



Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Main characteristics

450 TO 700VAC / 63 TO 2800A

 Recognized

- Exceptionally low I^2T , Watt losses.
- Non-magnetic construction,
- Highly reliable low voltage
- Trip-indicator system, conformity to UL, IEC, DIN and VDE standards.
- Increased technical performance
 - Higher ratings
 - Reduction in volume and weight



This fuse preselection table indicates, for each size:

- rated current (or rating) I_n
- pre-arcing I^2t (I^2tp) at 1 ms
- total operating I^2t (I^2tt) at 660 V, $f=50\text{Hz}$ $\cos \varphi=0.15$, 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
- breaking capacity at various voltages, checked by tests made in accordance with IEC and American standards.



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Estimated breaking capacity: 300kA

Size	Nominal Voltage (VAC)		Ampere Rating (A)	Pre-arcing I _t @ 1 ms (kA²s)	Total I ² t @ 660V (*) @ Un (kA²s)	Power P _n (W)		Tested Breaking capacity (kA)					
								IEC @ 690V (*) @ Un	USA @ 700V (*) @ Un				
	IEC	USA				End contact	Blades						
30	690	700	50	0,116	0,62	9	9	200	200				
			63	0,2	1,1	14	14						
			80	0,33	1,8	19	19						
			100	0,47	2,5	26	26						
			125	0,85	4,5	30	30						
			160	1,6	8,5	37	37						
			200	3	15,5	42	43						
			250	5,8	30	48	50						
			315	12	62	53	55						
			350	15,5	80	57	60						
			400	23	120	60	65						
			450	26	150	80	88						
31	690	700	500	41	240	80	88	200	200				
			550	52	300	80	90						
			600	650	630	84	450(*)			85	95	200(*)	200(*)
			160	1,3	7	35	35			200	200		
			200	2,6	13,5	45	45						
			250	4,7	25	52	52						
			315	7,5	40	65	65						
			350	10,5	55	67	67						
			400	19	100	68	68						
			450	26,5	140	70	70						
			500	37	195	70	72						
			550	52	280	70	75						
630	75	390	75	85									
700	95	490	85	95									
32	690	700	800	140	800	105	120	200	200				
			315	5,2	28,9	71	71						
			350	8,9	48,8	71	74						
			400	15	80	72	75						
			450	22	115	77	80						
			500	28	145	85	90						
			550	37	195	90	95						
			630	54	280	95	105						
			700	76	400	100	110						
			800	115	600	110	120						
			900	170	900	110	125						
			1000	240	1250	115	135						
33	690	700	1100	270	1450(*)	140	165	160(*)	160(*)				
			1250	410	1950(*)	150	180	150(*)	150(*)				
			1400	555	2300(*)	160	200	130(*)	130(*)				
			1600	870	3600(*)	165	205	200	200				
			1800	1050	3700(*)	195	230			110(*)	110(*)		
			450	13,45	74,1	84	88						
			500	19	100	105	105						
			550	27	140	105	110						
			630	40	210	110	120						
			700	55	300	115	125						
			800	95	490	120	130						
			900	135	700	120	135						
1000	170	900	135	155									
1100	240	1260	135	160									
1250	350	1850	150	180									
2X32	690	700	1400	480	2500	160	200	200	200				
			1500	500	2500(*)	210	240						
			1600	555	2900(*)	210	240						
			1800	720	3870(*)	225	260						
			2000	950	4500(*)	250	290						
			2250	1250	5160(*)	280	320						
			2500	1870	6540(*)	280	330						
			800	60	320	144	150(*)			150(*)			
			1000	110	590	165							
			1250	220	1100	190							
			1400	300	1600	200							
			1600	450	2400	220							
1800	700	3500	225										
2x33	690	700	2000	950	5000	235	170	170					
			2200	1100	5250(*)	280							
			1000	76	395	220							
			1250	160	850	230							
			1400	225	1200	240							
			1600	375	1900	250							
			1800	530	2800	250							
			2000	700	3100(*)	280							
			2200	950	4400(*)	280							
			2500	1400	6600(*)	310							
			2800	1900	8800(*)	330							



Semiconductor (AC) fuses



Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC American Terminals - 30 - 33 End contacts

Size	Designation				Reference Number	Weight (g)	Packaging	Catalog Number
30	A070 URD	30	TTI	0050	V302744	245	3	A070UD30TTI 50
	A070 URD	30	TTI	0063	A301967			A070UD30TTI 63
	A070 URD	30	TTI	0080	V301962			A070UD30TTI 80
	A070 URD	30	TTI	0100	W300744			A070UD30TTI100
	A070 URD	30	TTI	0125	G300708			A070UD30TTI125
	A070 URD	30	TTI	0160	N300576			A070UD30TTI160
	A070 URD	30	TTI	0200	P300577			A070UD30TTI200
	A070 URD	30	TTI	0250	Q300578			A070UD30TTI250
	A070 URD	30	TTI	0315	R300579			A070UD30TTI315
	A070 URD	30	TTI	0350	S300580			A070UD30TTI350
	A070 URD	30	TTI	0400	T300581			A070UD30TTI400
	A070 URD	30	TTI	0450	V300582			A070UD30TTI450
	A070 URD	30	TTI	0500	W300583			A070UD30TTI500
	A070 URD	30	TTI	0550	X300584			A070UD30TTI550
	A065 URD	30	TTI	0630	A302703			A065UD30TTI630
31	A070 URD	31	TTI	0160	-	370	3	A070UD31TTI200
	A070 URD	31	TTI	0200	A300472			A070UD31TTI250
	A070 URD	31	TTI	0250	B300473			A070UD31TTI315
	A070 URD	31	TTI	0315	C300474			A070UD31TTI350
	A070 URD	31	TTI	0350	D300475			A070UD31TTI400
	A070 URD	31	TTI	0400	E300476			A070UD31TTI450
	A070 URD	31	TTI	0450	F300477			A070UD31TTI500
	A070 URD	31	TTI	0500	G300478			A070UD31TTI550
	A070 URD	31	TTI	0550	H300479			A070UD31TTI630
	A070 URD	31	TTI	0630	J300480			A070UD31TTI700
	A070 URD	31	TTI	0700	K300481			A070UD31TTI800
	A070 URD	31	TTI	0800	L300482			
32	A070 URD	32	TTI	0315	-	510	3	A070UD32TTI400
	A070 URD	32	TTI	0350	-			A070UD32TTI450
	A070 URD	32	TTI	0400	Q300463			A070UD32TTI500
	A070 URD	32	TTI	0450	N300461			A070UD32TTI550
	A070 URD	32	TTI	0500	P300462			A070UD32TTI630
	A070 URD	32	TTI	0550	R300464			A070UD32TTI700
	A070 URD	32	TTI	0630	S300465			A070UD32TTI800
	A070 URD	32	TTI	0700	T300466			A070UD32TTI900
	A070 URD	32	TTI	0800	V300467	600	3	A070UD32TTI1000
	A070 URD	32	TTI	0900**	W300468			A065UD32TTI100
	A070 URD	32	TTI	1000**	X300469			A060UD32TTI1250
	A065 URD	32	TTI	1100**	M301081			A055UD32TTI1400
	A060 URD	32	TTI	1250**	N301082			A055UD32TTI1600
	A055 URD	32	TTI	1400**	P301083			A050UD32TTI1800
	A055 URD	32	TTI	1600**	Q301084			
	A050 URD	32	TTI	1800**	R301085			
33	A070 URD	33	TTI	0450	X302171	790	3	A070UD33TTI450
	A070 URD	33	TTI	0500	X300446			A070UD33TTI500
	A070 URD	33	TTI	0550	Y300447			A070UD33TTI550
	A070 URD	33	TTI	0630	Z300448			A070UD33TTI630
	A070 URD	33	TTI	0700	A300449			A070UD33TTI700
	A070 URD	33	TTI	0800	T300443			A070UD33TTI800
	A070 URD	33	TTI	0900	B300450			A070UD33TTI900
	A070 URD	33	TTI	1000	C300451			A070UD33TTI1000
	A070 URD	33	TTI	1100	D300452			A070UD33TTI1100
	A070 URD	33	TTI	1250**	E300453	910	3	A070UD33TTI1250
	A070 URD	33	TTI	1400**	F300454			A070UD33TTI1400
	A065 URD	33	TTI	1500**	F302064			A065UD33TTI1500
	A065 URD	33	TTI	1600**	S301086			A065UD33TTI1600
	A065 URD	33	TTI	1800**	T301087			A065UD33TTI1800
	A060 URD	33	TTI	2000**	V301088			A060UD33TTI2000
	A055 URD	33	TTI	2250**	W301089			A055UD33TTI2250
	A050 URD	33	TTI	2500**	Y300838			A050UD33TTI2500

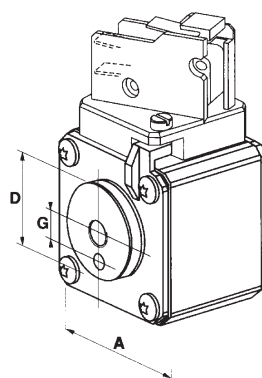
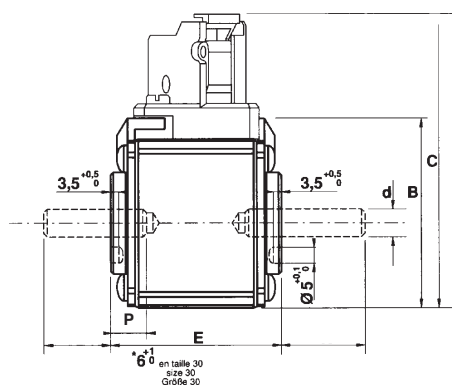
Rated Voltage as per American standard



Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC American Terminals - 30 - 33 End contacts

Size	A	B	C	D	E ^{±1}	d	G ^{±0.1}	P ^{±0.1}
30	40 1-19/32"	46.5 1-27/32"	82 3-7/32"	26 1"	50.6 2"	5/16"-18	9 23/64"	6 15/64"
31	51 2"	56.5 2-7/32"	91 3-37/64"	30 1-3/16"	50.6 2"	5/16"-18	9 23/64"	9 23/64"
32	60 2-3/8"	65.5 2-37/64"	100 3-15/16"	38 ; (42 **) 1-1/2" ; (1-21/32" **)	50.6 2"	3/8"-16	15 19/32"	9 23/64"
33	74.5 2-15/16"	79.5 3-1/8"	114 4-1/2"	46 ; (52 **) 1-13/16" ; (2-1/16" **)	50.6 2"	1/2"-13	15 19/32"	9 23/64"

Note:
dimensions in mm
dimensions in inches



Microswitches are supplied separately see microswitches PSC 3x & 7x section



Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC American Terminals - 30 - 33 Blades

Rated voltage as per American standard.

Size	Designation				Reference Number	Weight (g)	Pack.	Catalog Number
					K			
30	A 070	URD 30 KI	0050		E301925	290	3	A070UD30KI050
	A 070	URD 30 KI	0063		B300128			A070UD30KI63
	A 070	URD 30 KI	0080		C300129			A070UD30KI080
	A 070	URD 30 KI	0100		D300130			A070UD30KI100
	A 070	URD 30 KI	0125		E300131			A070UD30KI125
	A 070	URD 30 KI	0160		F300132			A070UD30KI160
	A 070	URD 30 KI	0200		G300133			A070UD30KI200
	A 070	URD 30 KI	0250		H300134			A070UD30KI250
	A 070	URD 30 KI	0315		J300135			A070UD30KI315
	A 070	URD 30 KI	0350		K300136			A070UD30KI350
	A 070	URD 30 KI	0400		L300137			A070UD30KI400
	A 070	URD 30 KI	0450		T301064			A070UD30KI450
	A 070	URD 30 KI	0500		V301065			A070UD30KI500
	A 070	URD 30 KI	0550		W301066			A070UD30KI550
	A 065	URD 30 KI	0630		-			
31	A 070	URD 31 KI	0160		F300385	430	3	A070UD31KI160
	A 070	URD 31 KI	0200		S300028			A070UD31KI200
	A 070	URD 31 KI	0250		T300029			A070UD31KI250
	A 070	URD 31 KI	0315		V300030			A070UD31KI315
	A 070	URD 31 KI	0350		R300050			A070UD31KI350
	A 070	URD 31 KI	0400		W300031			A070UD31KI400
	A 070	URD 31 KI	0450		X300032			A070UD31KI450
	A 070	URD 31 KI	0500		Y300033			A070UD31KI500
	A 070	URD 31 KI	0550		Z300034			A070UD31KI550
	A 070	URD 31 KI	0630		A300035			A070UD31KI630
	A 070	URD 31 KI	0700		B300036			A070UD31KI700
	A 070	URD 31 KI	0800		A301070			A070UD31KI800
32	A 070	URD 32 KI	0400		Z300195	590	3	A070UD32KI400
	A 070	URD 32 KI	0450		A300196			A070UD32KI450
	A 070	URD 32 KI	0500		B300197			A070UD32KI500
	A 070	URD 32 KI	0550		C300198			A070UD32KI550
	A 070	URD 32 KI	0630		D300199			A070UD32KI630
	A 070	URD 32 KI	0700		E300200			A070UD32KI700
	A 070	URD 32 KI	0800		F300201			A070UD32KI800
	A 070	URD 32 KI	0900		G300202			A070UD32KI900
	A 070	URD 32 KI	1000		H300203	660		A070UD32KI1000
	A 065	URD 32 KI	1100		-			
	A 060	URD 32 KI	1250		-			
	A 055	URD 32 KI	1400		-			
	A 055	URD 32 KI	1600		-			
	A 050	URD 32 KI	1800		-			
33	A 070	URD 33 KI	0500		W300238	860	3	A070UD33KI500
	A 070	URD 33 KI	0550		X300239			A070UD33KI550
	A 070	URD 33 KI	0630		Y300240			A070UD33KI630
	A 070	URD 33 KI	0700		Z300241			A070UD33KI700
	A 070	URD 33 KI	0800		A300242			A070UD33KI800
	A 070	URD 33 KI	0900		B300243			A070UD33KI900
	A 070	URD 33 KI	1000		C300244			A070UD33KI1000
	A 070	URD 33 KI	1100		D300245			A070UD33KI1100
	A 070	URD 33 KI	1250		E300246			A070UD33KI1250
	A 070	URD 33 KI	1400		F300247			A070UD33KI1400
	A 065	URD 33 KI	1600		E302063	1070		A065UD33KI1600
	A 065	URD 33 KI	1800		-			
	A 060	URD 33 KI	2000		-			
	A 055	URD 33 KI	2250		-			
	A 050	URD 33 KI	2500		-			



Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC American Terminals - 30 - 33 Blades



Rated voltage as per American standard.

Size	Designation				Reference Number	Weight (g)	Pack.	Catalog Number
					L			
30	A 070	URD 30 LI	0050		A301921	290	3	A070UD30LI050
	A 070	URD 30 LI	0063		M300138			A070UD30LI63
	A 070	URD 30 LI	0080		N300139			A070UD30LI080
	A 070	URD 30 LI	0100		P300140			A070UD30LI100
	A 070	URD 30 LI	0125		Q300141			A070UD30LI125
	A 070	URD 30 LI	0160		R300142			A070UD30LI160
	A 070	URD 30 LI	0200		S300143			A070UD30LI200
	A 070	URD 30 LI	0250		T300144			A070UD30LI250
	A 070	URD 30 LI	0315		V300145			A070UD30LI315
	A 070	URD 30 LI	0350		W300146			A070UD30LI350
	A 070	URD 30 LI	0400		X300147			A070UD30LI400
	A 070	URD 30 LI	0450		K300527			A070UD30LI450
	A 070	URD 30 LI	0500		L300528			A070UD30LI500
	A 070	URD 30 LI	0550		M300529			A070UD30LI550
	A 060	URD 30 LI	0630		P302003			A060UD30LI630
31	A 070	URD 31 LI	0160		D301924	430	3	A070UD31LI160
	A 070	URD 31 LI	0200		V300697			A070UD31LI200
	A 070	URD 31 LI	0250		W300698			A070UD31LI250
	A 070	URD 31 LI	0315		X300699			A070UD31LI315
	A 070	URD 31 LI	0350		Y300700			A070UD31LI350
	A 070	URD 31 LI	0400		Z300701			A070UD31LI400
	A 070	URD 31 LI	0450		A300702			A070UD31LI450
	A 070	URD 31 LI	0500		B300703			A070UD31LI500
	A 070	URD 31 LI	0550		C300704			A070UD31LI550
	A 070	URD 31 LI	0630		D300705			A070UD31LI630
	A 070	URD 31 LI	0700		E300706			A070UD31LI700
	A 070	URD 31 LI	0800		F300707			A070UD31LI800
32	A 070	URD 32 LI	0400		J300204	590	3	A070UD32LI400
	A 070	URD 32 LI	0450		K300205			A070UD32LI450
	A 070	URD 32 LI	0500		L300206			A070UD32LI500
	A 070	URD 32 LI	0550		M300207			A070UD32LI550
	A 070	URD 32 LI	0630		N300208			A070UD32LI630
	A 070	URD 32 LI	0700		P300209			A070UD32LI700
	A 070	URD 32 LI	0800		Q300210			A070UD32LI800
	A 070	URD 32 LI	0900		R300211			A070UD32LI900
	A 070	URD 32 LI	1000		S300212			A070UD32LI1000
	A 065	URD 32 LI	1100		B301071			A065UD32LI1100
	A 060	URD 32 LI	1250		C301072			A060UD32LI1250
	A 055	URD 32 LI	1400		D301073			A055UD32LI1400
	A 055	URD 32 LI	1600		E301074			A055UD32LI1600
	A 050	URD 32 LI	1800		F301075			A050UD32LI1800
33	A 070	URD 33 LI	0500		K300228	860	3	A070UD33LI500
	A 070	URD 33 LI	0550		L300229			A070UD33LI550
	A 070	URD 33 LI	0630		M300230			A070UD33LI630
	A 070	URD 33 LI	0700		N300231			A070UD33LI700
	A 070	URD 33 LI	0800		P300232			A070UD33LI800
	A 070	URD 33 LI	0900		Q300233			A070UD33LI900
	A 070	URD 33 LI	1000		R300234			A070UD33LI1000
	A 070	URD 33 LI	1100		S300235			A070UD33LI1100
	A 070	URD 33 LI	1250		T300236			A070UD33LI1250
	A 070	URD 33 LI	1400		V300237			A070UD33LI1400
	A 065	URD 33 LI	1600		G301076			A065UD33LI1600
	A 065	URD 33 LI	1800		H301077			A065UD33LI1800
	A 060	URD 33 LI	2000		J301078			A060UD33LI2000
	A 055	URD 33 LI	2250		K301079			A055UD33LI2250
	A 050	URD 33 LI	2500		L301080			A050UD33LI2500
						1070		



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Rated voltage as per American standard.

