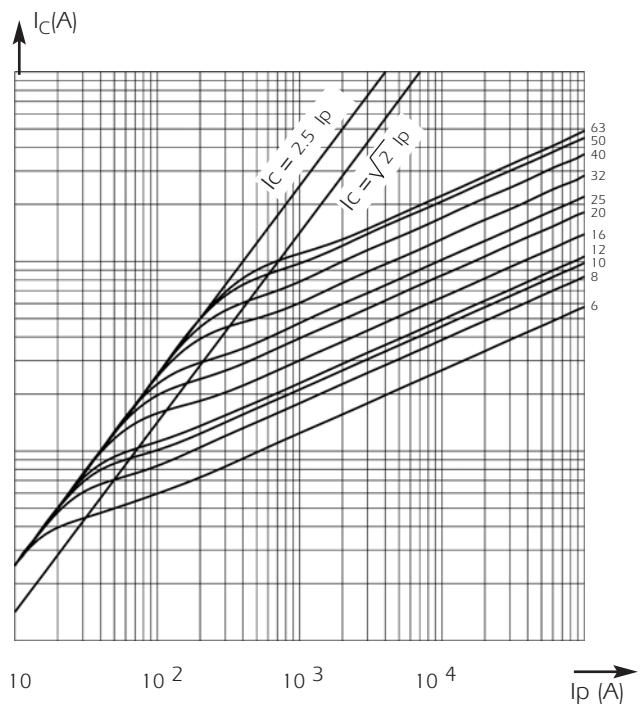
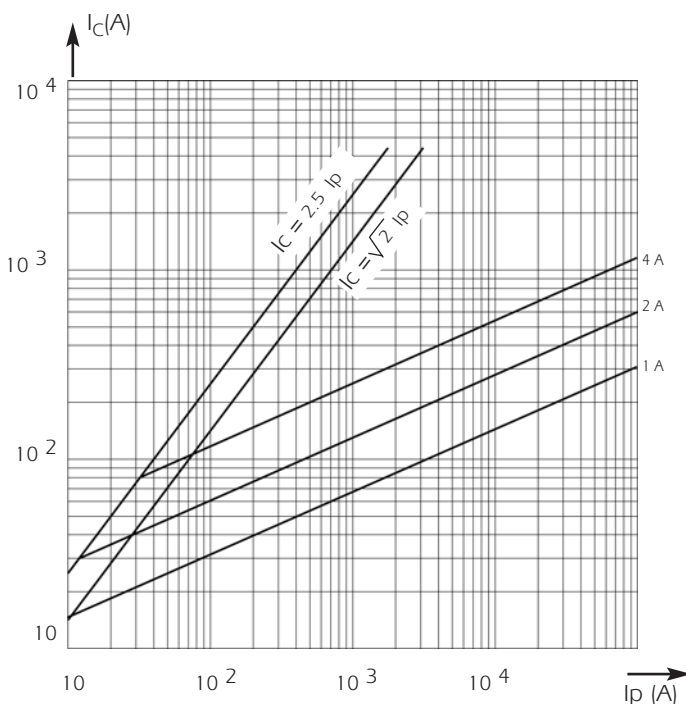
Mean curves showing variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .
1- 63 A rating - 600 V
2- 1 to 50 A rating - 690 V

Peak arc voltage



Curves showing peak value U_m of arc voltage which appears across fuse-link as a function of operating voltage U @ $\cos\phi = 0.15$
1-63A rating 600V
2-1 to 50A rating 690V

Current limitation curves



Curves show, for each rating, value of peak let-through current I_c as a function of available fault current I_p .

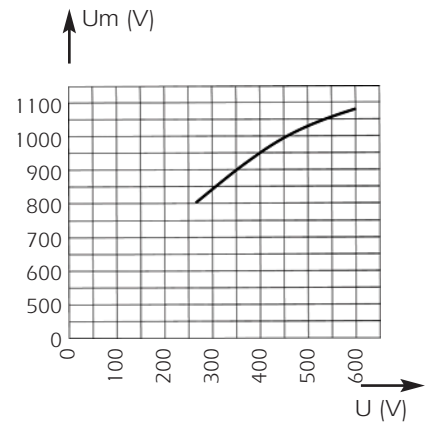
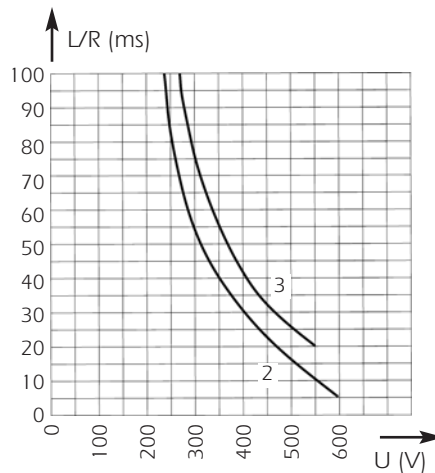
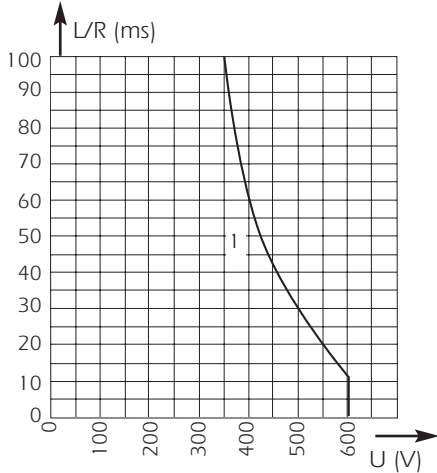
Semiconductor (AC) fuses

Other Protistor® Fuses

Ferrule Fuses

14x51 gRC(URC) - 600 V to 690 VAC

DC Application data



Above, left and center: Curves indicate the permissible value of time constant L/R as a function of DC working voltage:

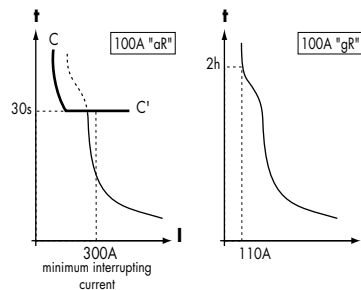
- 1- For rating 1, 2 and 4 A (gRC) $I_p \geq 1,6 I_N$
- 2- $I_p \geq 1,6 I_N$ for gRC only (rating 6 to 50 A)
- 3- $I_p \geq 2,5 I_N$ for gRC and URC (rating 6 to 63 A)

Above, right: Curve indicates peak arc voltage U_m which may appear across fuse terminals at working voltage U .

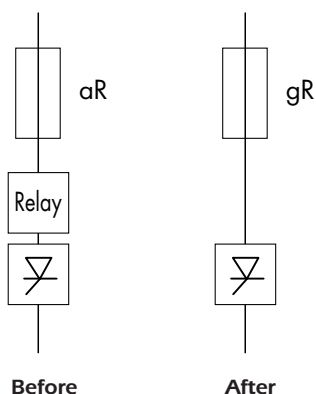
NEW gR-CLASS

OPTIMAL PROTECTION OF POWER EQUIPMENT

Thanks to recent technological developments, Ferraz Shawmut today markets gR-class PROTISTOR® fuses capable of clearing all types of overloads, from low multiples of current ratings up to very high short-circuit currents. Enhanced performance enables these fuses to provide solutions to many previously unsolved problems in power electronics: protection of cables without the use of additional components, protection of equipment from fire hazards, selective coordination of different fuses within a single power distribution installation...

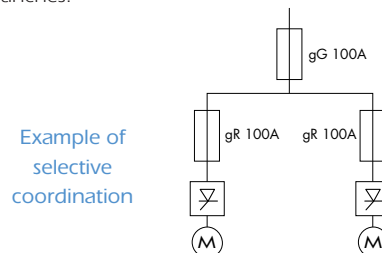


Example:
100A aR vs. 100A gR



SELECTIVE COORDINATION

gR-class semiconductor fuses can be utilized in association with gI and gG-class low voltage power distribution fuses of the same current rating, installed upstream. In a "selectively coordinated" distribution installation, melting is limited to the fuse associated with the faulted circuit, while upstream fuses remain intact. This prevents unnecessary down-time due to power blackouts in non-faulted branches.



aR-CLASS vs. gR-CLASS

aR-class fuses feature a high minimum interrupting current as compared with their current rating. The primary time-current characteristic of aR-class fuses is the CC' curve, above which another protection device must be associated. The gR-class fuse represents considerably improved performance in semiconductor protection

FERRAZ SHAWMUT EXPERTISE

gR-class fuses should be used in the design of low voltage equipment and in the protection of power electronics equipment. Designers can often substitute a gR-class fuse for an aR-class fuse (10x38, 14x51, 22x58, PSC 000 and 17x49 DIN80 or BS 88-4) but the reverse is not true: an aR fuse can never replace a gR fuse. Start protecting your new equipment with gR-class fuses today. The application of gR class fuses, with current ratings less than 100 Amps, offers enhanced protection, safety and reliability, along with reduced risk of replacement errors and assembly costs.

Other Protistor® Fuses

Ferrule Fuses

22x58 gRC (URD) - 600 V to 690 VAC

EXTREMELY BREAKING CAPACITY RATING FUSES: PROTECTION OF SEMICONDUCTORS

IN COMPLIANCE WITH IEC STANDARD 60269.1 AND 4

600 - 690 V VOLTAGE RATING (CURRENT RATING 12 TO 135 A)
AS PER IEC 33

gR CLASS (CURRENT RATING 12 TO 100 A) ACCORDING TO VDE 636-23

- CLEARING ALL OVERLOADS
- IMPROVED SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION AMONG ALL DISTRIBUTION CIRCUIT FUSES

aR CLASS (CURRENT RATING 125 AND 135 A) AS PER VDE 636-23 AND IEC 60269.4

TWO MODELS COMPLYING WITH NF C 63210 AND 63211
WITH OR WITHOUT TRIP-INDICATOR

gRC FUSES ARE 700VAC-DC UL RECOGNIZED



Main Characteristics

Voltage rating U_N (V)	Class	Current rating I_N (A)	Pre-arcing I^2t @ 1 ms I^2tp (A ² s)	Total clearing I^2t @ U_N I^2tt (A ² s)	Watts loss		Tested Breaking capacity	Estimated Breaking capacity
					$0.8 I_N$	I_N		
690	gRC	20	17	125	4.0	6.5	100k A @ 690 V	300k A @ 690 V
		25	39	280	4.5	7.5		
		32	72	490	5.0	9.0		
		40	118	785	5.5	10		
		50	242	1390	7.0	11.5		
		63	430	2460	8.0	13.5		
		80	970	5565	9.0	15.5		
		100	2080	11950	10	17		
600	URD	125	2900	14000	14	22	100k A @ 600 V	300k A @ 600 V
		135	3360	17700	15	25		

Minimum operating voltage for the trip-indicator: 20 V

See Fuse Blocks and Fuse Holders section

Semiconductor (AC) fuses

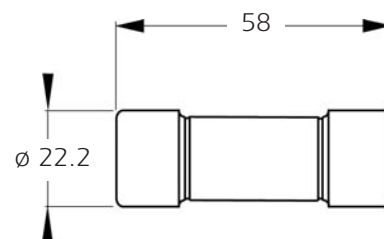
Other Protistor® Fuses

Ferrule Fuses

22x58 gRC (URD) - 600 V to 690 VAC

22 X 58 Without trip-indicator

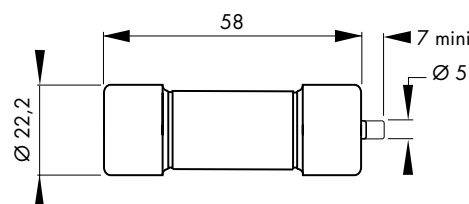
Current rating	Designation	Ref. Number	Catalog Number
12	6,900 CP gRC 22.58 12	F232719	FR22GC69V12
16	6,900 CP gRC 22.58 16	G232720	FR22GC69V16
20	6,900 CP gRC 22.58 20	C220940	FR22GC69V20
25	6,900 CP gRC 22.58 25	B220916	FR22GC69V25
32	6,900 CP gRC 22.58 32	A220915	FR22GC69V32
40	6,900 CP gRC 22.58 40	Z220914	FR22GC69V40
50	6,900 CP gRC 22.58 50	Y220913	FR22GC69V50
63	6,900 CP gRC 22.58 63	X220912	FR22GC69V63
80	6,900 CP gRC 22.58 80	Y220821	FR22GC69V80
100	6,900 CP gRC 22.58 100	W220911	FR22GC69V100



Weight: 57 g
Packaging: 10 pieces

22 X 58 With trip-indicator

20	6,921 CP gRC 22.58 20	D220734	FR22GC69V20T
25	6,921 CP gRC 22.58 25	G220921	FR22GC69V25T
32	6,921 CP gRC 22.58 32	F220920	FR22GC69V32T
40	6,921 CP gRC 22.58 40	E220919	FR22GC69V40T
50	6,921 CP gRC 22.58 50	D220918	FR22GC69V50T
63	6,921 CP gRC 22.58 63	C220733	FR22GC69V63T
80	6,921 CP gRC 22.58 80	X220820	FR22GC69V80T
100	6,921 CP gRC 22.58 100	C220917	FR22GC69V100T
125	621 CP URD 22.58 125	A220708	FR22UD60V125T
135	621 CP URD 22.58 135	B220709	FR22UD60V135T



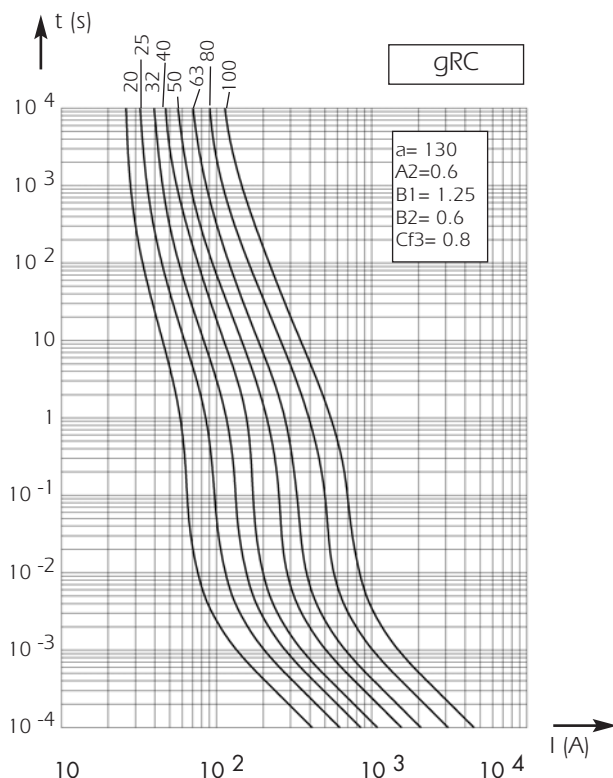
Weight: 57 g
Packaging: 10 pieces



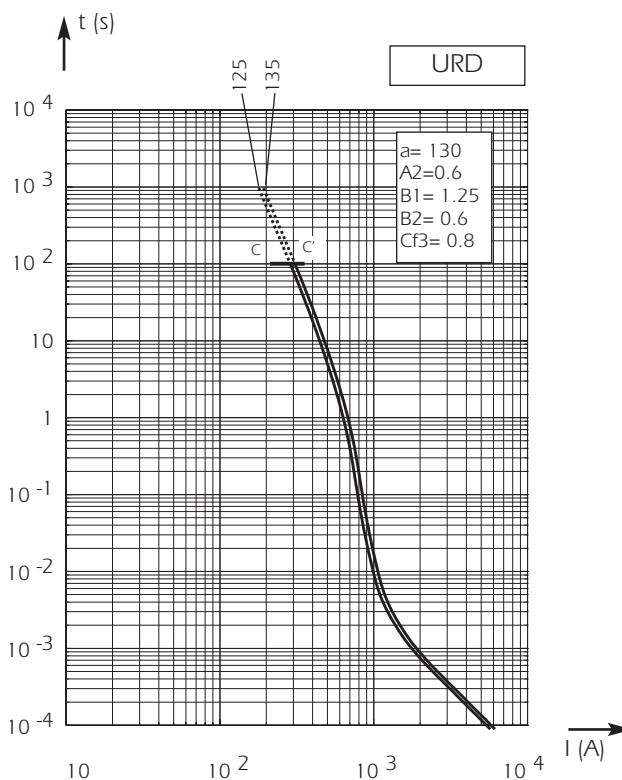
except 125 and 135A rating

Electrical characteristics

Time vs current characteristics



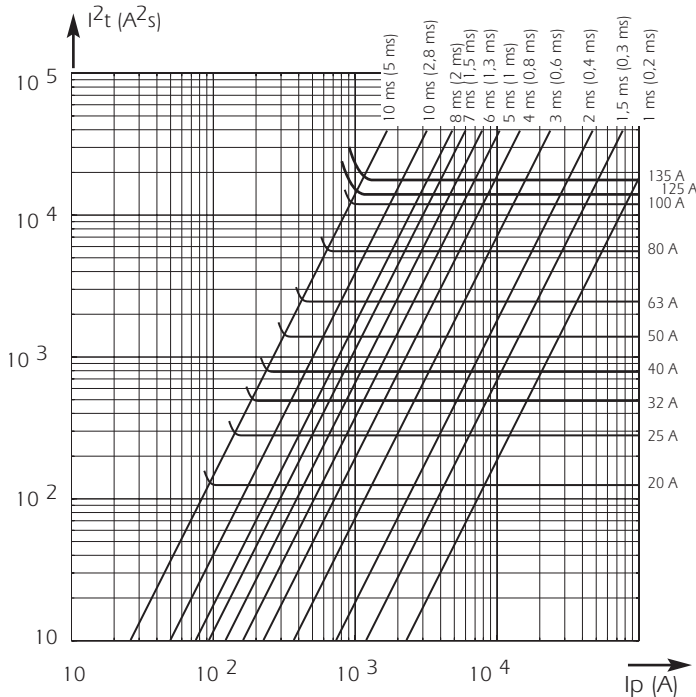
These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current



Tolerance for mean pre-arcing current
± 9% for all current ratings

Other Protistor® Fuses Ferrule Fuses 22x58 gRC (URD) - 600 V to 690 VAC

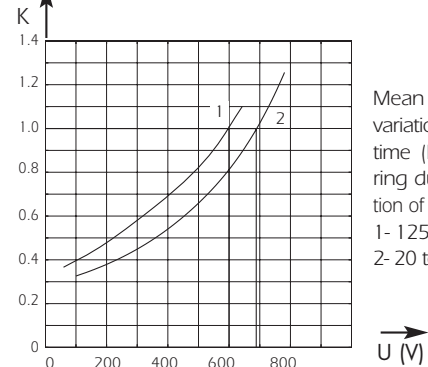
Total clearing I^2t



Above: Horizontal curves show, for each rated current, maximum values of total clearing I^2t (I^2t_t) as a function of prospective current I_p @ 690 V. $\cos\phi = 0.15$ (125-135 A @ 600 V. $\cos\phi = 0.15$)

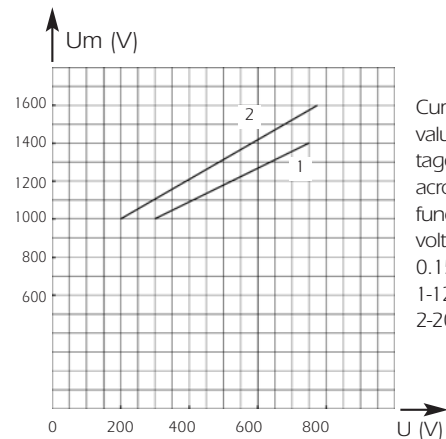
Oblique lines indicate total clearing duration T_t with associated pre-arcing duration in brackets.

I^2t corrective factor



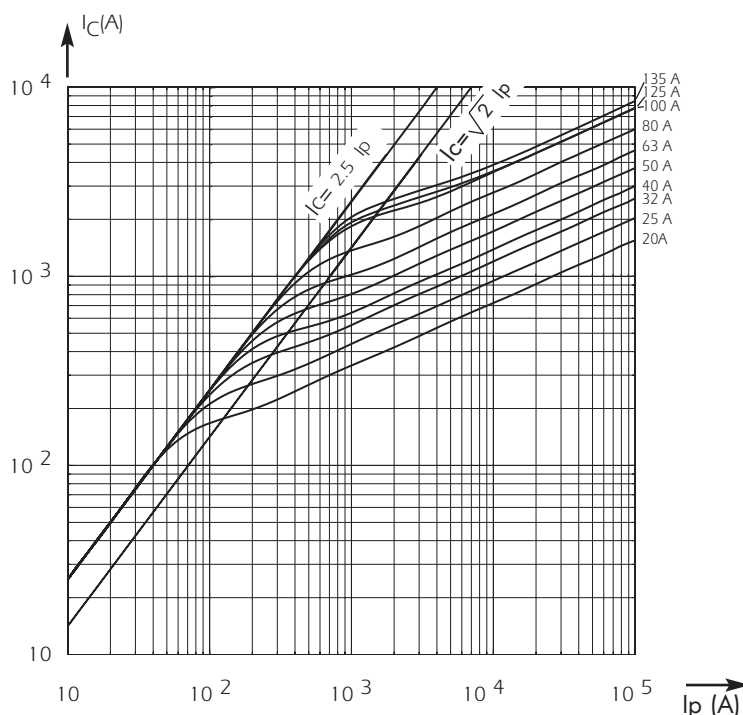
Mean curves showing variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .
1- 125 and 135 A rating
2- 20 to 100 A rating

Peak arc voltage



Curve showing peak value U_m of arc voltage which appears across fuse-link as a function of operating voltage U @ $\cos\phi = 0.15$
1-125 and 135 A rating
2-20 to 100 A rating

Current limitation curves



Left: Curves show value of peak let-through current I_c as a function of the available fault current I_p .

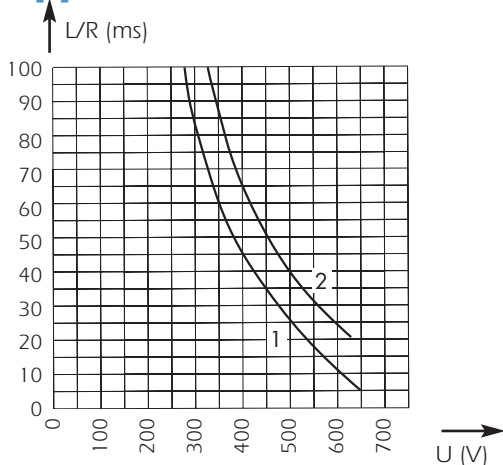
Semiconductor (AC) fuses

Other Protistor® Fuses

Ferrule Fuses

22x58 gRC (URD) - 600 V to 690 VAC

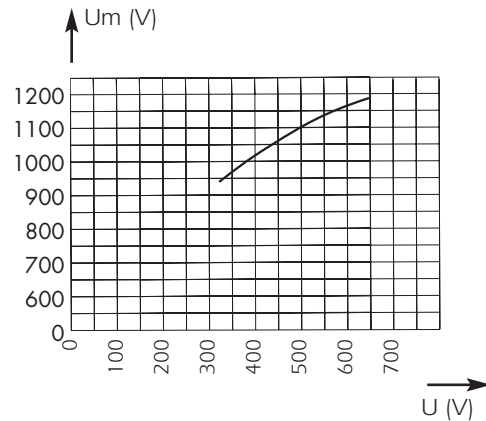
DC Application data



Ces courbes indiquent la constante de temps L/R maximale admissible en fonction de la tension d'utilisation

Courbe 1 : $I_p \geq 1.6 I_N$ pour fusibles gRC uniquement (calibres de 12 à 100 A)

Courbe 2 : $I_p \geq 2.5 I_N$ pour fusibles gRC et URD

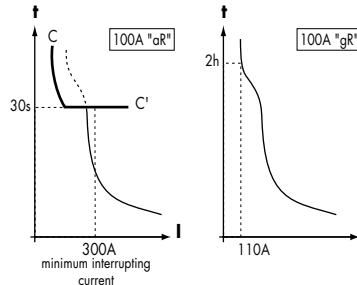


Above: Curve indicates peak arc voltage U_m which may appear across fuse terminals at working voltage U .

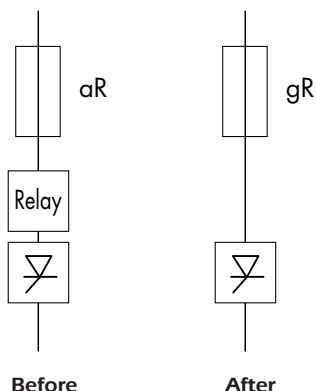
NEW gR-CLASS

OPTIMAL PROTECTION OF POWER EQUIPMENT

Thanks to recent technological developments, Ferraz Shawmut today markets gR-class PROTISTOR® fuses capable of clearing all types of overloads, from low multiples of current ratings up to very high short-circuit currents. Enhanced performance enables these fuses to provide solutions to many previously unsolved problems in power electronics: protection of cables without the use of additional components, protection of equipment from fire hazards, selective coordination of different fuses within a single power distribution installation...



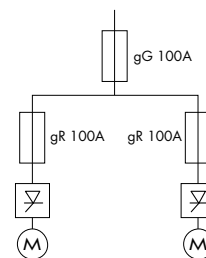
Example:
100A aR vs. 100A gR



SELECTIVE COORDINATION

gR-class semiconductor fuses can be utilized in association with gI and gG-class low voltage power distribution fuses of the same current rating, installed upstream. In a "selectively coordinated" distribution installation, melting is limited to the fuse associated with the faulted circuit, while upstream fuses remain intact. This prevents unnecessary down-time due to power blackouts in non-faulted branches.

Example of
selective
coordination



aR-CLASS vs. gR-CLASS

aR-class fuses feature a high minimum interrupting current as compared with their current rating. The primary time-current characteristic of aR-class fuses is the CC' curve, above which another protection device must be associated. The gR-class fuse represents considerably improved performance in semiconductor protection

FERRAZ SHAWMUT EXPERTISE

gR-class fuses should be used in the design of low voltage equipment and in the protection of power electronics equipment. Designers can often substitute a gR-class fuse for an aR-class fuse (10x38, 14x51, 22x58, PSC 000 and 17x49 DIN80 or BS 88-4) but the reverse is not true: an aR fuse can never replace a gR fuse. Start protecting your new equipment with gR-class fuses today. The application of gR class fuses, with current ratings less than 100 Amps, offers enhanced protection, safety and reliability, along with reduced risk of replacement errors and assembly costs.

Other Protistor® Fuses

Ferrule Fuses

14x51 & 22x58 URC / URD - 600 to 690 VAC



EXTREMELY BREAKING CAPACITY RATING FUSES:
PROTECTION OF POWER SEMI CONDUCTORS COMPLYING WITH IEC STANDARD 60269.1 AND 4

600 - 690 V AC VOLTAGE RATING

aR-CLASS ACCORDING TO VDE 636-23 AND IEC 60269.4

WITH AND WITHOUT TRIP-INDICATOR FOR SIZES 14 x 51 AND 22 x 58

UL RECOGNIZED (EXCEPT 6 A)*

Main Characteristics

Voltage rating U _N (VAC)	Size	Class	Current rating I _N (A)	Pre-arcing 2t @ 1 ms I ² t _p (A ² s)	Total clearing I ² t @ (A ² s)		Watts loss 0.8 I _N I _N		Breaking Capacity
690 V	14 x 51	URC	6	1.3	17.5* @ 660V		1.1	2	100 kA @ 690 V
			8	2.4	27.5@ 660V		1.6	2.8	
			10	4.3	40@ 660V		2	3.5	
			12	5.4	60@ 660V		2.45	4.4	
			16	13.2	100@ 660V		2.7	4.8	
			20	27	160@ 660V		2.9	5.2	
			25	53	275@ 660V		3.2	5.8	
			32	98	500@ 660V		3.9	7	
			40 (1)	130	700@ 660V		6	10.7	
			50 (1)	280	1500@ 660V		6.3	11.6	
690 V	14 x 51	URD	40 (2) 50 (2)	130 280	7 IN < I _p < 30 IN I _p ≥ 30 IN		6 6.3	10.7 11.6	100 kA @ 690 V
					850@660 1850@660	700@660 1500@660			
690 V	22 x 58	URD	25	22	125@ 660V		5.2	10	100 kA @ 690 V
			32	49	275@ 660V		5.7	11	
			40	88	480@ 660V		6.8	13	
			50	155	800@ 660V		7.8	14.9	
			63	350	1850@ 660V		8.4	16	
			80	730	3800@ 660V		9.4	17,8	
			100	1560	8000@ 660V		10	19	
600 V	22X58	URD	125	2900	14000@600V		14	22	100 kA @ 600 V
			130	3360	17700@600V		15	25	

* Without trip-indicator I^2t : 15 A²s.

(1) No trip-indicator available for this model.

(2) Models available only with trip-indicator.



Other Protistor® Fuses

Ferrule Fuses

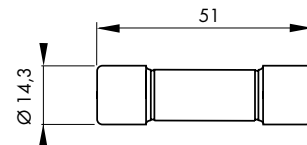
14x51 & 22x58 URC / URD - 600 to 690 VAC

All the fuses presented on this page are (except 6 A)*



14x51 - Without blown fuse indication

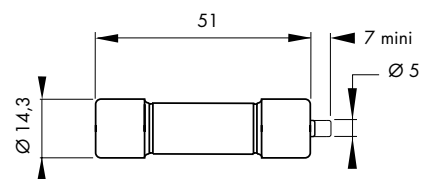
Current Rating	Designation	Ref. Number	Catalog Number
6 A	6.900 CP URC 14.51/6*	K081475	FR14UC69V6
8 A	6.900 CP URC 14.51/8	S093902	FR14UC69V8
10 A	6.900 CP URC 14.51/10	T093903	FR14UC69V10
12 A	6.900 CP URC 14.51/12	V093904	FR14UC69V12
16 A	6.900 CP URC 14.51/16	W093905	FR14UC69V16
20 A	6.900 CP URC 14.51/20	X093906	FR14UC69V20
25 A	6.900 CP URC 14.51/25	Y093907	FR14UC69V25
32 A	6.900 CP URC 14.51/32	Z093908	FR14UC69V32
40 A	6.900 CP URC 14.51/40	A093909	FR14UC69V40
50 A	6.900 CP URC 14.51/50	B093910	FR14UC69V50



Weight : 18g
Packaging : 10 pieces

14x51 - With trip-indicator

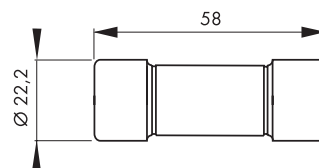
Current Rating	Designation	Ref. Number	Catalog Number
6 A	6.921 CP URC 14.51/6*	G081518	FR14UC69V6T
8 A	6.921 CP URC 14.51/8	C093911	FR14UC69V8T
10 A	6.921 CP URC 14.51/10	D093912	FR14UC69V10T
12 A	6.921 CP URC 14.51/12	E093913	FR14UC69V12T
16 A	6.921 CP URC 14.51/16	F093914	FR14UC69V16T
20 A	6.921 CP URC 14.51/20	G093915	FR14UC69V20T
25 A	6.921 CP URC 14.51/25	H093916	FR14UC69V25T
32 A	6.921 CP URC 14.51/32	J093917	FR14UC69V32T
40 A	6.921 CP URD 14.51/40	T100136	FR14UD69V40T
50 A	6.921 CP URD 14.51/50	V100137	FR14UD69V50T



Weight : 18g
Packaging : 10 pieces

22x58 - Without blown fuse indication

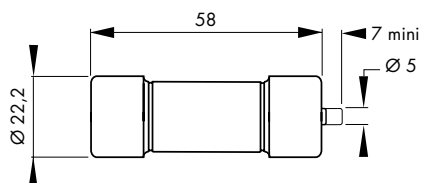
Current Rating	Designation	Ref. Number	Catalog Number
25 A	6.900 CP URD 22x58/25	B093956	FR22UD69V25
32 A	6.900 CP URD 22x58/32	Z094828	FR22UD69V32
40 A	6.900 CP URD 22x58/40	S094822	FR22UD69V40
50 A	6.900 CP URD 22x58/50	W094779	FR22UD69V50
63 A	6.900 CP URD 22x58/63	T094823	FR22UD69V63
80 A	6.900 CP URD 22x58/80	A094829	FR22UD69V80
100 A	6.900 CP URD 22x58/100	Y094827	FR22UD69V100



Weight: 57 g
Packaging: 10 pieces

22x58 - With trip-indicator

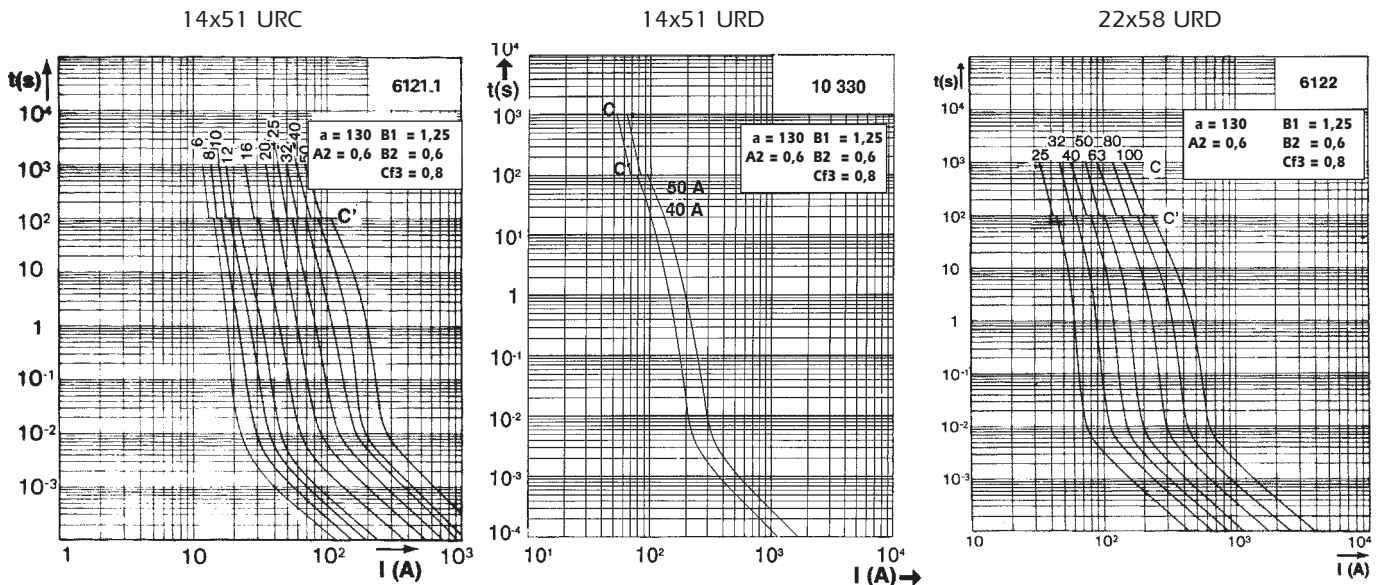
Current Rating	Designation	Ref. Number	Catalog Number
25 A	6,921 CP URD 22x58/ 25	H093801	FR22UD69V25T
32 A	6,921 CP URD 22x58/ 32	C093957	FR22UD69V32T
40 A	6,921 CP URD 22x58/ 40	J093802	FR22UD69V40T
50 A	6,921 CP URD 22x58/ 50	D093958	FR22UD69V50T
63 A	6,921 CP URD 22x58/ 63	K093803	FR22UD69V63T
80 A	6,921 CP URD 22x58/ 80	E093959	FR22UD69V80T
100 A	6,921 CP URD 22x58/100	F093960	FR22UD69V100T
125 A	621 CP URD 22x58/125	A220708	FR22UD60V125T
135 A	621 CP URD 22x58/135	B220709	FR22UD60V135T



Weight: 57 g
Packaging: 10 pieces

See Gears and Fuse gears section

Time vs current characteristics

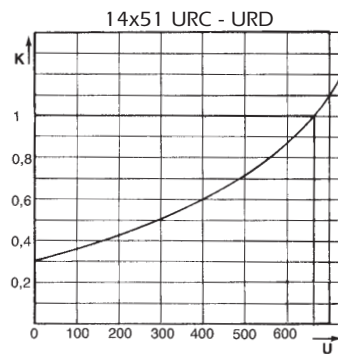


These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.

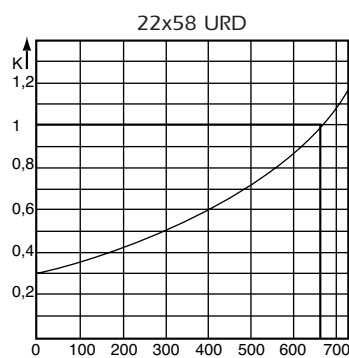
Tolerance for mean pre-arcing current $\pm 10\%$

Corrective factor - Peak arc voltage

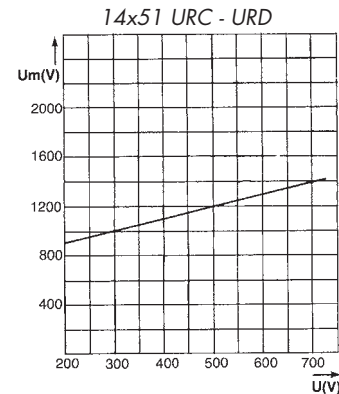
Corrective factor



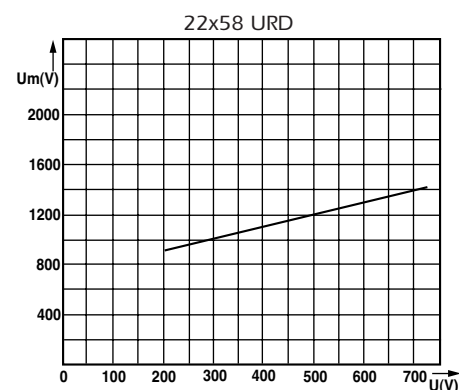
The mean curves show the variation of the total clearing time ($I_2 t_t$) and the total clearing duration t_t as a function of operating voltage U .



Peak arc voltage



This curve shows the peak value U_m of the arc voltage which appears across the fuse-link as a function of the operating voltage U @ $\cos \phi = 0.15$.



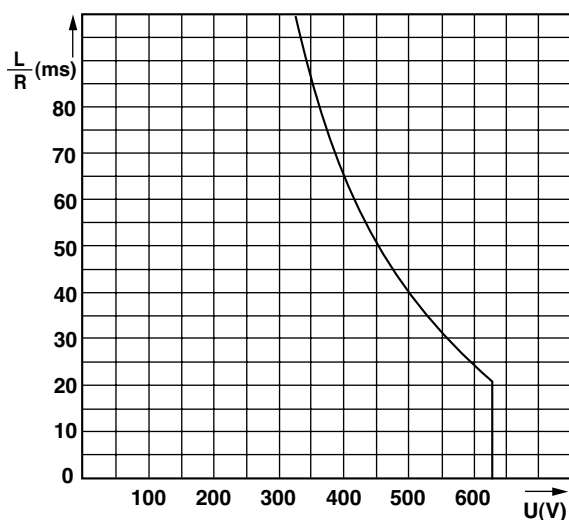
Other Protistor® Fuses

Ferrule Fuses

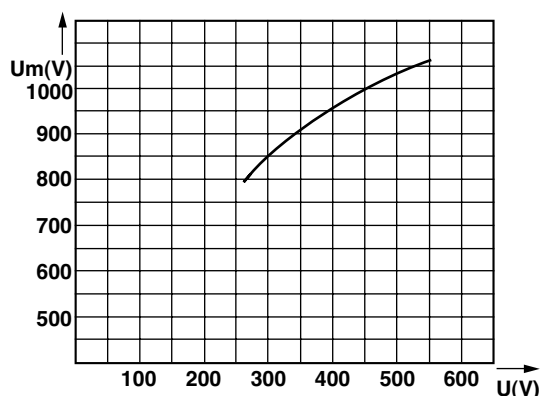
14x51 & 22x58 URC / URD - 600 to 690 VAC

DC Application data

14x51 URC - URD

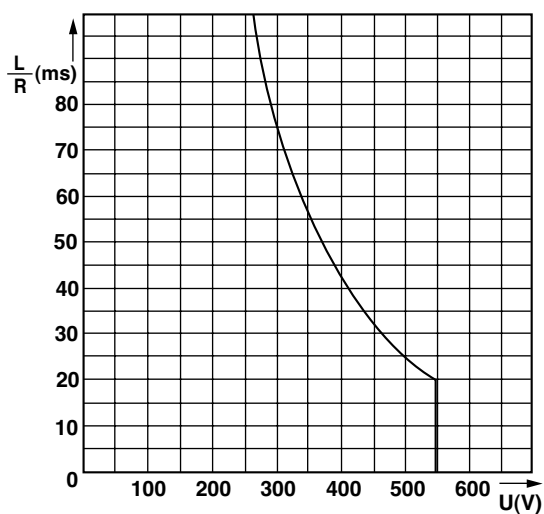


14x51 URC - URD

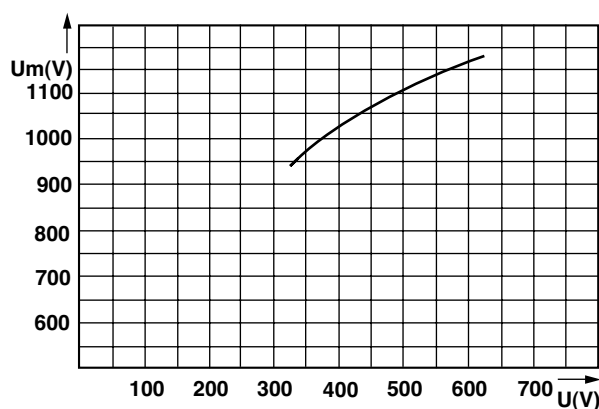


Minimum breaking current: see time-current characteristics

22x58 URD



22x58 URD



This curve indicates the permissible value of time constant L/r as a function of DC working voltage

This curve shows the peak value U_m of the arc voltage which appears across the fuse-link as a function of the operating voltage U .



Other Protistor® Fuses

Ferrule Fuses

14x51 URGB & 22x58 URGA - 600 V to 690 VAC



EXTREMELY HIGH BREAKING CAPACITY FUSES:
PROTECTION OF POWER SEMICONDUCTORS AS PER
IEC STANDARD 60269.1 AND 4

600 V - 690 V AC VOLTAGE RATING

aR CLASS AS PER VDE 636-23 AND IEC 60269.4

WITH AND WITHOUT TRIP-INDICATOR
FOR SIZES 14 x 51 AND 22 x 58

Main Characteristics

Voltage rating U_N (VAC)	Size	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2tp (A ² s)	Total clearing $I^2t @ \text{A}^2\text{s}$		Watts loss		Tested Breaking capacity
					660 V		0,8 I_N	I_N	
690 V	14 x 51	URGB	8	3.3	20	17	1.45	2.7	200 kA @ 690 V
			10	6.0	37	30	1.85	3.4	
			12	9.3	75	60	2.5	4.6	
			16	15.6	95	75	3.4	6.2	
			20	30.0	175	145	4	7.4	
			25	53.5	300	250	4.7	8.6	
			32	100	550	460	5.7	10.6	
			40	214	1150	940	6.2	11.5	
			50	480	2550	2070	7	13	
	22 x 58	URGA	25	45	210		4.7	8.5	200 kA @ 690 V
			32	84	400		5.7	10.3	
			40	150	700		7.1	12.8	
			50	270	1270		8.7	15.7	
			63	595	2770		9.8	17.7	
			80	1165	5500		12	21.7	
600* - 690 V	22 x 58	URGA	100*	2150	9000*		14.2	25.6	200 kA @600 V
							14.2	25.6	

*Operating voltage limited to 600 V for the model with blown fuse trip-indicator / Total clearing $I^2t @ 600 \text{ V} = 9000 \text{ A}^2\text{s}$
Minimum operating voltage for built-in trip-indicator: 20 V

Semiconductor (AC) fuses

Other Protistor® Fuses

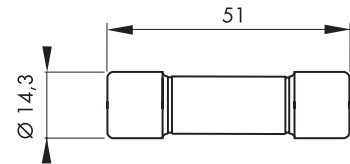
Ferrule Fuses

14x51 URGB & 22x58 URG A - 600 V to 690 VAC

References

14x51 - Without blown fuse trip-indicator

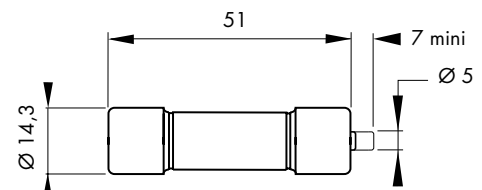
Current Rating	Designation	Ref. Number	Catalog Number
8 A	6.900 CP URGB 14.51/8	T078033	FR14UB69V8
10 A	6.900 CP URGB 14.51/10	V078034	FR14UB69V10
12 A	6.900 CP URGB 14.51/12	W078035	FR14UB69V12
16 A	6.900 CP URGB 14.51/16	X078036	FR14UB69V16
20 A	6.900 CP URGB 14.51/20	Y078037	FR14UB69V20
25 A	6.900 CP URGB 14.51/25	Z078038	FR14UB69V25
32 A	6.900 CP URGB 14.51/32	A078039	FR14UB69V32
40 A	6.900 CP URGB 14.51/40	B078040	FR14UB69V40
50 A	6.900 CP URGB 14.51/50	C078041	FR14UB69V50



Weight: 18 g
Packaging: 10 pieces

14x51 - With trip-indicator

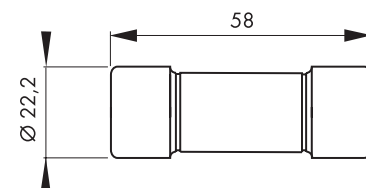
Current Rating	Designation	Ref. Number	Catalog Number
8 A	6.921 CP URGB 14.51/8	D078042	FR14UB69V8T
10 A	6.921 CP URGB 14.51/10	E078043	FR14UB69V10T
12 A	6.921 CP URGB 14.51/12	F078044	FR14UB69V12T
16 A	6.921 CP URGB 14.51/16	G078045	FR14UB69V16T
20 A	6.921 CP URGB 14.51/20	H078046	FR14UB69V20T
25 A	6.921 CP URGB 14.51/25	J078047	FR14UB69V25T
32 A	6.921 CP URGB 14.51/32	K078048	FR14UB69V32T
40 A	6.921 CP URGB 14.51/40	L078049	FR14UB69V40T
50 A	6.921 CP URGB 14.51/50	M078050	FR14UB69V50T



Weight: 18 g
Packaging: 10 pieces

22x58 - Without blown fuse trip-indicator

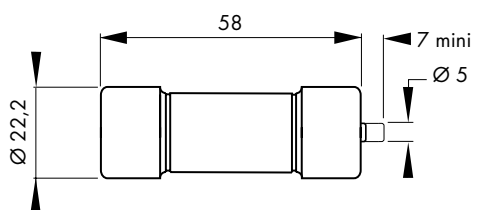
Current Rating	Designation	Ref. Number	Catalog Number
25 A	6.900 CP URG A 22.58/25	C095245	FR22UA69V25
32 A	6.900 CP URG A 22.58/32	D095246	FR22UA69V32
40 A	6.900 CP URG A 22.58/40	E095247	FR22UA69V40
50 A	6.900 CP URG A 22.58/50	F095248	FR22UA69V50
63 A	6.900 CP URG A 22.58/63	G095249	FR22UA69V63
80 A	6.900 CP URG A 22.58/80	H095250	FR22UA69V80
100 A	6.900 CP URG A 22.58/100	N078051	FR22UA69V100



Weight: 57 g
Packaging: 10 pieces

22x58 - With trip-indicator

Current Rating	Designation	Ref. Number	Catalog Number
25 A	6.921 CP URG A 22.58/25	T095260	FR22UA69V25T
32 A	6.921 CP URG A 22.58/32	V095261	FR22UA69V32T
40 A	6.921 CP URG A 22.58/40	W095262	FR22UA69V40T
50 A	6.921 CP URG A 22.58/50	X095263	FR22UA69V50T
63 A	6.921 CP URG A 22.58/63	Y095264	FR22UA69V63T
80 A	6.921 CP URG A 22.58/80	Z095265	FR22UA69V80T
100 A	6.21 CP URG A 22.58/100	N098222	FR22UA60V100T



Weight: 57 g
Packaging: 10 pieces

See Gears and Fuse gears section



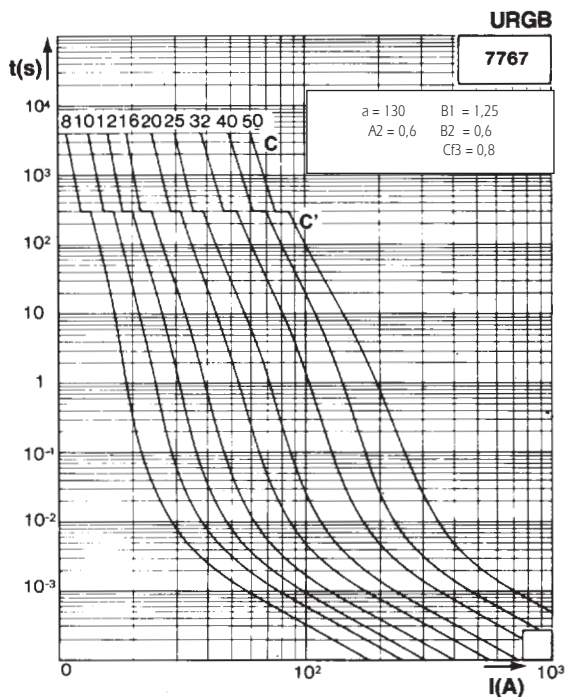
Other Protistor® Fuses

Ferrule Fuses

14x51 URGB & 22x58 URG A - 600 V to 690 VAC

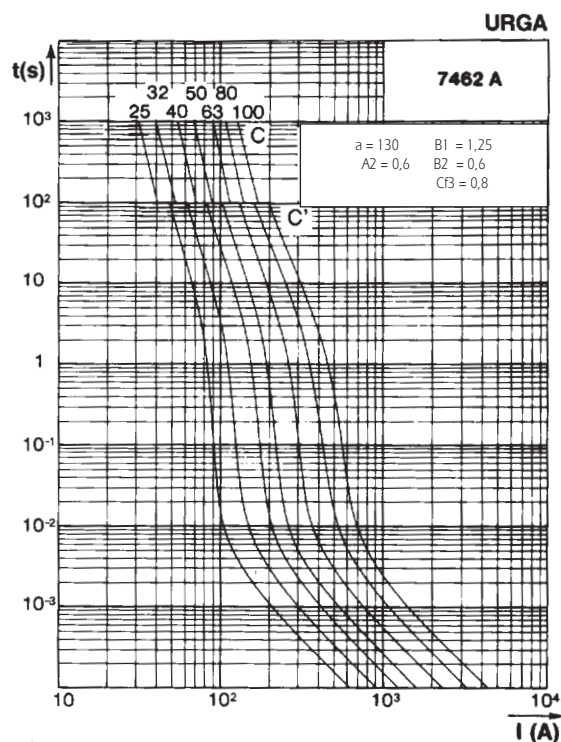
Electrical Characteristics

Time vs current characteristics



TOLERANCE OF MEAN PRE-ARCING CURRENT $\pm 10\%$

These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.



TOLERANCE FOR MEAN PRE-ARCING CURRENT $\pm 8\%$.

Semiconductor (AC) fuses

Other Protistor® Fuses

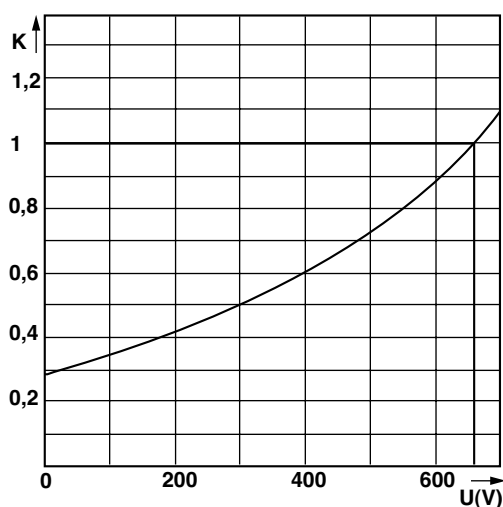
Ferrule Fuses

14x51 URGB & 22x58 URG A - 600 V to 690 VAC

Corrective factor - Peak arc voltage

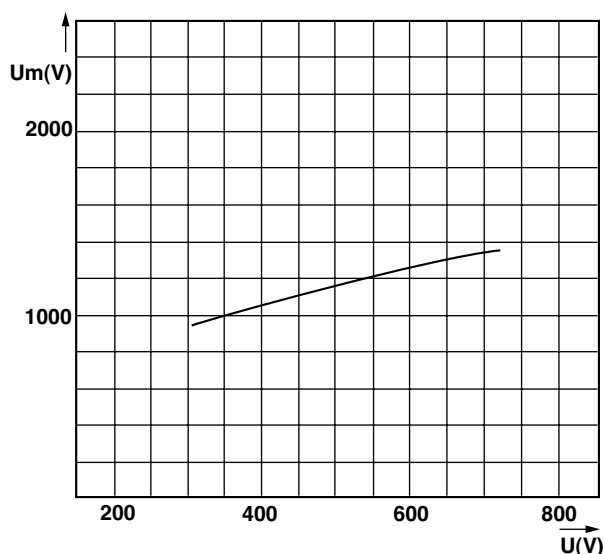
Corrective factor

URGB

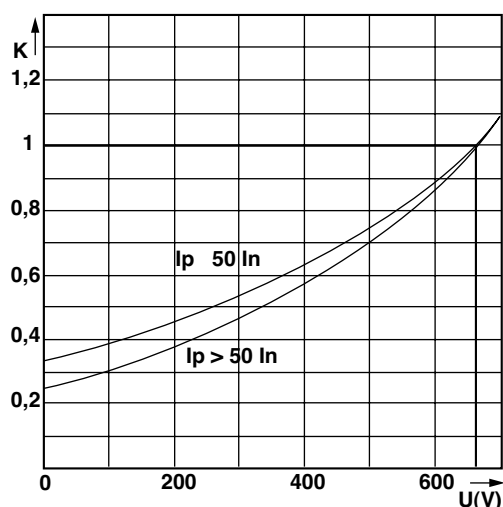


Peak arc voltage

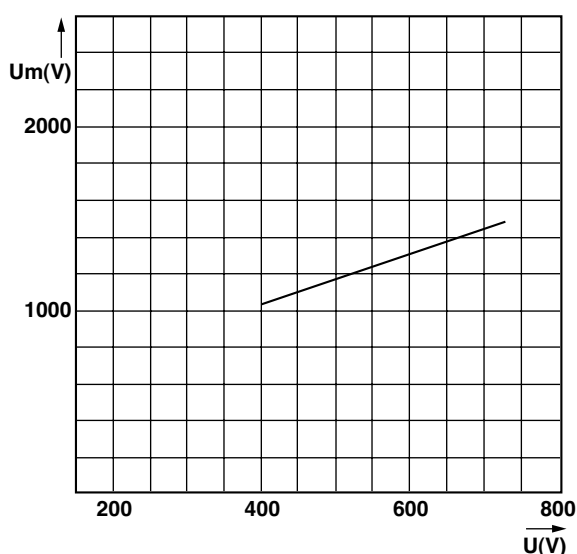
URGB



URGA



URGA



These mean curves show the variation of the total clearing time ($I^2 t_t$) and the total clearing duration t_t as a function of operating voltage U .

This curve shows the peak value U_m of the arc voltage which appears across the fuse link as a function of operating voltage U @ $\cos \varphi = 0.15$.

Other Protistor® Fuses Ferrule Fuses 27x60 gRB - 800 VAC

800 VAC
gRB from 8 to 110 A
Size: 27 x 60

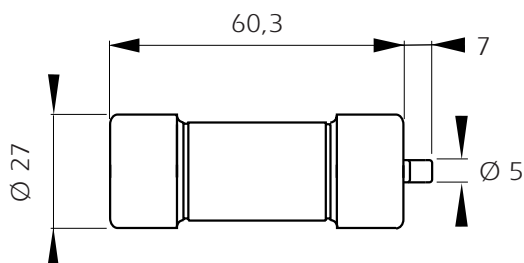
EXTREMELY HIGH BREAKING CAPACITY FUSES: PROTECTION
OF POWER SEMICONDUCTORS
COMPLYING WITH IEC STANDARDS 60269-1 AND 4

800 V VOLTAGE RATING ACCORDING TO IEC 33

- gR CLASS AS PER IEC 60269-4
- CLEARING ALL OVERLOADS
 - IMPROVED SAFETY AND PROTECTION
 - ENABLING SELECTIVE COORDINATION WITH OTHER FUSES

WITH TRIP INDICATOR

Dimensions



Unit weight
78 g

Trip indicator force: 4.5N at 0mm - 2.5N at 7mm

Main Characteristics

Voltage rating U_N (V)	Class	Current rating I_N (A)	Pre-arcing I^2t @ 1 ms I^2tp (A2s)	Total clearing I^2t @ U_N I^2tt (A2s)	Watts loss		Tested Breaking capacity	Designation	Ref. Number	Pack	Catalog Number
800	gRB	8	4.25	70	1.2	2.0	175 kA @ 700V	821 CP GRB27.60 8	R221436	10	FR27GB80V 8T
		10	8.0	100	1.3	2.3		821 CP GRB27.60 10	S221437	10	FR27GB80V 10T
		12	17.0	180	1.4	2.5		821 CP GRB27.60 12	T221438	10	FR27GB80V 12T
		16	26.5	250	1.9	3.5		821 CP GRB27.60 16	V221439	10	FR27GB80V 16T
		20	38.5	350	2.4	4.0		821 CP GRB27.60 20	W221440	10	FR27GB80V 20T
		25	73.0	600	2.8	5.0	90 kA @ 800V	821 CP GRB27.60 25	X221441	10	FR27GB80V 25T
		32	130	1000	3.5	6.0		821 CP GRB27.60 32	Y221442	10	FR27GB80V 32T
		40	195	1400	4.7	8.0		821 CP GRB27.60 40	Z221443	10	FR27GB80V 40T
		50	430	2700	4.8	8.5		821 CP GRB27.60 50	A221444	10	FR27GB80V 50T
		63	965	5500	5.6	10		821 CP GRB27.60 63	B221445	10	FR27GB80V 63T
		80	1890	11000	6.4	11.5		821 CP GRB27.60 80	C221446	10	FR27GB80V 80T
		100	3480	19000	7.4	13		821 CP GRB27.60 100	D221447	10	FR27GB80V 100T
		110	4670	27000	7.7	14		821 CP GRB27.60 110	E221448	10	FR27GB80V 110T

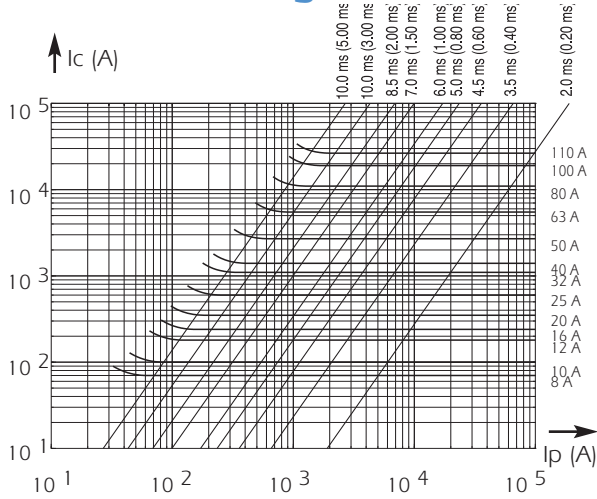
Minimum operating voltage for trip-indicator: 20 V

See Gears and Fuse gears

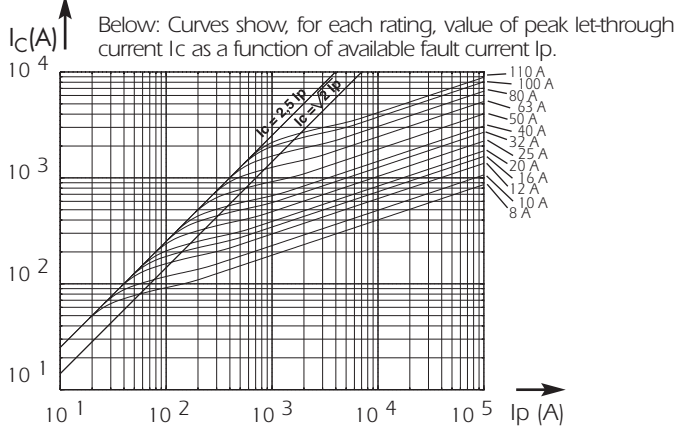
Semiconductor (AC) fuses

Other Protistor® Fuses Ferrule Fuses 27x60 gRB - 800 VAC

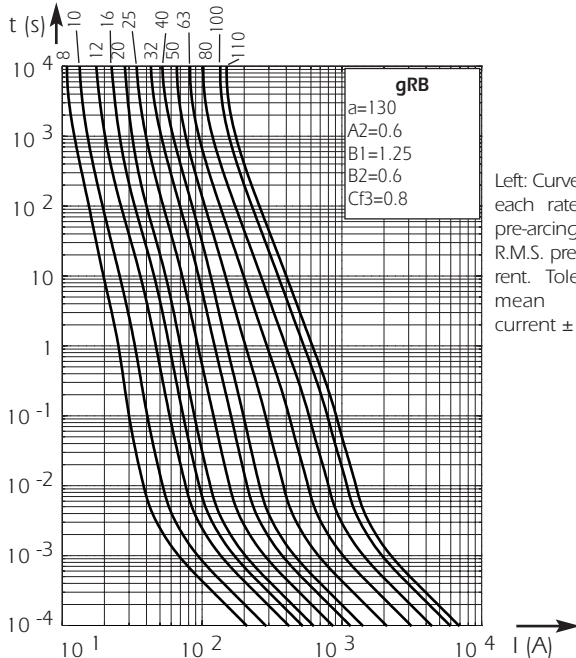
Total clearing I^2t



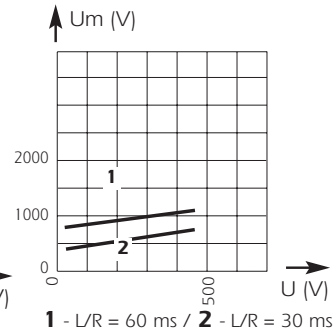
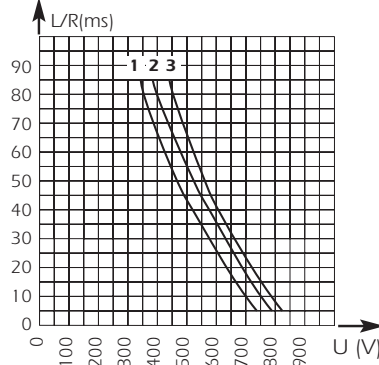
Current limitation curves



Time vs current characteristics

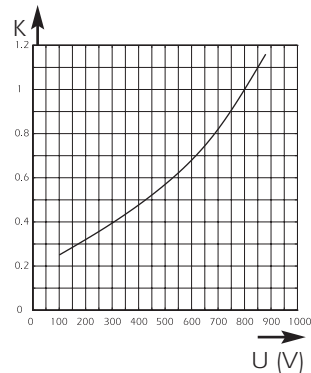


DC Application data

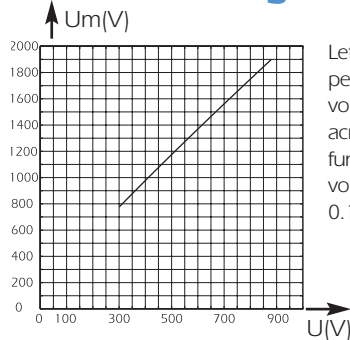


Above: Curve indicates peak arc voltage U_m which may appear across fuse terminals at working voltage U , for different values of time constant L/R of the fault circuit.