Size	Designation					Reference Number	Weight (g)	Pack.	Catalog Number
						LL			
31	A 070	URD 31	LLI	0160		C301923	290		A070UD31LLI160
	A 070	URD 31	LLI	0200		J300158			A070UD31LLI200
	A 070	URD 31	LLI	0250		K300159			A070UD31LLI250
	A 070	URD 31	LLI	0315		L300160			A070UD31LLI315
	A 070	URD 31	LLI	0350		M300161			A070UD31LLI350
	A 070	URD 31	LLI	0400		N300162			A070UD31LLI400
	A 070	URD 31	LLI	0450		P300163			A070UD31LLI450
	A 070	URD 31	LLI	0500		Q300164			A070UD31LLI500
	A 070	URD 31	LLI	0550		R300165			A070UD31LLI550
	A 070	URD 31	LLI	0630		S300166			A070UD31LLI630
	A 070	URD 31	LLI	0700		T300167			A070UD31LLI700
	A 070	URD 31	LLI	0800		J300526			A070UD31LLI800

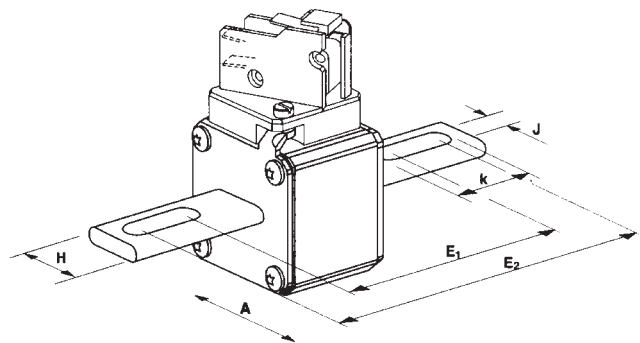
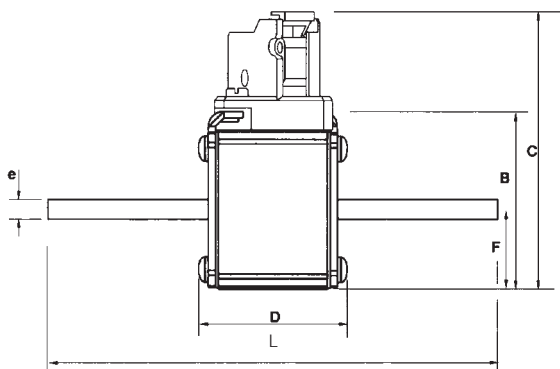


Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC American Terminals - 30 - 33 Blades

	Size	A	B	C	D	E ₁ ^{±1,1}	E ₂ ^{±1,1}	F	H	J	K	L	e
K	30	40 1-19/32"	46,5 1-27/32"	82 3-7/32"	47,5 1-7/8"	68 2-11/16"	107 4-7/32"	21 53/64"	25 1"	10,5 13/32"	30 1-3/16"	129 5-5/64"	6 15/64"
	31	51 2"	56,5 2-7/32"	91 3-37/64"	47,5 1-7/8"	68 2-11/16"	107 4-7/32"	25,5 1"	25 1"	10,5 13/32"	30 1-3/16"	129 5-5/64"	6 15/64"
	32	60 2-3/8"	65,5 2-37/64"	100 3-15/16"	47,5 1-7/8"	74,5 2-59/64"	109 4-9/32"	30 1-3/16"	32 1-1/4"	14,6 9/16"	32 1-1/4"	134 5-9/32"	6 15/64"
	33	74,5 2-15/16"	79,5 3-1/8"	114 4-1/2"	48,5 1-29/32"	75,4 2-31/32"	107,6 4-15/64"	37,2 1-15/32"	40 1-9/16"	15,9 5/8"	32 1-1/4"	134 5-9/32"	6 15/64"
L	30	40 1-19/32"	46,5 1-27/32"	82 3-7/32"	47,5 1-7/8"	87,6 3-7/16"	126,6 5"	21 53/64"	25 1"	10,5 13/32"	30 1-3/16"	148,5 5-27/32"	6 15/64"
	31	51 2"	56,5 2-7/32"	91 3-37/64"	47,5 1-7/8"	91,6 3-19/32"	122,4 4-13/16"	25,5 1"	25 1"	14,6 9/16"	30 1-3/16"	148,6 5-27/32"	6 15/64"
	32	60 2-3/8"	65,5 2-37/64"	100 3-15/16"	47,5 1-7/8"	94,2 3-45/64"	129 5-5/64"	30 1-3/16"	32 1-1/4"	14,6 9/16"	32 1-1/4"	153 5-9/32"	6 15/64"
	33	74,5 2-15/16"	79,5 3-1/8"	114 4-1/2"	48,5 1-29/32"	94,4 3-23/32"	126,6 5"	37,2 1-15/32"	40 1-9/16"	15,9 5/8"	32 1-1/4"	153 6"	6 15/64"
LL	31	51 2"	56,5 2-7/32"	91 3-37/64"	47,5 1-7/8"	87,6 3-7/16"	126,6 5"	25,5 1"	25 1"	10,5 13/32"	30 1-3/16"	148,6 5-27/32"	6 15/64"

Note:

dimensions in mm
dimensions in inches



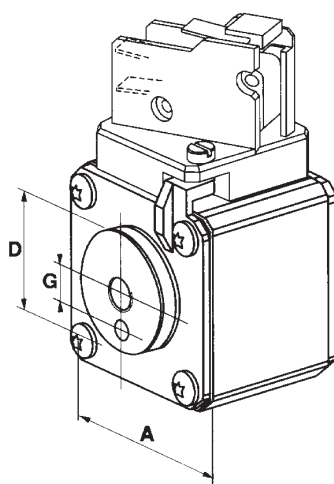
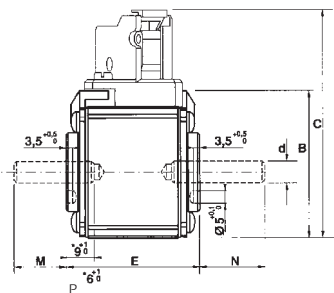
Microswitches supplied separately see microswitches for PSC 3x & 7x section



Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC IEC Terminals French - 30 - 33 End contacts

Size	Designation					Reference Number	Weight (g)	Packaging	Catalog Number
30	6,9	URD	30	TTF	0050	S300373	245	3	PC30UD69V50TF
	6,9	URD	30	TTF	0063	M300000			PC30UD69V63TF
	6,9	URD	30	TTF	0080	S300051			PC30UD69V80TF
	6,9	URD	30	TTF	0100	T300052			PC30UD69V100TF
	6,9	URD	30	TTF	0125	V300053			PC30UD69V125TF
	6,9	URD	30	TTF	0160	W300054			PC30UD69V160TF
	6,9	URD	30	TTF	0200	X300055			PC30UD69V200TF
	6,9	URD	30	TTF	0250	Y300056			PC30UD69V250TF
	6,9	URD	30	TTF	0315	Z300057			PC30UD69V315TF
	6,9	URD	30	TTF	0350	A300058			PC30UD69V350TF
	6,9	URD	30	TTF	0400	B300059			PC30UD69V400TF
	6,9	URD	30	TTF	0450	V300398			PC30UD69V450TF
	6,9	URD	30	TTF	0500	W300399			PC30UD69V500TF
	6,9	URD	30	TTF	0550	X300400			PC30UD69V550TF
	6	URD	30	TTF	0630	L301770			PC30UD60V630TF
31	6,9	URD	31	TTF	0160	M300299	370	3	PC31UD69V160TF
	6,9	URD	31	TTF	0200	N300001			PC31UD69V200TF
	6,9	URD	31	TTF	0250	P300002			PC31UD69V250TF
	6,9	URD	31	TTF	0315	Q300003			PC31UD69V315TF
	6,9	URD	31	TTF	0350	M300046			PC31UD69V350TF
	6,9	URD	31	TTF	0400	R300004			PC31UD69V400TF
	6,9	URD	31	TTF	0450	S300005			PC31UD69V450TF
	6,9	URD	31	TTF	0500	T300006			PC31UD69V500TF
	6,9	URD	31	TTF	0550	V300007			PC31UD69V550TF
	6,9	URD	31	TTF	0630	W300008			PC31UD69V630TF
	6,9	URD	31	TTF	0700	X300009			PC31UD69V700TF
	6,9	URD	31	TTF	0800	Y300401			PC31UD69V800TF
32	6,9	URD	32	TTF	0315	M302162	510	3	PC32UD69V315TF
	6,9	URD	32	TTF	0350	N302163			PC32UD69V350TF
	6,9	URD	32	TTF	0400	H300065			PC32UD69V400TF
	6,9	URD	32	TTF	0450	J300066			PC32UD69V450TF
	6,9	URD	32	TTF	0500	K300067			PC32UD69V500TF
	6,9	URD	32	TTF	0550	L300068			PC32UD69V550TF
	6,9	URD	32	TTF	0630	M300069			PC32UD69V630TF
	6,9	URD	32	TTF	0700	N300070			PC32UD69V700TF
	6,9	URD	32	TTF	0800	P300071			PC32UD69V800TF
	6,9	URD	32	TTF	0900 **	Q300072			PC32UD69V900TF
	6,9	URD	32	TTF	1000 **	S300074	PC32UD69V1000TF		
	6	URD	32	TTF	1100 **	M300759	PC32UD60V1100TF		
	5,5	URD	32	TTF	1250 **	P301060	600	3	PC32UD55V1250TF
	5	URD	32	TTF	1400 **	Q301061			PC32UD50V1400TF
	5	URD	32	TTF	1600 **	H300893			PC32UD50V1600TF
4,5	URD	32	TTF	1800 **	R301062	PC32UD45V1800TF			
33	6,9	URD	33	TTF	0450	W302170	790	3	PC33UD69V450TF
	6,9	URD	33	TTF	0500	V300076			PC33UD69V500TF
	6,9	URD	33	TTF	0550	W300077			PC33UD69V550TF
	6,9	URD	33	TTF	0630	X300078			PC33UD69V630TF
	6,9	URD	33	TTF	0700	Y300079			PC33UD69V700TF
	6,9	URD	33	TTF	0800	Z300080			PC33UD69V800TF
	6,9	URD	33	TTF	0900	A300081			PC33UD69V900TF
	6,9	URD	33	TTF	1000	B300082			PC33UD69V1000TF
	6,9	URD	33	TTF	1100	C300083			PC33UD69V1100TF
	6,9	URD	33	TTF	1250 **	D300084		PC33UD69V1250TF	
	6,9	URD	33	TTF	1400 **	E300085	PC33UD69V1400TF		
	6	URD	33	TTF	1500 **	Y300585	910	3	PC33UD60V1500TF
	6	URD	33	TTF	1600 **	Z300586			PC33UD60V1600TF
	6	URD	33	TTF	1800 **	A300587			PC33UD60V1800TF
	5,5	URD	33	TTF	2000 **	B300588			PC33UD55V2000TF
	5	URD	33	TTF	2250 **	K300757			PC33UD50V2250TF
	4,5	URD	33	TTF	2500 **	L300758			PC33UD45V2500TF



Note:

dimensions in mm
dimensions in inches

Threaded studs and microswitches
supplied separately
see microswitches PSC 3x & 7x and
Metric studs sections

Size	A	B	C	D	M*	N*	E±1	d	G±0.1	P
30	40 1-9/16"	46,5 1-27/32"	82 3-7/32"	26 1-1/64"	22	27	50,6 2"	M8	9 23/64"	6 15/64"
31	51 2"	56,5 2-7/32"	91 3-37/64"	30 1-3/16"	19	24	50,6 2"	M8	9 23/64"	9 23/64"
32	60 2-3/8"	65,5 2-37/64"	100 3-15/16"	38 ; (42mm **) 1-1/2" ; (1-21/32" **)	19	39	50,6 2"	M10	15 19/32"	9 23/64"
33	74,5 2-15/16"	79,5 3-1/8"	114 4-1/2"	46 ; (52mm **) 1-13/16" ; (2-1/16" **)	24	39	50,6 2"	M12	15 19/32"	9 23/64"



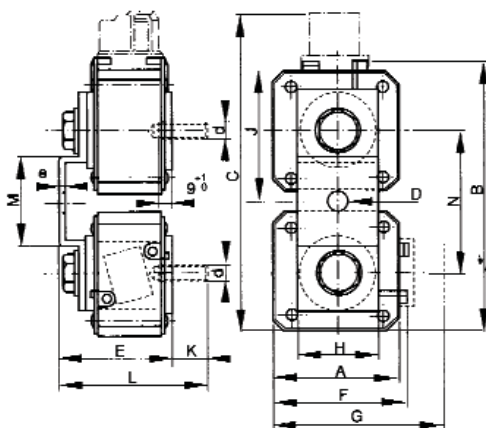
Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC IEC Terminals French - 30 - 33 End contacts

Size	Designation					Reference Number	Weight (g)	Packaging	Catalog Number
2 x 32	6,9	URD	232	TTF	0800	T300305			PC232UD69V8CTF
	6,9	URD	232	TTF	1000	T300213			PC232UD69V10CTF
	6,9	URD	232	TTF	1250	V300214	1240		PC232UD69V13CTF
	6,9	URD	232	TTF	1400	G300087		1	PC232UD69V14CTF
	6,9	URD	232	TDF	1600	W300215			PC232UD69V16CTD
	6,9	URD	232	TDF	1800	X300216	3300		PC232UD69V18CTD
	6,9	URD	232	TDF	2000	Y300217			PC232UD69V20CTD
	5,5	URD	232	TDF	2200	D301993			PC232UD55V22CTD
2 x 33	6,9	URD	233	TTF	1000	B301186			PC233UD69V10CTF
	6,9	URD	233	TTF	1250	D300268			PC233UD69V13CTF
	6,9	URD	233	TTF	1400	E300269	1900		PC233UD69V14CTF
	6,9	URD	233	TTF	1600	F300270			PC233UD69V16CTF
	6,9	URD	233	PLAF	1800	B300427			PC36UD69V18CP11
	6	URD	233	PLAF	2000	R302235			PC36UD60V20CP11
	6	URD	233	PLAF	2200	Q302234			PC36UD60V22CP11
	6	URD	233	PLAF	2500	P302233		1	PC36UD60V25CP11
	6	URD	233	PLAF	2800	N302232			PC36UD60V28CP11
	5,5	URD	233	PLAF	3000*	L301977			PC36UD55V30CP11
	5,5	URD	233	PLAF	3200*	M301978	2000		PC36UD55V32CP11
	5	URD	233	PLAF	3600*	N301979			PC36UD50V36CP11
	5	URD	233	PLAF	4000*	P301980			PC36UD50V40CP11
	4	URD	233	PLAF	4500*	Q301981			PC36UD40V45CP11
	4	URD	233	PLAF	5000*	R301982			PC36UD40V50CP11

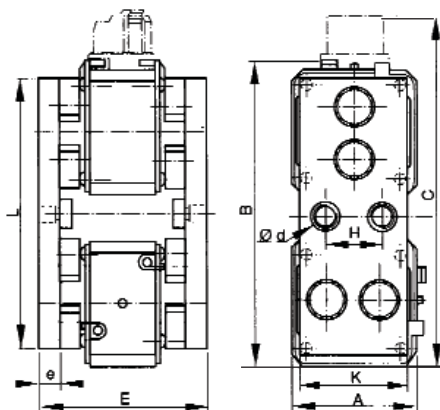
*Consult us

Size	A	B	C	D	E	F	G	H	J	K	d	e	L	M	N
2x32 TT	60	138,5	172	11	67,6	66,5	100	35	61	40	M 10	4	107,5	48	72
2x33 TT	74,5	167	200	13	67,6	81	114	50	80	40	M 12	4	107,5	54	86
2x32 TD	65,5	147	182	-	91,5	-	-	30	-	60	M 10	12	140	-	-
2x33 PLAF	75	171,5	207	-	55,5	-	115	40	-	71	M 10	15	81	-	-

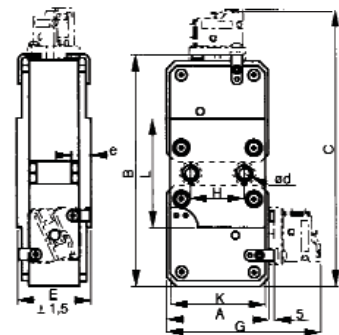
TT



TD



PLAF



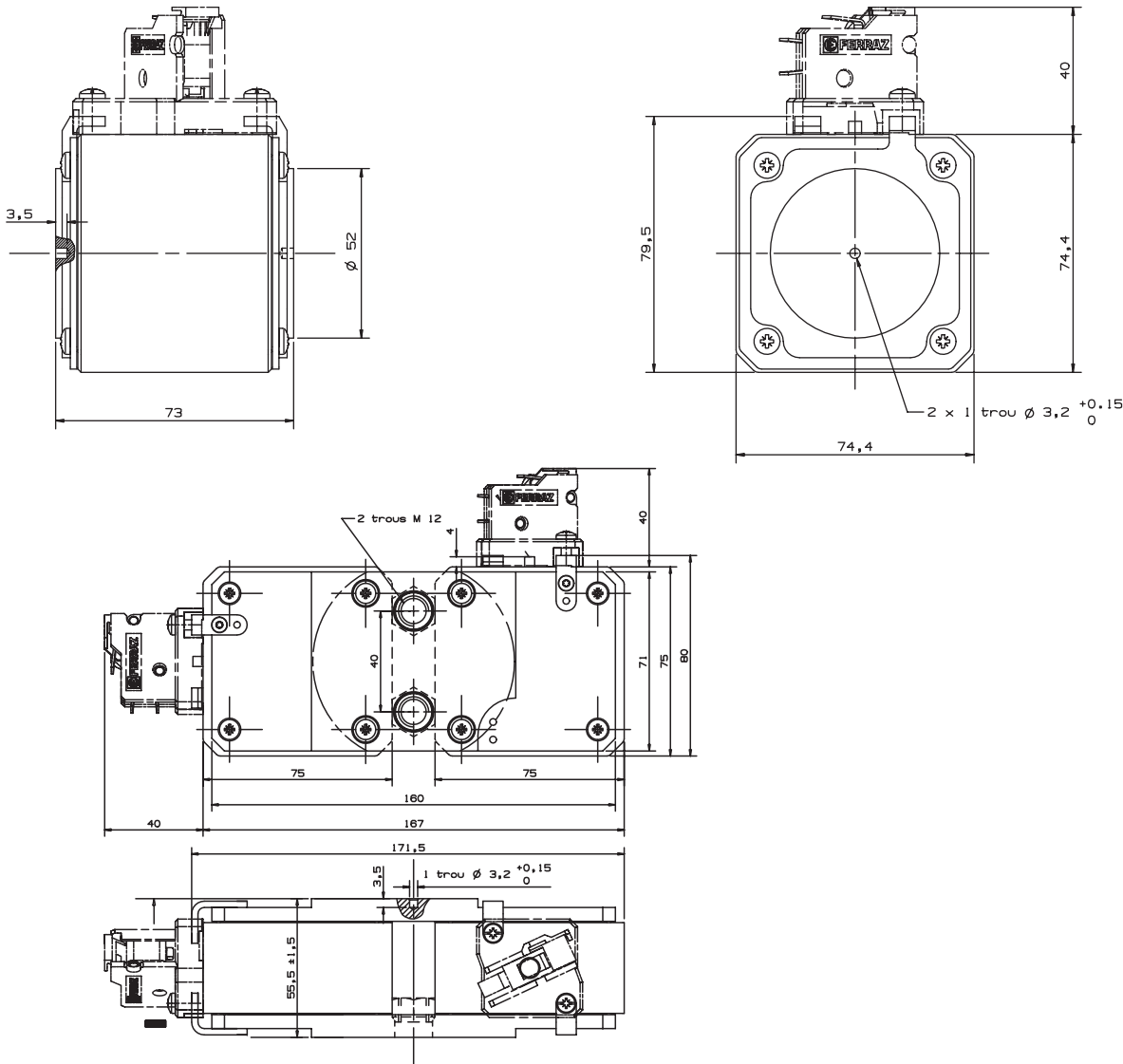


Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC IEC Terminals French - 30 - 33 End contacts

33 PPAF Standard Press-Pack

Size	Designation	Reference Number	Weight (g)	Packaging	Catalog Number
33	6,9 URD 33 PPAF 1250	D301855	910	3	PC33UD69V13CPP
	6,9 URD 33 PPAF 1400	E301856			PC33UD69V14CPP
	6 URD 33 PPAF 1600	G301927			PC33UD60V16CPP
2x33	6,9 URD 233 PPAF 1800	R300694	2450	1	PC36UD69V18CP12
	6 URD 233 PPAF 2000	H302250			PC36UD60V20CP12
	6 URD 233 PPAF 2200	K302252			PC36UD60V22CP13
	6 URD 233 PPAF 2500	M302254			PC36UD60V25CP12
	6 URD 233 PPAF 2800	L302253			PC36UD60V28CP13
	5,5 URD 233 PPAF 3000	to be given - contact us			to be given - contact us
	5,5 URD 233 PPAF 3200	V301985			PC36UD55V32CP12
	5,5 URD 233 PPAF 3600	to be given - contact us			to be given - contact us
	5 URD 233 PPAF 4000	X301987			PC36UD50V40CP12
	4,5 URD 233 PPAF 4500	to be given - contact us			to be given - contact us
	4 URD 233 PPAF 5000	M301932			PC36UD40V50CP12

Studs and microswitches supplied separately







Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC IEC Terminals French - 30 - 33 Blades

Size	Designation	Reference Number	Weight (g)	Packaging	Base	I/I _N *	Catalog Number
30	6,9 URD 30 E F 0050	R300372	290	3	SP30	1	PC30UD69V50EF
	6,9 URD 30 E F 0063	H300088				1	PC30UD69V63EF
	6,9 URD 30 E F 0080	J300089				1	PC30UD69V80EF
	6,9 URD 30 E F 0100	K300090				1	PC30UD69V100EF
	6,9 URD 30 E F 0125	L300091				1	PC30UD69V125EF
	6,9 URD 30 E F 0160	M300092				0,95	PC30UD69V160EF
	6,9 URD 30 E F 0200	N300093				0,90	PC30UD69V200EF
	6,9 URD 30 E F 0250	P300094				0,85	PC30UD69V250EF
	6,9 URD 30 E F 0315	O300095				0,80	PC30UD69V315EF
	6,9 URD 30 E F 0350	R300096				0,80	PC30UD69V350EF
	6,9 URD 30 E F 0400	S300097				0,75	PC30UD69V400EF
31	6,9 URD 31 E F 0160	B301922	430	3	SE31	1	PC31UD69V160EF
	6,9 URD 31 E F 0200	C300037				1	PC31UD69V200EF
	6,9 URD 31 E F 0250	D300038				1	PC31UD69V250EF
	6,9 URD 31 E F 0315	E300039				0,95	PC31UD69V315EF
	6,9 URD 31 E F 0350	N300047				0,95	PC31UD69V350EF
	6,9 URD 31 E F 0400	F300040				0,95	PC31UD69V400EF
	6,9 URD 31 E F 0450	G300041				0,95	PC31UD69V450EF
	6,9 URD 31 E F 0500	H300042				0,95	PC31UD69V500EF
	6,9 URD 31 E F 0550	J300043				0,90	PC31UD69V550EF
	6,9 URD 31 E F 0630	K300044				0,90	PC31UD69V630EF
	6,9 URD 31 E F 0700	L300045				0,85	PC31UD69V700EF
32	6,9 URD 32 E F 0400	V300168	590	3	SE32	0,95	PC32UD69V400EF
	6,9 URD 32 E F 0450	W300169				0,95	PC32UD69V450EF
	6,9 URD 32 E F 0500	X300170				0,90	PC32UD69V500EF
	6,9 URD 32 E F 0550	Y300171				0,90	PC32UD69V550EF
	6,9 URD 32 E F 0630	Z300172				0,85	PC32UD69V630EF
	6,9 URD 32 E F 0700	A300173				0,85	PC32UD69V700EF
	6,9 URD 32 E F 0800	B300174				0,80	PC32UD69V800EF
	6,9 URD 32 E F 0900	C300175				0,80	PC32UD69V900EF
	6,9 URD 32 E F 1000	D300176				0,80	PC32UD69V1000EF
33	6,9 URD 33 E F 0500	Z300218	860	3	SF33	0,95	PC33UD69V500EF
	6,9 URD 33 E F 0550	A300219				0,95	PC33UD69V550EF
	6,9 URD 33 E F 0630	B300220				0,90	PC33UD69V630EF
	6,9 URD 33 E F 0700	C300221				0,90	PC33UD69V700EF
	6,9 URD 33 E F 0800	D300222				0,90	PC33UD69V800EF
	6,9 URD 33 E F 0900	E300223				0,85	PC33UD69V900EF
	6,9 URD 33 E F 1000	F300224				0,85	PC33UD69V1000EF
	6,9 URD 33 E F 1100	G300225				0,80	PC33UD69V1100EF
	6,9 URD 33 E F 1250	H300226				0,80	PC33UD69V1250EF
	6,9 URD 33 E F 1400	J300227				0,80	PC33UD69V1400EF



*I/I_N: Ratio "maximum continuous permissible RMS current I_N" for a fuse fitted into the bases.

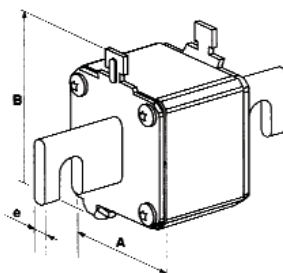
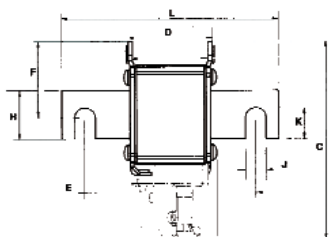
Connections defined as per IEC 60269-1 and for a calm ambience of 30°C.

Use the pullout grip PM3 (T097675) for fuse sizes 30, 31, 32.

Fuse holders and microswitches supplied separately. (see Fuse Holders and microswitches PSC 3x & 7x sections)

Size	A	B	C	D	E ^{±1,1}	L	F	H	J	K	e
30	40	62	96	44,6	76,6	100	38	18	9	11	6
31	51	69	103	44,6	86,6	110	39	25	10,5	16	6
32	60	78	112	44,6	91	126	43	32	13	21,2	6
33	74,5	92,5	127	44,6	91	126	57	40	13	19,5	6

Dimensions in mm



Semiconductor (AC) fuses

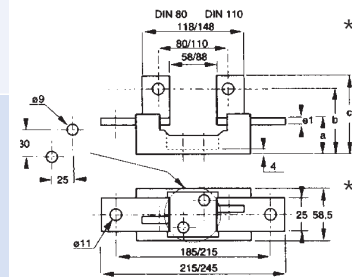
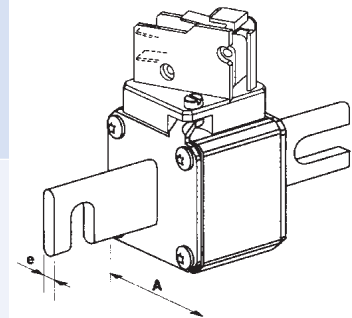
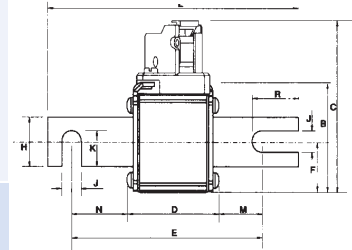


Protistor® Square-body Fuses

PSC aR sizes 3x - 450V to 700 VAC

IEC Terminals German - 30 - 33 Blades (Din 80)

Size	Designation				Reference Number	Weight (g)	I/IN Base		Catalog Number DIN 80
					DIN 80		L98772 F98031	F98560 L91941	
30	6,9	URD 30	D08A	0050	F301926	290	1	1	PC30UD69V50A
	6,9	URD 30	D08A	0063	E300108		1	1	PC30UD69V63A
	6,9	URD 30	D08A	0080	F300109		1	1	PC30UD69V80A
	6,9	URD 30	D08A	0100	G300110		1	1	PC30UD69V100A
	6,9	URD 30	D08A	0125	H300111		1	1	PC30UD69V125A
	6,9	URD 30	D08A	0160	J300112		1	1	PC30UD69V160A
	6,9	URD 30	D08A	0200	K300113		1	1	PC30UD69V200A
	6,9	URD 30	D08A	0250	L300114		1	1	PC30UD69V250A
	6,9	URD 30	D08A	0315	M300115		1	1	PC30UD69V315A
	6,9	URD 30	D08A	0350	N300116		1	1	PC30UD69V350A
	6,9	URD 30	D08A	0400	P300117		1	1	PC30UD69V400A
	6,9	URD 30	D08A	0450	A300403		0,95	1	PC30UD69V450A
6,9	URD 30	D08A	0500	B300404	0,95	1	PC30UD69V500A		
6,9	URD 30	D08A	0550	C300405	0,95	1	PC30UD69V550A		
31	6,9	URD 31	D08A	0160	M300322	430	1	1	PC31UD69V160A
	6,9	URD 31	D08A	0200	Y300010		1	1	PC31UD69V200A
	6,9	URD 31	D08A	0250	Z300011		1	1	PC31UD69V250A
	6,9	URD 31	D08A	0315	A300012		1	1	PC31UD69V315A
	6,9	URD 31	D08A	0350	Q300049		1	1	PC31UD69V350A
	6,9	URD 31	D08A	0400	B300013		1	1	PC31UD69V400A
	6,9	URD 31	D08A	0450	C300014		1	1	PC31UD69V450A
	6,9	URD 31	D08A	0500	D300015		1	1	PC31UD69V500A
	6,9	URD 31	D08A	0550	E300016		1	1	PC31UD69V550A
	6,9	URD 31	D08A	0630	F300017		1	1	PC31UD69V630A
	6,9	URD 31	D08A	0700	G300018		0,95	1	PC31UD69V700A
	6,9	URD 31	D08A	0800	D300406		0,85	0,90	PC31UD69V800A
32	6,9	URD 32	D08A	0315	H302158	590	1	1	PC32UD69V315A
	6,9	URD 32	D08A	0350	K302160		1	1	PC32UD69V350A
	6,9	URD 32	D08A	0400	E300177		1	1	PC32UD69V400A
	6,9	URD 32	D08A	0450	F300178		1	1	PC32UD69V450A
	6,9	URD 32	D08A	0500	G300179		1	1	PC32UD69V500A
	6,9	URD 32	D08A	0550	H300180		0,95	1	PC32UD69V550A
	6,9	URD 32	D08A	0630	J300181		0,95	1	PC32UD69V630A
	6,9	URD 32	D08A	0700	K300182		0,90	1	PC32UD69V700A
	6,9	URD 32	D08A	0800	L300183		0,90	0,95	PC32UD69V800A
	6,9	URD 32	D08A	0900	M300184		0,90	0,95	PC32UD69V900A
	6,9	URD 32	D08A	1000	N300185		0,85	0,95	PC32UD69V1000A
	6	URD 32	D08A	1100	W302101		0,80	0,85	PC32UD60V1100A
5	URD 32	D08A	1250	G300409	0,80	0,85	PC32UD50V1250A		
33	6,9	URD 33	D08A	0450	T302168	860	0,95	1	PC33UD69V450A
	6,9	URD 33	D08A	0500	G300248		0,95	1	PC33UD69V500A
	6,9	URD 33	D08A	0550	H300249		0,90	1	PC33UD69V550A
	6,9	URD 33	D08A	0630	J300250		0,90	0,95	PC33UD69V630A
	6,9	URD 33	D08A	0700	K300251		0,90	0,95	PC33UD69V700A
	6,9	URD 33	D08A	0800	L300252		0,85	0,95	PC33UD69V800A
	6,9	URD 33	D08A	0900	M300253		0,85	0,95	PC33UD69V900A
	6,9	URD 33	D08A	1000	N300254		0,80	0,90	PC33UD69V1000A
	6,9	URD 33	D08A	1100	P300255		0,80	0,90	PC33UD69V1100A
	6,9	URD 33	D08A	1250	Q300256		0,75	0,85	PC33UD69V1250A
	6,9	URD 33	D08A	1400	R300257		0,75	0,80	PC33UD69V1400A
	6	URD 33	D08A	1600	X301803		0,70	0,75	PC33UD60V1600A



Fuse holders and microswitches supplied separately (see page , and Fuse Blocks and Fuse Holders section)

Dimensions in mm

Fuse Size	A	B	C	D	E	F	G	H	J	K	d	e	L	M
30 DIN 80	40	46,5	82	47,5	77	21	25	10,5	17,7	110	11,5	18,5	25,2	6
31 DIN 80	51	56,5	91	47,5	77	25,5	25	10,5	17,7	110	11,5	18,5	25,2	6
32 DIN 80	60	65,5	100	47,5	77	30	32	10,5	21,2	110	11,5	18,5	25,2	6
33 DIN 80	74,5	79,5	114	48,5	77	37,2	40	10,5	25,2	110	11	18	25,2	6

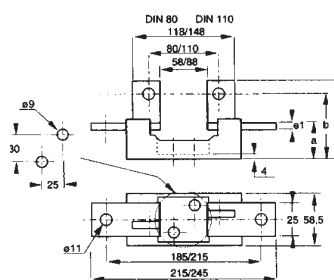
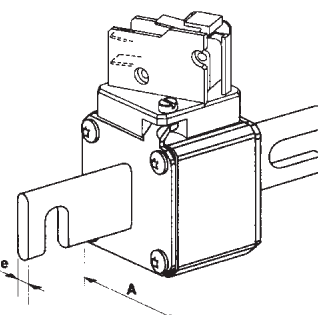
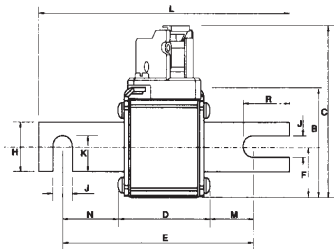
Fuse holders	Ref. Number	a	b	c	e1	x	y	Weight (g) *
SI DIN 80 630 A	L098772	40	68	82	5	185	215	660
SI DIN 80 1250 A	F098560	45	73	87	10	185	215	890

Use the pullout grip PM3 (T097675) for fuse sizes 30, 31, 32

Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC IEC Terminals German - 30 - 33 Blades (Din110)

Size	Designation					Reference Number	Weight (g)	I/IN Base		Catalog Number
						DIN 110		L98772 F98031	F98560 L91941	DIN 110
30	6,9	URD 30	D11A	0050	G301191	290	1	1	PC30UD69V50D1A	
	6,9	URD 30	D11A	0063	Q300118		1	1	PC30UD69V63D1A	
	6,9	URD 30	D11A	0080	R300119		1	1	PC30UD69V80D1A	
	6,9	URD 30	D11A	0100	S300120		1	1	PC30UD69V100D1A	
	6,9	URD 30	D11A	0125	T300121		1	1	PC30UD69V125D1A	
	6,9	URD 30	D11A	0160	V300122		1	1	PC30UD69V160D1A	
	6,9	URD 30	D11A	0200	W300123		1	1	PC30UD69V200D1A	
	6,9	URD 30	D11A	0250	X300124		1	1	PC30UD69V250D1A	
	6,9	URD 30	D11A	0315	Y300125		1	1	PC30UD69V315D1A	
	6,9	URD 30	D11A	0350	Z300126		1	1	PC30UD69V350D1A	
	6,9	URD 30	D11A	0400	A300127		1	1	PC30UD69V400D1A	
	6,9	URD 30	D11A	0450	S300695		0,95	1	PC30UD69V450D1A	
	6,9	URD 30	D11A	0500	Y301091		0,95	1	PC30UD69V500D1A	
6,9	URD 30	D11A	0550	Z301092	0,95	1	PC30UD69V550D1A			
31	6,9	URD 31	D11A	0160	-	430	1	1		
	6,9	URD 31	D11A	0200	H300019		1	1	PC31UD69V200D1A	
	6,9	URD 31	D11A	0250	J300020		1	1	PC31UD69V250D1A	
	6,9	URD 31	D11A	0315	K300021		1	1	PC31UD69V315D1A	
	6,9	URD 31	D11A	0350	P300048		1	1	PC31UD69V350D1A	
	6,9	URD 31	D11A	0400	L300022		1	1	PC31UD69V400D1A	
	6,9	URD 31	D11A	0450	M300023		1	1	PC31UD69V450D1A	
	6,9	URD 31	D11A	0500	N300024		1	1	PC31UD69V500D1A	
	6,9	URD 31	D11A	0550	P300025		1	1	PC31UD69V550D1A	
	6,9	URD 31	D11A	0630	Q300026		1	1	PC31UD69V630D1A	
	6,9	URD 31	D11A	0700	R300027		0,95	1	PC31UD69V700D1A	
	6,9	URD 31	D11A	0800	H300709		0,85	0,90	PC31UD69V800D1A	
32	6,9	URD 32	D11A	0315	K302160	590	1	1		
	6,9	URD 32	D11A	0350	L302161		1	1	PC32UD69V350D1A	
	6,9	URD 32	D11A	0400	P300186		1	1	PC32UD69V400D1A	
	6,9	URD 32	D11A	0450	Q300187		1	1	PC32UD69V450D1A	
	6,9	URD 32	D11A	0500	R300188		1	1	PC32UD69V500D1A	
	6,9	URD 32	D11A	0550	S300189		0,95	1	PC32UD69V550D1A	
	6,9	URD 32	D11A	0630	T300190		0,95	1	PC32UD69V630D1A	
	6,9	URD 32	D11A	0700	V300191		0,90	1	PC32UD69V700D1A	
	6,9	URD 32	D11A	0800	W300192		0,90	0,95	PC32UD69V800D1A	
	6,9	URD 32	D11A	0900	X300193		0,90	0,95	PC32UD69V900D1A	
	6,9	URD 32	D11A	1000	Y300194		0,85	0,95	PC32UD69V10CD1A	
	6	URD 32	D11A	1100	-		0,80	0,85		
	5	URD 32	D11A	1250	-		0,80	0,85		
33	6,9	URD 33	D11A	0450	V302169	860	0,95	1	PC33UD69V450D1A	
	6,9	URD 33	D11A	0500	S300258		0,95	1	PC33UD69V500D1A	
	6,9	URD 33	D11A	0550	T300259		0,90	1	PC33UD69V550D1A	
	6,9	URD 33	D11A	0630	V300260		0,90	0,95	PC33UD69V630D1A	
	6,9	URD 33	D11A	0700	W300261		0,90	0,95	PC33UD69V700D1A	
	6,9	URD 33	D11A	0800	X300262		0,85	0,95	PC33UD69V800D1A	
	6,9	URD 33	D11A	0900	Y300263		0,85	0,95	PC33UD69V900D1A	
	6,9	URD 33	D11A	1000	Z300264		0,80	0,90	PC33UD69V10CD1A	
	6,9	URD 33	D11A	1100	A300265		0,80	0,90	PC33UD69V11CD1A	
	6,9	URD 33	D11A	1250	B300266		0,75	0,85	PC33UD69V12CD1A	
	6,9	URD 33	D11A	1400	C300267		0,75	0,80	PC33UD69V14CD1A	
	6	URD 33	D11A	1600	Z301437		0,70	0,75	PC33UD60V16CD1A	



Fuse holders and microswitches supplied separately (see Fuse Holders and microswitches 3x & 7x sections)

Dimensions in mm

fuse Size	A	B	C	D	E	F	G	H	J	K	d	e	L	M
30 DIN 110	40	46,5	82	47,5	101,6	21	25	10,5	17,7	134,6	23,8	30,8	25,2	6
31 DIN 110	51	56,5	91	47,5	101,6	25,5	25	10,5	17,7	134,6	23,8	30,8	25,2	6
32 DIN 110	60	65,5	100	47,5	101,6	30	32	10,5	21,2	134,6	23,8	30,8	25,2	6
33 DIN 110	74,5	79,5	114	48,5	101,6	37,2	40	10,5	25,2	134,6	23,3	30,3	25,2	6

Fuse holders	Ref. Number	a	b	c	e1	x	y	Weight (g)
SI DIN 110 630 A	F098031	40	68	82	5	215	245	1060
SI DIN 110 1250 A	L091941	45	73	87	10	215	245	1320

Use the pullout grip PM3 (T097675) for fuse sizes 30, 31, 32

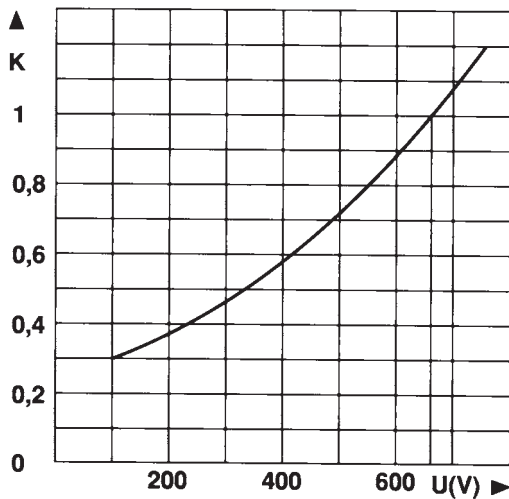




Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Sizes 30 - 31 - 32 - 33

I^2t Multiplier coefficient



Mean curve indicating variation of total I^2t (I^2t_t) and total operating time T_t in accordance with working voltage U .