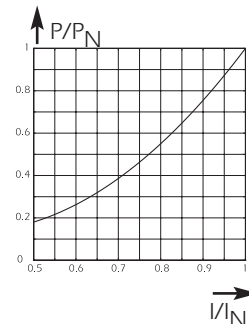
I^2t corrective factor



Peak arc voltage



Watts loss



Other Protistor® Fuses

Ferrule Fuses

27x60 URGD - 600 V to 690 VAC



EXTREMELY BREAKING CAPACITY RATING FUSES:
PROTECTION OF POWER SEMICONDUCTORS ACCORDING TO
IEC STANDARD 60269.1 AND 4

600 V - 690 V AC VOLTAGE RATING

aR- CLASS ACCORDING TO VDE 636-23 AND IEC 60269.4

Main Characteristics

Voltage rating U_N (VAC)	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2t_p (A ² s)	Total clearing I^2t I^2t_t (A ² s)	Watts loss		Tested Breaking capacity
					$0.8 I_N$	I_N	
690 V	URGD	63	405	1840 @ 660 V	12	22	200 kA @ 690 V
		80	860	3750 @ 660 V	13.5	24.6	
		100	1620	6800 @ 660 V	15	27	
		125	3425	13600 @ 660 V	16	29.5	
		160	6480	24600 @ 660 V	17	32.5	
		200	13700	61500 @ 660 V	18.5	35.7	
600 V	URGD	250	29600	107000 @ 600 V	21	40	200 kA @ 600 V

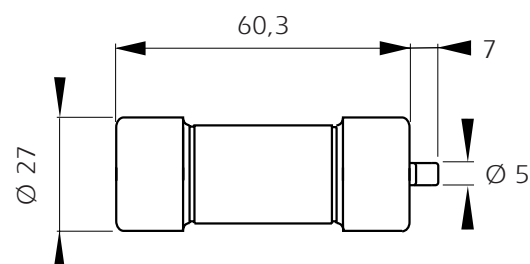
Minimum operating voltage for trip-indicator: 20 V

Ref. Numbers

27x60 - With trip-indicator

Type	Voltage	Current rating	Designation	Ref. Number	Catalog Number
URGD	690 V	63 A	6.921 CP URGD 27x60/ 63	A076820	FR27UD69V63T
		80 A	6.921 CP URGD 27x60/ 80	B076821	FR27UD69V80T
		100 A	6.921 CP URGD 27x60/100	C076822	FR27UD69V100T
		125 A	6.921 CP URGD 27x60/125	D076823	FR27UD69V125T
		160 A	6.921 CP URGD 27x60/160	E076824	FR27UD69V160T
		200 A	6.921 CP URGD 27x60/200	F076825	FR27UD69V200T
URGD	600 V	250 A	621 CP URGD 27x60/250	W076264	FR27UD60V250T

See Gears and Fuse gears section

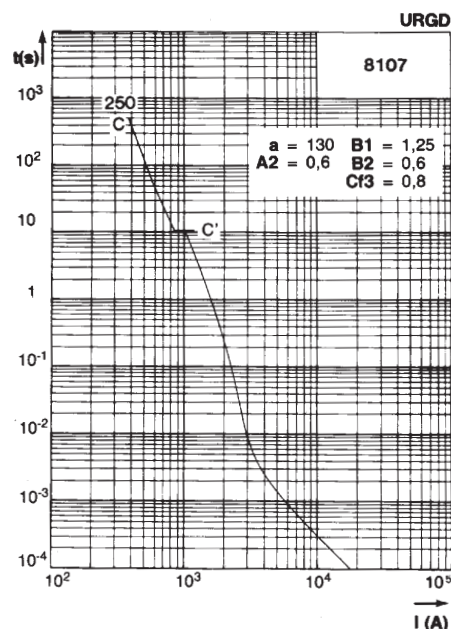
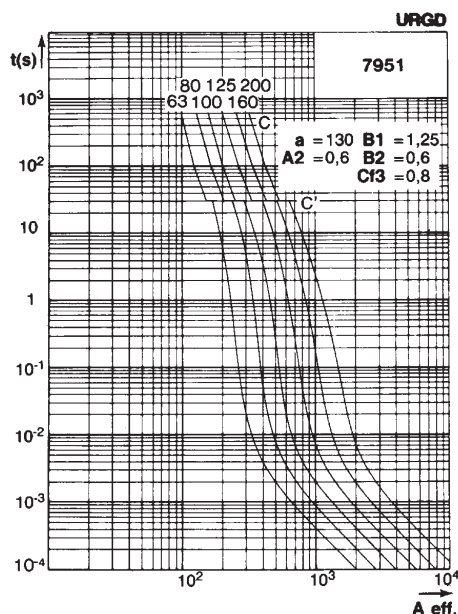


Other Protistor® Fuses

Ferrule Fuses

27x60 URGD - 600 V to 690 VAC

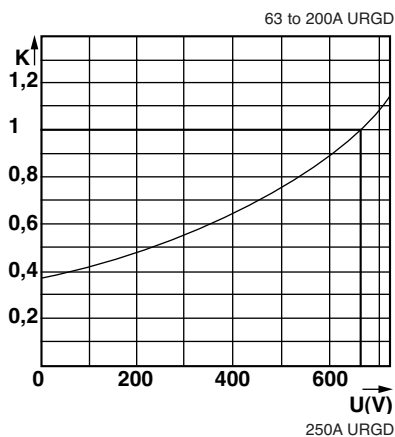
Time vs current characteristics



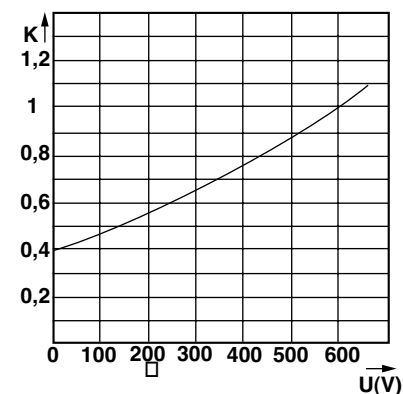
Tolerance for mean pre-arcing current $\pm 8\%$

These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.

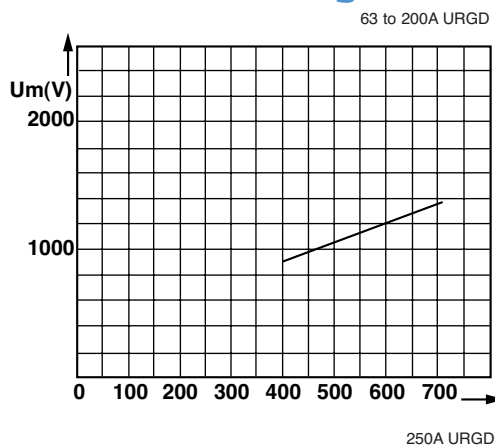
Corrective factor



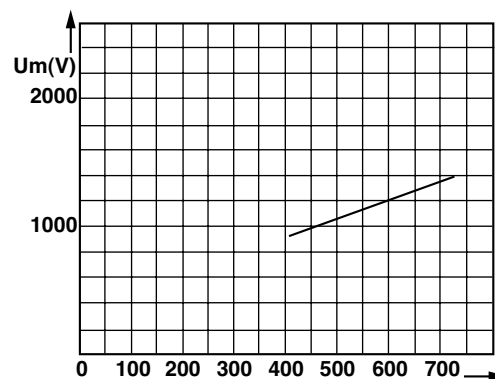
Left: Mean curves showing variation of total clearing time ($I^2 t_t$) and the total clearing duration t_t as a function of the operating voltage U



Peak arc voltage



Left: Curves show peak value U_m of arc voltage which appears across the fuse-link as a function of operating voltage U @ $\cos \varphi = 0,15$.





Other Protistor® Fuses

Ferrule Fuses

27x60 URQ/URS/URB - 690 V to 1000 VAC



EXTREMELY HIGH IBREAKING CAPACITY FUSES:

PROTECTION OF POWER SEMI CONDUCTORS ACCORDING TO IEC STANDARD 60269.1 AND 4

690 V - 1000 V AC VOLTAGE RATING

aR-CLASS ACCORDING TO VDE 636-23 AND IEC 60269.4

690V URQ and 1000V URB are UL RECOGNIZED

Main Characteristics

Voltage rating U_N (VAC)	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2t_p (A ² s)	Total clearing I^2t I^2t_t (A ² s)	Watts loss		Tested Breaking capacity
					0,8 I_N	I_N	
690 V	URQ	50	110	610 @ 660 V	8.4	16	200 kA @ 690 V
		63	155	860 @ 660 V	11.1	21	
		80	350	1880 @ 660 V	12.6	24	
		100	625	3210 @ 660 V	14.2	27	
		125	1400	6970 @ 660 V	15.7	30	
		160	3150	15000 @ 660 V	17.7	34	
		200	6580	30000 @ 660 V	19.4	38	
		250	15570	63000 @ 660 V	22.6	45	
690 V	URS	125	2790	13000 @ 660 V	14.5	25	200 kA @ 690 V
		160	5500	24000 @ 660 V	17.5	30	
1000 V	URB	32	33	250 @ 1000 V	7.4	14.5	100 kA @ 1000 V
		40	60	450 @ 1000 V	8.7	17	
		50	110	840 @ 1000 V	9.7	19	
		63	200	1470 @ 1000 V	11.3	22	
		80	435	3300 @ 1000 V	12.3	24	
		100	975	6000 @ 1000 V	14	27	
		125	1910	12500 @ 1000 V	16	31	
		160	3890	26700 @ 1000 V	18	35	
		170	4710	36000 @ 1000 V	19	37	

* Minimum operating voltage for trip-indicator: 20 V

Other Protistor® Fuses

Ferrule Fuses

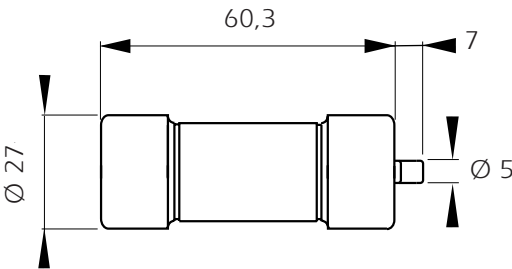
27x60 URQ/URS/URB - 690 V to 1000 VAC

27x60 - With trip-indicator

 Except 125 and 160A URS

Type	Voltage	Current rating	Designation	Ref. Number	Catalog Number
URQ	690 V	50 A	6.921 CP URO 27x60/ 50	N075958	FR27UQ69V50T
		63 A	6.921 CP URO 27x60/ 63	V076309	FR27UQ69V63T
		80 A	6.921 CP URO 27x60/ 80	W076310	FR27UQ69V80T
		100 A	6.921 CP URO 27x60/100	R078330	FR27UQ69V100T
		125 A	6.921 CP URO 27x60/125	S078331	FR27UQ69V125T
		160 A	6.921 CP URO 27x60/160	X076311	FR27UQ69V160T
		200 A	6.921 CP URO 27x60/200	T078332	FR27UQ69V200T
		250 A	6.921 CP URO 27x60/250	T076308	FR27UQ69V250T
URS	690 V	125 A	6.921 CP URS 27x60/125	P209865	FR27US69V125T
		160 A	6.921 CP URS 27x60/160	Q209866	FR27US69V160T
URB	1000 V	32 A	1021 CP URB 27x60/ 32	S081298	FR27UB10C32T
		40 A	1021 CP URB 27x60/ 40	R081297	FR27UB10C40T
		50 A	1021 CP URB 27x60/ 50	Q081296	FR27UB10C50T
		63 A	1021 CP URB 27x60/ 63	P081295	FR27UB10C63T
		80 A	1021 CP URB 27x60/ 80	N081294	FR27UB10C80T
		100 A	1021 CP URB 27x60/100	M081293	FR27UB10C100T
		125 A	1021 CP URB 27x60/125	L081292	FR27UB10C125T
		160 A	1021 CP URB 27x60/160	K081291	FR27UB10C160T
		170 A	1021 CP URB 27x60/170	Z080338	FR27UB10C170T

See Gears and Fuse gears section

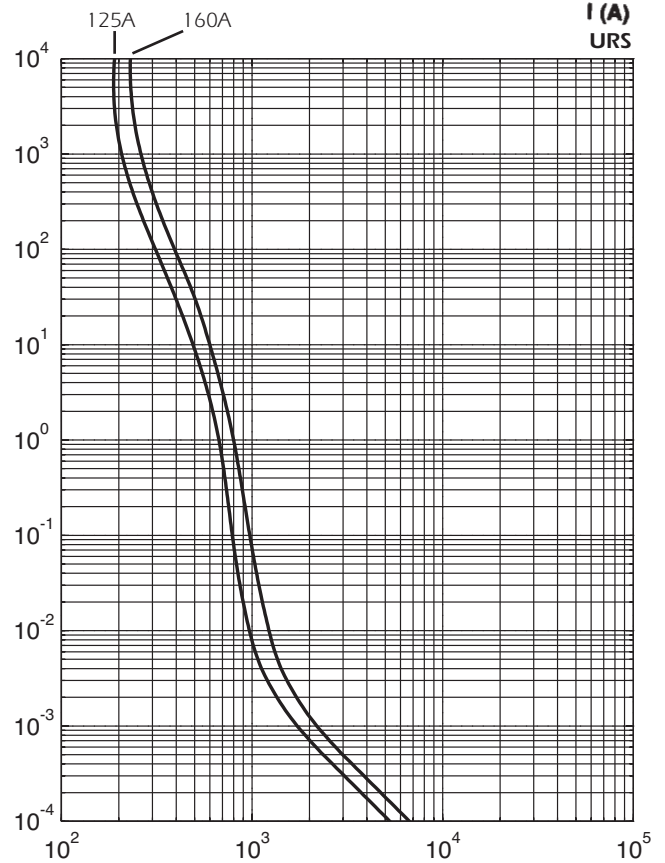
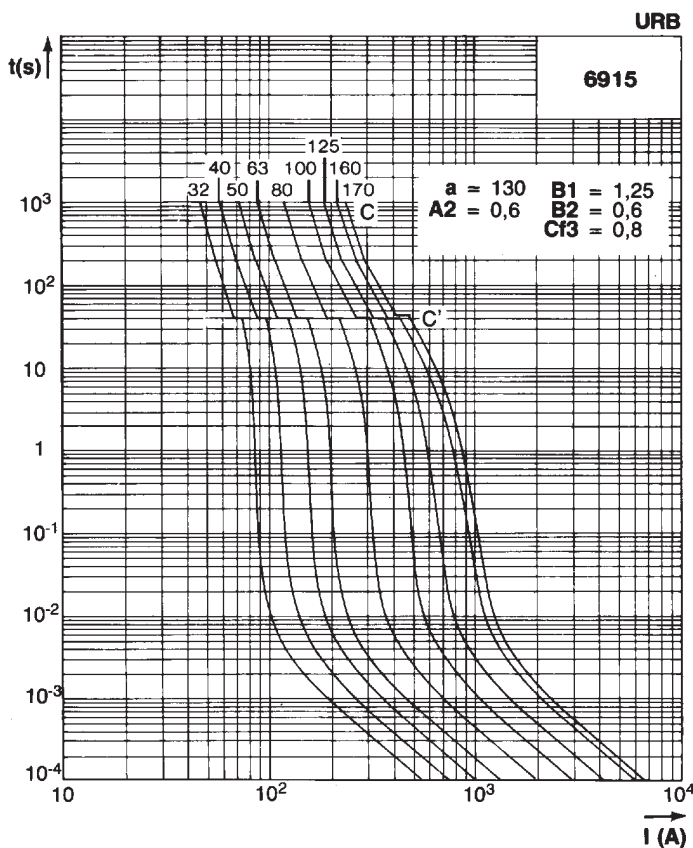
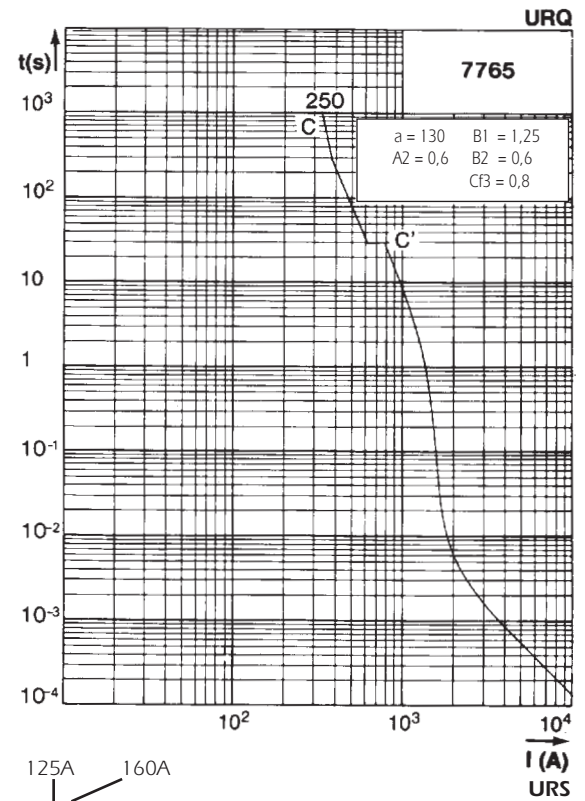
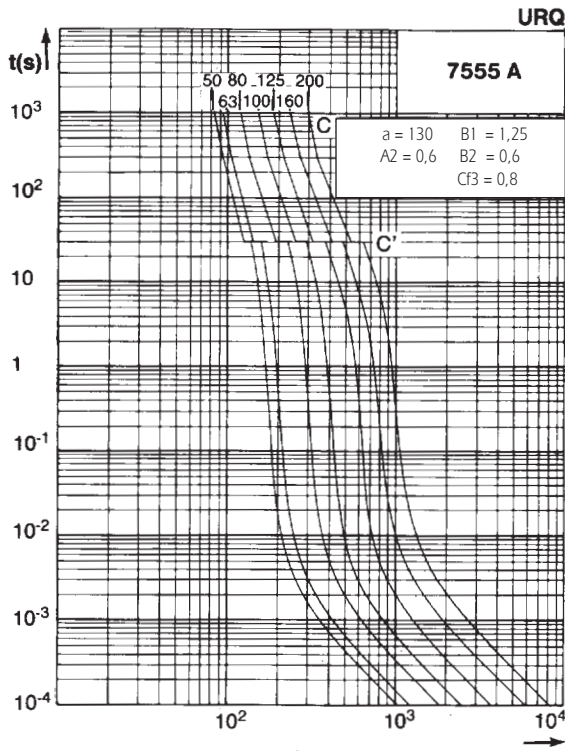


Other Protistor® Fuses

Ferrule Fuses

27x60 URQ/URS/URB - 690 V to 1000 VAC

Time vs current characteristics



These curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current.

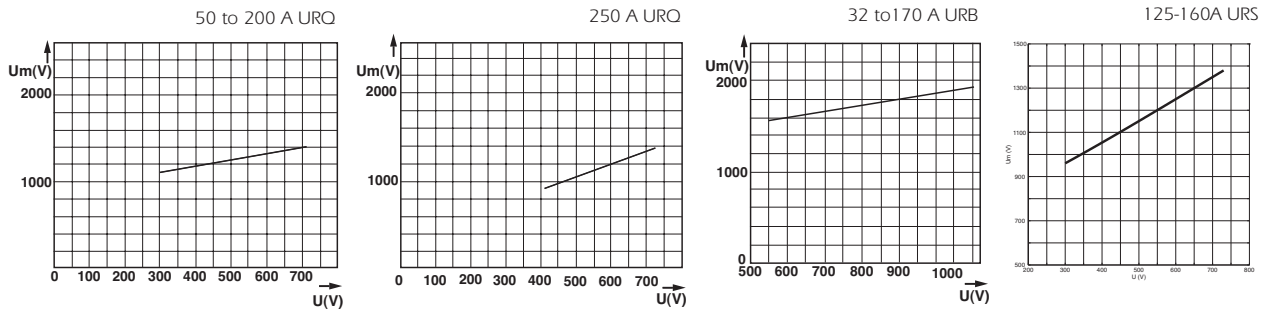
Tolerance for mean pre-arcing current $\pm 8\%$.

Other Protistor® Fuses

Ferrule Fuses

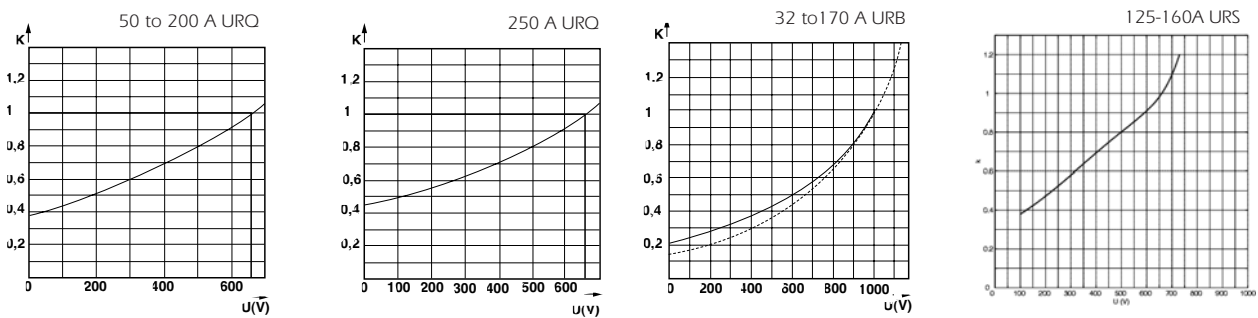
27x60 URQ/URS/URB - 690 V to 1000 VAC

Peak arc voltage



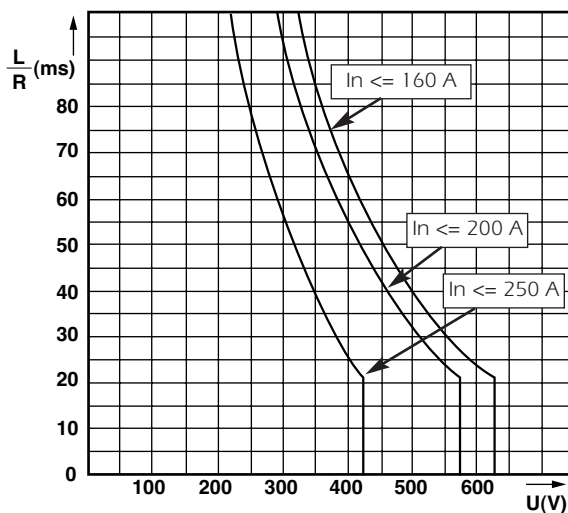
These curves show peak value U_m of arc voltage which appears across the fuse-link as a function of operating voltage U @ $\cos \varphi = 0.15$.

Corrective factor



Above: Mean curves show variation of total clearing time ($I^2 t_t$) and total clearing duration t_t as a function of operating voltage U .

DC Application data



Left: Curves indicate permissible value of time constant L/r as a function of the DC working voltage

Other Protistor® Fuses DIN Bracket Ferrule Fuses 17x49 gRB/URB - 690 VAC



EXTREMELY HIGH BREAKING CAPACITY FUSES:
PROTECTION OF SEMICONDUCTORS
AS PER IEC STANDARD 60269.1 AND 4

690 V VOLTAGE RATING AS PER IEC 33

gR CLASS (CURRENT RATING 12 TO 90 A) AS PER
VDE 636-23

- CLEARING ALL OVERLOADS
- IMPROVED SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION WITH ALL FUSES
WITHIN DISTRIBUTION CIRCUIT

aR CLASS (CURRENT RATING 100 A) ACCORDING TO VDE
636-23 AND IEC 60269.4

CONNECTION AS PER:

- GERMAN STANDARD DIN 43653/00C
- BRITISH STANDARD BS 88-4

These fuses are UL Recognized 

Main Characteristics

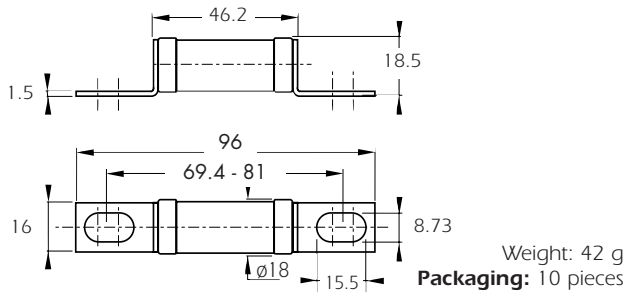
Voltage rating U_N (V)	Class	Current rating I_N (A)	pre-arcing I^2_t @ 1 ms I^2_{tp} (A ² s)	Total clearing I^2_t @ U_N I^2_{tt} (A ² s)	Watts loss		Tested Breaking capacity	Estimated Breaking capacity
					0.8 I_N	I_N		
690	gRB	12	4.2	30	1.95	3.5	200 kA @ 690 V	300 kA @ 690 V
		16	9.6	65	2.2	4.0		
		20	17.1	110	3.0	5.5		
		25	26.8	170	4.4	8.0		
		32	52.5	330	5.0	9.0		
		35	69	430	5.2	9.5		
		40	96	610	5.8	10.5		
		45	130	820	6.3	11.5		
		50	154	970	7.2	13		
		55	210	1320	7.4	13.5		
		63	310	1950	8.0	14.5		
		75	520	3250	8.8	16		
		80	620	3900	9.4	17		
		90	840	5300	11	20		
690	URB	100	965	6150	13	23.5	200 kA @ 690 V	300 kA @ 690 V

Minimum operating voltage for separate trip-indicator: 20 V

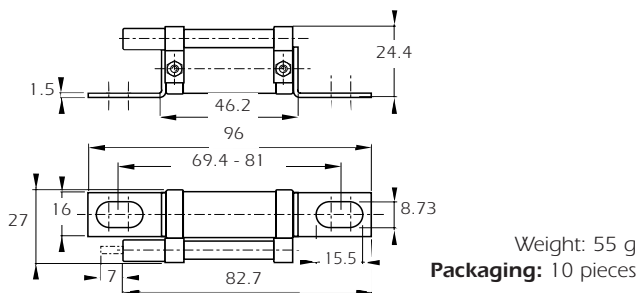
Semiconductor (AC) fuses

Other Protistor® Fuses DIN Bracket Ferrule Fuses 17x49 gRB/URB - 690 VAC

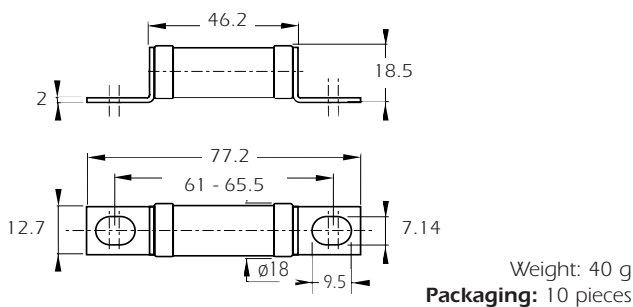
German standard without blown fuse indication



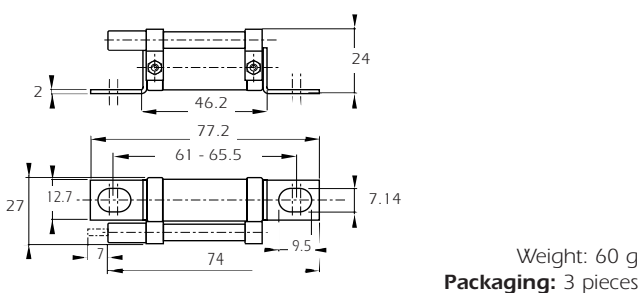
German standard with separate trip-indicator DIN 43623/00C