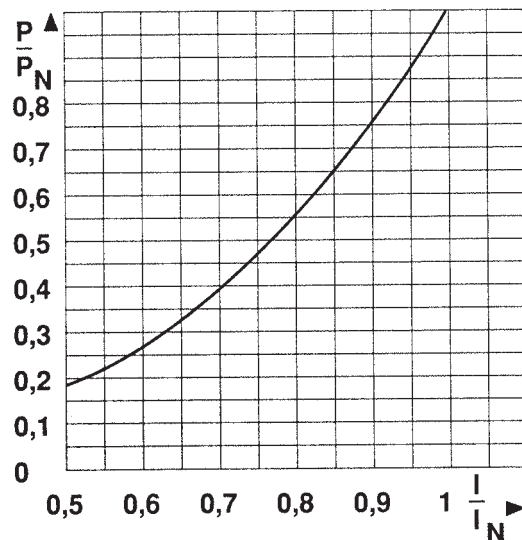
Example:

Fuse 350 A in size 30.
 $I_p = 10\,000\text{ A}$ $U = 500\text{ V}$

At 660 V
 $I^2t_t = 80\,000\text{ A}^2\text{s}$ $T_t = 6\text{ ms}$

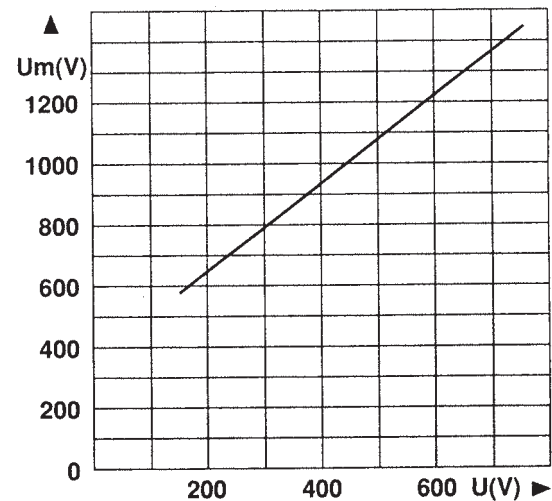
At 500 V
 $I^2t_t = 80\,000 \times 0.72 = 57\,600\text{ A}^2\text{s}$
 $T_t = 6 \times 0.72 = 4.3\text{ ms}$

Dissipated power



Curve enabling calculation of dissipated power P by a fuse rated I_N , as a function of the RMS current I , in multiples of I_N , in a steady state.

Arc voltage

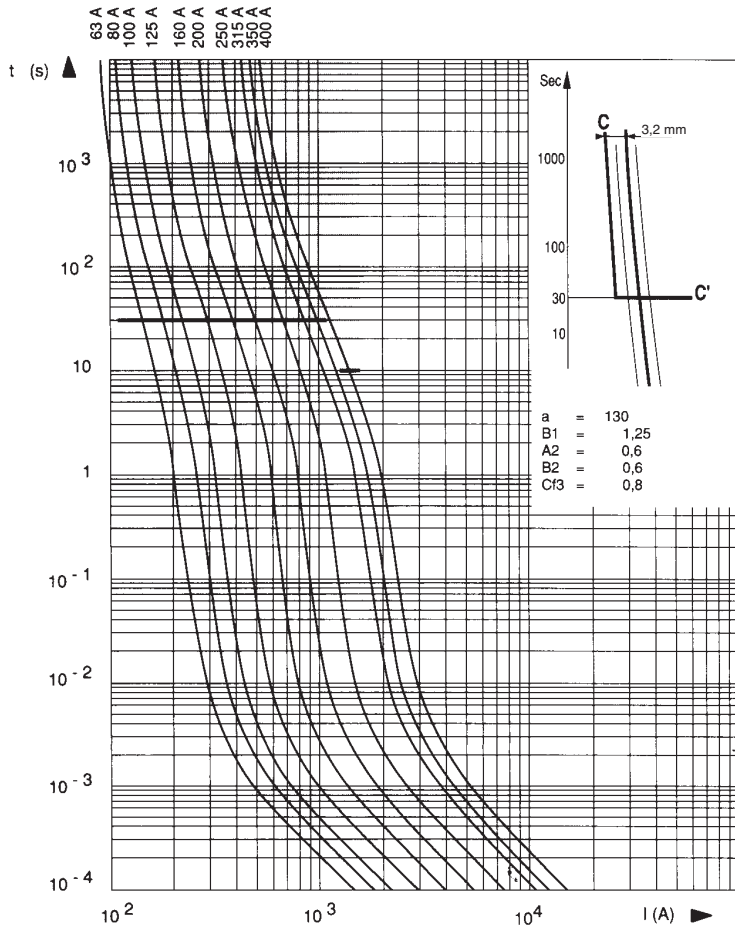


Curve indicating peak arc voltage U_m which may appear across fuse terminals as function of working voltage U at $\cos \varphi = 0.15$



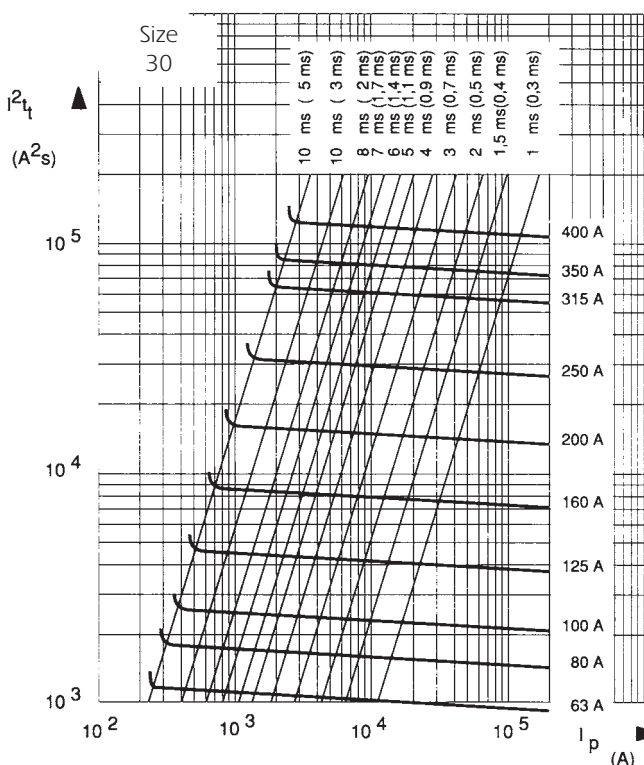
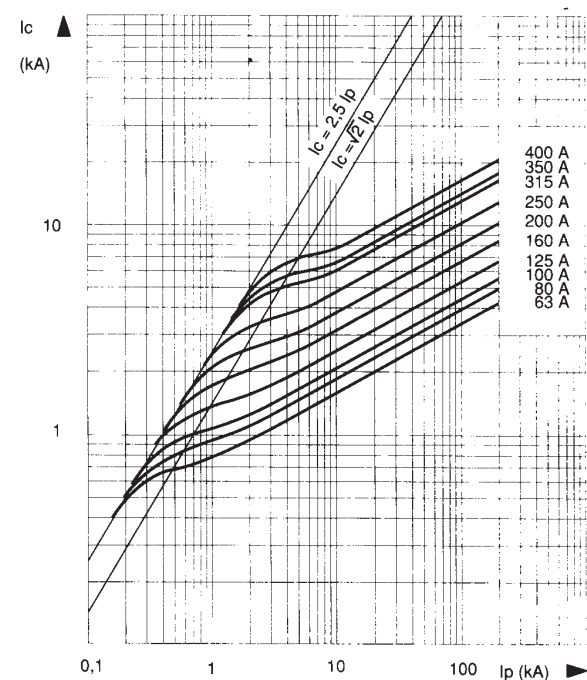
Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Size 30



↓ Cut-off characteristics

Below, right: Curves indicating for each rated-current the peak value I_C that the current may reach as a function of the prospective fault current I_p .



↑ Time-current characteristics

Above, left: Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current I .

- Tolerances on this current $\pm 8\%$.
- Beyond 30 sec or 10 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, top right corner.
- The intersection of the fuse and CC' curves indicates the minimum breaking current I_{pm} of the fuse.

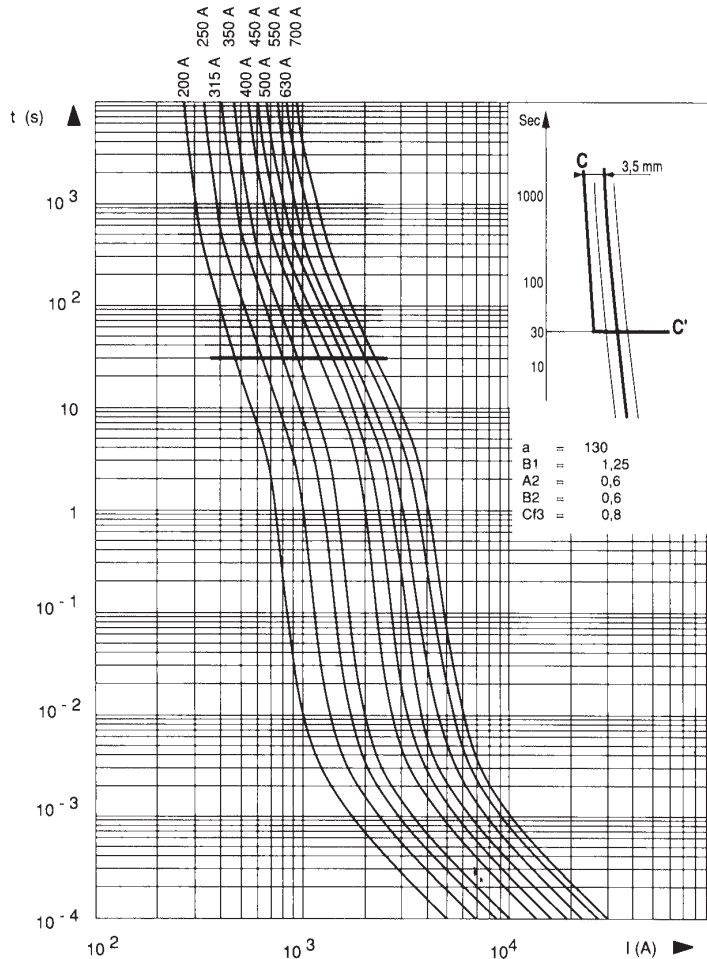
← Maximum values of total operating I^2t and total operating times

Left: Horizontal curves indicating the maximum values of total operating I^2t (I^2t_t) as function of the prospective current I_p at 660 V, $\cos \varphi = 0.15$. The oblique lines indicate the corresponding total operating time T_T , with pre-arcing time in brackets.



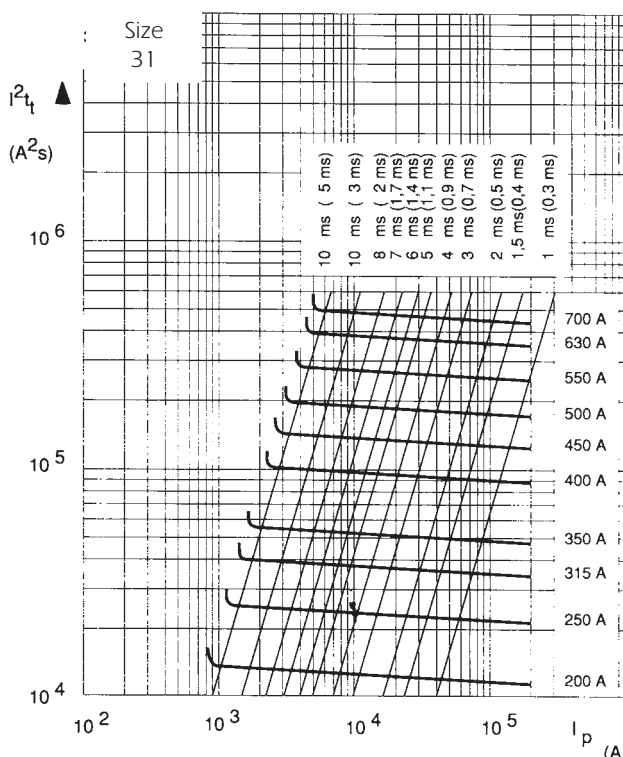
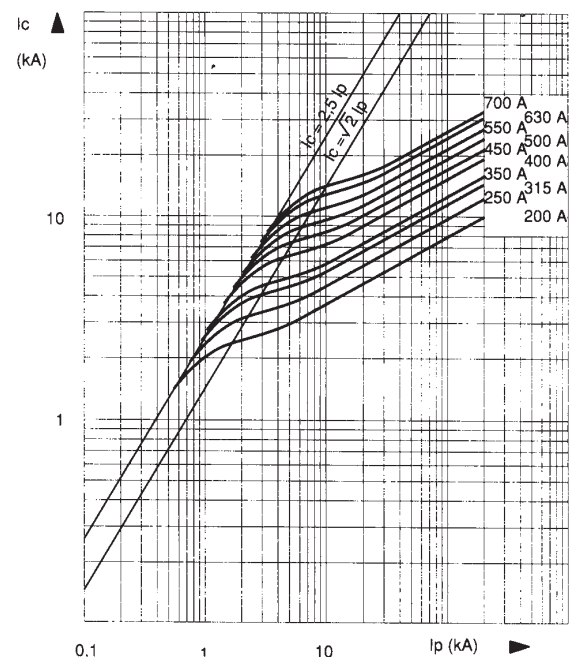
Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Size 31



↓ Cut-off characteristics

Below, right: Curves indicating for each rated current the peak value I_C that the current may reach as a function of the prospective fault current I_P .



↑ Time-current characteristics

Above, left: Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current I .

- Tolerances on this current $\pm 8\%$.
- Beyond 30 sec or 10 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, top right corner.
- The intersection of the fuse and CC' curves indicates the minimum breaking current I_{pm} of the fuse.

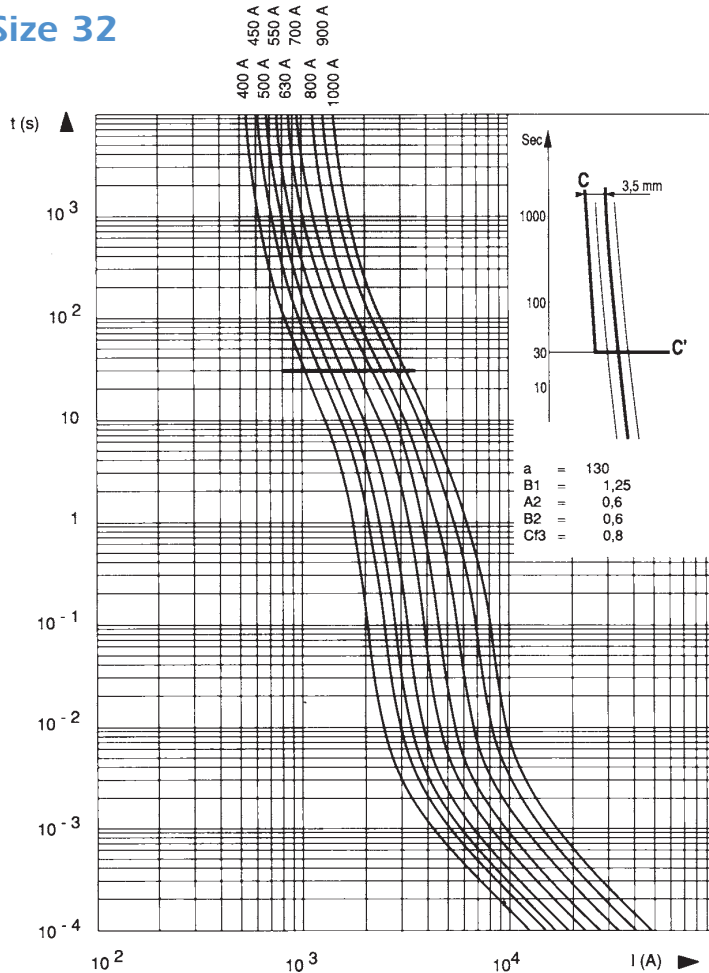
← Maximum values of total operating I^2t and total operating times

Left: Horizontal curves indicating the maximum values of total operating I^2t (I^2t_t) as function of the prospective current I_P at 660 V, $\cos \varphi = 0.15$. The oblique lines indicate the corresponding total operating time T_t , with pre-arcing time in brackets.