British standard without blown fuse indication



British standard with separate trip-indicator BS 88-4



Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17 D08/12	M220972	DN17GB69V12
16	6,9 gRB 17 D08/16	N220973	DN17GB69V16
20	6,9 gRB 17 D08/20	P220974	DN17GB69V20
25	6,9 gRB 17 D08/25	Q220975	DN17GB69V25
32	6,9 gRB 17 D08/32	R220976	DN17GB69V32
35	6,9 gRB 17 D08/35	S220977	DN17GB69V35
40	6,9 gRB 17 D08/40	T220978	DN17GB69V40
45	6,9 gRB 17 D08/45	V220979	DN17GB69V45
50	6,9 gRB 17 D08/50	W220980	DN17GB69V50
55	6,9 gRB 17 D08/55	X220981	DN17GB69V55
63	6,9 gRB 17 D08/63	Y220982	DN17GB69V63
75	6,9 gRB 17 D08/75	Z220983	DN17GB69V75
80	6,9 gRB 17 D08/80	A220984	DN17GB69V80
90	6,9 gRB 17 D08/90	B220985	DN17GB69V90
100	6,9 URB 17 D08/100	C220986	DN17UB69V100

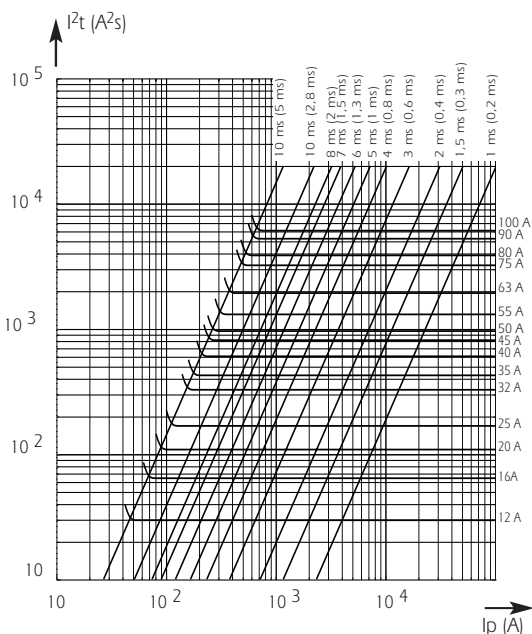
Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17 D08P 12	X221004	DN17GB69V12P
16	6,9 gRB 17 D08P 16	Y221005	DN17GB69V16P
20	6,9 gRB 17 D08P 20	Z221006	DN17GB69V20P
25	6,9 gRB 17 D08P 25	A221007	DN17GB69V25P
32	6,9 gRB 17 D08P 32	B221008	DN17GB69V32P
35	6,9 gRB 17 D08P 35	C221009	DN17GB69V35P
40	6,9 gRB 17 D08P 40	D221010	DN17GB69V40P
45	6,9 gRB 17 D08P 45	E221011	DN17GB69V45P
50	6,9 gRB 17 D08P 50	F221012	DN17GB69V50P
55	6,9 gRB 17 D08P 55	G221013	DN17GB69V55P
63	6,9 gRB 17 D08P 63	H221014	DN17GB69V63P
75	6,9 gRB 17 D08P 75	J221015	DN17GB69V75P
80	6,9 gRB 17 D08P 80	K221016	DN17GB69V80P
90	6,9 gRB 17 D08P 90	L221017	DN17GB69V90P
100	6,9 URB 17 D08P 100	M221018	DN17UB69V100P

Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17/12	W220957	BS17GB69V12
16	6,9 gRB 17/16	X220958	BS17GB69V16
20	6,9 gRB 17/20	Y220959	BS17GB69V20
25	6,9 gRB 17/25	Z220960	BS17GB69V25
32	6,9 gRB 17/32	A220961	BS17GB69V32
35	6,9 gRB 17/35	B220962	BS17GB69V35
40	6,9 gRB 17/40	C220963	BS17GB69V40
45	6,9 gRB 17/45	D220964	BS17GB69V45
50	6,9 gRB 17/50	E220965	BS17GB69V50
55	6,9 gRB 17/55	F220966	BS17GB69V55
63	6,9 gRB 17/63	G220967	BS17GB69V63
75	6,9 gRB 17/75	H220968	BS17GB69V75
80	6,9 gRB 17/80	J220969	BS17GB69V80
90	6,9 gRB 17/90	K220970	BS17GB69V90
100	6,9 URB 17/100	L220971	BS17UB69V100

Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17P12	D220987	BS17GB69V12P
16	6,9 gRB 17P16	E220988	BS17GB69V16P
20	6,9 gRB 17P20	F220989	BS17GB69V20P
25	6,9 gRB 17P25	G220990	BS17GB69V25P
32	6,9 gRB 17P32	H220991	BS17GB69V32P
35	6,9 gRB 17P35	J220992	BS17GB69V35P
40	6,9 gRB 17P40	K220993	BS17GB69V40P
45	6,9 gRB 17P45	L220994	BS17GB69V45P
50	6,9 gRB 17P50	M220995	BS17GB69V50P
55	6,9 gRB 17P55	N220996	BS17GB69V55P
63	6,9 gRB 17P63	P220997	BS17GB69V63P
75	6,9 gRB 17P75	Q220998	BS17GB69V75P
80	6,9 gRB 17P80	R220999	BS17GB69V80P
90	6,9 gRB 17P90	S221000	BS17GB69V90P
100	6,9 URB 17P100	T221001	BS17UB69V100P

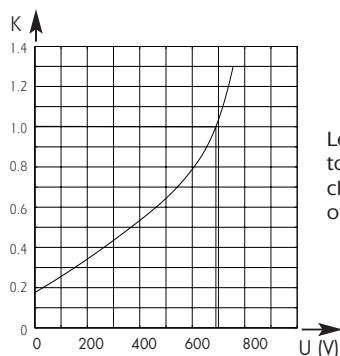
Other Protistor® Fuses DIN Bracket Ferrule Fuses 17x49 gRB/URB - 690 VAC

Total clearing I^2t



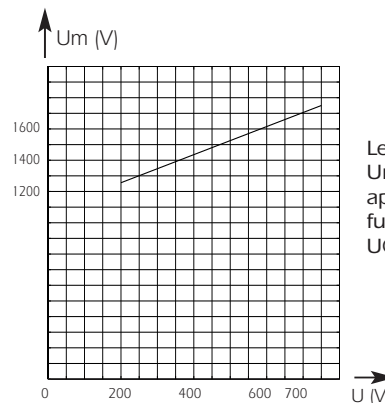
Above: Horizontal curves show for each rated current maximum values of total clearing I^2t (I^2t_t) as a function of prospective current I_p . @ 690 V.
 $\cos \varphi = 0.15$.
Oblique lines indicate total clearing duration T_t and associated pre-arcing duration in brackets.

I^2t corrective factor



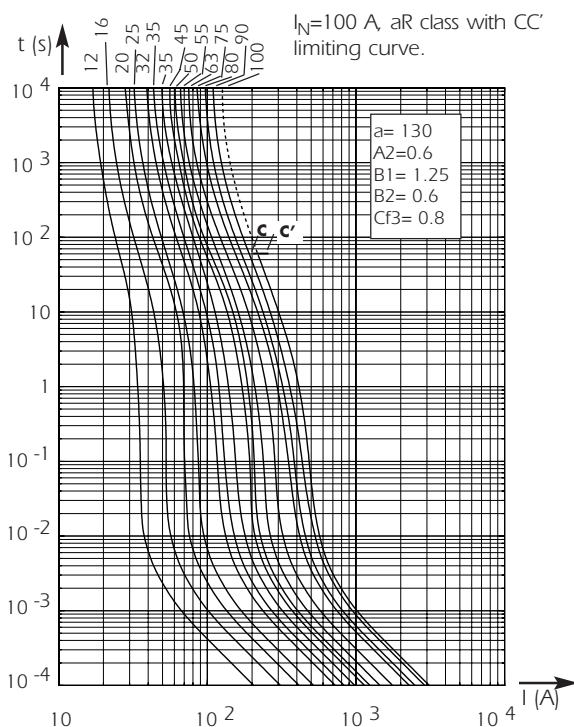
Left: Curve shows variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .

Peak arc voltage



Left: Curve shows peak value U_m of arc voltage which appears across fuse-link as a function of operating voltage U @ $\cos \varphi = 0.15$

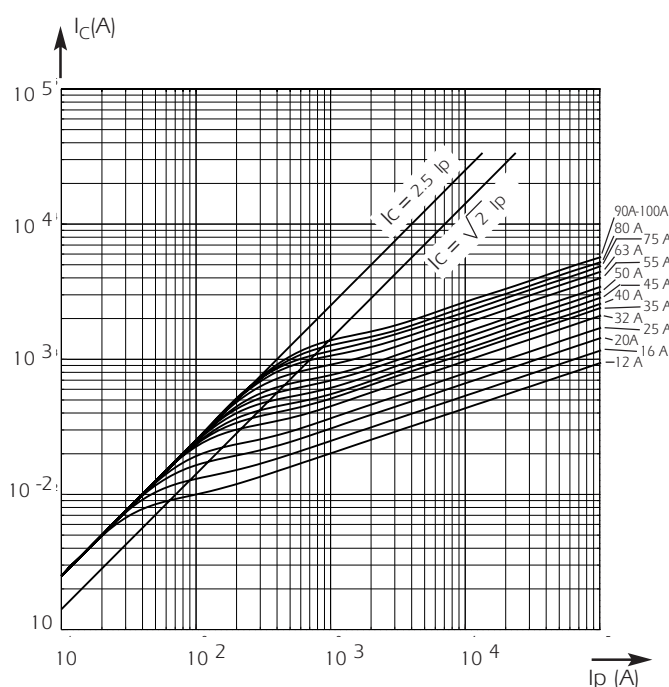
Time vs current characteristics



Tolerance for mean pre-arcing current $\pm 9\%$.

Above: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current

Current limitation curves

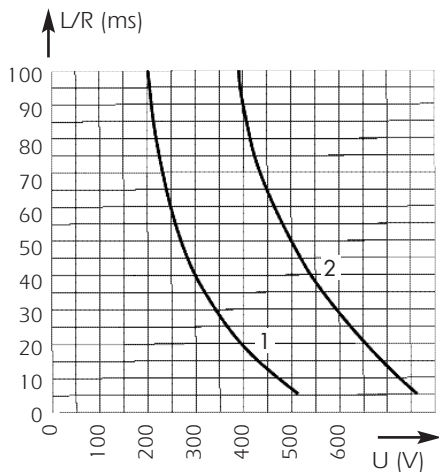


Above: Curves show, for each rating, value of peak let-through current I_c as a function of available fault current I_p .

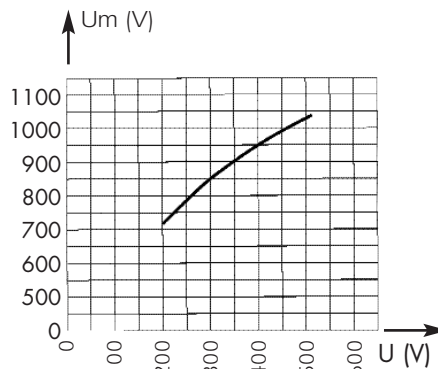
Semiconductor (AC) fuses

Other Protistor® Fuses DIN Bracket Ferrule Fuses 17x49 gRB/URB - 690 VAC

DC Application data

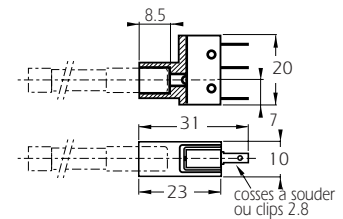


Above: Curves indicate permissible value of time constant L/R as a function of DC working voltage.
Curve 1: $I_p \geq 1,6 I_N$ only for fuses gRB (current rating from 12 to 50 A)
Curve 2: $I_p \geq 8 I_N$ for fuses gRB et URB



Curve indicates peak arc voltage U_m which may appear across the fuse terminals at working voltage U .

Microswitch



Designation	Ref. Num.	Weight	Pack.
MC 6,3 GR 2.5	Y 310015	10 g	3 pieces

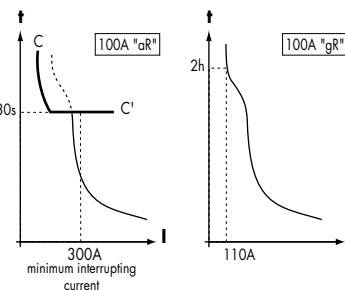
Electrical characteristics:
 $I_N = 3 A - U_N = 250 VAC$
 $I_N = 2 A - U_N = 30 VDC$

Certain minimum operating voltage/current
20 V-100 mA

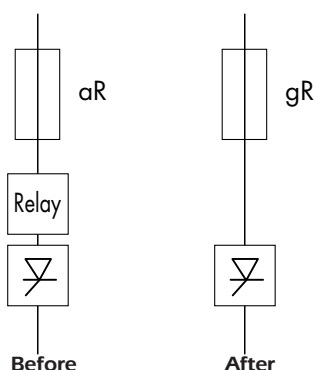
NEW gR-CLASS

OPTIMAL PROTECTION OF POWER EQUIPMENT

Thanks to recent technological developments, Ferraz Shawmut today markets gR-class PROTISTOR® fuses capable of clearing all types of overloads, from low multiples of current ratings up to very high short-circuit currents. Enhanced performance enables these fuses to provide solutions to many previously unsolved problems in power electronics: protection of cables without the use of additional components, protection of equipment from fire hazards, selective coordination of different fuses within a single power distribution installation...



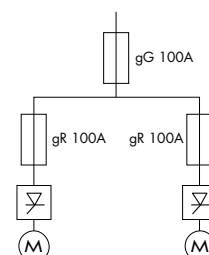
Example:
100A aR vs. 100A gR



SELECTIVE COORDINATION

gR-class semiconductor fuses can be utilized in association with gI and gG-class low voltage power distribution fuses of the same current rating, installed upstream. In a "selectively coordinated" distribution installation, melting is limited to the fuse associated with the faulted circuit, while upstream fuses remain intact. This prevents unnecessary down-time due to power blackouts in non-faulted branches.

Example of
selective
coordination



aR-CLASS vs. gR-CLASS

aR-class fuses feature a high minimum interrupting current as compared with their current rating. The primary time-current characteristic of aR-class fuses is the CC' curve, above which another protection device must be associated. The gR-class fuse represents considerably improved performance in semiconductor protection.

FERRAZ SHAWMUT EXPERTISE

gR-class fuses should be used in the design of low voltage equipment and in the protection of power electronics equipment. Designers can often substitute a gR-class fuse for an aR-class fuse (10x38, 14x51, 22x58, PSC 000 and 17x49 DIN80 or BS 88-4) but the reverse is not true: an aR fuse can never replace a gR fuse. Start protecting your new equipment with gR-class fuses today. The application of gR class fuses, with current ratings less than 100 Amps, offers enhanced protection, safety and reliability, along with reduced risk of replacement errors and assembly costs.

Other Protistor® Fuses BS88-4 Fuses 10x28, 17x27 - 250 VAC

BRITISH STANDARD
250 VAC - URE - URGs - URZ
From 5 to 180 A
Sizes 10x28 - 17x27

Extremely high breaking capacity fuses:
protection of power semiconductors as per
IEC standard 60269.1 and 4

250 V voltage rating complying with IEC 33

gr class (ratings from 5 to 32 a)
AS PER VDE 636-23 AND IEC 60269.4

aR CLASS (RATINGS FROM 7 to 180 A) COMPLYING WITH
VDE 636-23 AND IEC 60269.4

TWO MODELS COMPLYING WITH BS 88-4

- WITHOUT INDICATOR
- WITH SEPARATE TRIP-INDICATOR (SIZE 17x27)

17x27 URGs are UL Recognized



Main Characteristics

Voltage rating U_N (V)	Size	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2tp (A ² s)	Total clearing $I^2t @ U_N$ A ² s		Watts loss		Tested breaking capacity
					$I_p \leq 30I_N$	$I_p > 30I_N$	$0.8 I_N$	I_N	
250V	10 x28	URE	5	1.3	10	11	0.6	1	160k A @ 250 V
			6	1.8	13	15	0.7	1.2	
			10	2.4	18	20	1.2	2.1	
			12	4.3	28	33	1.6	2.8	
			15	6.7	41	48	2.0	3.5	
			20	15.0	85	100	2.2	4.0	
			25	27.0	135	160	2.6	4.7	
			32	53.0	240	280	3.0	5.4	
	17x27	URGS	7	1.3	8,5	9,8	0.56	1	160k A @ 250 V
			10	4.5	21	23,8	0.84	1.5	
			12	5.9	27	31	1.1	2.0	
			16	11.2	50	59	1.7	3.0	
			20	15.6	80	100	2.2	3.9	
			25	30.0	130	160	2.7	4.8	
			30	45.0	195	235	3.2	5.6	
			35	63.0	270	330	3.7	6.5	
			50	180.0	7890	940	4.9	8.8	
			60	250.0	1100	1310	5.8	10.4	
			75	380.0	1670	1990	7.2	13.6	
			80	480.0	2100	2530	7.25	13.7	
		URZ	100	730.0	3350	4060	6.5	11.5	160k A @ 250 V
			125	850.0	5720	6920	6.7	12.3	
			150	1250.0	7930	9590	7.4	13.6	
			160	1730.0	9600	11700	8.8	15.6	
			180	2090.0	14500	17500	9.5	17	

Minimum Operating voltage for separate trip indicator = 20 V



Other Protistor® Fuses

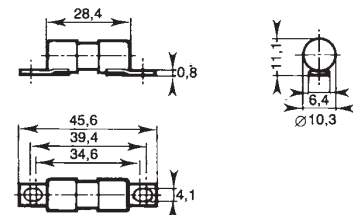
BS88-4 Fuses

10x28, 17x27 - 250 VAC

CP 10x28 - Without trip-indicator

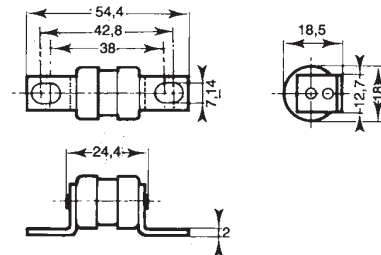
Size	Designation	Ref. Number	Pack.	Catalog Number
10x28	2.5 URE 10/5	M082489	10 (11g)	BS10UE25V5
	2.5 URE 10/6	E097478		BS10UE25V6
	2.5 URE 10/10	L082488		BS10UE25V10
	2.5 URE 10/12	P097487		BS10UE25V12
	2.5 URE 10/15	K082487		BS10UE25V15
	2.5 URE 10/20	J082486		BS10UE25V20
	2.5 URE 10/25	X097494		BS10UE25V25
	2.5 URE 10/32	N081984		BS10UE25V32

**BBS 88 part 4
requires respectively
Ø8.7 and 8.8



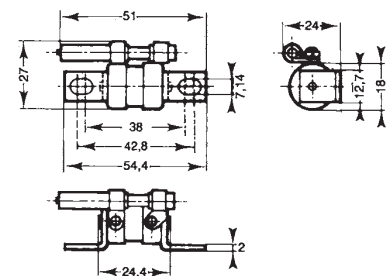
CP 17x27 - Without trip-indicator

Size	Designation	Ref. Number	Pack.	Catalog Number
17x27	2.5 URGs 17/7	M076647	10 (30g)	BS17US25V7
	2.5 URGs 17/10	N076648		BS17US25V10
	2.5 URGs 17/12	P076649		BS17US25V12
	2.5 URGs 17/16	Q076650		BS17US25V16
	2.5 URGs 17/20	L097507		BS17US25V20
	2.5 URGs 17/25	R076651		BS17US25V25
	2.5 URGs 17/30	S076652		BS17US25V30
	2.5 URGs 17/35	T076653		BS17US25V35
	2.5 URGs 17/50	V076654		BS17US25V50
	2.5 URGs 17/60	W076655		BS17US25V60
	2.5 URGs 17/75	X076656		BS17US25V75
	2.5 URGs 17/80	Z085559		BS17US25V80
	2.5 URZ 17/100	Y085558		BS17UZ25V100
	2.5 URZ 17/125	G097526		BS17UZ25V125
	2.5 URZ 17/150	W085556		BS17UZ25V150
	2.5 URZ 17/160	H097527		BS17UZ25V160
	2.5 URZ 17/180	N097532		BS17UZ25V180



CP 17x27 - With separated trip-indicator BS88-4

Size	Designation	Ref. Number	Pack.	Catalog Number
17x27	2.5 URGs 17P7	P097533	10 (40g)	BS17US25V7P
	2.5 URGs 17P10	Q097534		BS17US25V10P
	2.5 URGs 17P12	S097536		BS17US25V12P
	2.5 URGs 17P16	X097540		BS17US25V16P
	2.5 URGs 17P20	B097544		BS17US25V20P
	2.5 URGs 17P25	D097546		BS17US25V25P
	2.5 URGs 17P30	E097547		BS17US25V30P
	2.5 URGs 17P35	F097548		BS17US25V35P
	2.5 URGs 17P50	J097551		BS17US25V50P
	2.5 URGs 17P60	H081082		BS17US25V60P
	2.5 URGs 17P75	K097552		BS17US25V75P
	2.5 URGs 17P80	L097553		BS17US25V80P
	2.5 URZ 17P100	P097556		BS17UZ25V100P
	2.5 URZ 17P125	Q097557		BS17UZ25V125P
	2.5 URZ 17P150	R097558		BS17UZ25V150P
	2.5 URZ 17P160	S097559		BS17UZ25V160P
	2.5 URZ 17P180	T097560		BS17UZ25V180P



Microswitch MC6.3 GR 2-5N Ref: Y301015



Semiconductor (AC) fuses

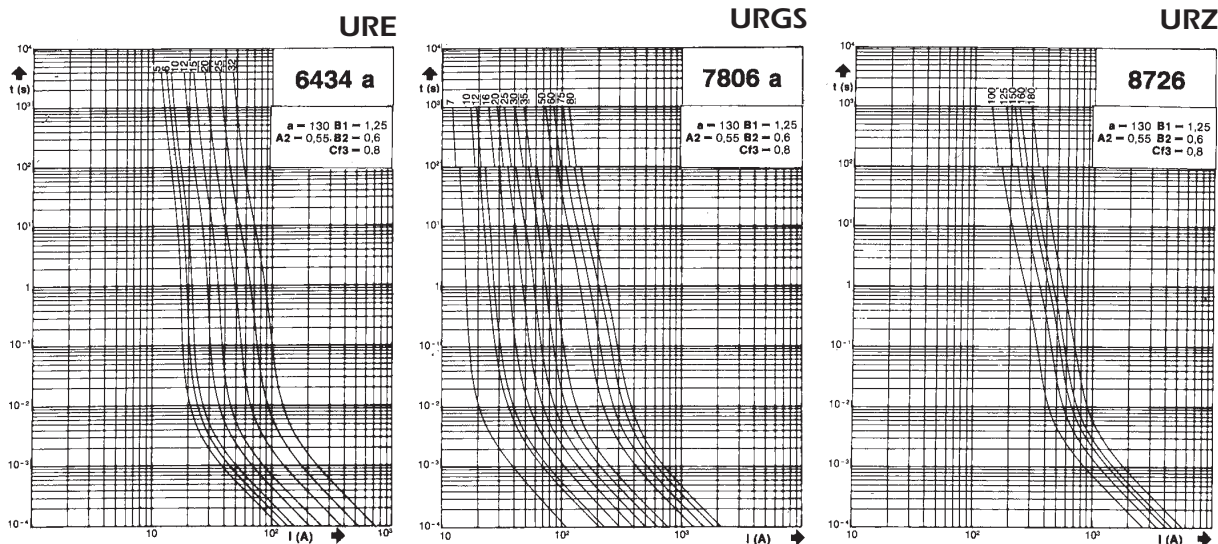
Other Protistor® Fuses

BS88-4 Fuses

10x28, 17x27 - 250 VAC

Electrical characteristics

Times vs current characteristics

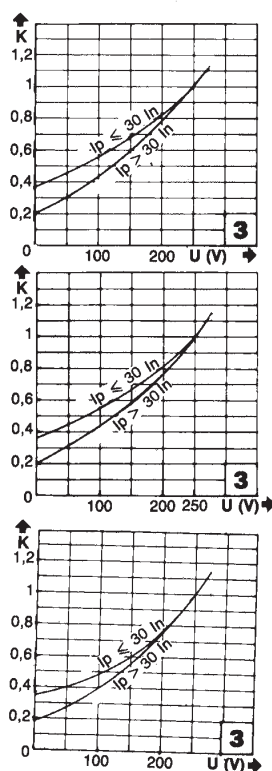


* These curves indicate, for each rated current, the pearcing time vs. the R.M.S. pre-arcing current.

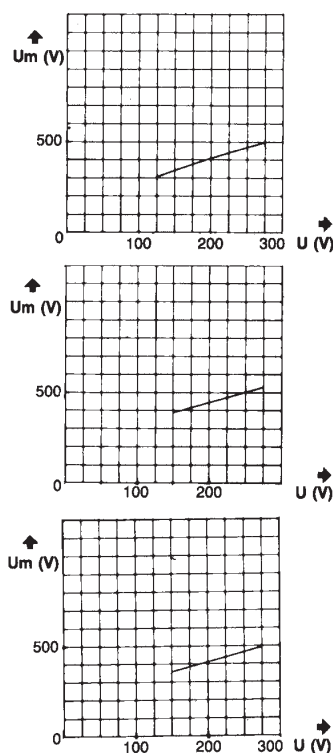
* Tolerance for the mean pre-arcing current $\pm 10\%$

Corrective factor - Peak arc voltage

Corrective factor



Peak arc voltage



* The mean curves show the variation of the total clearing time (I^2t_f) and the total clearing duration t_f as a function of operating voltage U

This curve show the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U @ $\cos \varphi = 0.15$.

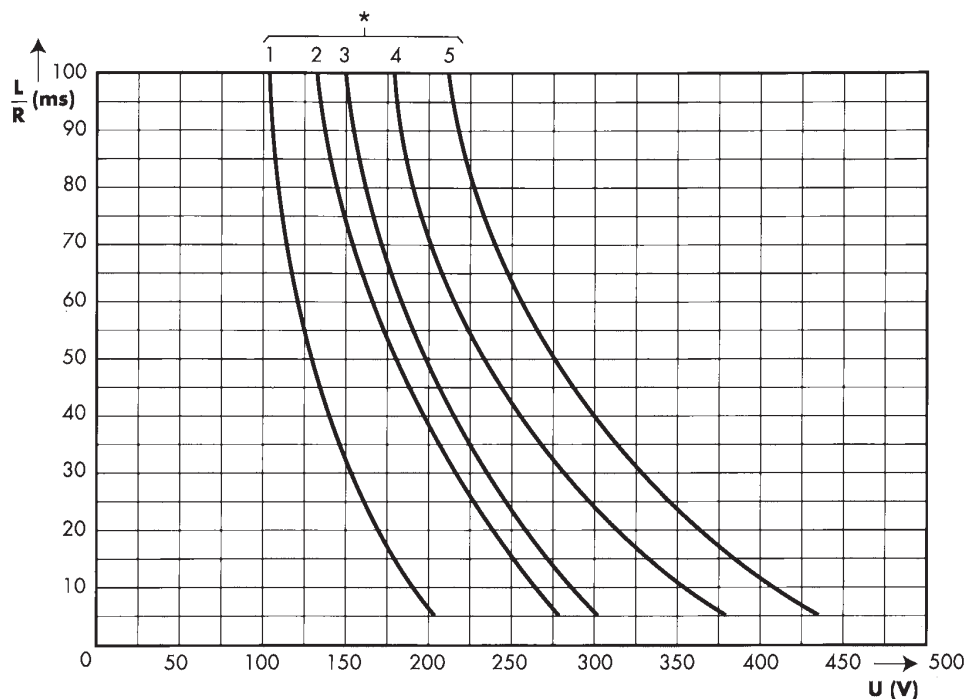


Other Protistor® Fuses

BS88-4 Fuses

10x28, 17x27 - 250 VAC

D.C Applications data



▪ These curve indicate the permissible value of time constant L/R as a function of the D.C. working voltage.

▪ These I_{pm} values give the minimum DC interrupting current in amps.

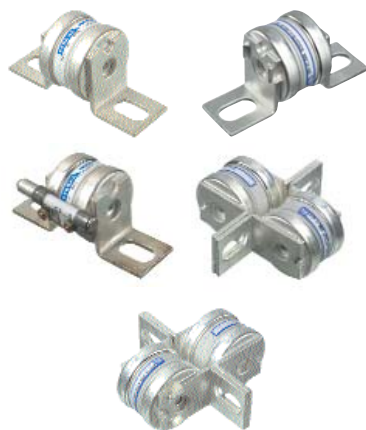
Curves # and I_{pm} for each rating			
Class	Rated current	*	$I_{pm}(A)$
URE	5	5	40
	6	5	50
	10	5	55
	12	5	80
	15	5	100
	20	5	130
	25	5	175
	32	5	255
URGS	7	5	40
URZ	100	4	190
	125	3	250
	150	2	300
	160	2	330
	180	1	400

for URGS class fuses, consult us.