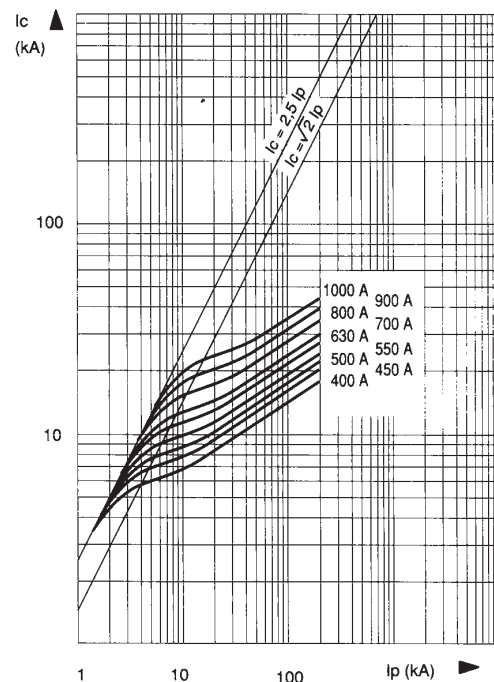
Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Size 32



↓ Cut-off characteristics

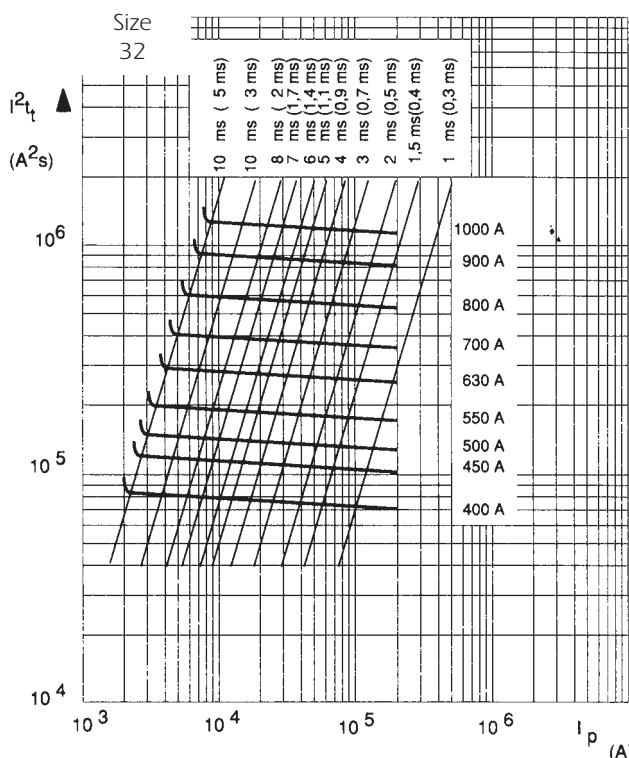
Below, right: Curves indicating for each rated-current the peak value I_c that the current may reach as a function of the prospective fault current I_p .



↑ Time-current characteristics

Above, left: Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current I .

- Tolerances on this current $\pm 8\%$.
- Beyond 30 sec or 10 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, top right corner.
- The intersection of the fuse and CC' curves indicates the minimum breaking current I_{pm} of the fuse.



← Maximum values of total operating I^2t and total operating times

Left: Horizontal curves indicating the maximum values of total operating I^2t (I^2t_t) as function of the prospective current I_p at 660 V, $\cos \varphi = 0.15$. The oblique lines indicate the corresponding total operating time T_t , with pre-arcing time in brackets.



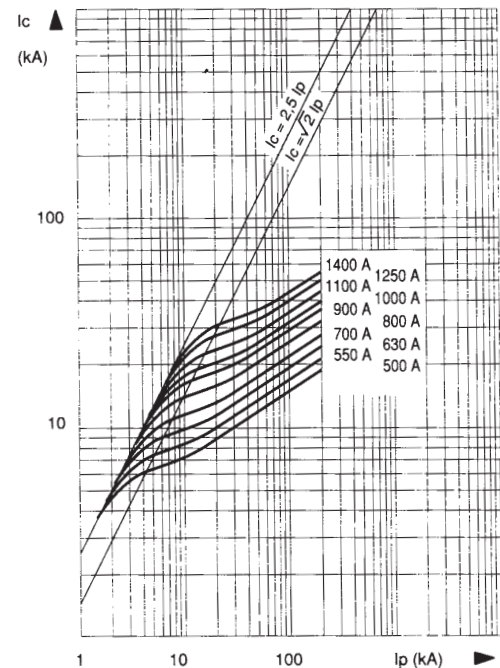
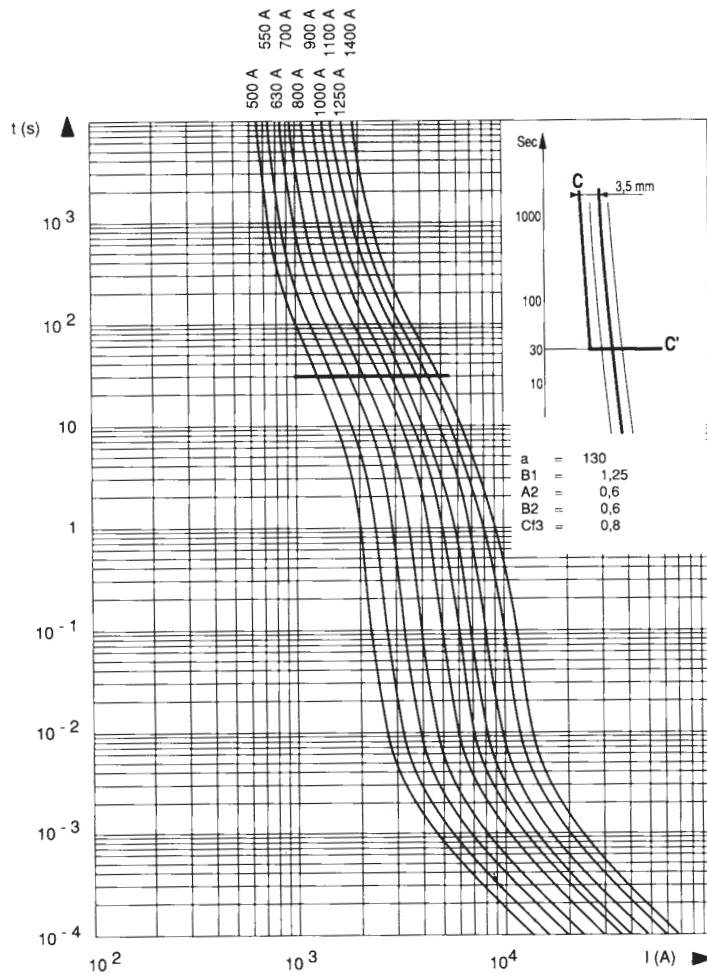
Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Size 33

↓ Cut-off characteristics

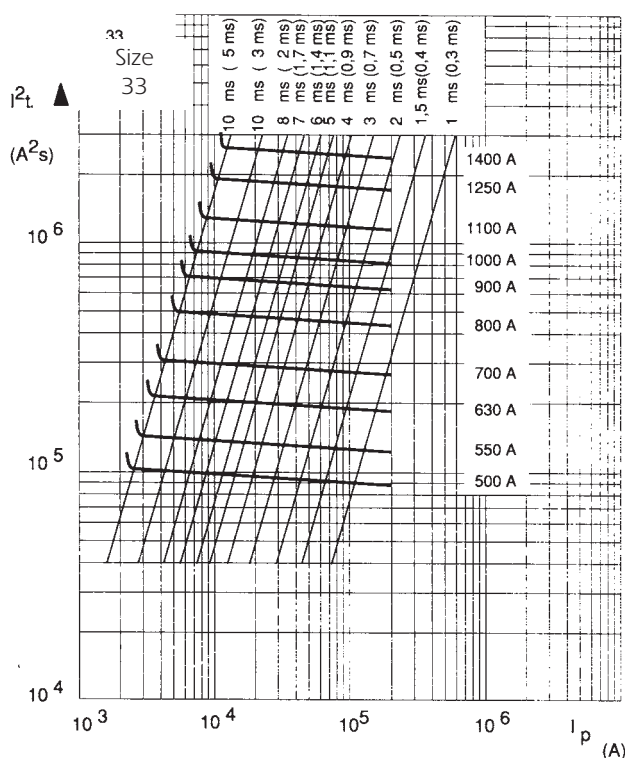
Below, right: Curves indicating for each rated current the peak value I_C that the current may reach as a function of the prospective fault current I_p .



↑ Time-current characteristics

Above, left: Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current I .

- Tolerances on this current $\pm 8\%$.
- Beyond 30 sec or 10 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, top right corner.
- The intersection of the fuse and CC' curves indicates the minimum breaking current I_{pm} of the fuse.



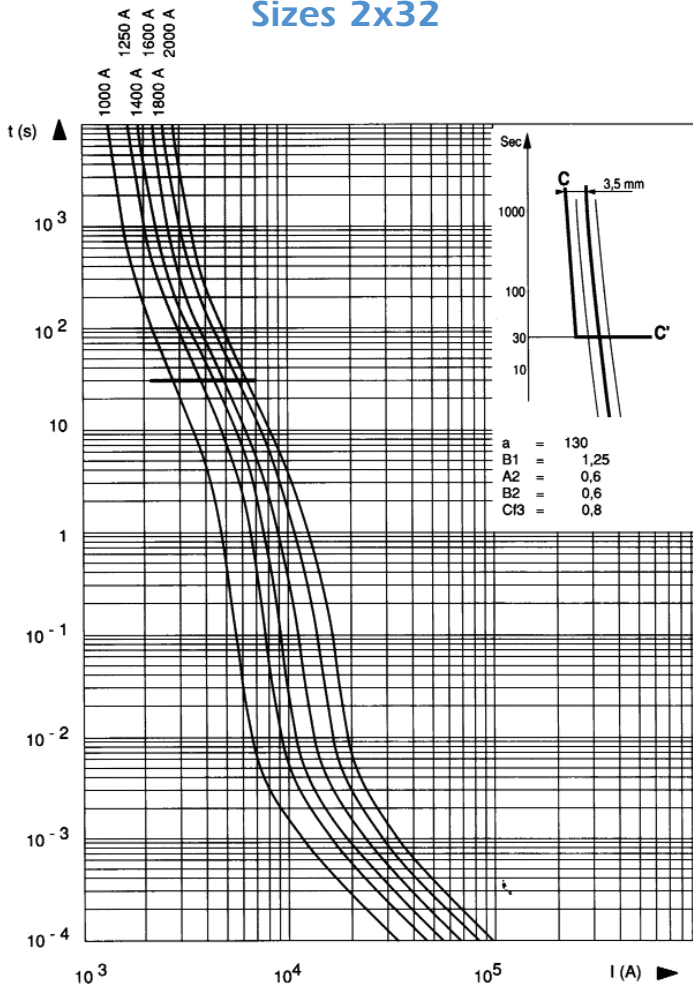
← Maximum values of total operating I^2t and total operating times

Left: Horizontal curves indicating the maximum values of total operating I^2t (I^2t_t) as function of the prospective current I_p at 660 V, $\cos \varphi = 0.15$. The oblique lines indicate the corresponding total operating time T_t , with pre-arcing time in brackets.



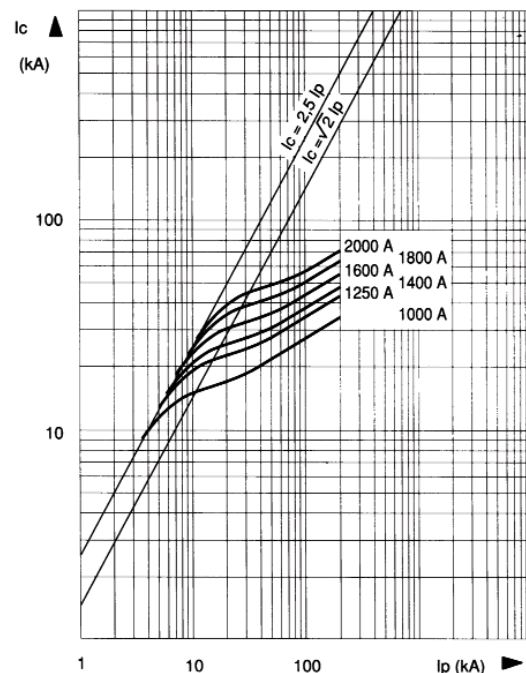
Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Sizes 2x32



↓ Cut-off characteristics

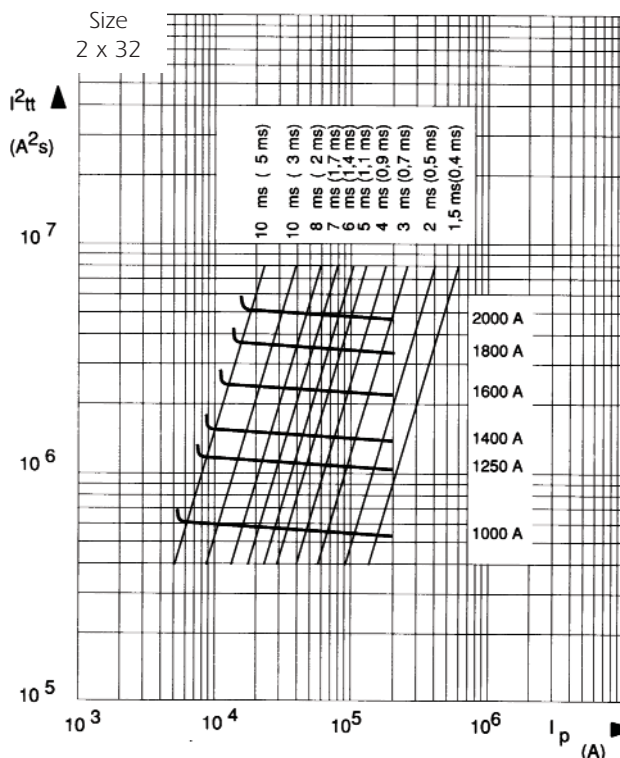
Below, right: Curves indicating for each rated-current the peak value I_C that the current may reach as a function of the prospective fault current I_p .



↑ Time-current characteristics

Above, left: Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current I .

- Tolerances on this current $\pm 8\%$.
- Beyond 30 sec or 10 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, top right corner.
- The intersection of the fuse and CC' curves indicates the minimum breaking current I_{pm} of the fuse.



← Maximum values of total operating I^2t and total operating times

Left: Horizontal curves indicating the maximum values of total operating I^2t (I^2t_t) as function of the prospective current I_p at 660 V, $\cos \varphi = 0.15$. The oblique lines indicate the corresponding total operating time T_t , with pre-arcing time in brackets.

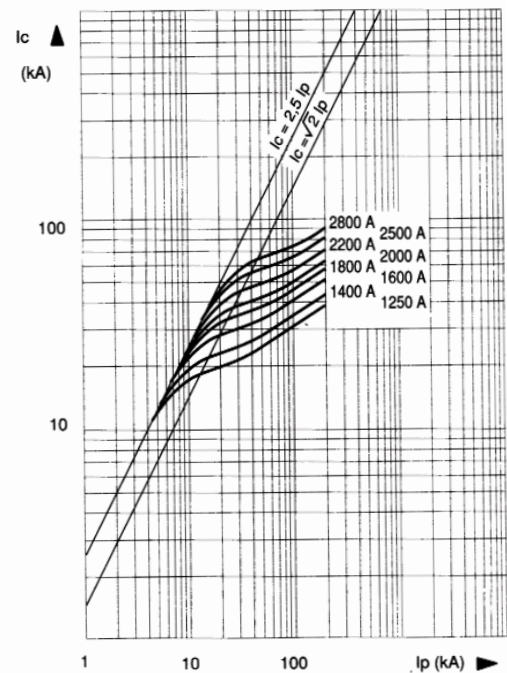
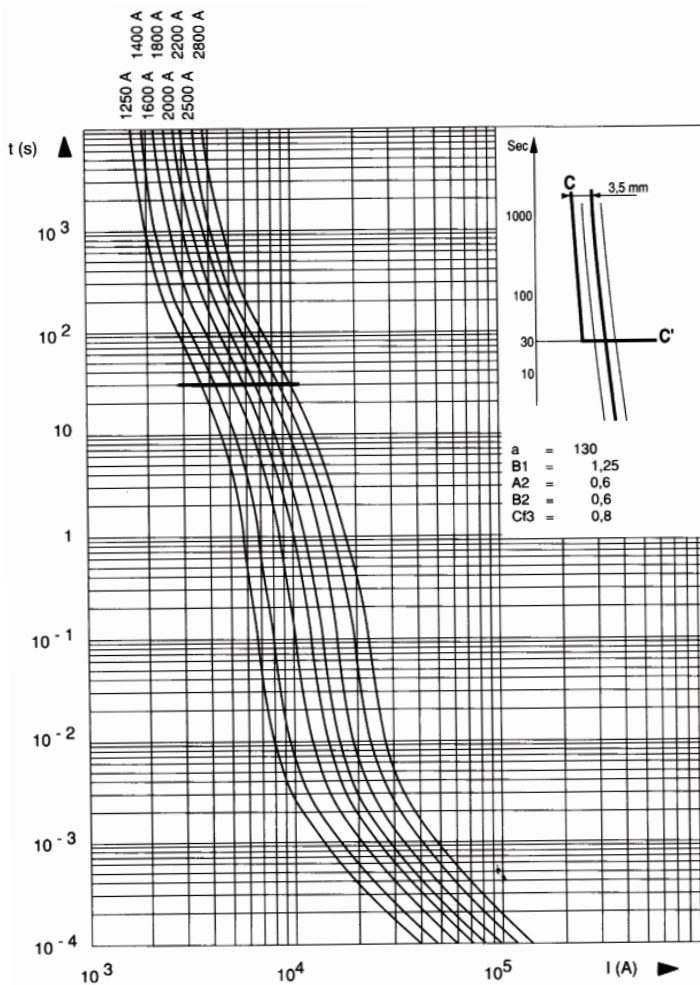


Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Size 2x33

↓ Cut-off characteristics

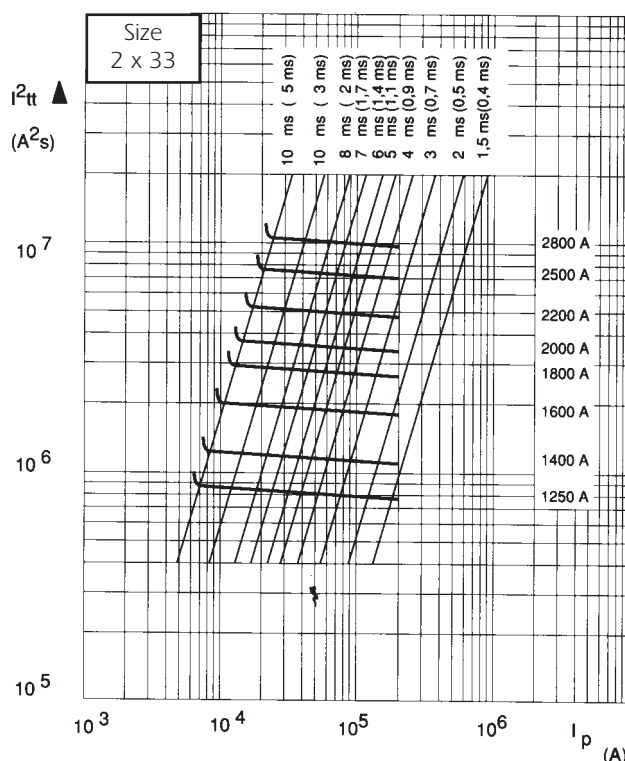
Below, right: Curves indicating for each rated current the peak value I_C that the current may reach as a function of the prospective fault current I_p .



↑ Time-current characteristics

Above, left: Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current I .

- Tolerances on this current $\pm 8\%$.
- Beyond 30 sec or 10 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, top right corner.
- The intersection of the fuse and CC' curves indicates the minimum breaking current I_{pm} of the fuse.



← Maximum values of total operating I^2t and total operating times

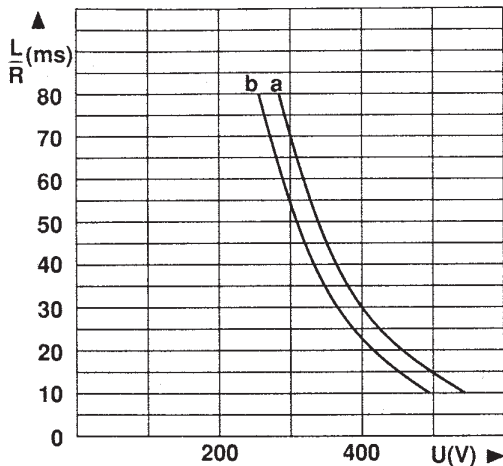
Left: Horizontal curves indicating the maximum values of total operating I^2t (I^2t_t) as function of the prospective current I_p at 660 V, $\cos \varphi = 0.15$. The oblique lines indicate the corresponding total operating time T_t , with pre-arcing time in brackets.