Other Protistor® Fuses

BS88-4 Fuses

36x27, 2X36x27, - 250 VAC



Extremely high breaking capacity fuses:

protection of power semiconductors as per IEC standard 60269.1 and 4

250 V voltage rating COMPLYING WITH IEC 33

gr class (ratings from 50 to 350 a URGG - 300 to 700 A URGH) AS PER VDE 636-23 AND IEC 60269.4

aR CLASS (RATINGS FROM 400 to 525 A URGG - 800 to 1050 A URGH) COMPLYING WITH VDE 636-23 AND IEC 60269.4

TWO MODELS COMPLYING WITH BS 88-4

- WITHOUT INDICATOR

- WITH SEPARATE TRIP-INDICATOR

Main Characteristics

Voltage rating U_N (V)	Size	Class	Current rating I_N (A)	Pre-arcing I^2t @ 1 ms I^2tp (A ² s)	Total clearing I^2t @ U_N A ² s	Watts loss		Tested Breaking capacity
						$0.8 I_N$	I_N	
250V	36x27	URGG	50	120	500	4.75	9.5	100k A @ 250 V
			75	330	1380	6.3	12.6	
			100	745	3060	7.8	15.7	
			125	1340	5500	9.1	18.2	
			150	1930	7950	10.8	21.6	
			200	4020	16400	13.5	27.0	
			250	5350	30000	16.3	32.6	
			300	7290	49600	18.6	37.2	
			350	18000	74000	21	42.0	
			400	25100	128000	23.4	46.7	
			450	33500	170000	27.1	54.1	
			500	43000	219000	30.4	60.8	
			525	48200	245000	33.2	66.4	
	2x36x27	URGH	300	7700	31800	21.6	43.2	100k A @ 250 V
			350	11500	48700	24.3	48.6	
			400	16000	65600	27	54.0	
			500	29100	120000	32.6	65.2	
			600	48200	198500	37.2	74.4	
			700	72000	276000	42.0	84.0	
			800	100000	512000	46.7	93.4	
			900	134000	680000	54.1	108.2	
			1000	172000	876000	60.8	121.6	
			1050	193000	980000	66.4	132.8	

Minimum operating voltage for separate or integrated trip indicator = 20 V

Semiconductor (AC) fuses

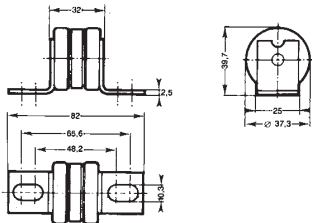


Other Protistor® Fuses

BS88-4 Fuses

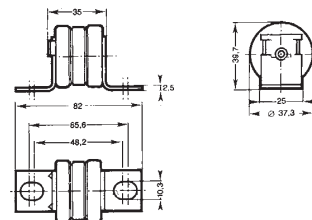
36x27, 2X36x27, - 250 VAC

CP 36x27 Without trip-indicator



Size	Designation	Ref. Number	Pack.	Catalog Number
36x27	2.5 URGG 36/50	J080945		BS36UG25V50
	2.5 URGG 36/75	K080946		
	2.5 URGG 36/100	L080947		BS36UG25V100
	2.5 URGG 36/125	R082470		BS36UG25V125
	2.5 URGG 36/150	Q082469		BS36UG25V150
	2.5 URGG 36/200	P082468	3 (170g)	BS36UG25V200
	2.5 URGG 36/250	N082467		BS36UG25V250
	2.5 URGG 36/300	M082466		BS36UG25V300
	2.5 URGG 36/350	L082465		BS36UG25V350
	2.5 URGG 36/400	G075538		BS36UG25V400
	2.5 URGG 36/450	H075539		BS36UG25V450
	2.5 URGG 36/500	J075540		BS36UG25V500
	2.5 URGG 36/525	K075541		BS36UG25V525

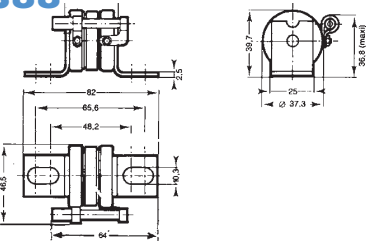
CP 36x27 With built-in trip-indicator



Size	Designation	Ref. Number	Pack.	Catalog Number
36x27	2.5 URGG 36T50	F080942		BS36UG25V50T
	2.5 URGG 36T75	G080943		BS36UG25V75T
	2.5 URGG 36T100	H080944		BS36UG25V100T
	2.5 URGG 36T125	W082382		BS36UG25V125T
	2.5 URGG 36T150	V082381		BS36UG25V150T
	2.5 URGG 36T200	T082380	3 (170g)	BS36UG25V200T
	2.5 URGG 36T250	S082379		BS36UG25V250T
	2.5 URGG 36T300	R082378		BS36UG25V300T
	2.5 URGG 36T350	Q082377		BS36UG25V350T
	2.5 URGG 36T400	L075542		BS36UG25V400T
	2.5 URGG 36T450	M075543		BS36UG25V450T
	2.5 URGG 36T500	N075544		BS36UG25V500T
	2.5 URGG 36T525	P075545		BS36UG25V525T

Microswitch MC 36 GR 2.5 - Ref. P 092496

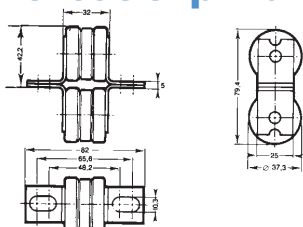
CP 36x27 With separated trip-indicator BS88



Size	Designation	Ref. Number	Pack.	Catalog Number
36x27	2.5 URGG 36P50	C080939		BS36UG25V50P
	2.5 URGG 36P75	D080940		BS36UG25V75P
	2.5 URGG 36P100	E080941		BS36UG25V100P
	2.5 URGG 36P125	Y081004		BS36UG25V125P
	2.5 URGG 36P150	X081003		BS36UG25V150P
	2.5 URGG 36P200	W081002	3 (185g)	BS36UG25V200P
	2.5 URGG 36P250	V081001		BS36UG25V250P
	2.5 URGG 36P300	T081000		BS36UG25V300P
	2.5 URGG 36P350	S080999		BS36UG25V350P
	2.5 URGG 36P400	V075504		BS36UG25V400P
	2.5 URGG 36P450	W075505		BS36UG25V450P
	2.5 URGG 36P500	X075506		BS36UG25V500P
	2.5 URGG 36P525	Y075507		BS36UG25V525P

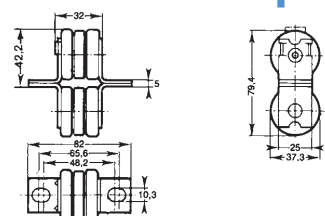
Microswitch MC 36 GR 2.5 N - Ref. Y 310005

CP 2x36x27 Without trip-indicator



Size	Designation	Ref. Number	Pack.	Catalog Number
2x36x27	2.5 URGH 236/300	K082464		BS236UH25V300
	2.5 URGH 236/350	J082463		BS236UH25V350
	2.5 URGH 236/400	H082462		BS236UH25V400
	2.5 URGH 236/500	G082461		BS236UH25V500
	2.5 URGH 236/600	F082460		BS236UH25V600
	2.5 URGH 236/700	E082459	3 (290g)	BS236UH25V700
	2.5 URGH 236/800	Q075546		BS236UH25V800
	2.5 URGH 236/900	R075547		BS236UH25V900
	2.5 URGH 236/1000	S075548		BS236UH25V1000
	2.5 URGH 236/1050	T075549		BS236UH25V1050

CP 2x36x27 With built-in trip-indicator



Size	Designation	Ref. Number	Pack.	Catalog Number
2x36x27	2.5 URGH 236T300	P082376		BS236UH25V300T
	2.5 URGH 236T350	N082375		BS236UH25V350T
	2.5 URGH 236T400	M082374		BS236UH25V400T
	2.5 URGH 236T500	L082373		BS236UH25V500T
	2.5 URGH 236T600	K082372		BS236UH25V600T
	2.5 URGH 236T700	J082371	3 (290g)	BS236UH25V700T
	2.5 URGH 236T800	V075550		BS236UH25V800T
	2.5 URGH 236T900	R075501		BS236UH25V900T
	2.5 URGH 236T1000	S075502		BS236UH25V1000T
	2.5 URGH 236T1050	T075503		BS236UH25V1050T

Microswitch MC 36 GR 2.5 N - Ref. P 092496



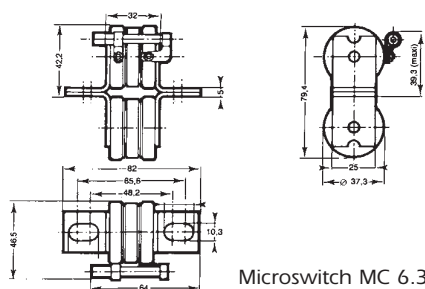
Semiconductor (AC) fuses

Other Protistor® Fuses

BS88-4 Fuses

36x27, 2X36x27, - 250 VAC

CP 36x27 With separated trip-indicator BS88

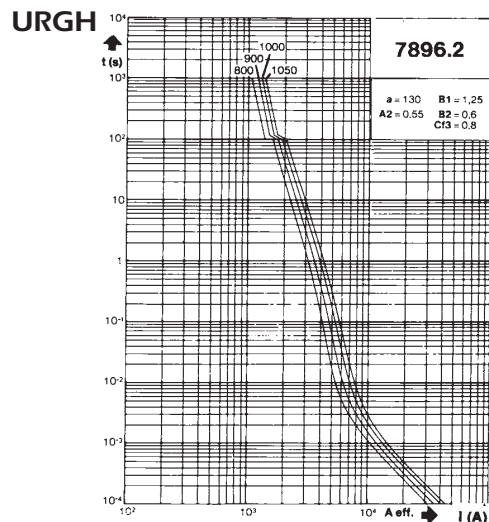
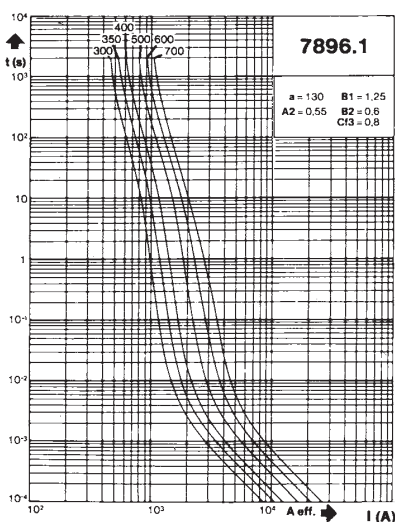
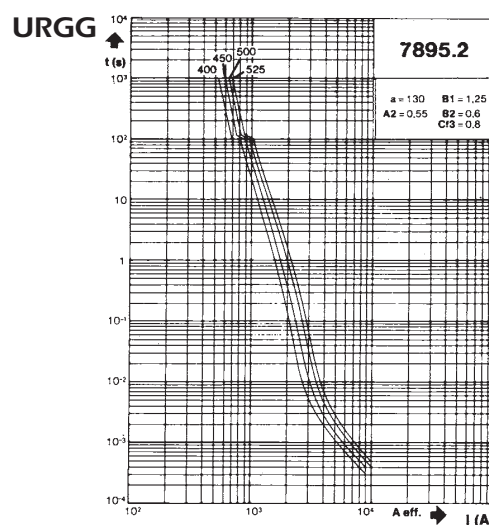
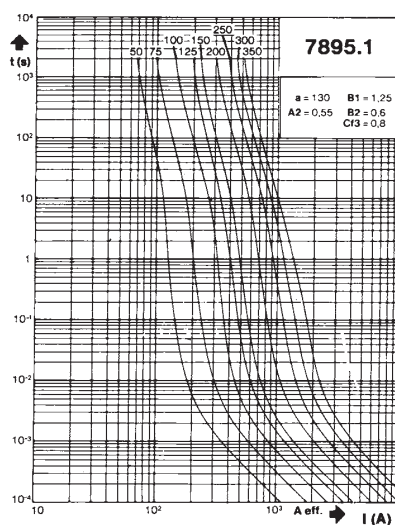


Microswitch MC 6.3 GR 2.5 N - Ref. Y 310005

Size	Designation	Ref. Number	Pack.	Catalog Number
2.5	URGH 236P300	R080998		BS236UH25V300P
2.5	URGH 236P350	Q080997		BS236UH25V350P
2.5	URGH 236P400	P080996		BS236UH25V400P
2.5	URGH 236P500	N080995		BS236UH25V500P
2.5	URGH 236P600	M080994	3	BS236UH25V600P
2x36x27	2.5 URGH 236P700	L080993	(900g)	BS236UH25V700P
2.5	URGH 236P800	Z075508		BS236UH25V800P
2.5	URGH 236P900	A075509		BS236UH25V900P
2.5	URGH 236P1000	B075510		BS236UH25V1000P
2.5	URGH 236P1050	C075511		BS236UH25V1050P

Electrical characteristics

Times vs current characteristics



- These curves indicate, for each rated current, the pre-arcing time vs. the R/M.S. pre-arcing current.
- Tolerance for the mean pre-arcing current $\pm 10\%$



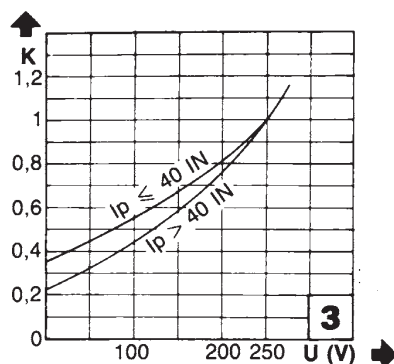
Other Protistor® Fuses

BS88-4 Fuses

36x27, 2X36x27, - 250 VAC

Corrective factor - Peak arc voltage

Corrective factor



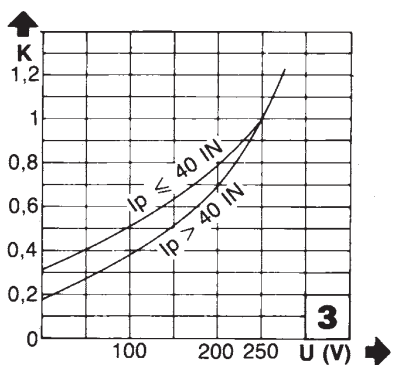
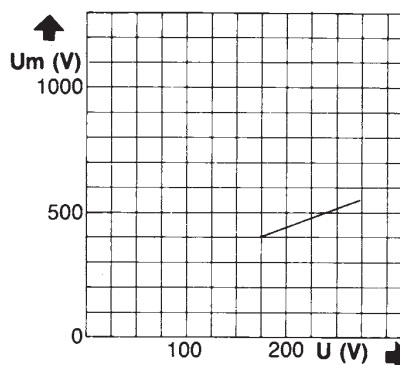
URGG

From 50 to 350 A

URGH

From 300 to 700 A

Peak arc voltage

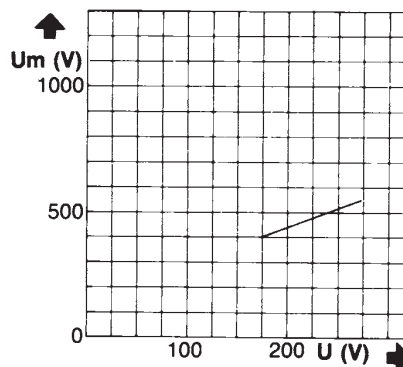


URGG

From 400 to 525 A

URGH

From 800 to 1050 A



Corrective factor

* The mean curves show the variation of the total clearing time (I^2t_t) and the total clearing duration t_t as a function of operating voltage U

Peak arc voltage

This curve shows the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U @ $\cos \varphi = 0.15$.

Other Protistor® Fuses

BS88-4 Fuses

10x51, 17x49, 2X17x49, - 690 VAC



EXTREMELY HIGH BREAKING CAPACITY FUSES:
PROTECTION OF POWER SEMICONDUCTORS AS PER
IEC STANDARD 60269.1 AND 4

690 V VOLTAGE RATING COMPLYING WITH IEC 33

GR CLASS (RATINGS FROM 5 TO 160 A)
AS PER VDE 636-23 AND IEC 60269.4

TWO MODELS COMPLYING WITH BS 88-4

- WITHOUT INDICATOR
- WITH SEPARATE TRIP-INDICATOR
(SIZES 17x49 AND 2x17x49)

17x49 URS fuses are UL Recognized 

Main Characteristics

Voltage rating U_N (V)	Size	Class	Current rating I_N (A)	Pre-arcing I^2t @ 1 ms I^2tp (A ² s)	Total clearing I^2t @ 660 V A ² s		Watts loss		Tested Breaking capacity
					$I_p \leq 30I_N$	$I_p > 30I_N$	$0.8 I_N$	I_N	
690V	10 x51	URE	5	1.3	10	15	1.05	2	200k A @ 690 V
			6	1.3	13.5	20.5	1.3	2.5	
			10	3.3	25	35	2.2	4.1	
			12	5.5	40	58	2.3	4.3	
			15	9.7	70	100	2.4	4.4	
			20	19.4	120	200	3.1	5.8	
	17x49	URS	16	9.7	75	107	2.7	4.8	200k A @ 690 V
			20	17.3	130	185	2.9	5.3	
			25	27	200	285	3.7	6.7	
			32	53	400	570	4.7	8.6	
			35	70	510	725	5.2	9.6	
			40	98	760	1080	5.7	10.5	
			45	130	900	1280	6.2	11.4	
			50	156	1000	1420	6.8	12.6	
			55	210	1380	1970	7.2	13.3	
			63	315	2000	2850	7.5	13.9	
			75	525	3350	4630	7.8	14.4	
			80	625	3900	5700	8.5	15.8	
	2x17x49	URT	65	210	1590	2270	9.5	17.4	200k A @ 690 V
			75	310	2300	3280	10.9	20	
			85	430	3050	4350	11.9	21.9	
			90	252	3600	5130	12.4	22.8	
			110	850	5500	7840	13.8	26.5	
			145	1730	11000	15700	15.5	28.5	
			150	2090	13400	18500	15.6	28.7	
			160	2500	15600	22800	16.9	31.5	

Minimum operating voltage for separate trip indicator = 20 V

Semiconductor (AC) fuses

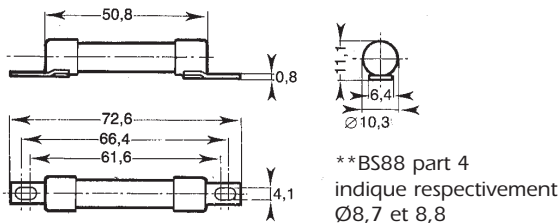


Other Protistor® Fuses

BS88-4 Fuses

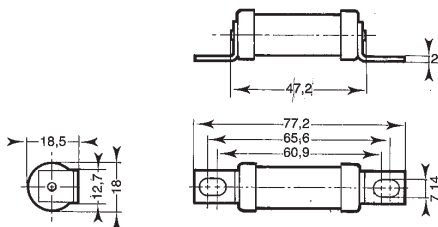
10x51, 17x49, 2X17x49, - 690 VAC

CP 10x51 Without trip-indicator



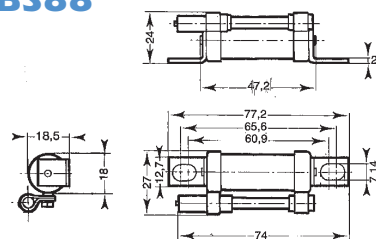
Size	Designation	Ref. Number	Pack.	Catalog Number
10x51	6,9 URE 10/5	D082458	10 (13g)	BS10UE69V5
	6,9 URE 10/6	X097057		BS10UE69V6
	6,9 URE 10/10	C082457		BS10UE69V10
	6,9 URE 10/12	Z097059		BS10UE69V12
	6,9 URE 10/15	B082456		BS10UE69V15
	6,9 URE 10/20	A082455		BS10UE69V20

CP 17x49 Without trip-indicator



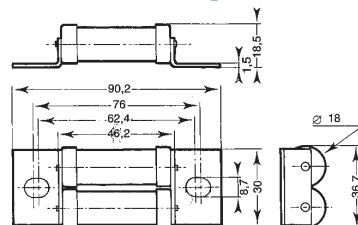
Size	Designation	Ref. Number	Pack.	Catalog Number
17x49	6,9 URS 17/16	G075883	10 (51g)	BS17US69V16
	6,9 URS 17/20	H075884		BS17US69V20
	6,9 URS 17/25	J075885		BS17US69V25
	6,9 URS 17/32	K075886		BS17US69V32
	6,9 URS 17/35	L075887		BS17US69V35
	6,9 URS 17/40	M075888		BS17US69V40
	6,9 URS 17/45	N075889		BS17US69V45
	6,9 URS 17/50	P075890		BS17US69V50
	6,9 URS 17/55	Q075891		BS17US69V55
	6,9 URS 17/63	R075892		BS17US69V63
	6,9 URS 17/75	S075893		BS17US69V75
	6,9 URS 17/80	T075894		BS17US69V80

CP 17x49 With separated trip-indicator BS88



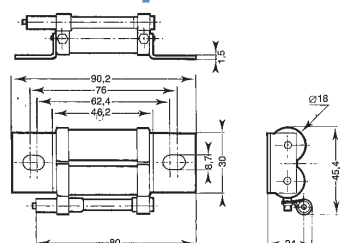
Size	Designation	Ref. Number	Pack.	Catalog Number
17x49	6,6 URS 17P16	V075895	10 (61g)	BS17US69V16P
	6,9 URS 17P20	W075896		BS17US69V20P
	6,9 URS 17P25	X075897		BS17US69V25P
	6,9 URS 17P32	Y075898		BS17US69V32P
	6,9 URS 17P35	Z075899		BS17US69V35P
	6,9 URS 17P40	A075900		BS17US69V40P
	6,9 URS 17P45	B075901		BS17US69V45P
	6,9 URS 17P50	K081084		BS17US69V50P
	6,9 URS 17P55	C075902		BS17US69V55P
	6,9 URS 17P63	D075903		BS17US69V63P
	6,9 URS 17P75	E075904		BS17US69V75P
	6,9 URS 17P80	F075905		BS17US69V80P

CP 2x17x49 Without trip-indicator



Size	Designation	Ref. Number	Pack.	Catalog Number
2x17x49	6,6 URT 217/65	G075906	5 (82g)	BS217UT69V65
	6,9 URT 217/75	F099572		BS217UT69V75
	6,9 URT 217/85	H075907		BS217UT69V85
	6,9 URT 217/90	A099958		BS217UT69V90
	6,9 URT 217/110	B099959		BS217UT69V110
	6,9 URT 217/140	J075908		BS217UT69V140
	6,9 URT 217/150	C099960		BS217UT69V150
	6,9 URT 217/160	K075909		BS217UT69V160

CP 2x17x49 With separated trip-indicator



Size	Designation	Ref. Number	Pack.	Catalog Number
2x17x49	6,6 URT 217P65	L075910	5 (95g)	BS217UT69V65P
	6,9 URT 217P75	M075911		BS217UT69V75P
	6,9 URT 217P85	N075912		BS217UT69V85P
	6,9 URT 217P90	P075913		BS217UT69V90P
	6,9 URT 217P110	Q075914		BS217UT69V110P
	6,9 URT 217P140	R075915		BS217UT69V140P
	6,9 URT 217P150	S075916		BS217UT69V150P
	6,9 URT 217P160	T075917		BS217UT69V160P



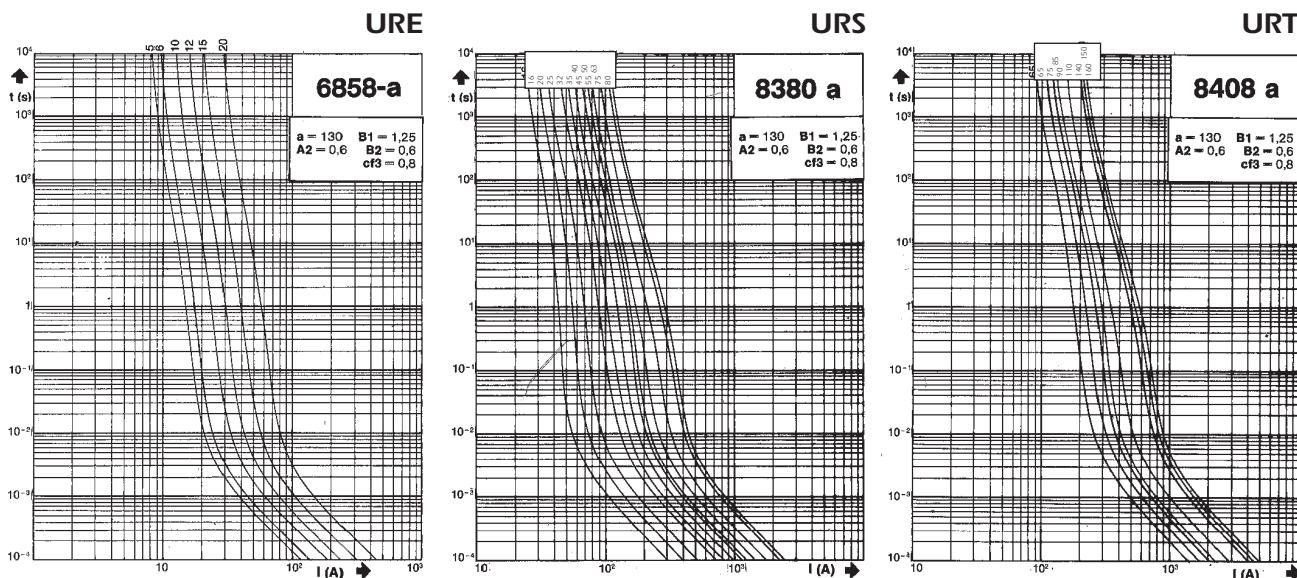
Semiconductor (AC) fuses

Other Protistor® Fuses

BS88-4 Fuses

10x51, 17x49, 2X17x49, - 690 VAC

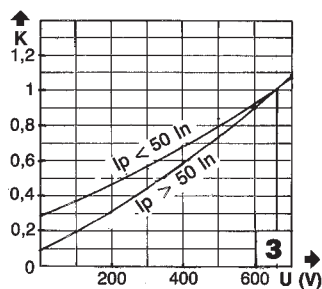
Times vs current characteristics



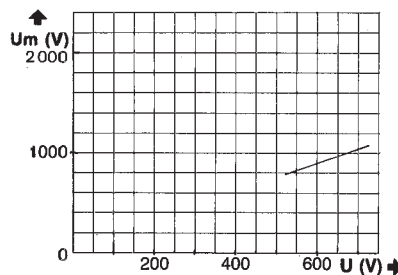
- These curves indicate, for each rated current, the pre-arcing time vs. the R/M.S. pre-arcing current.
- Tolerance for the mean pre-arcing current $\pm 10\%$

Corrective factor - Peak arc voltage

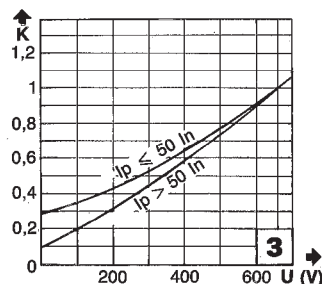
Corrective factor



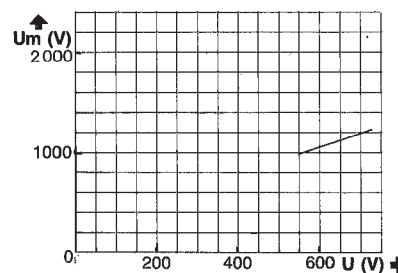
URE



Peak arc voltage



URS
URT



Corrective factor

* The mean curves show the variation of the total clearing time ($I^2 t_f$) and the total clearing duration t_f as a function of operating voltage U

Peak arc voltage

This curve shows the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U @ $\cos \varphi = 0.15$.

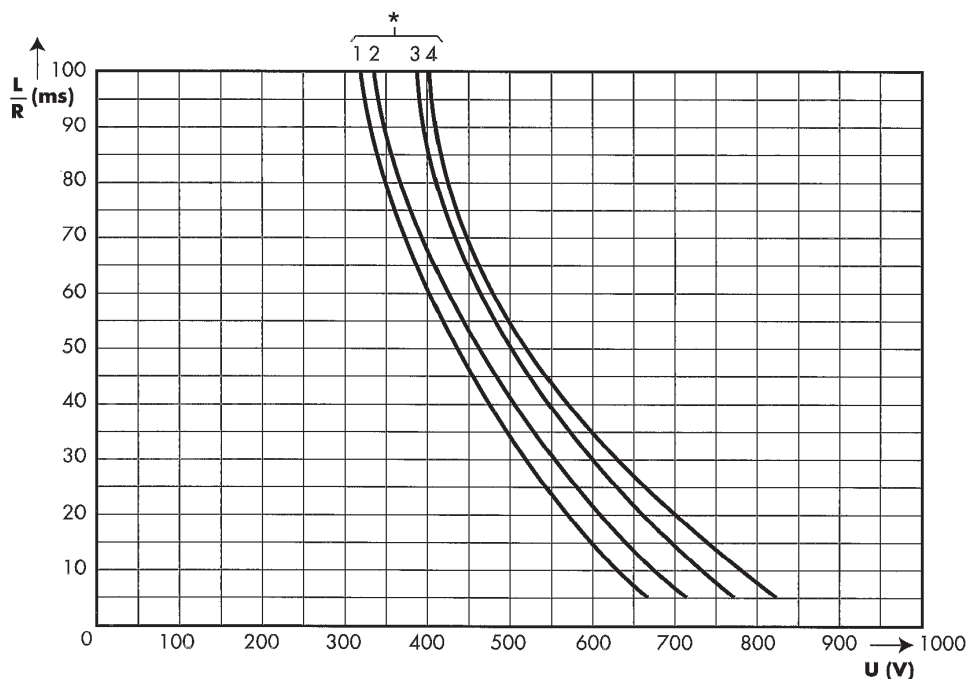


Other Protistor® Fuses

BS88-4 Fuses

10x51, 17x49, 2X17x49, - 690 VAC

D.C Applications data



▪ These curve indicate the permissible value of time constant L/R as a function of the D.C. working voltage.

▪ These I_{pm} values give the minimum DC interrupting current in amps.