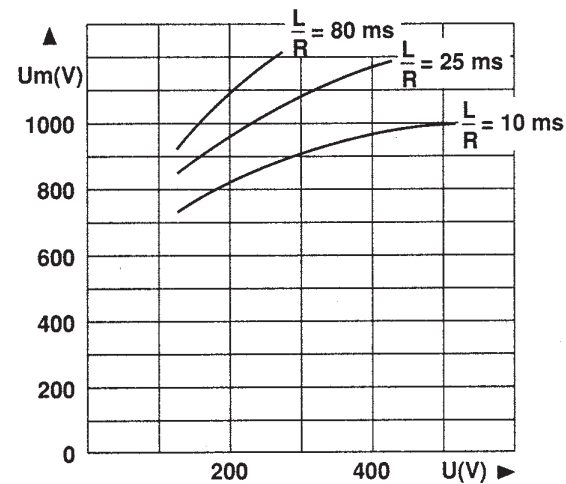
Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Curves set

Sizes 30 - 31 - 32 - 33

DC working voltage possibilities



Rated current I_n (A)	Curves (*) and I_{pm} (I) corresponding to the rating					
	30 * I_{pm} (A)	31 * I_{pm} (A)	32 * I_{pm} (A)	33 * I_{pm} (A)	2 x 32 * I_{pm} (A)	2 x 33 * I_{pm} (A)
63	a 230					
80	a 300					
100	a 360					
125	a 460					
160	a 650					
200	a 880	a 850				
250	a 1300	a 1150				
315	a 1700	a 1450				
350	a 1900	a 1600				
400	a 2300	a 2200	a 2000			
450		a 2500	a 2300			
500		a 3000	a 2600	a 2300		
550		a 3400	a 3150	a 2500		
630		a 5000	a 3700	a 3250		
700		a 5600	a 4300	a 3900		
800			a 5300	a 4800		
900			a 7800	a 5600		
1000			b 9000	a 6600	a 5200	
1100				a 7700		
1250				b 11000	a 7400	a 6500
1400				b 12500	a 8600	a 7800
1600					a 10600	a 9600
1800					a 15600	a 11200
2000					b 18000	a 13200
2200						a 15400
2500						b 22000
2800						b 25000



Top: Curves indicating the maximum time constant L/R of the fault path as a function of the DC voltage U for the rated currents in the sizes indicated in the table.

I_{pm} (I) values indicate the minimum breaking current in Amperes (A).

Remark:

When the fault current di/dt is very large, this condition can be exceeded. This is the case for faults occurring in voltage commutated inverters.

Below: Curves indicating peak arc voltage U_m which may appear across fuse terminals as a function of the DC working voltage U , for various time constant L/R of fault path.



Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Microswitches PSC 3x &7x

- MICROSWITCH SYSTEMS ADAPTED
TO THE FOLLOWING FERRAZ SHAWMUT FUSES ONLY:
- PSC sizes 30, 31, 32, 33, 2x32, 2x33 / 70, 71, 72, 73, 272, 273
except plain blades
- PSC LR sizes 33, 233, 73, 273
- PERMANENT INDICATION OF FUSE STATE: CONDUCTIVE
BLOWN
- MANUAL RESETTING
- STANDARD AND LOW ELECTRICAL LEVEL WITH DIFFERENT INSULATION LEVELS
- BS TYPE FOR USE IN CORROSIVE ATMOSPHERE
- MS 3V 1-5 UR AND MS 7V 1-5 UR TYPE UL ARE RECOGNIZED



MS 7V 1-5

Main Characteristics

Code	AC Insulation voltage rating (***)	Positive operating voltage/current	Current rating	Current	Breaking Capacity						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 3V 1-5 MS 3V 1-5 UR	1000 V	20 V 50 mA	10 A	50/60 Hz	10 A	10 A	10 A	10 A	10 A	10 A	8,5 kV	14 kV	H.B
MS 7V 1-5 MS 7V 1-5 UR	1500V			DC	8 A	0,4 A	0,2 A	4 A	0,2 A	0,1 A	12 kV	20 kV	
MS 3V 1-5 BS MS 3V 1-9 BS	1000 V	10 V 10 mA	3 A	50/60 Hz	3 A	3 A	3 A	2 A	1 A	1 A	8,5 kV	14 kV	
MS 7V 1-5 BS MS 7V 1-9 BS	1500V			DC	3 A	0,5 A	0,25 A	3 A	0,2 A	0,1 A	12 kV	20 kV	
MS 3V 1-5 ET MS 7V 1-5 ET	1000V	10 V 10 mA	3 A	50/60 Hz	3 A	3 A	3 A	2 A	1 A	1 A	8,5 kV	14 kV	
	1500V			DC	3 A	0,5 A	-	2 A	0,2 A	-	12 kV	20 kV	

* 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

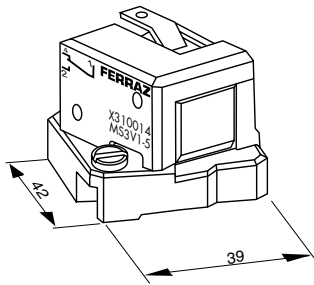
Warning: microswitch systems exclusively designed for FERRAZ SHAWMUT.
PSC Fuses fitted a patented trip-indicator, saving use of EDV



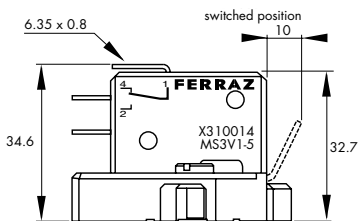
Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Microswitches for PSC 3x & 7x

Indication systems for PSC Fuse sizes 30 to 73 MS 3V...

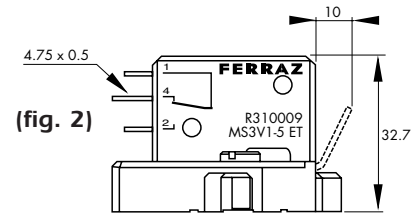
These patented indication systems are exclusively hand resettable.



(fig. 1)



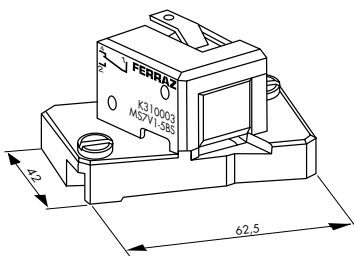
- (3) Same as fig. 1
(4) Same dimensions as figure 1 but with 2 microswitches side by side
(9) Watertightness class



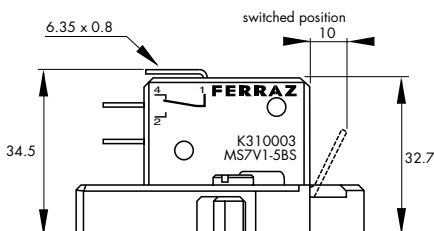
(fig. 2)

Fuse size	Designation	Ref. Number	Indication style	Weight (g)	Pack.	Catalog Number
30, 31 32, 33	MS 3V 1-5 (fig.1)	X310014	Standard NO-NC	34	3 pieces	MS3 V1-5
	MS 3V 1-5 UR	Y310038				MS3 V1-5UR
	MS 3V 1-5 BS (3)	K310013	Low level NO-NC	34	3 pieces	MS3-V1-5BS
	MS 3V 1-9 BS (4)	P310011	Double pole Low level	44	3 pieces	MS3V1-9BS
	MS 3V 1-5 ET (fig.2)	S310009	Low level NO-NC IP 50 (9)	34	3 pieces	MS3V1-5 ETANCHE

MS 7V...

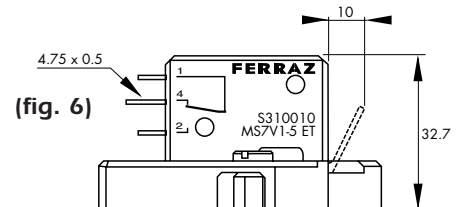


(fig. 5)



- (7) Same as fig. 5
(8) Same dimensions as figure 5 but with 2 microswitches side by side
(9) Watertightness class

Warning: Microswitch systems exclusively designed for FERRAZ SHAWMUT PSC fuses fitted with a patented trip-indicator, saving use of EDV.



(fig. 6)

Fuse size	Designation	Ref. Number	Indication style	Weight (g)	Pack.	Catalog Number
70, 71 72, 73	MS 7V 1-5 (fig.5)	J310002	Standard NO-NC	45	3 pieces	MS7 V1-5
	MS 7V 1-5 UR	Z310039				MS7 V1-5UR
	MS 7V 1-5 BS (3)	K310003	Low level NO-NC	45	3 pieces	MS7-V1-5BS
	MS 7V 1-9 BS (4)	P310007	Double pole Low level	55	3 pieces	MS7V1-9BS
	MS 7V 1-5 ET (fig.6)	S310010	Low level NO-NC IP 50 (9)	55	3 pieces	MS7V1-5 ETANCHE



Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC aR sizes 3x - 450V to 700 VAC Metric-studs

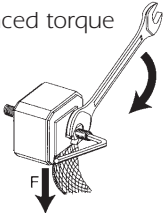
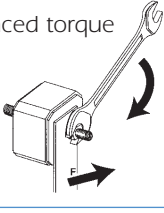
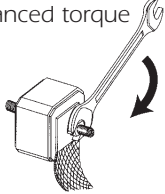
Metric studs for threaded terminal fuses



Type and fuse size	Designation	Ref. Number	Unit weight (g)	Pack.	Catalog Number
 Sizes 0 and 1	HC stud pair M8x30 & M8x35	S098801	23	6 pairs	STUM8x30M8x35
	Size 2 HC stud pair M10x30 & M10x50	T098802	40	6 pairs	STUM10x30M10x50
	Size 3 HC stud pair M12x35 & M12x50	V098803	60	6 pairs	STUM12x35M12x50
 Size 2	HC stud pair M10x50	W098804	45	6 pairs	STUM10x50
	Size 3 HC stud pair M12x50	X098805	45	6 pairs	STUM12x50

We recommend the use of studs, whose quality is suited to all FERRAZ SHAWMUT square-body fuses with terminals

Stud mounting

Torque type	Stud type	Maximum stud tightning torque (Nm) (1)	Maximum nut tightning torque (Nm) (1)
Balanced torque 	M8x30 & M8x35 M10x30 & M10x50 M12x35 & M12x50	10 15 15	13.5 26 46
Balanced torque 	M8x30 & M8x35 M10x30 & M10x50 M12x35 & M12x50	10 15 15	13.5 26 46
Unbalanced torque 	M8x30 & M8x35 M10x30 & M10x50 M12x35 & M12x50	10 15 15	13.5 26 46



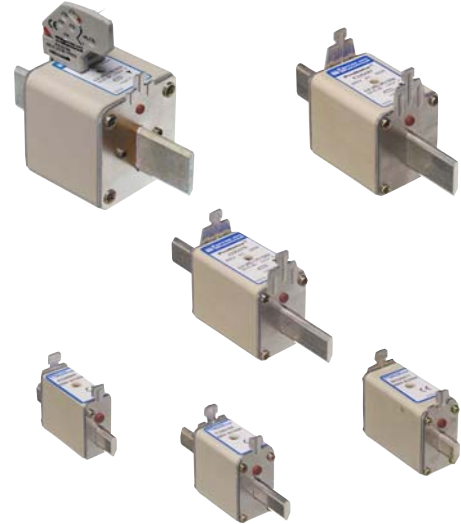
Protistor® Square-body Fuses NH Plain Blades - 690 VAC gR - 690 VAC sizes 000 to 3 (full range)

Ferraz Shawmut PROTISTOR® NH gRB 690 VAC fuse-links provide maximum flexibility in equipment design and ultimate protection for today's power conversion equipment. This range is a full range, engineered to provide state of the art protection for power semiconductor such as diodes, thyristors, triacs.

These square body fuse-links are available in various body sizes with a broad range of ampere ratings allowing the greatest flexibility in equipment design.

They have pure silver fuse elements which provides optimized I^2t and high breaking capacity. All contact surfaces are silver plated and all hardware non-magnetic.

All fuses are standard with a low voltage dual blown fuse indicator. This indicator can operate a microswitch which is easily mounted directly on to the fuse in service.



Features/Benefits

Broad range of ampere ratings in each body size for design flexibility

IEC 60269-1 and 4 compliance for fuses for worldwide semiconductor applications



Beige melted



Red non melted

Ratings

AC: up to 800 A
690 VAC
80-170 kA IR
DC: Consult Factory

Approvals

AC: Tested to IEC 60269-1 and 4

Features

- Full range fast acting
- Highly current limiting.
- High breaking capacities
- Low I^2t
- Worldwide mounting acceptance.
- Superior cycling ability.
- High withstanding in rush current and overloads

Applications

Protection of rectifiers, inverters, static switch, AC & DC drives and UPS systems.

Innovations

- Double indicator (Visual and mechanical).
- Largest range of the market
- Connexion improvement between trip indicator - Micro switch
- Cd / Pb free
- Low voltage indicator - 50V



Semiconductor (AC) fuses

Protistor® Square-body Fuses NH Plain Blades - 690 VAC gR - 690 VAC sizes 000 to 3 (full range)

Voltage	Size	Type	Rating In (A)	Pre-Arcing I ² t @ 1ms (A ² s)	Total I ² t @ 690 V kA ² s	Pn: Power losses (W) PV 43620 0,8In	Breaking capacities @ Un (kA)
690 V	000	gRB	16				
		gRB	20				
		gRB	25				
		gRB	32				
		gRB	40				
		gRB	50				
		gRB	63				
		gRB	80				
		gRB	100				
		gRB	125				
690 V	00	gRB	20			Consult us	
		gRB	25				
		gRB	32				
		gRB	40				
		gRB	50				
		gRB	63				
		gRB	80				
		gRB	100				
		gRB	125				
		gRB	160				
690 V	0	gRB	200				
		gRB	32				
		gRB	40				
		gRB	50				
		gRB	63				
		gRB	80				
		gRB	100				
		gRB	125				
		gRB	160				
		gRB	200				
690 V	0	gRB	250				
		gRB	32				
		gRB	40				
		gRB	50				
		gRB	63				
		gRB	80				
		gRB	100				
		gRB	125				
		gRB	160				
		gRB	200				

Time/current characteristics
Cut off characteristics
Total I²t and total operating time
Other curves
Fuse holder derating

} Consult us

Protistor® Square-body Fuses

NH Plain Blades - 690 VAC

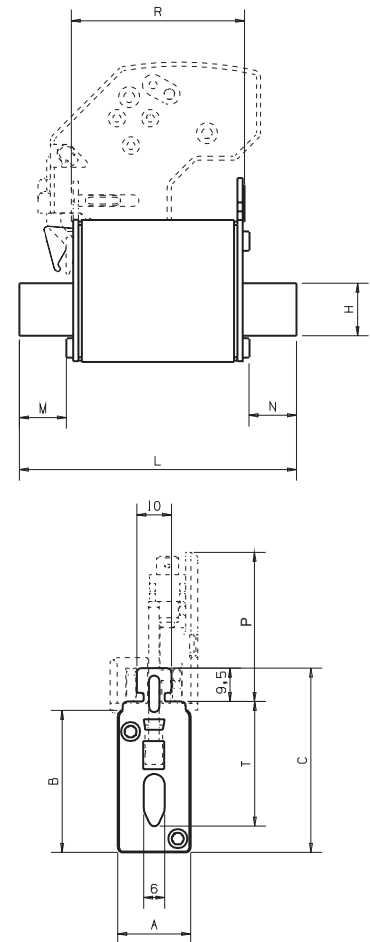
gR - 690 VAC sizes 000 to 3 (full range)

Voltage	Size	Type	Rating In (A)	Pre-Arcing I²t @ 1ms (A²s)	Total I²t @ 690 V kA²s	Pn: Power losses (W) PV 43620 0,8In	Breaking capacities @ Un (kA)
690 V	16	gRB	63				
		gRB	80				
		gRB	100				
		gRB	125				
		gRB	160				
		gRB	200				
		gRB	250				
		gRB	315				
		gRB	350				
		gRB	160				
690 V	2	gRB	200			Consult US	
		gRB	250				
		gRB	315				
		gRB	350				
		gRB	400				
		gRB	450				
		gRB	500				
		gRB	160				
690 V	3	gRB	315				
		gRB	350				
		gRB	400				
		gRB	450				
		gRB	500				
		gRB	560				
		gRB	630				
		gRB	700				
		gRB	800				



Protistor® Square-body Fuses NH Plain Blades - 690 VAC gR - 690 VAC sizes 000 to 3 (full range)

Size	Designation	Reference Number	Catalog Number	Weight	Pack. (g)
000	6,9 gRB 000 PV 0016	N322035	NH000GB69V16PV	135	3
	6,9 gRB 000 PV 0020	Q322037	NH000GB69V20PV		
	6,9 gRB 000 PV 0025	S322039	NH000GB69V25PV		
	6,9 gRB 000 PV 0032	X322043	NH000GB69V32PV		
	6,9 gRB 000 PV 0040	B322047	NH000GB69V40PV		
	6,9 gRB 000 PV 0050	F322051	NH000GB69V50PV		
	6,9 gRB 000 PV 0063	K322055	NH000GB69V63PV		
	6,9 gRB 000 PV 0080	P322059	NH000GB69V80PV		
	6,9 gRB 000 PV 0100	T322063	NH000GB69V100PV		
	6,9 gRB 000 PV 0125	W322065	NH000GB69V125PV		
	Neutral	Z218269	NH00NEUTRAL		10
	Extraction puller	P215592	NHHANDLE		1
00	6,9 gRB 00 PV 0020	Z322137	NH00GB69V20PV	200	3
	6,9 gRB 00 PV 0025	B322139	NH00GB69V25PV		
	6,9 gRB 00 PV 0032	F322143	NH00GB69V32PV		
	6,9 gRB 00 PV 0040	K322147	NH00GB69V40PV		
	6,9 gRB 00 PV 0050	P322151	NH00GB69V50PV		
	6,9 gRB 00 PV 0063	T322155	NH00GB69V63PV		
	6,9 gRB 00 PV 0080	Y322159	NH00GB69V80PV		
	6,9 gRB 00 PV 0100	C322163	NH00GB69V100PV		
	6,9 gRB 00 PV 0125	E322165	NH00GB69V125PV		
	6,9 gRB 00 PV 0160	J322169	NH00GB69V160PV		
	6,9 gRB 00 PV 0200	L322171	NH00GB69V200PV		
	Neutral	Z218269	NH00NEUTRAL		10
0	6,9 gRB 0 PV 0032	P322243	NH0GB69V32PV	250	3
	6,9 gRB 0 PV 0040	T322247	NH0GB69V40PV		
	6,9 gRB 0 PV 0050	Y322251	NH0GB69V50PV		
	6,9 gRB 0 PV 0063	C322255	NH0GB69V63PV		
	6,9 gRB 0 PV 0080	G322259	NH0GB69V80PV		
	6,9 gRB 0 PV 0100	L322263	NH0GB69V100PV		
	6,9 gRB 0 PV 0125	N322265	NH0GB69V125PV		
	6,9 gRB 0 PV 0160	S322269	NH0GB69V160PV		
	6,9 gRB 0 PV 0200	V322271	NH0GB69V200PV		
	6,9 gRB 0 PV 0250	Z322275	NH0GB69V250PV		
	Neutral	Z219304	NH0NEUTRAL		10
	Extraction puller	P215592	NHHANDLE		1