Curves and I_{pm} for each rating			
Class	Rated current	*	$I_{pm}(A)$
URE	5	4	40
	6	4	48
	10	4	60
	12	4	84
	15	4	112
	20	4	140
URS	16	3	96
	20	3	140
	25	3	175
	32	3	255
	35	3	300
	40	3	320
	45	3	335
	50	3	350
	55	3	365
	63	3	390
	75	2	425
	80	1	440
URT	65	3	510
	75	3	550
	85	3	590
	90	3	610
	110	3	685
	140	3	800
	150	2	840
	160	1	880



Semiconductor (AC) fuses

Other Protistor® Fuses

BS88-4 Fuses

000 BS88 - 500 V to 690 VAC



EXTREMELY HIGH BREAKING CAPACITY FUSES: PROTECTION OF POWER SEMICONDUCTORS AS PER IEC STANDARD 60269.1 AND 4, AND EN 60269-1 AND 4

500- 690 V VOLTAGE RATING (RATING 20 TO 400 A)

gR CLASS (gRB RATINGS 20 TO 125 A) ACCORDING TO VDE 636-23

- CLEARING ALL OVERLOADS
- IMPROVED SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION WITH ALL FUSES

aR CLASS (URB RATINGS 75 TO 400 A) ACCORDING TO VDE 636-23 AND IEC 269.4

TWO MODELS ACCORDING TO BS 88-4 AND EN 60 269 .4 STANDARDS; Z3 DRAWING (74 mm BETWEEN AXES) WITHOUT BLOWN FUSE INDICATION - WITH SEPARATE TRIP INDICATOR

These fuses are UL Recognized 

Main Characteristics

Voltage rating U_N (V)	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2t_p (A ² s)	Total clearing I^2t (A ² s)	Watts loss		Tested Breaking capacity	Estimated Breaking capacity
					$0.8 I_N$	I_N		
690 V	gRB	20	12	80 @ 660 V	3.8	7	200k A @ 690 V	300k A @ 690 V
		25	20	150 @ 660 V	5.0	9		
		32	39	270 @ 660 V	5.5	10		
		40	70	460 @ 660 V	6.6	12		
		50	102	730 @ 660 V	7.7	14		
		63	210	1500 @ 660 V	8.8	16		
		80	475	2900 @ 660 V	9.9	18		
		100	970	6000 @ 660 V	11	20		
		125	1900	11800 @ 660 V	11.6	21		
690 V	URB	75	350	2250 @ 660 V	11.2	20.5	200k A @ 690 V	300k A @ 690 V
		80	390	2500 @ 660 V	11.6	21		
		100	690	4200 @ 660 V	12.7	23		
		110	950	6800 @ 660 V	13.5	24.5		
		125	1300	8900 @ 660 V	14.3	26		
		160	2700	16000 @ 660 V	17.0	31		
		200	5250	31500 @ 660 V	19.8	36		
		250	9900	52000 @ 660 V	24.8	45		
		315	15500	82000 @ 660 V	31.9	58		
500 V	URB	350	22400	110000 @ 500 V	31.9	58	120k A @ 500 V	
		400	33200	160000 @ 500 V	36.3	66		

Minimum operating voltage for separate trip indicator = 20 V

Semiconductor (AC) fuses



Other Protistor® Fuses

BS88-4 Fuses

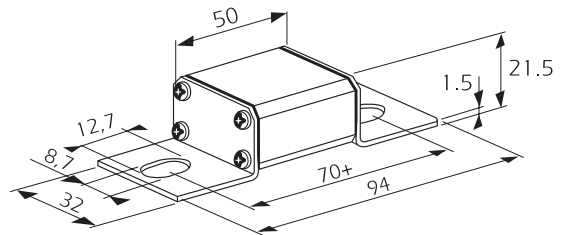
000 BS88 - 500 V to 690 VAC

References

British standard without blown fuse indicator

Current rating	Designation	Ref. Number	Catalog Number
20	6,9 gRB 000 BS88/020	T330044	BS000GB69V20
25	6,9 gRB 000 BS88/025	V330045	BS000GB69V25
32	6,9 gRB 000 BS88/032	W330046	BS000GB69V32
40	6,9 gRB 000 BS88/040	X330047	BS000GB69V40
50	6,9 gRB 000 BS88/050	Z330049	BS000GB69V50
63	6,9 gRB 000 BS88/063	A330050	BS000GB69V63
80	6,9 gRB 000 BS88/080	N330108	BS000GB69V80
100	6,9 gRB 000 BS88/100	H330103	BS000GB69V100
125	6,9 gRB 000 BS88/125	P330109	BS000GB69V125

75	6,9 URB 000 BS88/075	B330051	BS000UB69V75
80	6,9 URB 000 BS88/080	C330052	BS000UB69V80
100	6,9 URB 000 BS88/100	D330053	BS000UB69V100
110	6,9 URB 000 BS88/110	E330100	BS000UB69V110
125	6,9 URB 000 BS88/125	E330054	BS000UB69V125
150	6,9 URB 000 BS88/150	F330101	BS000UB69V150
160	6,9 URB 000 BS88/160	F330055	BS000UB69V160
200	6,9 URB 000 BS88/200	G330056	BS000UB69V200
250	6,9 URB 000 BS88/250	H330057	BS000UB69V250
315	6,9 URB 000 BS88/315	J330058	BS000UB69V315
350	5 URB 000 BS88/350	X330116	BS000UB50V350
400	5 URB 000 BS88/400	G330194	BS000UB50V400

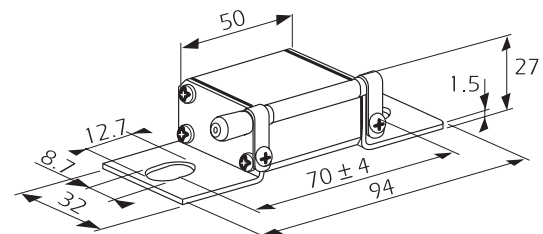


Weight: 125 g
Packaging: 3 pieces

British standard with separate blown fuse trip-indicator

Current rating	Designation	Ref. Number	Catalog Number
20	6,9 gRB 000 BS88P020	Y330117	BS000GB69V20P
25	6,9 gRB 000 BS88P025	Z330118	BS000GB69V25P
32	6,9 gRB 000 BS88P032	A330119	BS000GB69V32P
40	6,9 gRB 000 BS88P040	B330120	BS000GB69V40P
50	6,9 gRB 000 BS88P050	C330121	BS000GB69V50P
63	6,9 gRB 000 BS88P063	D330122	BS000GB69V63P
80	6,9 gRB 000 BS88P080	E330123	BS000GB69V80P
100	6,9 gRB 000 BS88P100	F330124	BS000GB69V100P
125	6,9 gRB 000 BS88P125	G330125	BS000GB69V125P

75	6,9 URB 000 BS88P075	H330126	BS000UB69V75P
80	6,9 URB 000 BS88P080	J330127	BS000UB69V80P
100	6,9 URB 000 BS88P100	K330128	BS000UB69V100P
110	6,9 URB 000 BS88P110	L330129	BS000UB69V110P
125	6,9 URB 000 BS88P125	M330130	BS000UB69V125P
150	6,9 URB 000 BS88P150	N330131	BS000UB69V150P
160	6,9 URB 000 BS88P160	P330132	BS000UB69V160P
200	6,9 URB 000 BS88P200	Q330133	BS000UB69V200P
250	6,9 URB 000 BS88P250	R330134	BS000UB69V250P
315	6,9 URB 000 BS88P315	S330135	BS000UB69V315P
350	5 URB 000 BS88P350	T330136	BS000UB50V350P
400	5 URB 000 BS88P400	H330195	BS000UB50V400P



Weight: 135 g
Packaging: 3 pieces

The use of MC 6.3 GR 2-5N blown fuse remote sensing microswitch is possible.
Ref. Number : Y 310015 mounted on separate trip-indicator.
See Microswitch section



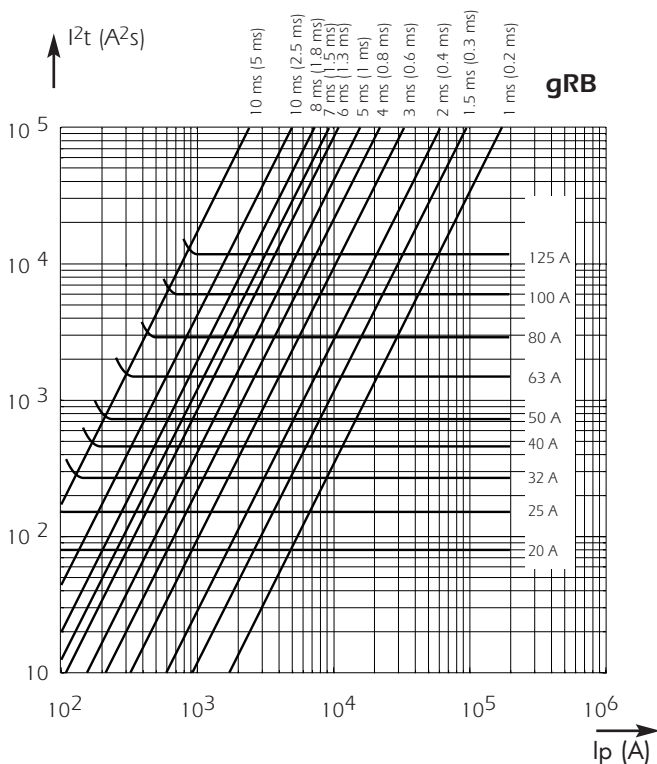
Semiconductor (AC) fuses

Other Protistor® Fuses

BS88-4 Fuses

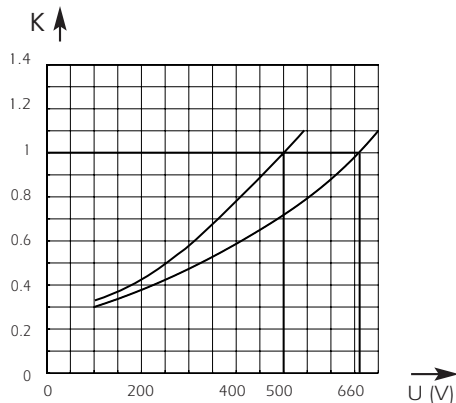
000 BS88 - 500 V to 690 VAC

Total clearing I^2t

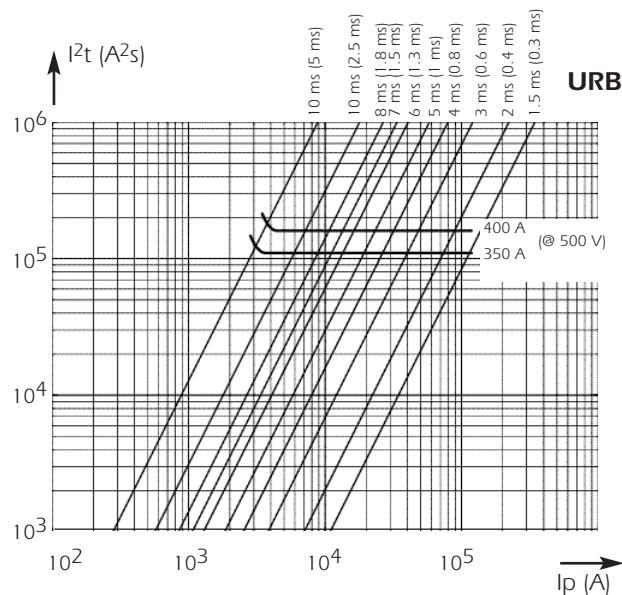
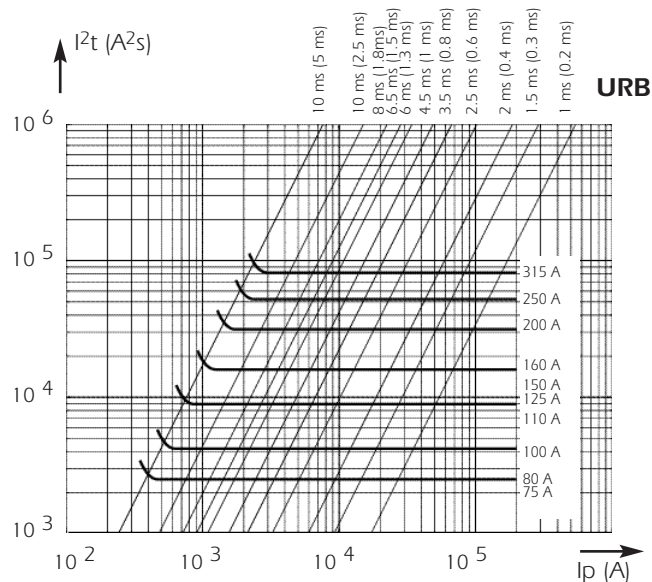


Above: Horizontal curves show, for each rated current, maximum values of total clearing I^2t (I^2t_t) as a function of prospective current I_p . @ UN with $\cos \varphi = 0.15$. Oblique lines indicate total clearing duration T_t , with associated pre-arcing duration in brackets.

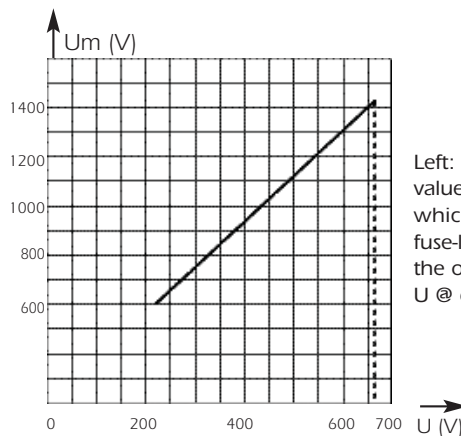
I^2t corrective factor



Above: Mean curves show variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U.



Peak arc voltage



Left: Curve shows peak value U_m of arc voltage which appears across fuse-link as a function of the operating voltage U @ $\cos \varphi = 0.15$

Semiconductor (AC) fuses

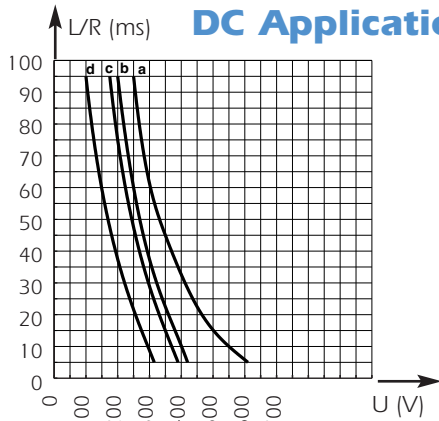


Other Protistor® Fuses

BS88-4 Fuses

000 BS88 - 500 V to 690 VAC

DC Application data



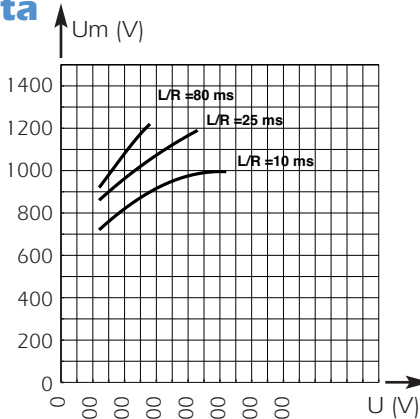
Above: curves indicate permissible value of time constant L/R as a function of DC working voltage.

Curve a: for ratings from 20 to 160 A

Curve b: for ratings from 180 to 200 A

Curve c: for ratings from 250 to 315 A

Curve d: for ratings from 350 to 400 A

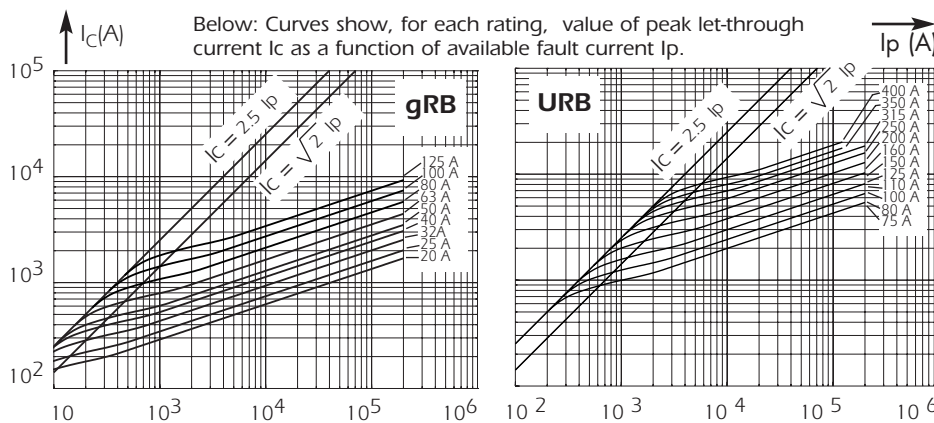


Above: Curves indicate peak arc voltage Um which may appear across the fuse terminals at working voltage U.

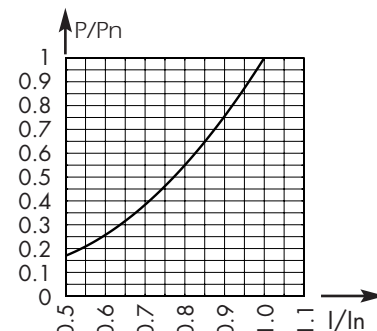
Rated current	Curve	I _{pm} (A)
20	a	60
25	a	65
32	a	90
40	a	120
50	a	150
63	a	200
80	a	270
100	a	370
125	a	500
160	a	700
200	b	1200
250	c	1800
315	c	2200
350	d	2600
400	d	3100

I_{pm} values give minimum DC interrupting current in amps.

Current limitation curves

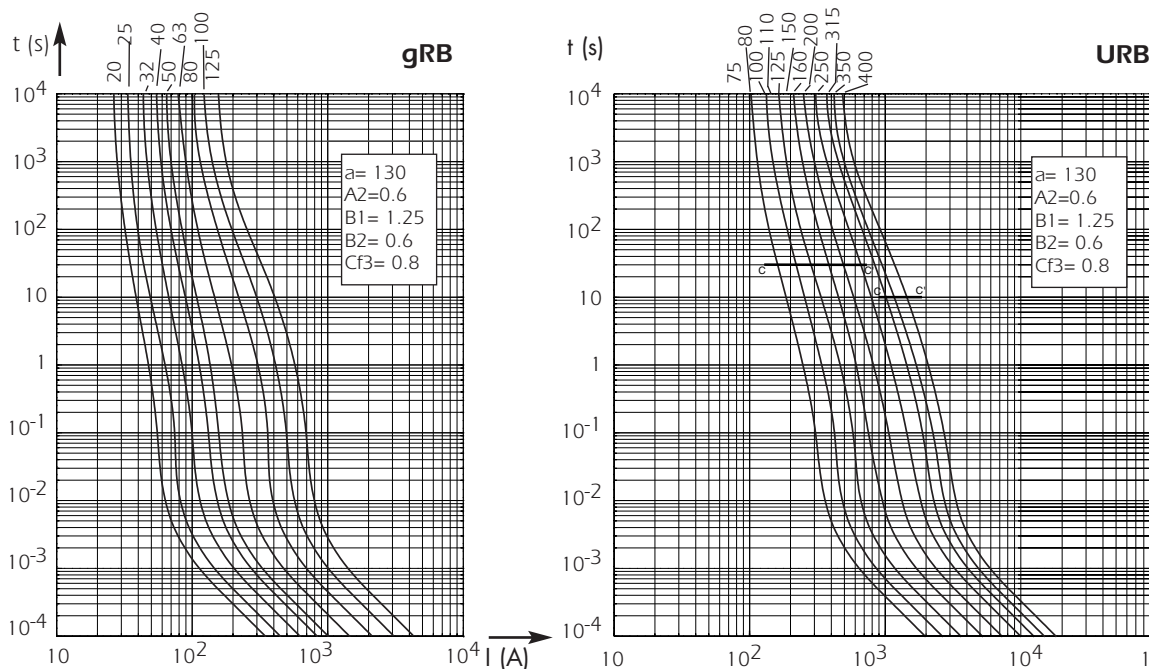


Watts loss



Above: Curve enables computation of power losses P for a IN-rated fuse as a function of the R.M.S. current I (as a multiple of IN for steady state operation)

Time vs current characteristics



Left: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current

Tolerance for mean pre-arcing current $\pm 8\%$.

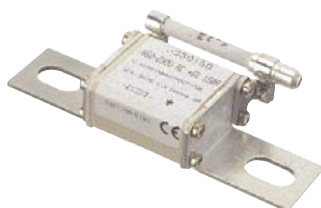


Semiconductor (AC) fuses

Other Protistor® Fuses

BS88-4 Fuses

000, 2.000 BS88Z - 690 VAC



EXTREMELY HIGH BREAKING CAPACITY FUSES: PROTECTION OF POWER SEMICONDUCTORS AS PER IEC STANDARD 60269.1 AND 4

690 V VOLTAGE RATING (RATINGS 50 TO 500 A)

gR CLASS (gRB RATINGS 50 AND 65 A) COMPLYING WITH VDE 636-23

- CLEARING ALL OVERLOADS
- IMPROVED SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION WITH ALL FUSES

aR CLASS (URC AND URD RATINGS 75 TO 500 A) ACCORDING TO VDE 636-23 AND IEC 60269.4

FOUR MODELS: SINGLE AND TWIN BODY AS PER BS 88-4 STANDARD ; Z2 DRAWING (92 mm BETWEEN AXES) WITHOUT BLOWN FUSE INDICATOR - WITH SEPARATE TRIP-INDICATOR

These fuses are UL Recognized



Main Characteristics

Voltage rating U_N (V)	Size	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 ms$ I^2t_p (A ² s)	Total clearing $I^2t @ 660 V$ I^2t_t (A ² s)	Watts loss		Tested Breaking capacity	Estimated Breaking capacity
						0.8 I_N	I_N		
690	000	gRB	50	102	730	7.7	14	200 kA @ 690 V	300 kA @ 690 V
			65	210	1500	8.8	16		
		URC	75	390	2500	9.4	17		
			85	540	3300	10.5	19		
			90	690	4200	13.2	24		
			110	1300	8900	13.8	25		
			150	2700	16000	14.3	26		
			180	5250	31500	14.9	27		
			200	9900	52000	15.4	28		
			250	15500	82000	17.6	32		
			280	15500	82000	23.7	43		
	2.000	URC	175	2760	16800	18.2	33	200 kA @ 690 V	300 kA @ 690 V
			200	3800	25000	20.4	37		
			235	5200	35600	24.2	44		
			300	10800	64000	28.6	52		
			325	15400	92400	29.1	53		
			355	21000	126000	29.7	54		
			400	39600	208000	30.8	56		
			450	40000	210000	33	60		
			500	62000	328000	35.2	64		
		URD	355	21000	126000	29.7	54		

Minimum operating voltage for separate trip-indicator: 20 V

Semiconductor (AC) fuses



Other Protistor® Fuses

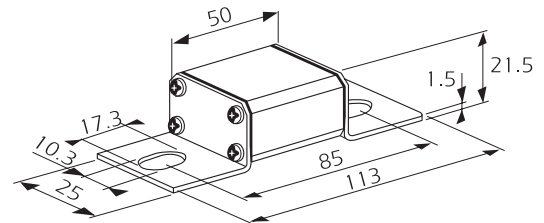
BS88-4 Fuses

000, 2.000 BS88Z - 690 VAC

British standard without blown fuse indicator

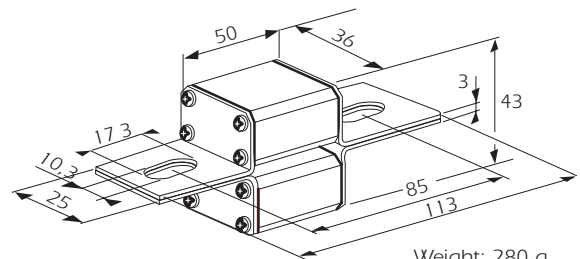


Current rating	Designation	Ref. Number	Catalog Number
50	6,9 gRB 000 BS88Z/050	V330137	BZ000GB69V50
65	6,9 gRB 000 BS88Z/065	W330138	BZ000GB69V65
75	6,9 URC 000 BS88Z/075	X330139	BZ000UC69V75
85	6,9 URC 000 BS88Z/085	Y330140	BZ000UC69V85
90	6,9 URC 000 BS88Z/090	Z330141	BZ000UC69V90
110	6,9 URC 000 BS88Z/110	A330142	BZ000UC69V110
150	6,9 URC 000 BS88Z/150	B330143	BZ000UC69V150
180	6,9 URC 000 BS88Z/180	C330144	BZ000UC69V180
200	6,9 URD 000 BS88Z/200	D330145	BZ000UD69V200
250	6,9 URD 000 BS88Z/250	E330146	BZ000UD69V250
280	6,9 URC 000 BS88Z/280	F330147	BZ000UC69V280



Weight: 140 g
Packaging: 3 pieces

175	6,9 URC 2000 BS88Z/175	P330155	BZ2000UC69V175
200	6,9 URC 2000 BS88Z/200	Q330156	BZ2000UC69V200
235	6,9 URC 2000 BS88Z/235	R330157	BZ2000UC69V235
300	6,9 URC 2000 BS88Z/300	S330158	BZ2000UC69V300
325	6,9 URC 2000 BS88Z/325	T330159	BZ2000UC69V325
355	6,9 URC 2000 BS88Z/355	V330160	BZ2000UC69V355
400	6,9 URD 2000 BS88Z/400	W330161	BZ2000UD69V400
450	6,9 URC 2000 BS88Z/450	X330162	BZ2000UC69V450
500	6,9 URD 2000 BS88Z/500	Y330163	BZ2000UD69V500

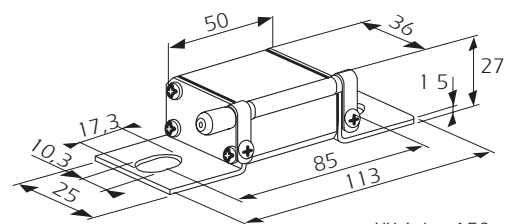


Weight: 280 g
Packaging: 3 pieces

British standard with separate trip-indicator

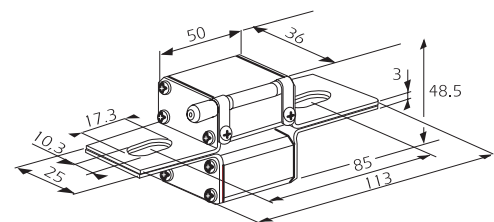


Current rating	Designation	Ref. Number	Catalog Number
90	6,9 URC 000 BS88ZP090	G330148	BZ000UC69V90P
110	6,9 URC 000 BS88ZP110	H330149	BZ000UC69V110P
150	6,9 URC 000 BS88ZP150	J330150	BZ000UC69V150P
180	6,9 URC 000 BS88ZP180	K330151	BZ000UC69V180P
200	6,9 URD 000 BS88ZP200	L330152	BZ000UD69V200P
250	6,9 URD 000 BS88ZP250	M330153	BZ000UD69V250P
280	6,9 URC 000 BS88ZP280	N330154	BZ000UC69V280P



Weight: 150 g
Packaging: 3 pieces

175	6,9 URC 2000 BS88ZP175	Z330164	BZ2000UC69V175P
200	6,9 URC 2000 BS88ZP200	A330165	BZ2000UC69V200P
235	6,9 URC 2000 BS88ZP235	B330166	BZ2000UC69V235P
300	6,9 URC 2000 BS88ZP300	C330167	BZ2000UC69V300P
325	6,9 URC 2000 BS88ZP325	D330168	BZ2000UC69V325P
355	6,9 URC 2000 BS88ZP355	E330169	BZ2000UC69V355P
400	6,9 URD 2000 BS88ZP400	F330170	BZ2000UD69V400P
450	6,9 URC 2000 BS88ZP450	G330171	BZ2000UC69V450P
500	6,9 URD 2000 BS88ZP500	H330172	BZ2000UD69V500P



Weight: 290 g
Packaging: 3 pieces

The use of MC 6.3 GR 2-5N blown fuse remote sensing microswitch is possible.
Ref. Number: Y 310015 mounted on separate trip-indicator.



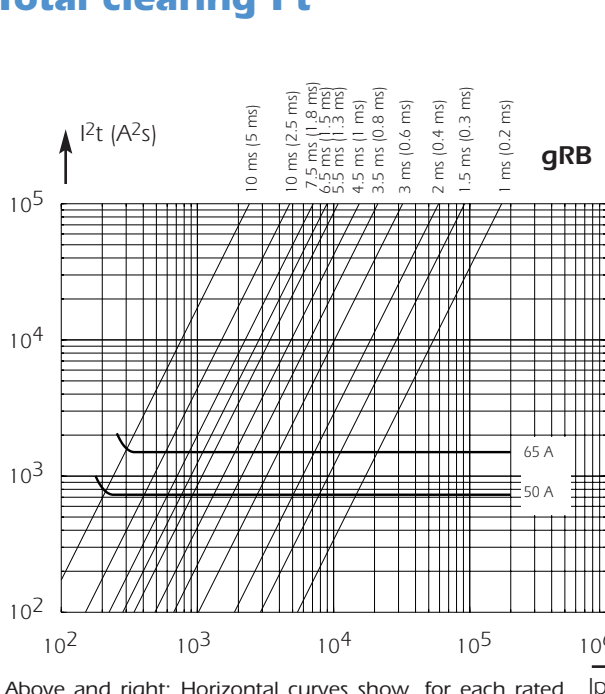
Semiconductor (AC) fuses

Other Protistor® Fuses

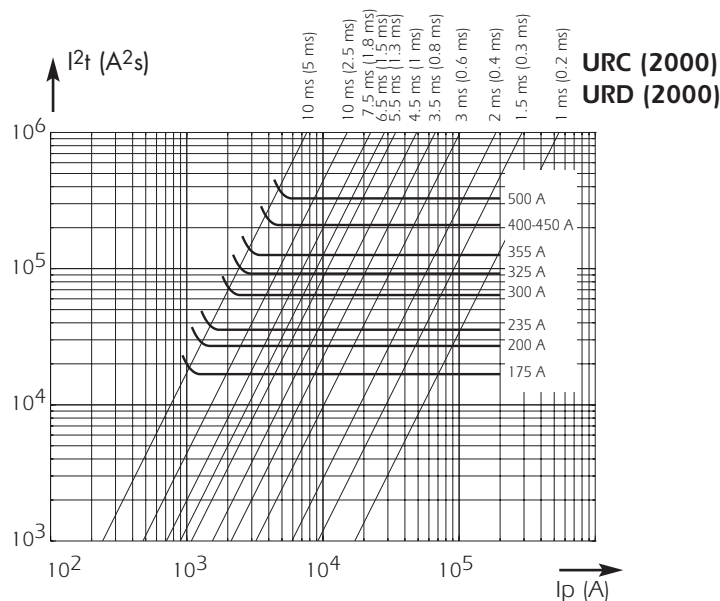
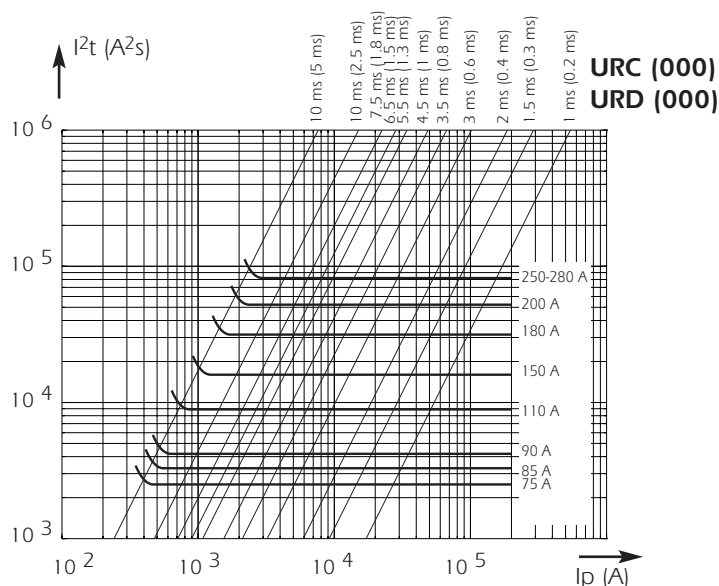
BS88-4 Fuses

000, 2.000 BS88Z - 690 VAC

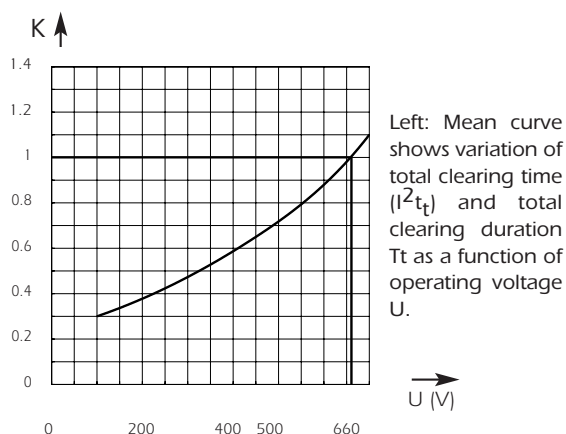
Total clearing I^2t



Above and right: Horizontal curves show, for each rated current, maximum values of total clearing I^2t (I^2t_t) as a function of prospective current I_p @ UN with $\cos \varphi = 0.15$. Oblique lines indicate total clearing duration T_t , with associated pre-arcing duration in brackets.

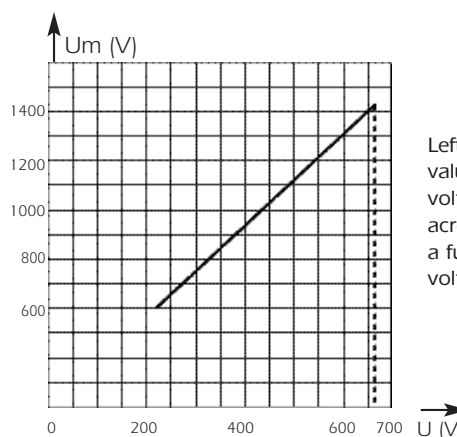


I^2t corrective factor



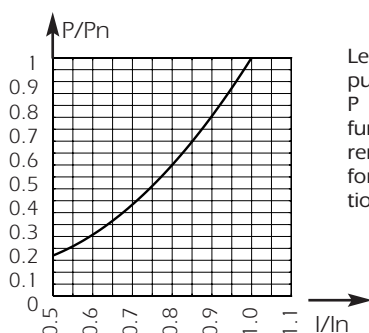
Left: Mean curve shows variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .

Peak arc voltage



Left: Curve shows peak value U_m of the arc voltage which appears across fuse-link as a function of operating voltage U @ $\cos \varphi = 0.15$

Watts loss



Left: Curve enables computation of power losses P for I_N -rated fuse as a function of R.M.S. current I (as a multiple of I_N for steady state operation)

Semiconductor (AC) fuses

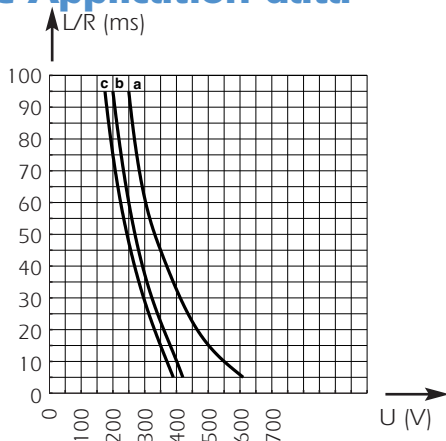


Other Protistor® Fuses

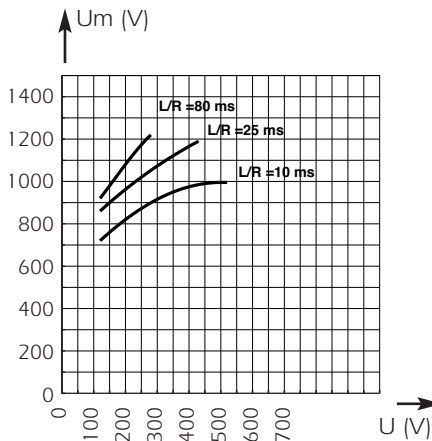
BS88-4 Fuses

000, 2.000 BS88Z - 690 VAC

DC Application data



Above: Curves indicate permissible value of time constant L/R as a function of DC working voltage.
Curve a: Ratings from 175 to 300 A
Curve b: Rating 325 A
Curve c: Ratings from 355 to 500 A

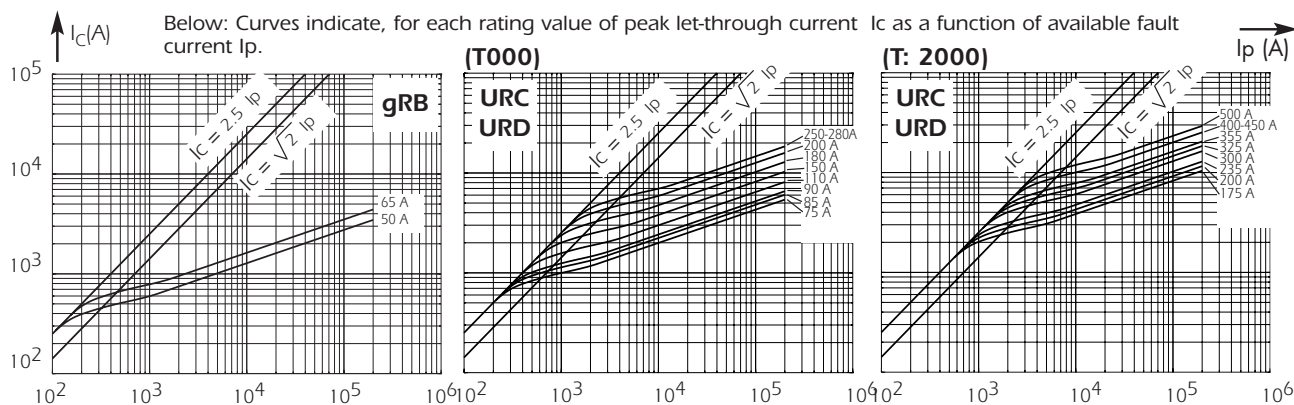


Above: Curves indicate peak arc voltage U_m which may appear across fuse terminals at working voltage U .

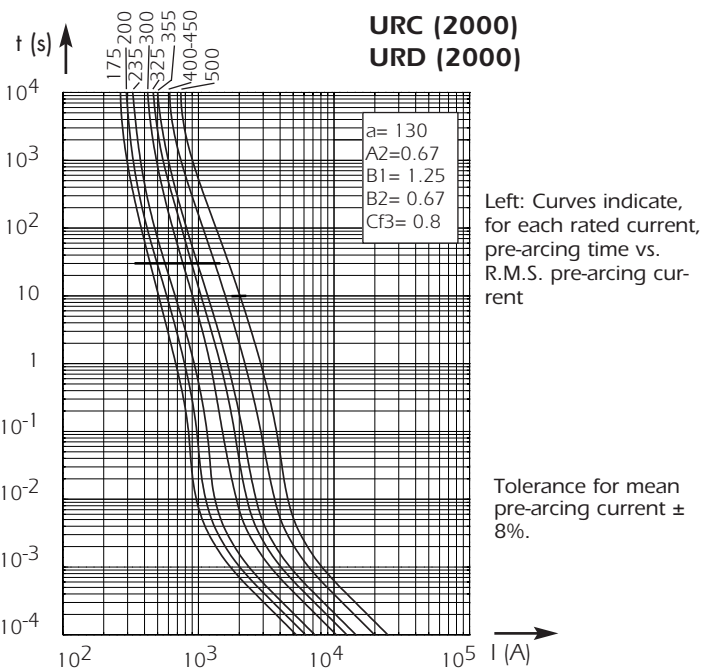
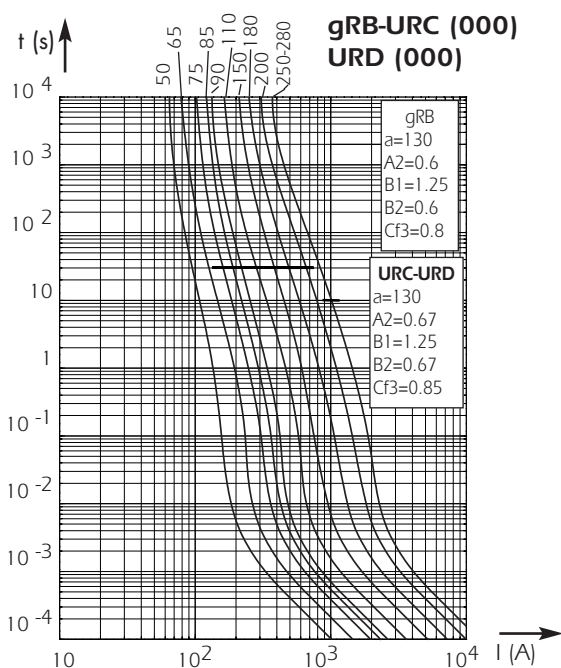
Rated current	Curve	I_{pm} (A)
50	a	150
65	a	200
75	a	270
85	a	350
90	a	370
110	a	500
150	a	700
180	b	1200
200	c	1800
250	c	2200
280	c	2200
175	a	740
200	a	870
235	a	1000
300	a	1400
325	b	1900
355	b	2400
400	c	3600
450	c	4400
500	c	4400

I_{pm} values give minimum DC interrupting current in amps.

Current limitation curves



Time vs current characteristics



Left: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current

Tolerance for mean pre-arcing current $\pm 8\%$.

Other Protistor® Fuses

BS88-4 Fuses

36x55, 2x36x55 - 690 VAC



EXTREMELY HIGH BREAKING CAPACITY FUSES:
PROTECTION OF POWER SEMICONDUCTORS AS PER IEC
STANDARD 60269.1 AND 4
690 V VOLTAGE RATING COMPLYING WITH IEC 33
AR CLASS (RATINGS FROM 75 TO 800 A) AS PER VDE 636-23
AND IEC 60269.4
THREE MODELS COMPLYING WITH BS 88-4
- WITHOUT INDICATOR
- WITH SEPARATE TRIP-INDICATOR
- WITH BUILT-IN TRIP-INDICATOR

Main Characteristics

Voltage rating U_N (V)	Size	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2t_p (A ² s)	Total clearing $I^2t @ 660 \text{ V}$ A ² s		Watts loss		Tested Breaking capacity
					$I_p \leq 50 I_N$	$I_p > 50 I_N$	$0.8 I_N$	I_N	
690V	36x55	URR	75	350	1800	2000	9.7	19.5	200k A @ 690 V
			110	1180	6000	67000	11.3	22.8	
			200	3900	18500	20500	21.8	41.4	
			250	8760	41000	46000	23.6	44.1	
		URGL	50	180	860	990	7.3	14.0	200k A @ 690 V
			65	335	1600	1840	8.8	17.1	
			85	480	3450	4000	12.2	23.5	
			90	720	41000	4700	13.2	25.5	
			150	2880	12600	14500	18.9	35.3	
			180	5350	22500	25500	19.1	35.7	
			200	9510	40000	46000	17.7	33.1	
			250	21400	97000	11000	18.7	34.5	
			280	29100	125000	145000	20.3	38.0	
			315	38100	157000	180000	222.77	42.6	
			355	48200	190000	215000	25.9	48.5	
			400	72000	265000	305000	26.7	50.0	
	2x36x55	URU	200	4700	24000	27000	18.4	33.0	200k A @ 690 V
			235	6920	34500	39000	21.0	37.6	
			400	21200	100000	110000	34.8	62.3	
			500	35000	164000	184000	47.2	88.2	
			630	97300	515000	575000	41.1	73.2	
		URGM	175	2880	13800	16000	24.7	47.6	200k A @ 690 V
			300	13700	660000	68000	31.5	59.0	
			325	21400	900000	102000	30.0	54.0	
			355	25200	106000	120000	33.1	62.0	
			450	65600	300000	340000	34.6	63.8	
			500	85600	390000	440000	37.44	69.0	
			630	152000	630000	720000	45.4	85.2	
			710	193000	760000	860000	51.8	97.0	
			800	282000	1.22 10 ⁶	1.22 10 ⁶	53.4	100.0	

Minimum operating voltage for built-in and separate trip indicator = 20 V



Other Protistor® Fuses

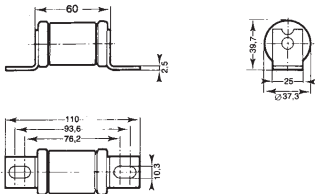
BS88-4 Fuses

36x55, 2x36x55 - 690 VAC

Ref. Numbers

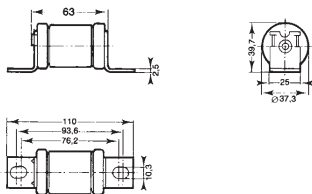
CP 36x55

without trip-indicator



CP 36x55

with built-in trip-indicator

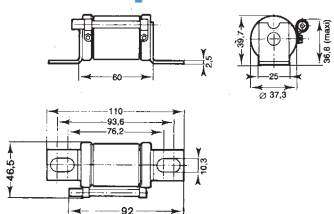


Microswitch MC 36 GR 2.5 - Ref. P 092496

CP 36x55

with separated trip-indicator

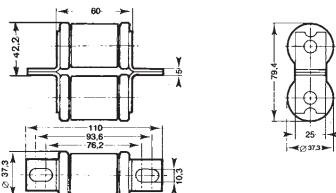
BS88-4



Microswitch MC 36 GR 2.5 - Ref. Y 310015

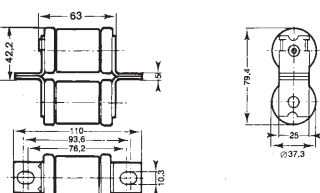
CP 2x36x55

without trip-indicator



CP 2x36x55

with built-in trip-indicator



Microswitch MC 36 GR 2.5 - Ref. P 092496

Size	Designation	Ref. Number	Pack.	Catalog Number
36x55	6,9 URGL 36/50	X097103		BS36UL69V50
	6,9 URGL 36/65	H097113		BS36UL69V65
	6,9 URR 36/75	H097136		BS36UR69V75
	6,9 URGL 36/85	M097163		BS36UL69V85
	6,9 URGL 36/90	N097164		BS36UL69V90
	6,9 URR 36/110	P097165	6	BS36UR69V110
	6,9 URGL 36/150	O097166	(220g)	BS36UL69V150
	6,9 URGL 36/180	R097167		BS36UL69V180
	6,9 URR 36/200	S097168		BS36UR69V200
	6,9 URGL 36/200	T097169		BS36UL69V200
	6,9 URR 36/250	V097170		BS36UR69V250
	6,9 URGL 36/250	W097171		BS36UL69V250
	6,9 URGL 36/280	A097175		BS36UL69V280
	6,9 URGL 36/315	B097176		BS36UL69V315
	6,9 URGL 36/355	C097177		BS36UL69V355
	6,9 URGL 36/400	D097178		BS36UL69V400

Size	Designation	Ref. Number	Pack.	Catalog Number
36x55	6,6 URGL 36T50	N097210		BS36UL69V50T
	6,9 URGL 36T65	K097230		BS36UL69V65T
	6,9 URR 36T75	H099965		BS36UR69V75T
	6,9 URGL 36T85	M097255		BS36UL69V85T
	6,9 URGL 36T90	N097256		BS36UL69V90T
	6,9 URR 36T110	R099973	6	BS36UR69V110T
	6,9 URGL 36T150	Z082178	(220g)	BS36UL69V150T
	6,9 URGL 36T180	P097257		BS36UL69V180T
	6,9 URR 36T200	A085560		BS36UR69V200T
	6,9 URGL 36T200	R097259		BS36UL69V200T
	6,9 URR 36T250	W097263		BS36UR69V250T
	6,9 URGL 36T250	X097264		BS36UL69V250T
	6,9 URGL 36T280	Y097265		BS36UL69V280T
	6,9 URGL 36T315	Z097266		BS36UL69V315T
	6,9 URGL 36T355	A097267		BS36UL69V355T
	6,9 URGL 36T400	C097269		BS36UL69V400T

Size	Designation	Ref. Number	Pack.	Catalog Number
36x55	6,9 URGL 36P90	H097182		BS36UL69V90P
	6,9 URR 36P110	J097183		BS36UR69V110P
	6,9 URGL 36P150	K097184		BS36UL69V150P
	6,9 URGL 36P180	L097185		BS36UL69V180P
	6,9 URR 36P200	M097186		BS36UR69V200P
	6,9 URGL 36P200	N097187	6	BS36UL69V200P
	6,9 URR 36P250	P097188	(230g)	BS36UR69V250P
	6,9 URGL 36P250	O097189		BS36UL69V250P
	6,9 URGL 36P280	R097190		BS36UL69V280P
	6,9 URGL 36P315	V097193		BS36UL69V315P
	6,9 URGL 36P355	Y097196		BS36UL69V355P
	6,9 URGL 36P400	M097209		BS36UL69V400P

Size	Designation	Ref. Number	Pack.	Catalog Number
2x36x55	6,9 URGM 236/175	D097270		BS236UM69V175
	6,9 URU 236/200	F097272		BS236UU69V200
	6,9 URU 236/235	J097275		BS236UU69V235
	6,9 URGM 236/300	K097276		BS236UM69V300
	6,9 URGM 236/325	R097282		BS236UM69V325
	6,9 URGM 236/355	S097283	3	BS236UM69V355
	6,9 URU 236/400	T097284	(400g)	BS236UU69V400
	6,9 URGM 236/450	Y097288		BS236UM69V450
	6,9 URGM 236/500	Z097289		BS236UM69V500
	6,9 URU 236/500	A097290		BS236UU69V500
	6,9 URGM 236/630	B097291		BS236UM69V630
	6,9 URU 236/630	R097351		BS236UU69V630
	6,9 URGM 236/710	S097352		BS236UM69V710
	6,9 URGM 236/800	Y097357		BS236UM69V800

Size	Designation	Ref. Number	Pack.	Catalog Number
2x36x55	6,9 URGM 236T175	F097456		BS236UM69V175T
	6,9 URU 236T200	G097457		BS236UU69V200T
	6,9 URU 236T235	A082179		BS236UU69V235T
	6,9 URGM 236T300	S085553		BS236UM69V300T
	6,9 URGM 236T325	J097459		BS236UM69V325T
	6,9 URGM 236T355	N097463	3	BS236UM69V355T
	6,9 URU 236T400	P097464	(400g)	BS236UU69V400T
	6,9 URGM 236T450	O097465		BS236UM69V450T
	6,9 URGM 236T500	R097466		BS236UM69V500T
	6,9 URU 236T500	S097467		BS236UU69V500T
	6,9 URGM 236T630	V097469		BS236UM69V630T
	6,9 URU 236T630	W097470		BS236UU69V630T
	6,9 URGM 236T710	C097476		BS236UM69V710T
	6,9 URGM 236T800	D097477		BS236UM69V800T



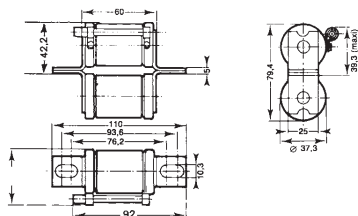
Semiconductor (AC) fuses

Other Protistor® Fuses

BS88-4 Fuses

36x55, 2x36x55 - 690 VAC

CP 2x36x55 with separated trip-indicator BS88-4



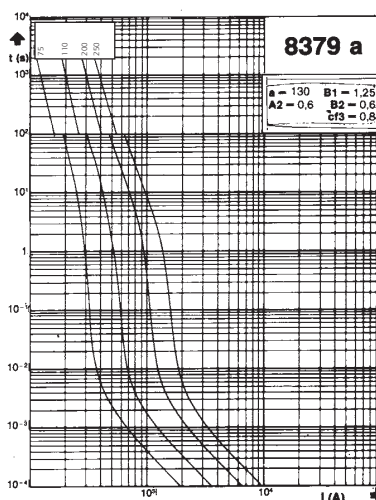
Microswitch MC 6,3 GR 2.5 - Ref. Y 310015

Size	Designation	Ref. Number	Pack.	Catalog Number
6,9	URGM 236P175	A097359		BS236UM69V175P
6,9	URU 236P200	E097363		BS236UU69V200P
6,9	URU 236P235	F097364		BS236UU69V235P
6,9	URGM 236P300	G097365		BS236UM69V300P
6,9	URGM 236P325	Q097373		BS236UM69V325P
6,9	URGM 236P355	R097374	3	BS236UM69V355P
6,9	URU 236P400	S097375	(410g)	BS236UU69V400P
2x36x55	6,9	URGM 236P450		BS236UM69V450P
6,9	URU 236P500	V097377		BS236UU69V500P
6,9	URGM 236P500	E097386		BS236UM69V500P
6,9	URU 236P630	J097390		BS236UU69V630P
6,9	URGM 236P630	P097395		BS236UM69V630P
6,9	URGM 236P710	B097452		BS236UM69V710P
6,9	URGM 236P800	E097455		BS236UM69V800P

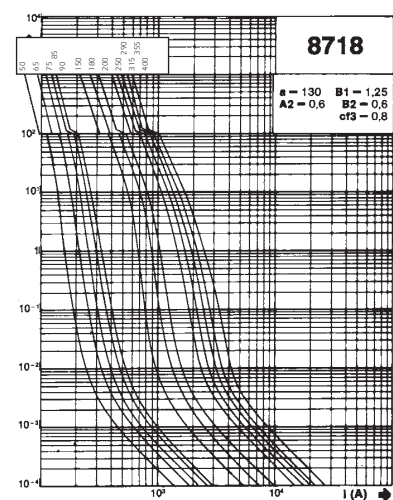
Electrical characteristics

Times vs current characteristics

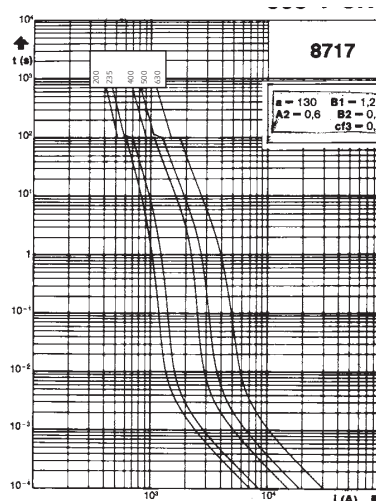
690 V URR



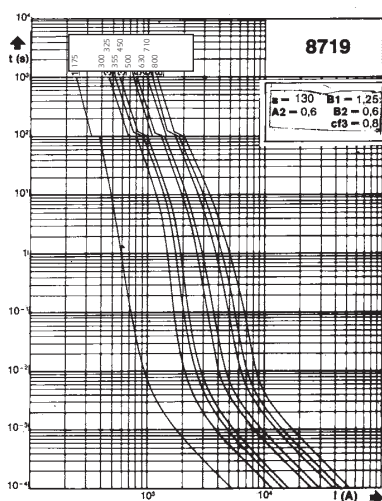
690 V URGL



690 V URU



690 V URGM



- These curves indicate, for each rated current, the pre-arcing time vs. the R/M.S. pre-arcing current.
- Tolerance for the mean pre-arcing current $\pm 10\%$

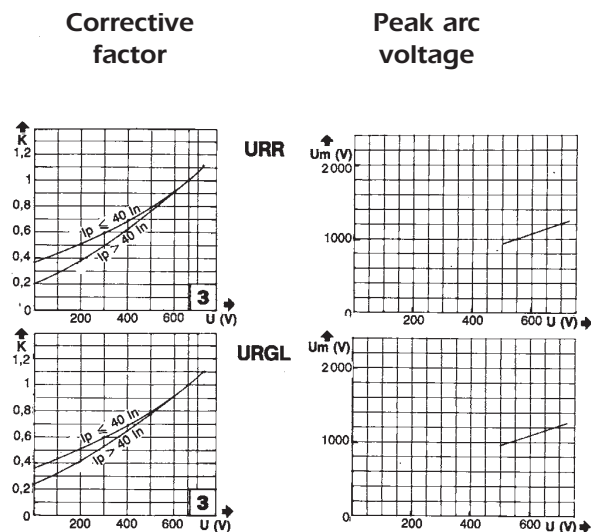
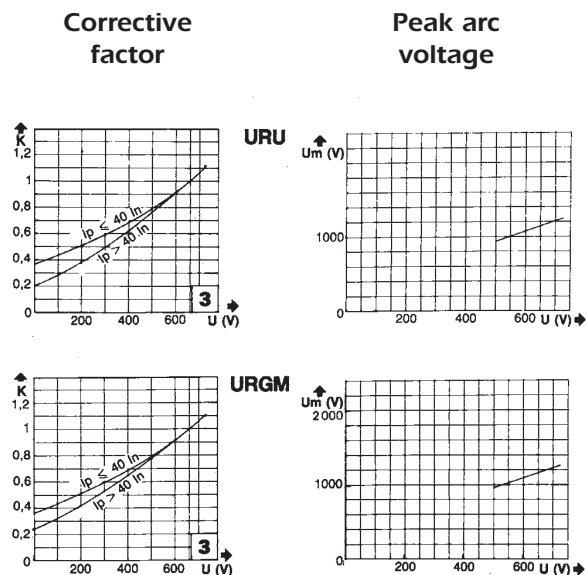


Other Protistor® Fuses

BS88-4 Fuses

36x55, 2x36x55 - 690 VAC

Corrective factor - Peak arc voltage



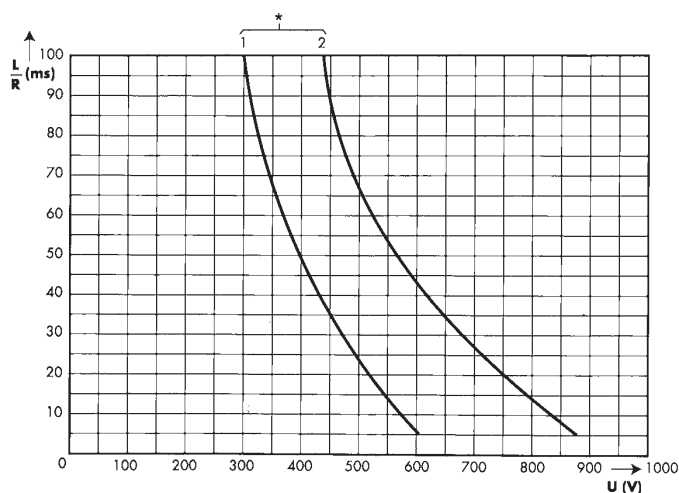
Corrective factor

The mean curves shows the variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .

Peak arc voltage

This curve shows peak value U_m of the arc voltage which appears across the fuse-link as a function of the operating voltage U @ $\cos \phi = 0.15$

DC Application data



- This curves indicate the permissible value of time constant L/R as a function of DC working voltage
- I_{pm} values give the minimum DC interrupting current in amps.

Curves and I_{pm} for each rating			
Class	Rated current	Curve*	I_{pm} (A)
URR	75	2	225
	110	2	330
	200	2	600
	250	2	750
URU	200	2	600
	235	2	700
	400	2	1200
	500	2	1500
	630	1	1890



Other Protistor® Fuses BS88-4 Fuses 17x49 gRB/URB - 690 VAC



EXTREMELY HIGH BREAKING CAPACITY FUSES:
PROTECTION OF SEMICONDUCTORS
AS PER IEC STANDARD 60269.1 AND 4

690 V VOLTAGE RATING AS PER IEC 33

gR CLASS (CURRENT RATING 12 TO 90 A) AS PER
VDE 636-23

- CLEARING ALL OVERLOADS
- IMPROVED SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION WITH ALL FUSES
WITHIN DISTRIBUTION CIRCUIT

aR CLASS (CURRENT RATING 100 A) ACCORDING TO VDE
636-23 AND IEC 60269.4

CONNECTION AS PER:

- GERMAN STANDARD DIN 43653/00C
- BRITISH STANDARD BS 88-4

These fuses are UL Recognized 

Main Characteristics

Voltage rating U_N (V)	Class	Current rating I_N (A)	pre-arcing $I^2t @ 1 \text{ ms}$ I^2tp (A ² s)	Total clearing $I^2t @ U_N$ I^2tt (A ² s)	Watts loss		Tested Breaking capacity	Estimated Breaking capacity
					0.8 I_N	I_N		
690	gRB	12	4.2	30	1.95	3.5	200 kA @ 690 V	300 kA @ 690 V
		16	9.6	65	2.2	4.0		
		20	17.1	110	3.0	5.5		
		25	26.8	170	4.4	8.0		
		32	52.5	330	5.0	9.0		
		35	69	430	5.2	9.5		
		40	96	610	5.8	10.5		
		45	130	820	6.3	11.5		
		50	154	970	7.2	13		
		55	210	1320	7.4	13.5		
		63	310	1950	8.0	14.5		
		75	520	3250	8.8	16		
		80	620	3900	9.4	17		
		90	840	5300	11	20		
690	URB	100	965	6150	13	23.5	200 kA @ 690 V	300 kA @ 690 V

Minimum operating voltage for separate trip-indicator: 20 V

Semiconductor (AC) fuses

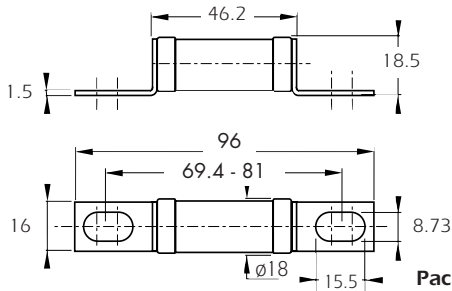


Other Protistor® Fuses

BS88-4 Fuses

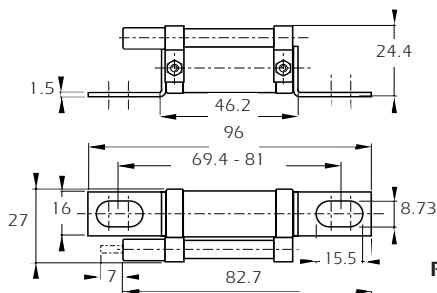
17x49 gRB/URB - 690 VAC

German standard without blown fuse indication



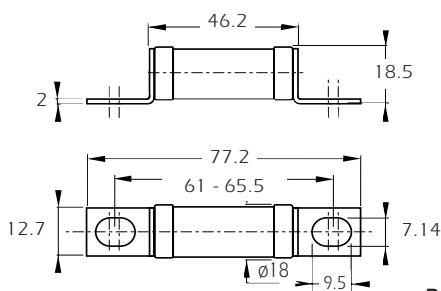
Weight: 42 g
Packaging: 10 pieces

German standard with separate trip-indicator DIN 43623/00C



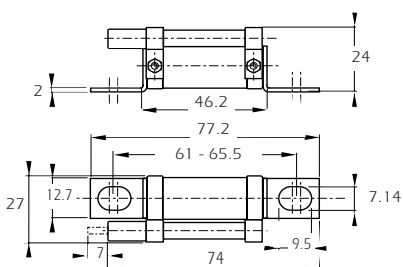
Weight: 55 g
Packaging: 10 pieces

British standard without blown fuse indication



Weight: 40 g
Packaging: 10 pieces

British standard with separate trip-indicator BS 88-4



Weight: 60 g
Packaging: 3 pieces

Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17 D08/12	M220972	DN17GB69V12
16	6,9 gRB 17 D08/16	N220973	DN17GB69V16
20	6,9 gRB 17 D08/20	P220974	DN17GB69V20
25	6,9 gRB 17 D08/25	Q220975	DN17GB69V25
32	6,9 gRB 17 D08/32	R220976	DN17GB69V32
35	6,9 gRB 17 D08/35	S220977	DN17GB69V35
40	6,9 gRB 17 D08/40	T220978	DN17GB69V40
45	6,9 gRB 17 D08/45	V220979	DN17GB69V45
50	6,9 gRB 17 D08/50	W220980	DN17GB69V50
55	6,9 gRB 17 D08/55	X220981	DN17GB69V55
63	6,9 gRB 17 D08/63	Y220982	DN17GB69V63
75	6,9 gRB 17 D08/75	Z220983	DN17GB69V75
80	6,9 gRB 17 D08/80	A220984	DN17GB69V80
90	6,9 gRB 17 D08/90	B220985	DN17GB69V90
100	6,9 URB 17 D08/100	C220986	DN17UB69V100

Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17 D08P 12	X221004	DN17GB69V12P
16	6,9 gRB 17 D08P 16	Y221005	DN17GB69V16P
20	6,9 gRB 17 D08P 20	Z221006	DN17GB69V20P
25	6,9 gRB 17 D08P 25	A221007	DN17GB69V25P
32	6,9 gRB 17 D08P 32	B221008	DN17GB69V32P
35	6,9 gRB 17 D08P 35	C221009	DN17GB69V35P
40	6,9 gRB 17 D08P 40	D221010	DN17GB69V40P
45	6,9 gRB 17 D08P 45	E221011	DN17GB69V45P
50	6,9 gRB 17 D08P 50	F221012	DN17GB69V50P
55	6,9 gRB 17 D08P 55	G221013	DN17GB69V55P
63	6,9 gRB 17 D08P 63	H221014	DN17GB69V63P
75	6,9 gRB 17 D08P 75	J221015	DN17GB69V75P
80	6,9 gRB 17 D08P 80	K221016	DN17GB69V80P
90	6,9 gRB 17 D08P 90	L221017	DN17GB69V90P
100	6,9 URB 17 D08P 100	M221018	DN17UB69V100P

Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17/12	W220957	BS17GB69V12
16	6,9 gRB 17/16	X220958	BS17GB69V16
20	6,9 gRB 17/20	Y220959	BS17GB69V20
25	6,9 gRB 17/25	Z220960	BS17GB69V25
32	6,9 gRB 17/32	A220961	BS17GB69V32
35	6,9 gRB 17/35	B220962	BS17GB69V35
40	6,9 gRB 17/40	C220963	BS17GB69V40
45	6,9 gRB 17/45	D220964	BS17GB69V45
50	6,9 gRB 17/50	E220965	BS17GB69V50
55	6,9 gRB 17/55	F220966	BS17GB69V55
63	6,9 gRB 17/63	G220967	BS17GB69V63
75	6,9 gRB 17/75	H220968	BS17GB69V75
80	6,9 gRB 17/80	J220969	BS17GB69V80
90	6,9 gRB 17/90	K220970	BS17GB69V90
100	6,9 URB 17/100	L220971	BS17UB69V100

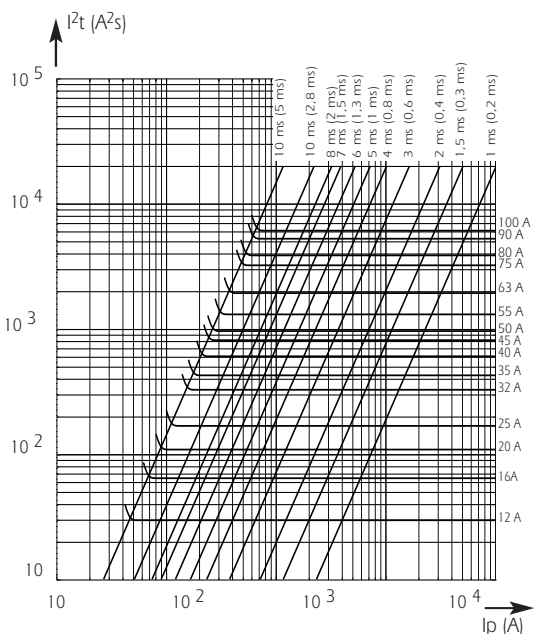
Current rating	Designation	Ref. Number	Catalog Number
12	6,9 gRB 17P12	D220987	BS17GB69V12P
16	6,9 gRB 17P16	E220988	BS17GB69V16P
20	6,9 gRB 17P20	F220989	BS17GB69V20P
25	6,9 gRB 17P25	G220990	BS17GB69V25P
32	6,9 gRB 17P32	H220991	BS17GB69V32P
35	6,9 gRB 17P35	J220992	BS17GB69V35P
40	6,9 gRB 17P40	K220993	BS17GB69V40P
45	6,9 gRB 17P45	L220994	BS17GB69V45P
50	6,9 gRB 17P50	M220995	BS17GB69V50P
55	6,9 gRB 17P55	N220996	BS17GB69V55P
63	6,9 gRB 17P63	P220997	BS17GB69V63P
75	6,9 gRB 17P75	Q220998	BS17GB69V75P
80	6,9 gRB 17P80	R220999	BS17GB69V80P
90	6,9 gRB 17P90	S221000	BS17GB69V90P
100	6,9 URB 17P100	T221001	BS17UB69V100P



Semiconductor (AC) fuses

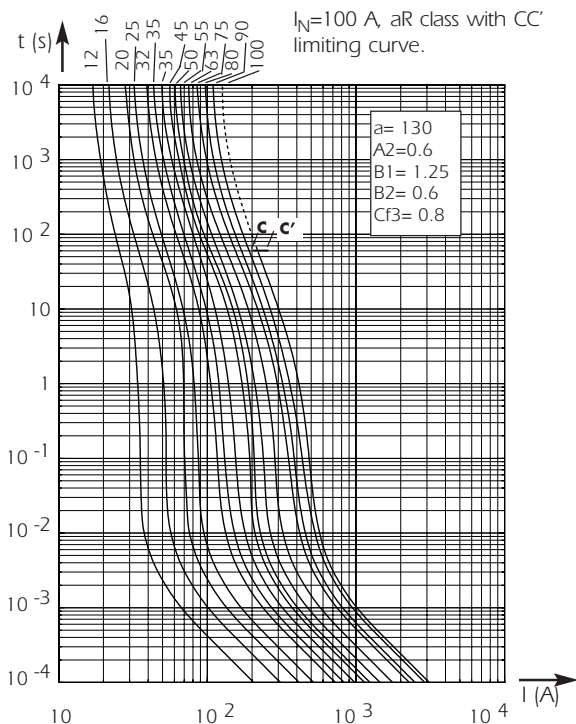
Other Protistor® Fuses BS88-4 Fuses 17x49 gRB/URB - 690 VAC

Total clearing I^2t



Above: Horizontal curves show for each rated current maximum values of total clearing I^2t (I^2t_t) as a function of prospective current I_p . @ 690 V.
 $\cos \varphi = 0.15$.
Oblique lines indicate total clearing duration T_t and associated pre-arcing duration in brackets.

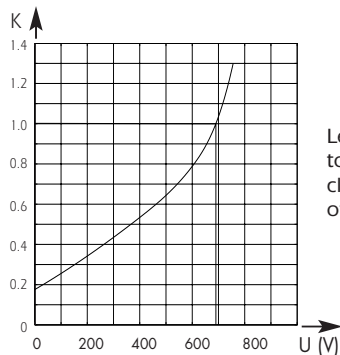
Time vs current characteristics



Tolerance for mean pre-arcing current $\pm 9\%$.

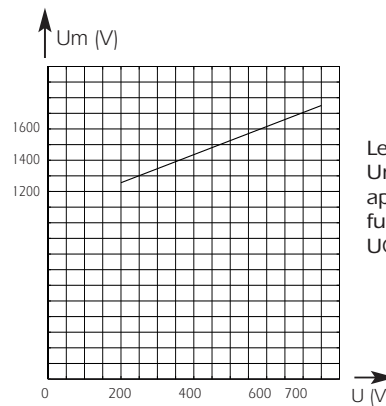
Above: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current

I^2t corrective factor



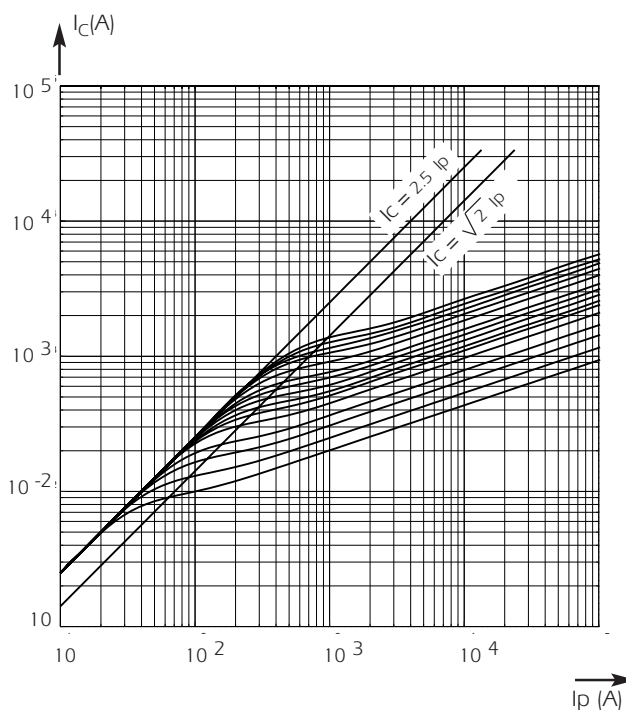
Left: Curve shows variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .

Peak arc voltage



Left: Curve shows peak value U_m of arc voltage which appears across fuse-link as a function of operating voltage U @ $\cos \varphi = 0.15$

Current limitation curves



Above: Curves show, for each rating, value of peak let-through current I_c as a function of available fault current I_p .

Semiconductor (AC) fuses

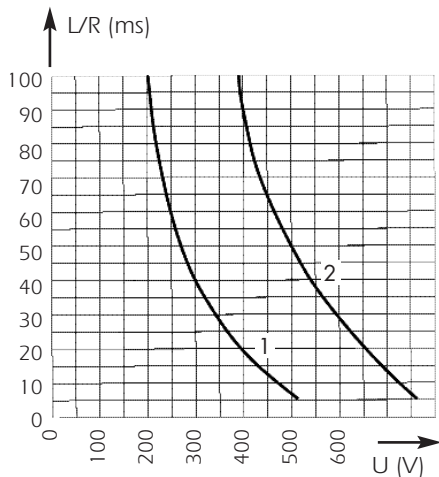


Other Protistor® Fuses

BS88-4 Fuses

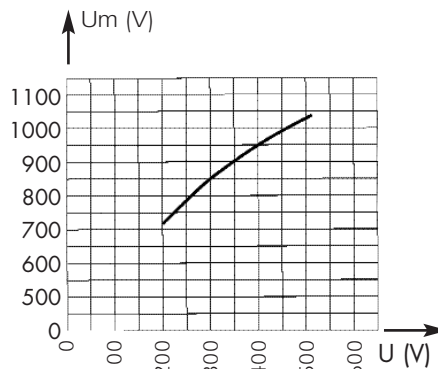
17x49 gRB/URB - 690 VAC

DC Application data



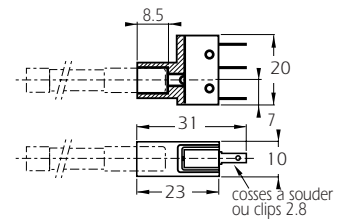
Above: Curves indicate permissible value of time constant L/R as a function of DC working voltage.

Curve 1: $I_p \geq 1,6 I_N$ only for fuses gRB (current rating from 12 to 50 A)
Curve 2: $I_p \geq 8 I_N$ for fuses gRB et URB



Curve indicates peak arc voltage U_m which may appear across the fuse terminals at working voltage U.

Microswitch



Designation	Ref. Num.	Weight	Pack.
MC 6,3 GR 2.5	Y 310015	10 g	3 pieces

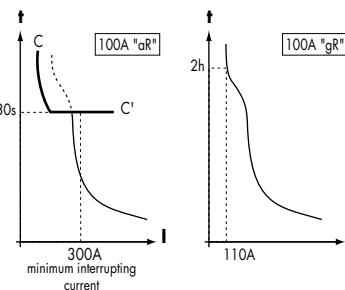
Electrical characteristics:
 $I_N = 3 A - U_N = 250 VAC$
 $I_N = 2 A - U_N = 30 VDC$

Certain minimum operating voltage/current
20 V-100 mA

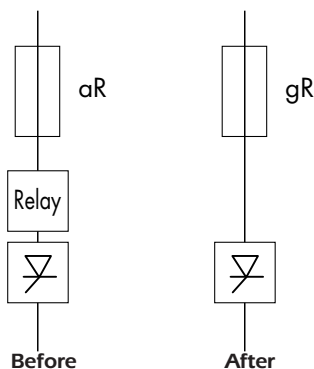
NEW gR-CLASS

OPTIMAL PROTECTION OF POWER EQUIPMENT

Thanks to recent technological developments, Ferraz Shawmut today markets gR-class PROTISTOR® fuses capable of clearing all types of overloads, from low multiples of current ratings up to very high short-circuit currents. Enhanced performance enables these fuses to provide solutions to many previously unsolved problems in power electronics: protection of cables without the use of additional components, protection of equipment from fire hazards, selective coordination of different fuses within a single power distribution installation...



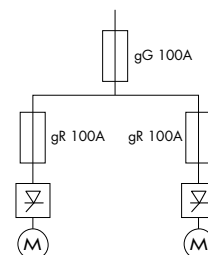
Example:
100A aR vs. 100A gR



SELECTIVE COORDINATION

gR-class semiconductor fuses can be utilized in association with gI and gG-class low voltage power distribution fuses of the same current rating, installed upstream. In a "selectively coordinated" distribution installation, melting is limited to the fuse associated with the faulted circuit, while upstream fuses remain intact. This prevents unnecessary down-time due to power blackouts in non-faulted branches.

Example of
selective
coordination



aR-CLASS vs. gR-CLASS

aR-class fuses feature a high minimum interrupting current as compared with their current rating. The primary time-current characteristic of aR-class fuses is the CC' curve, above which another protection device must be associated. The gR-class fuse represents considerably improved performance in semiconductor protection.

FERRAZ SHAWMUT EXPERTISE

gR-class fuses should be used in the design of low voltage equipment and in the protection of power electronics equipment. Designers can often substitute a gR-class fuse for an aR-class fuse (10x38, 14x51, 22x58, PSC 000 and 17x49 DIN80 or BS 88-4) but the reverse is not true: an aR fuse can never replace a gR fuse. Start protecting your new equipment with gR-class fuses today. The application of gR class fuses, with current ratings less than 100 Amps, offers enhanced protection, safety and reliability, along with reduced risk of replacement errors and assembly costs.



Other Protistor® Fuses

BS88-4 Fuses

Microswitches for BS88-4 Protistor®

MICROSWITCH SYSTEMS ADAPTED
TO THE FOLLOWING FUSES:

- BS88 - 4 separated trip-indicator
- BS88 - 4 built-in trip-indicator

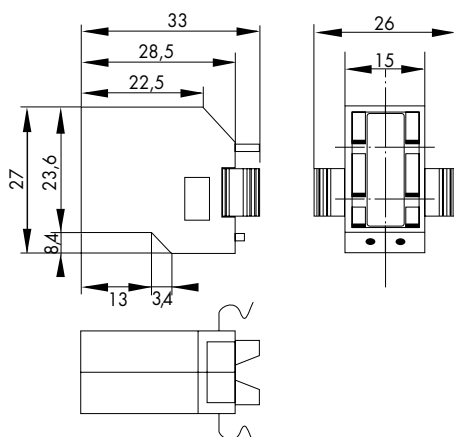
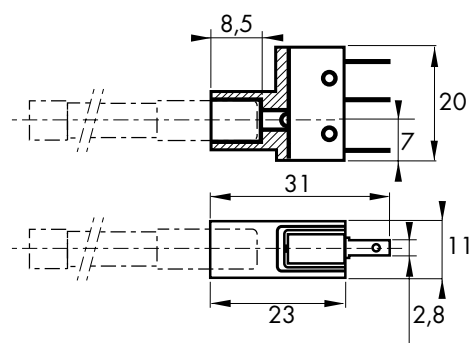
Main Characteristics

Code	AC Insulation voltage rating (***)	Positive operating voltage/current	Current rating	Current	Interrupting rating						AC voltage withstand test (*)	Impulse voltage test Uimp1.2/50 µs (**)	Fire class according to UL 94
					Non inductive circuit			Inductive circuit : L/R = 25ms					
					30V	110V	250V	30V	110V	250V			
MC 6,3 GR 2-5 N	1000 V	20 V 100 mA	5 A	50/60 Hz	-	5 A	0,3 A	-	3 A	2 A	3.5 kV	-	H.B.
				DC	4 A	0.4 A	-	3 A	0.4 A	-			
MC 36 GR 2-5	1000 V	20 V 100 mA	5 A	50/60 Hz	-	5 A	5 A	-	5 A	5 A	7.5 kV	-	
				DC	4 A	0.4 A	-	2 A	0.4 A				

* Between power circuit and microswitch terminals as per IEC 60 and 694 (50/60 Hz 1 min duration in dry air)

** Between power circuit and microswitch terminals Uimp: impulse voltage as per IEC 947-1

*** Between power circuit and microswitch terminals



Catalog Number	Ref. Number	Weight (g)	Pack.
MC 6,3 GR 2-5 N (for separate trip-indicator)	Y 310015	10	3

Catalog Number	Ref. Number	Weight (g)	Pack.
MC 36 GR 2-5 (for built-in trip-indicator)	P 092496	10	3





DIN Recticur fuses D - Type gR Fuses (DIAZED)

RECTICUR - D Fuse links "ultra rapide"

Specifications : IEC 60 269-4
DIN-VDE 0636 Part 23 and Part 33
DIN 43653
DIN 49515
DIN 49522
DIN 43620

RECTICUR-type ultra-rapid fuses are used to protect semiconductor components in power converters. D fuse links are designed for rated voltages of 500 V AC with rated currents extending from 2 to 100A.

Technical Notes

RECTICUR fuse links are equipped with fuse elements made of fine silver. The number and shape of their reductions in cross-section ensure satisfactory disconnection and optimum operating characteristics.

The design of the fuse element determines the characteristic curve and the remaining electrical properties of this fuse link.

Fuse links with gR characteristic provide total protection against overloading and against short-circuit currents.

Breaking Capacity

The switching reliability of RECTICUR semiconductor fuses has been verified in numerous tests extending up to the highest short-circuit currents. Rated braking capacity is 100 kA (RMS) for D-fuse links.

RECTICUR D Fuse bases

RECTICUR D fuse links can be fitted in all normal fuse-bases of the D system, using all usual accessories such as screw-cap and adaptor sleeve.

1 - This indicates the following maximum loadings for the various individual fuse links :

63-A fuse link : $I_{max} = 63 \text{ A} \times 0.7 = 44\text{A}$
50-A fuse link : $I_{max} = 50 \text{ A} \times 0.7 = 35\text{A}$
35-A fuse link : $I_{max} = 35 \text{ A} \times 0.7 = 25\text{A}$
25-A fuse link : $I_{max} = 25 \text{ A} \times 0.9 = 22.5\text{A}$
20-A fuse link : $I_{max} = 20 \text{ A} \times 0.9 = 18\text{A}$
16-A fuse link : $I_{max} = 16 \text{ A} \times 1 = 16\text{A}$
10-A fuse link : $I_{max} = 10 \text{ A} \times 1 = 10\text{A}$
6-A fuse link : $I_{max} = 6 \text{ A} \times 1 = 6\text{A}$

2 - The following additional reduction-factors must be used in installation sites with ambient temperatures $> 25^{\circ}\text{C}$

Ambient temp. ($^{\circ}\text{C}$) T	$T \leq 25$	$25 < T \leq 30$	$30 < T \leq 35$	$35 < T \leq 40$	$40 < T \leq 45$	$45 < T \leq 50$	$50 < T \leq 55$
Max. loading of fuse link (%)	100	94	88	82	75	67	58



DIN Recticur fuses D - Type Gr Fuses (DIAZED)

RECTICUR - D Fuse links "ultra rapide"

RECTITUR D-Fuse links can be used in all fuse bases of the D-system using the usual accessories such as screw caps and gauge pieces.

RECTITUR D

Fuse links

500 VAC - 400 VDC

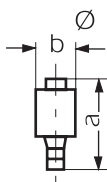
size D II, D III, D IV, operating class gR

Main characteristics

For base	Rated current (A)	Pre-arcing I ^t value (A ² s)	Total I ^t value at 380V (RMS) (A ² s)	Total I ^t value at 500V (RMS) (A ² s)	Power loss (W)	Kg/100 pcs.
D II	2	1	2	3	1,8	3,1
	4	2	4	5	3,1	3,1
	6	4	6	9	3,2	3,1
	10	10	14	20	5,0	3,1
	16	26	40	55	5,8	3,1
	20	40	60	85	8,0	3,1
	25	95	140	200	12,2	3,1
D III	35	490	790	1100	14	5,3
	50	900	1480	2050	16	5,3
	63	1580	2400	3200	19	5,3
D IV	80	3200	5200	7300	35	11,0
	100	5600	10100	14000	41	11,0

Dimensions

Dimensions	a	bØ
D II	50	22
DIII	50	27
DIV	57	33

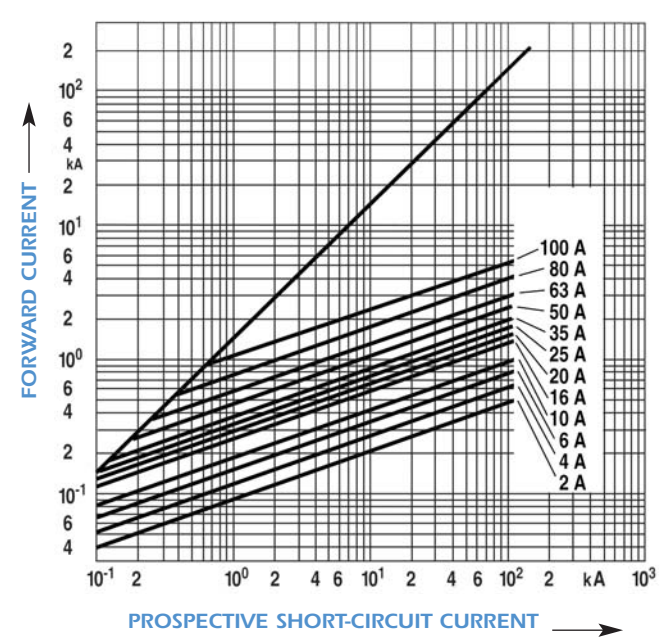
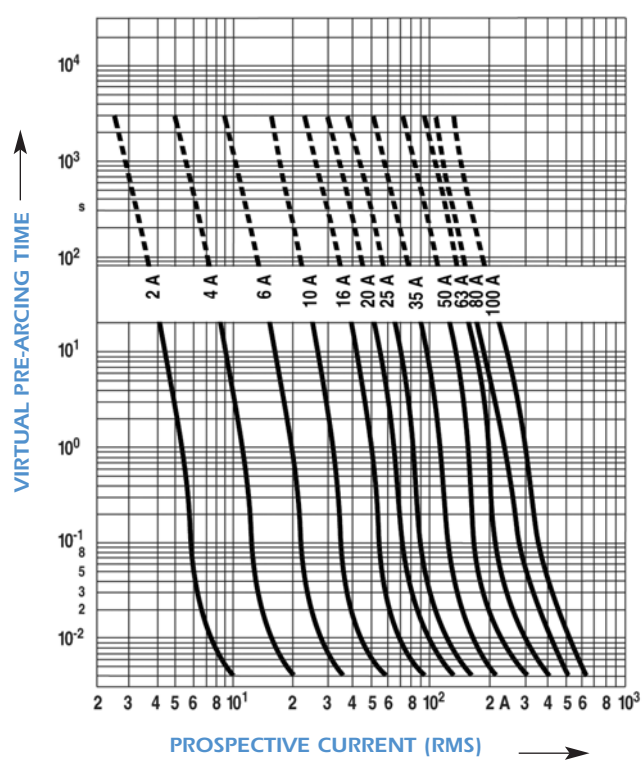




DIN Recticur fuses D - Type gR Fuses (DIAZED)

RECTICUR - D
Fuse links "ultra rapide"

Size	Intensité (A)	Tension (VAC)	Reference	Previous Ref.	Catalog Number
D II	2	500VAC/ 400 VDC	Z212542	5970028	DIIGR50V2
D II	4	500VAC/ 400 VDC	K213058	5970048	DIIGR50V4
D II	6	500VAC/ 400 VDC	E214065	5970068	DIIGR50V6
D II	10	500VAC/ 400 VDC	M214578	5970108	DIIGR50V10
D II	16	500VAC/ 400 VDC	T215090	5970168	DIIGR50V16
D II	20	500VAC/ 400 VDC	T215596	5970208	DIIGR50V20
D II	25	500VAC/ 400 VDC	B216109	5970258	DIIGR50V25
D II	30	500VAC/ 400 VDC	Y216612	5970308	DIIGR50V30
D III	35	500VAC/ 400 VDC	K217129	5980358	DIIGR50V35
D III	50	500VAC/ 400 VDC	Q217640	5980508	DIIGR50V50
D III	63	500VAC/ 400 VDC	Y218153	5980638	DIIGR50V63
D IV	80	500VAC/ 400 VDC	B201251	5980808	DIVGR50V80
D IV	100	500VAC/ 400 VDC	M201767	5981008	DIVGR50V100
D V	125	500VAC/ 400 VDC	J207054	5961258	DIVGR50V125
D V	160	500VAC/ 400 VDC	C211510	5961608	DIVGR50V160
D.V	200	500VAC/ 400 VDC	G212020	5962008	DIVGR50V200





DIN Recticur fuses DO - Type Gr Fuses (DIAZED)

RECTICUR - DO Fuse links "ultra rapide"

Specifications : IEC 60 269-4
DIN-VDE 0636 Part 23 and Part 33
DIN 43653
DIN 49515
DIN 49522
DIN 43620

RECTICUR-type ultra-rapid fuses are used to protect semiconductor components in power converters. DO fuse links have a rated voltage of 440 V AC and are available within the rated current range extending from 2 to 100A.

Technical Notes

RECTICUR fuse links are equipped with fuse elements made of fine silver. The number and shape of their reductions in cross-section ensure satisfactory disconnection and optimum operating characteristics.

The design of the fuse element determines the characteristic curve and the remaining electrical properties of this fuse link.

Fuse links with gR characteristic provide total protection against overloading and against short-circuit currents.

Breaking Capacity

The switching reliability of RECTICUR semiconductor fuses has been verified in numerous tests extending up to the highest short-circuit currents. Rated breaking capacity is 160 kA (RMS) for DO fuse links.

RECTICUR DO Fuse links

RECTICUR DO fuse links can be fitted in all normal fuse-bases of the DO system, using all usual accessories such as screw-cap and adaptor sleeve.

Fitting of LINO CUR switch-disconnector-fuse with RECTICUR DO Fuse Links

This means that the use of DO fuse links in combination with the LINO CUR switch-disconnector-fuse is subject to certain conditions.

1 - This indicates the following maximum loadings for the various individual fuse links :

63-A fuse link : $I_{max} = 63 \text{ A} \times 0.7 = 44\text{A}$
50-A fuse link : $I_{max} = 50 \text{ A} \times 0.7 = 35\text{A}$
35-A fuse link : $I_{max} = 35 \text{ A} \times 0.7 = 25\text{A}$
25-A fuse link : $I_{max} = 25 \text{ A} \times 0.9 = 22.5\text{A}$
20-A fuse link : $I_{max} = 20 \text{ A} \times 0.9 = 18\text{A}$
16-A fuse link : $I_{max} = 16 \text{ A} \times 1 = 16\text{A}$
10-A fuse link : $I_{max} = 10 \text{ A} \times 1 = 10\text{A}$
6-A fuse link : $I_{max} = 6 \text{ A} \times 1 = 6\text{A}$

2 - The following additional reduction-factors must be used in installation sites with ambient temperatures $> 25^{\circ}\text{C}$

Ambient temp. ($^{\circ}\text{C}$) T	$T \leq 25$	$25 < T \leq 30$	$30 < T \leq 35$	$35 < T \leq 40$	$40 < T \leq 45$	$45 < T \leq 50$	$50 < T \leq 55$
Max. loading of fuse link (%)	100	94	88	82	75	67	58



DIN Recticur fuses D0 - Type Gr Fuses (DIAZED)



RECTICUR - DO
Fuse links "ultra rapide"

RECTITUR DO

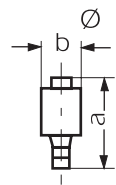
Fuse links
440 VAC up to 100 A
size D0 1, D0 2, D0 3, operating class gR

Main characteristics

For base	Rated current (A)	Pre-arcing I ² t value (A ² s)	Total I ² t value at 440V (RMS) (A ² s)	Power loss (W)	Kg/100 pcs.
D01	2	3	3	1,5	0,62
	4	4	5	2,0	0,62
	6	5	10	2,3	0,62
	10	12	25	2,2	0,62
	16	40	75	3,3	0,62
D02	20	60	110	4,3	1,40
	25	90	180	6,0	1,40
	35	210	410	8,4	1,40
	50	830	1650	10,0	1,40
	63	1300	2500	13,9	1,40
D03	80	2100	4300	17,6	3,70
	100	3300	6600	21,0	4,10

Dimensions

Dimensions	a	bØ
D02	36	11
D03	36	15,3
D04	43	22,5



Semiconductor (AC) fuses



DIN Recticur fuses D0 - Type Gr Fuses (DIAZED)

RECTICUR - DO

Fuse links "ultra rapide"

Size	Intensité (A)	Tension (VAC)	Reference	Previous Ref.	Catalog Number
D01	2	440V	M215038	17000026	D01GR44V2
D01	4	440V	N218673	17000046	D01GR44V4
D01	6	440V	B219191	17000066	D01GR44V6
D01	10	440V	F219724	17000106	D01GR44V10
D01	16	440V	N222169	17000166	D01GR44V16
D02	20	440V	H222923	17010206	D02GR44V20
D02	25	440V	R200713	17010256	D02GR44V25
D02	35	440V	F201255	17010356	D02GR44V35
D02	50	440V	R201771	17010506	D02GR44V50
D02	63	440V	Y207113	17010636	D02GR44V63
D03	80	440V	G211514	17020806	D03GR44V80
D03	100	440V	L212024	17021006	D03GR44V100

Packaging:
D01 50 pieces
D02 25 pieces
D03 10 pieces