Microswitches

MS 4L 2-5 B6 + PRES	F210156	(6,3mm clips)
MS 4L 2-5 B2 + PRES	G210157	(2.8 mm clips)

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)

Microswitches supplied separately

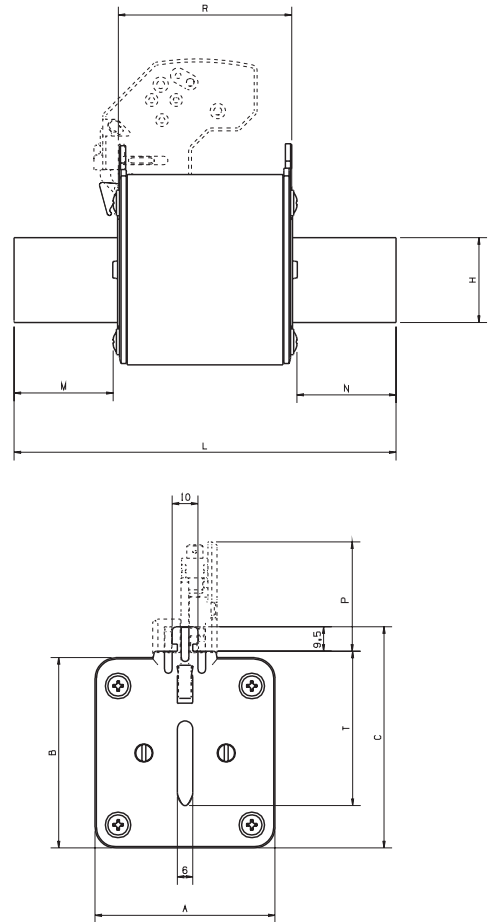
Size	A	B	C	H	L	M	N	P	R	T
000	20,8 0.82"	40,5 1.59"	52,5 2.07"	15 0.59"	79 3.11"	13,5 0.53"	13,5 0.53"	43,4 1.71"	49,5 1.95"	35 1.38"
00	29,5 1.16"	47,5 1.87"	59,5 2.34"	15 0.59"	79 3.11"	13,1 0.52"	13,1 0.52"	43,4 1.71"	50 1.97"	35 1.38"
0	29,5 1.16"	47,5 1.87"	59,5 2.34"	15 0.59"	125 4.92"	29,1 1.15"	29,1 1.15"	43,4 1.71"	66 2.60"	35 1.38"

Fuse holder solution, see gear and Fuse gear section



Protistor® Square-body Fuses NH Plain Blades - 690 VAC gR - 690 VAC sizes 000 to 3 (full range)

Size	Designation	Reference Number	Catalog Number	Weight	Pack. (g)
1	6,9 gRB 1 PV 0063	L322355	NH1GB69V63VP	430	3
	6,9 gRB 1 PV 0080	J322399	NH1GB69V80PV		
	6,9 gRB 1 PV 0100	V322363	NH1GB69V100PV		
	6,9 gRB 1 PV 0125	X322365	NH1GB69V125PV		
	6,9 gRB 1 PV 0160	B322369	NH1GB69V160PV		
	6,9 gRB 1 PV 0200	D322371	NH1GB69V200PV		
	6,9 gRB 1 PV 0250	H322375	NH1GB69V250PV		
	6,9 gRB 1 PV 0315	M322379	NH1GB69V315PV		
	6,9 gRB 1 PV 0350	N322380	NH1GB69V350PV		
	Neutral	A219834	NH1NEUTRAL		10
	Extraction puller	P215592	NHHANDLE		1
2	6,9 gRB 2 PV 0160	K322469	NH2GB69V160PV	600	3
	6,9 gRB 2 PV 0200	M322471	NH2GB69V200PV		
	6,9 gRB 2 PV 0250	R322475	NH2GB69V250PV		
	6,9 gRB 2 PV 0315	W322479	NH2GB69V315PV		
	6,9 gRB 2 PV 0350	X322480	NH2GB69V350PV		
	6,9 gRB 2 PV 0400	A322483	NH2GB69V400PV		
	6,9 gRB 2 PV 0450	C322485	NH2GB69V450PV		
	6,9 gRB 2 PV 0500	E322487	NH2GB69V500PV		
	Neutral	N222514	NH2NEUTRAL		10
	Extraction puller	P215592	NHHANDLE		1
3	6,9 gRB 3 PV 0315	E322579	NH3GB69V315PV	750	3
	6,9 gRB 3 PV 0350	F322580	NH3GB69V350PV		
	6,9 gRB 3 PV 0400	J322583	NH3GB69V400PV		
	6,9 gRB 3 PV 0450	L322585	NH3GB69V450PV		
	6,9 gRB 3 PV 0500	N322587	NH3GB69V500PV		
	6,9 gRB 3 PV 0550	P322588	NH3GB69V550PV		
	6,9 gRB 3 PV 0630	Q322589	NH3GB69V630PV		
	6,9 gRB 3 PV 0700	R322590	NH3GB69V700PV		
	6,9 gRB 3 PV 0850	S322591	NH3GB69V850PV		
	Neutral	E223035	NH3NEUTRAL		10
	Extraction puller	P215592	NHHANDLE		1



Microswitches

MS 4L 2-5 B6 + PRES	F210156	(6,3mm clips)
MS 4L 2-5 B2 + PRES	G210157	(2.8 mm clips)

Automatically resetable, 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)

Microswitches supplied separately

Size	A	B	C	H	L	M	N	P	R	T
1	39,5	52,5	64,5	20	135	32,1	32,1	43,4	68	40
	1.56"	2.07"	2.54"	0.79"	5.32"	1.26"	1.26"	1.71"	2.68"	1.57"
2	51	60	72	26	150	38,85	38,85	43,4	68	48
	2.01"	2.36"	2.85"	1.02"	5.91"	1.53"	1.53"	1.71"	2.68"	1.89"
3	70	74	86	33	150	38,85	38,85	43,4	68	60
	2.76"	2.91"	3.39"	1.30"	5.91"	1.53"	1.53"	1.71"	2.68"	2.36"

Fuse holder solution, see p.11



Protistor® Square-body Fuses NH Plain Blades - 690 VAC gR - 690 VAC sizes 000 to 3 (full range)

Fuse holders and switch-disconnector



Fuse holder
unprotect



Fuse holder
finger safe



Switch
Disconnecter



Fuse switch
Disconnecter
fast handle

Type	Characteristics	Poles	Size 000/00	Size 0	Size 1	Size 2	Size 3
Fuse holder	Unprotected (4) screw connection for hole and bar terminals for 35mm Din rail	1	R216192	T218241	A223008	E211075	X213644
		2	F218758	G218759	G200796	V211595	B214154
		3	V219277	W219278	Y201340	D212109	F214664
		4	Z223007	H222486	H201855	R212627	K215174
	Unprotected (4) screw connection for holes or bar terminals for panels	1	F215170	N216695	E218757	F201853	W213643
		2	A217212	B217213	F222484	S211593	D214662
		3	F217723	G217724	Y223006	B212107	H215172
		4	S219275	R218239	X201339	C213143	L215681
	Finger Safe Protected screw connection for hole and bar terminals for DIN rail	1	S218240	G226717	P226724	R226726	T226728
		3	G222485	J226719A	Q226725	S226727	V226729
Switch- disconnecter	Horizontal Linocur AC23	1	N216626 N222882				
		2	B218685 C201781				
		3	Y212035 W213574				
Fused switch- disconnecter front handle	ITCP 160 III(4)	3	F210409				
	ITC 63 III complete (5)	3	G210824				
	ITC 160 III complete (5)	3	K227824				
	ITC 250 III complete (5)	3			N210830 + Y210770 (3)		
	ITC 400 III complete(5)	3				Q210832 + Y210770 (3)	
	ITC 630 III complete(5)	3					P210831 + Y210770 (3)
	ITC 800 III complete(5)	3					W229674 + Y210770 (3)

(1) Impossible to use microswitch

(2) The axis of operation must be fragmented if the heighten (Y210770A) is not used - Internal or external control.

(3) Necessary heighten for the use of microswitch (F210156C or G210157C)

(4) Unprotected against accidental contact-not finger safe

(5) Finger safe

Warning: for all holders, please check maximum fuse and fuse holder operating limit".

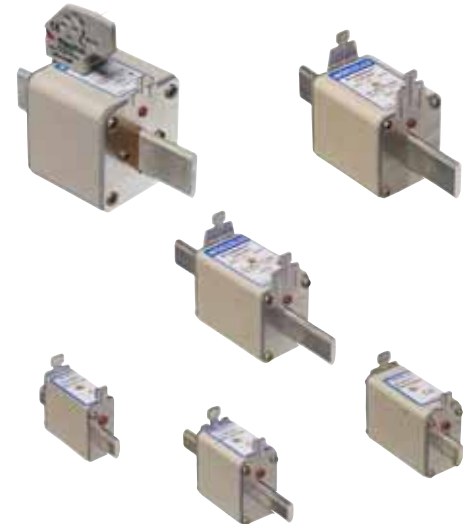


Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3

Ferraz Shawmut PSC-URD 690 VAC fuse-links provide maximum flexibility in equipment design and ultimate protection for today's power conversion equipment. This range is a fast acting, engineered to provide state of the art protection for power semiconductors such as diodes, thyristors.

These square body fuse-links are available in various body sizes with a broad range of ampere ratings allowing the greatest flexibility in equipment design.

They have pure silver fuse elements embedded in solidified sand which provides optimized I^2t and high breaking capacity. All contact surfaces are plated and all hardware non-magnetic. All fuses are standard with a low voltage blown fuse indicator. This indicator can operate a microswitch which is easily mounted directly on to the fuse in service.



Features/Benefits

Broad range of ampere ratings in each body size for design flexibility

IEC 60269-4 compliance for fuses for worldwide semiconductor applications



Beige melted



Red non melted

Ratings

AC: up to 1000 A
500 - 690 VAC
80-170 kA IR

DC: Consult Factory

Approvals

AC: Tested to IEC 269.4

Features

- Ultra fast acting
- Highly current limiting.
- High breaking capacities
- Very low I^2t
- Worldwide mounting acceptance.
- Superior cycling ability.
- High withstanding in rush current and overloads

Applications

Protection of rectifiers, inverters, static switch, AC & DC drives and UPS systems.

Innovations

- Double indicator (Visual and mechanical).
- Largest range of the market
- Connexion improvement between trip indicator - Micro switch
- Cd / Pb free
- Low voltage indicator - 50V



Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3

Voltage	Size	Type	Rating In (A)	Pre-Arcing I _t @ 1ms (A ² s)	Total I _t @ 690 V (A ² s)	P _n : Power losses (W) PV 43620 0,8I _n	Breaking capacities @ Un kA
690 V CEI 700V UL	000	URD	16	10	48	1,0	80
		URD	20	15	90	1,5	
		URD	25	22	130	2,0	
		URD	32	45	270	2,5	
		URD	40	69	400	4,0	
		URD	50	107	630	5,0	
		URD	63	220	1 300	6,0	
		URD	80	350	2 000	8,0	
		URD	100	720	4 300	9,5	
		URD	125	1 400	8 200	10,5	
		URD	160	2 100	12 200	15,0	
		URD	200	3 900	22 700	18,0	
		URD	250	7 600	44 400	22,0	
500V CEI 550V UL		URD	315	15 400	90 700	30,0	
690 V CEI 700V UL	00	URD	20	15	90	1,5	170
		URD	25	22	130	2,0	
		URD	32	45	270	2,5	
		URD	40	69	400	4,0	
		URD	50	110	630	5,0	
		URD	63	220	1 300	6,0	
		URD	80	350	2 000	8,0	
		URD	100	720	4 300	8,5	
		URD	125	1 390	8 200	10,0	
		URD	160	2 100	12 200	14,0	
		URD	200	3 900	22 700	17,0	
		URD	250	7 600	44 400	20,0	
		URD	315	15 400	90 700	29,0	
690 V CEI 700V UL	0	URD	32	32	170	9,5	170
		URD	40	53	280	10,0	
		URD	50	87	470	10,5	
		URD	63	130	700	11,5	
		URD	80	180	970	12,5	
		URD	100	390	2 080	15,0	
		URD	125	720	3 890	18,0	
		URD	160	1 550	8 320	22,0	
		URD	200	2 950	15 900	27,0	
		URD	250	5 560	29 900	33,0	
		URD	315	11 600	62 300	40,0	

Time/current characteristics
Cut off characteristics
Total I_t and total operating time
Other curves
Fuse holder derating

} See following pages



Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3



Voltage	Size	Type	Rating In (A)	Pre-Arcing I ² t @ 1ms (A ² s)	Total I ² t @ 690 V (A ² s)	Pn: Power losses (W) PV 43620 0,8In	Breaking capacities @ Un kA
690 V CEI 700V UL	1	URD	63	130	700	18	170
		URD	80	220	1 170	21,5	
		URD	100	290	1 570	23,0	
		URD	125	620	3 320	26,0	
		URD	160	1 170	6 270	29,0	
		URD	200	2 470	13 300	33,0	
		URD	250	4 670	25 100	37,0	
		URD	315	9 570	51 400	42,0	
		URD	350	13 400	72 300	44,0	
690 V CEI 700V UL	2	URD	400	19 500	105 000	48,0	170
		URD	160	960	5 180	38	
		URD	200	1 710	9 220	42	
		URD	250	3 480	18 700	46,5	
		URD	315	6 860	36 900	54,0	
		URD	350	9 570	51 400	58,0	
		URD	400	13 400	72 300	62,5	
		URD	450	21 000	113 000	69,0	
		URD	500	27 400	147 000	73,0	
		URD	550	38 300	206 000	78,0	
690 V CEI 700V UL	3	URD	630	58 700	315 000	85,0	170
		URD	700	78 100	420 000	87,0	
		URD	315	5 251	28 200	57,0	
		URD	350	7 562	40 600	58,0	
		URD	400	10 500	56 500	65,5	
		URD	450	15 700	84 300	70,0	
		URD	500	22 200	119 000	75,0	
		URD	550	30 200	163 000	80,0	
		URD	630	42 000	226 000	89,0	
		URD	700	61 700	332 000	100,0	
		URD	800	88 900	478 000	112,0	
		URD	900	123 900	666 000	125,0	
		URD	1000	178 400	959 000	140,0	



Semiconductor (AC) fuses

Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3

Size	Designation	Reference Number	Catalog Number	Weight	Pack. (g)
000	6,9 URD 000 PV 0016	P320035	NH000UD 69V 16PV	135	3
	6,9 URD 000 PV 0020	R320037	NH000UD 69V 20PV		
	6,9 URD 000 PV 0025	T320039	NH000UD 69V 25PV		
	6,9 URD 000 PV 0032	Y320043	NH000UD 69V 32PV		
	6,9 URD 000 PV 0040	C320047	NH000UD 69V 40PV		
	6,9 URD 000 PV 0050	G320051	NH000UD 69V 50PV		
	6,9 URD 000 PV 0063	L320055	NH000UD 69V 63PV		
	6,9 URD 000 PV 0080	Q320059	NH000UD 69V 80PV		
	6,9 URD 000 PV 0100	V320063	NH000UD 69V 100PV		
	6,9 URD 000 PV 0125	X320065	NH000UD 69V 125PV		
	6,9 URD 000 PV 0160	B320069	NH000UD 69V 160PV		
	6,9 URD 000 PV 0200	D320071	NH000UD 69V 200PV		
	6,9 URD 000 PV 0250	H320075	NH000UD 69V 250PV		
	5 URD 000 PV 0315	M320079	NH000UD 50V 315PV		
	Neutral	Z218269			10
00	Extraction puller	P215592	NH HANDLE	200	1
	6,9 URD 00 PV 0020	A320137	NH00UD 69V 20PV		3
	6,9 URD 00 PV 0025	C320139	NH00UD 69V 25PV		
	6,9 URD 00 PV 0032	G320143	NH00UD 69V 32PV		
	6,9 URD 00 PV 0040	L320147	NH00UD 69V 40PV		
	6,9 URD 00 PV 0050	Q320151	NH00UD 69V 50PV		
	6,9 URD 00 PV 0063	V320155	NH00UD 69V 63PV		
	6,9 URD 00 PV 0080	Z320159	NH00UD 69V 80PV		
	6,9 URD 00 PV 0100	D320163	NH00UD 69V 100PV		
	6,9 URD 00 PV 0125	F320165	NH00UD 69V 125PV		
	6,9 URD 00 PV 0160	K320169	NH00UD 69V 160PV		
	6,9 URD 00 PV 0200	M320171	NH00UD 69V 200PV		
	6,9 URD 00 PV 0250	R320175	NH00UD 69V 250PV		
	6,9 URD 00 PV 0315	W320179	NH00UD 69V 315PV		
	Neutral	Z218269			10
0	Extraction puller	P215592	NH HANDLE	250	1
	6,9 URD 0 PV 0032	Q320243	NH0UD 69V 32PV		3
	6,9 URD 0 PV 0040	V320247	NH0UD 69V 40PV		
	6,9 URD 0 PV 0050	Z320251	NH0UD 69V 50PV		
	6,9 URD 0 PV 0063	D320255	NH0UD 69V 63PV		
	6,9 URD 0 PV 0080	H320259	NH0UD 69V 80PV		
	6,9 URD 0 PV 0100	M320263	NH0UD 69V 100PV		
	6,9 URD 0 PV 0125	P320265	NH0UD 69V 125PV		
	6,9 URD 0 PV 0160	T320269	NH0UD 69V 160PV		
	6,9 URD 0 PV 0200	W320271	NH0UD 69V 200PV		
	6,9 URD 0 PV 0250	A320275	NH0UD 69V 250PV		
	6,9 URD 0 PV 0315	E320279	NH0UD 69V 315PV		
	Neutral	Z219304			10
	Extraction puller	P215592	NH HANDLE		1

Microswitches

MS 4L 2-5 B6 + PRES	F210156	(6,3mm clips)
MS 4L 2-5 B2 + PRES	G210157	(2.8 mm clips)

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)

Microswitches supplied separately

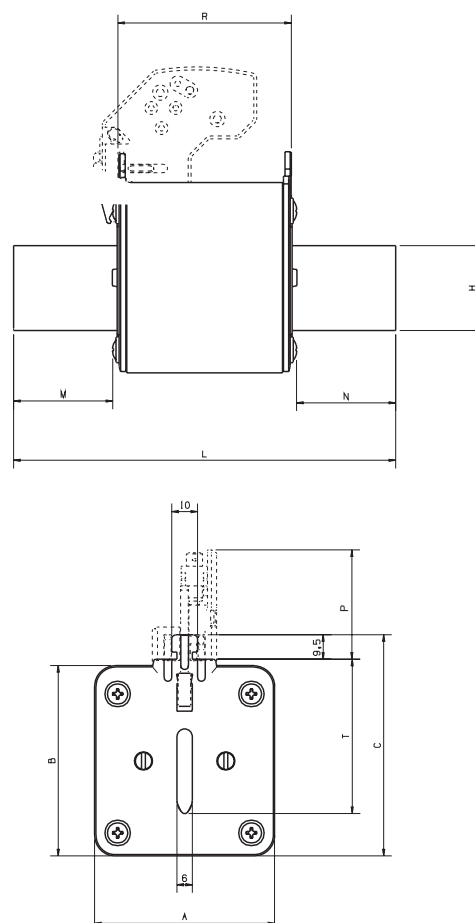
Size	A	B	C	H	L	M	N	P	R	T
000	20,8	40,5	52,5	15	79	13,5	13,5	43,4	49,5	35
	0.82"	1.59"	2.07"	0.59"	3.11"	0.53"	0.53"	1.71"	1.95"	1.38"
00	29,5	47,5	59,5	15	79	13,1	13,1	43,4	50	35
	1.16"	1.87"	2.34"	0.59"	3.11"	0.52"	0.52"	1.71"	1.97"	1.38"
0	29,5	47,5	59,5	15	125	29,1	29,1	43,4	66	35
	1.16"	1.87"	2.34"	0.59"	4.92"	1.15"	1.15"	1.71"	2.60"	1.38"

Fuse holder solution, see Gear and Fuse gear section.



Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3

Size	Designation	Reference Number	Catalog Number	Weight	Pack. (g)
1	6,9 URD 1 PV 0063	M320355	NH1UD 69V 63PV	430	3
	6,9 URD 1 PV 0080	K320399	NH1UD 69V 80PV		
	6,9 URD 1 PV 0100	W320363	NH1UD 69V 100PV		
	6,9 URD 1 PV 0125	Y320365	NH1UD 69V 125PV		
	6,9 URD 1 PV 0160	C320369	NH1UD 69V 160PV		
	6,9 URD 1 PV 0200	E320371	NH1UD 69V 200PV		
	6,9 URD 1 PV 0250	J320375	NH1UD 69V 250PV		
	6,9 URD 1 PV 0315	N320379	NH1UD 69V 315PV		
	6,9 URD 1 PV 0350	P320380	NH1UD 69V 350PV		
	6,9 URD 1 PV 0400	S320383	NH1UD 69V 400PV		
	Neutral	A219834			5
	Extraction puller	P215592	NHHANDLE		1
2	6,9 URD 2 PV 0160	L320469	NH2UD 69V 160PV	600	3
	6,9 URD 2 PV 0200	N320471	NH2UD 69V 200PV		
	6,9 URD 2 PV 0250	S320475	NH2UD 69V 250PV		
	6,9 URD 2 PV 0315	X320479	NH2UD 69V 315PV		
	6,9 URD 2 PV 0350	Y320480	NH2UD 69V 350PV		
	6,9 URD 2 PV 0400	B320483	NH2UD 69V 400PV		
	6,9 URD 2 PV 0450	D320485	NH2UD 69V 450PV		
	6,9 URD 2 PV 0500	F320487	NH2UD 69V 500PV		
	6,9 URD 2 PV 0550	G320488	NH2UD 69V 550PV		
	6,9 URD 2 PV 0630	H320489	NH2UD 69V 630PV		
	6,9 URD 2 PV 0700	J320490	NH2UD 69V 700PV		
	Neutral	N222514			5
	Extraction puller	P215592	NHHANDLE		1
3	6,9 URD 3 PV 0315	F320579	NH3UD 69V 315PV	750	3
	6,9 URD 3 PV 0350	G320580	NH3UD 69V 350PV		
	6,9 URD 3 PV 0400	K320583	NH3UD 69V 400PV		
	6,9 URD 3 PV 0450	M320585	NH3UD 69V 450PV		
	6,9 URD 3 PV 0500	P320587	NH3UD 69V 500PV		
	6,9 URD 3 PV 0550	Q320588	NH3UD 69V 550PV		
	6,9 URD 3 PV 0630	R320589	NH3UD 69V 630PV		
	6,9 URD 3 PV 0700	S320590	NH3UD 69V 700PV		
	6,9 URD 3 PV 0800	T320591	NH3UD 69V 800PV		
	6,9 URD 3 PV 0900	V320592	NH3UD 69V 900PV		
	6,9 URD 3 PV 1000	W320593	NH3UD 69V 1000PV		
	Neutral	E223035			51
	Extraction puller	P215592	NHHANDLE		



Microswitches

MS 4L 2-5 B6 + PRES	F210156	(6,3mm clips)
MS 4L 2-5 B2 + PRES	G210157	(2.8 mm clips)

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)

Microswitches supplied separately

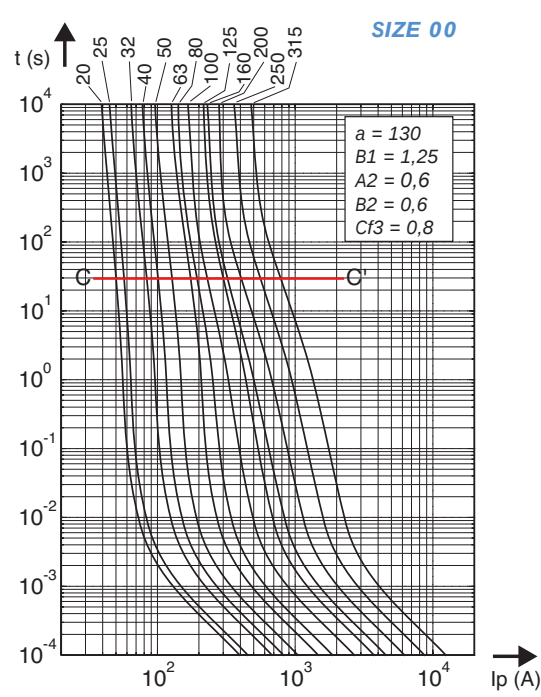
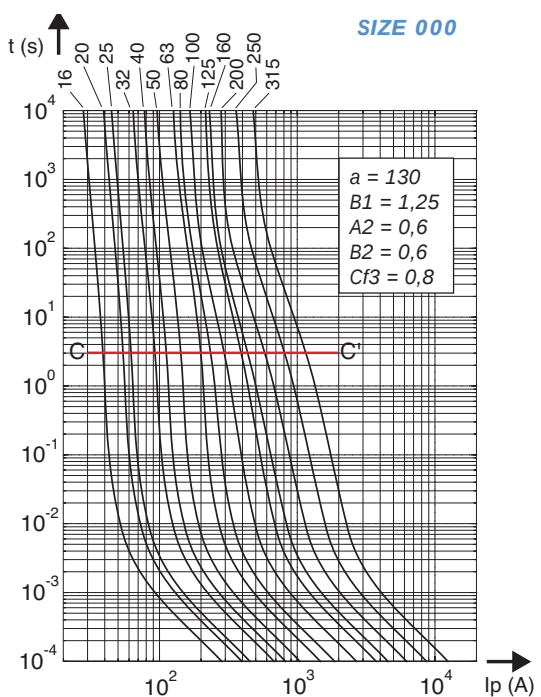
Size	A	B	C	H	L	M	N	P	R	T
1	39,5	52,5	64,5	20	135	32,1	32,1	43,4	68	40
	1.56"	2.07"	2.54"	0.79"	5.32"	1.26"	1.26"	1.71"	2.68"	1.57"
2	51	60	72	26	150	38,85	38,85	43,4	68	48
	2.01"	2.36"	2.85"	1.02"	5.91"	1.53"	1.53"	1.71"	2.68"	1.89"
3	70	74	86	33	150	38,85	38,85	43,4	68	60
	2.76"	2.91"	3.39"	1.30"	5.91"	1.53"	1.53"	1.71"	2.68"	2.36"

Fuse holder solution, see Gear and Fuse gear section.

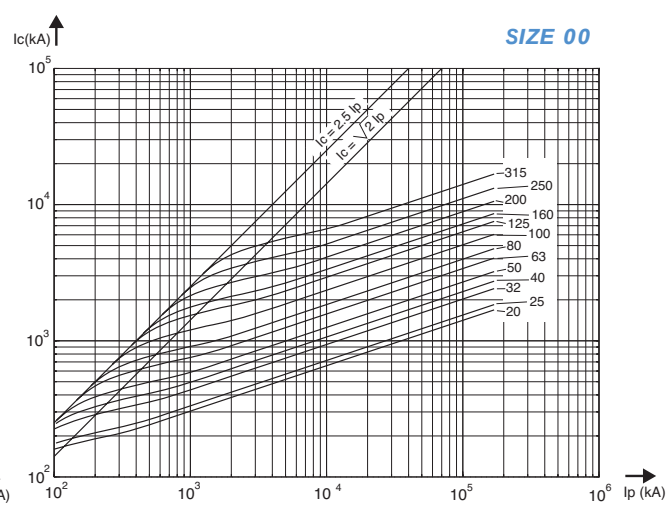
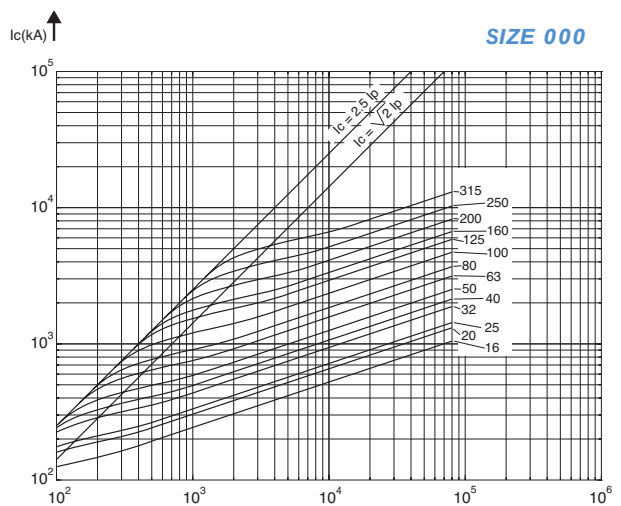


Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3

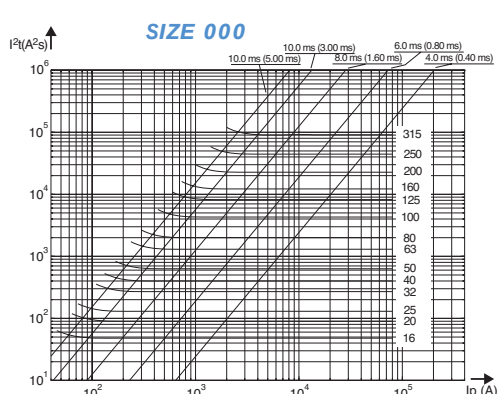
Times/Current Characteristics



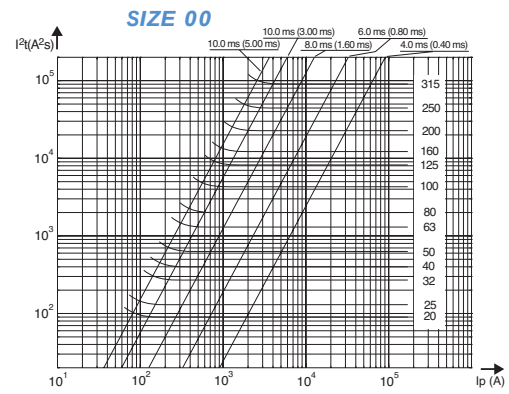
Cut off characteristics - Peak let thru current



Total I^2t and total operating time @ 690 V



Value between parentheses pertain to prearcing I^2t

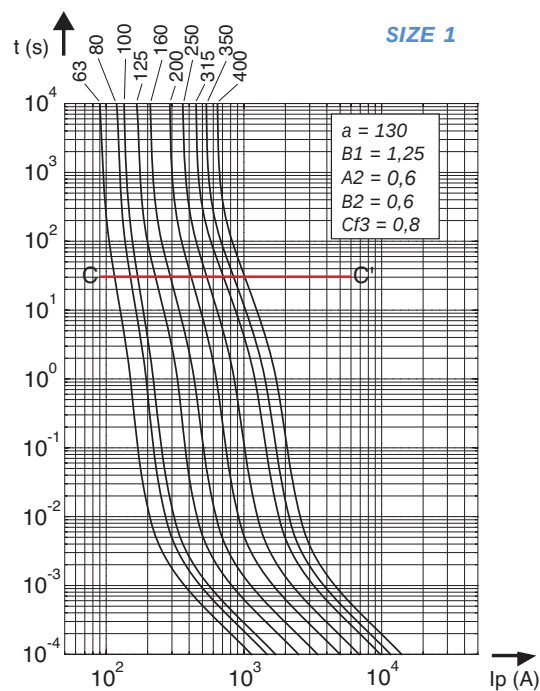
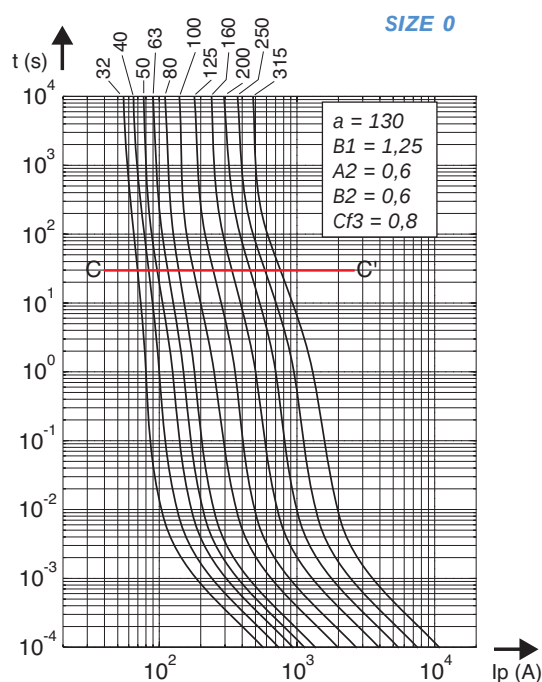


Semiconductor (AC) fuses

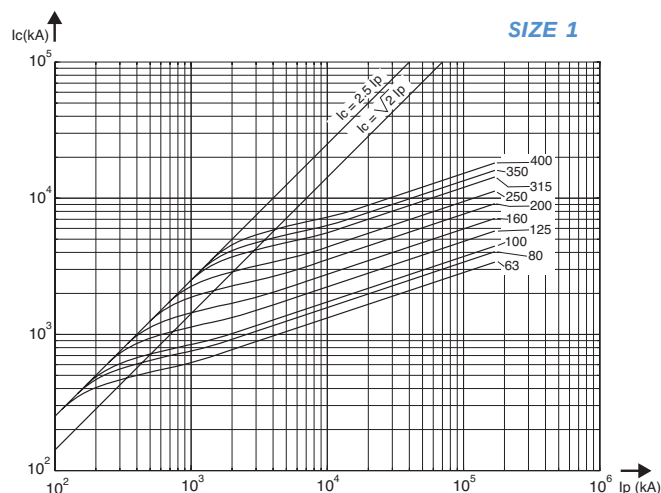
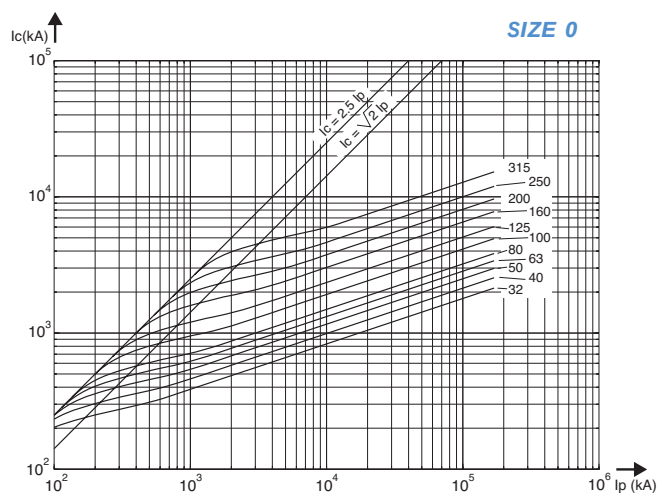


Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3

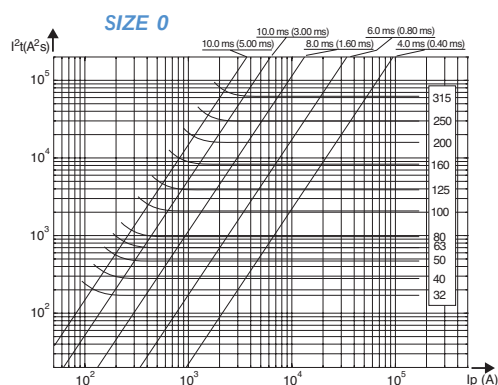
Times/Current Characteristics



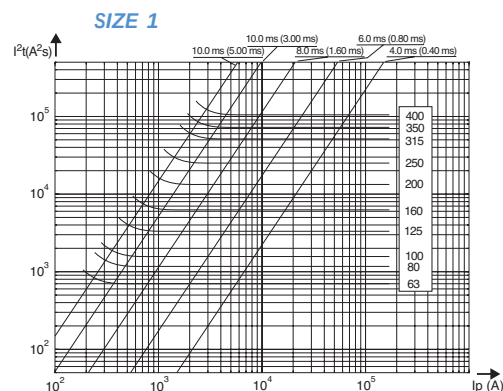
Cut off characteristics - Peak let thru current



Total I²t and total operating time @ 690 V



Value between
parentheses pertain
to prearcing I²t

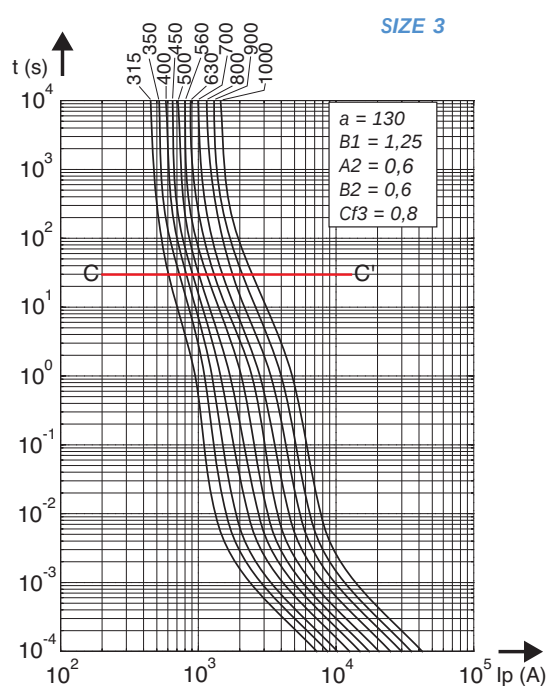
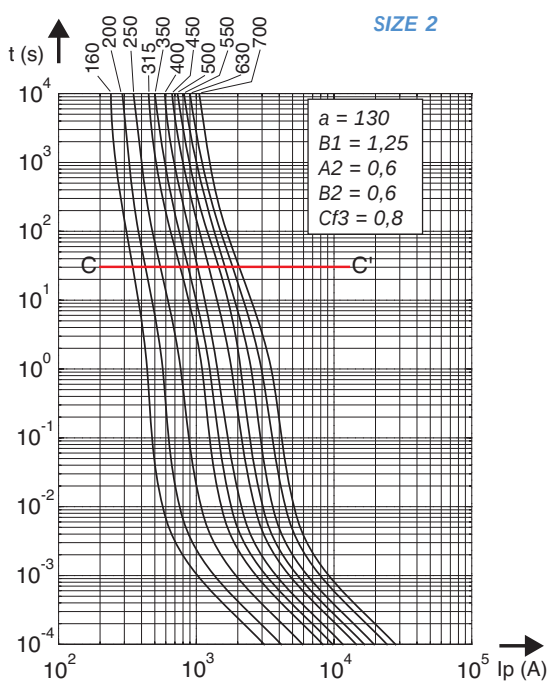




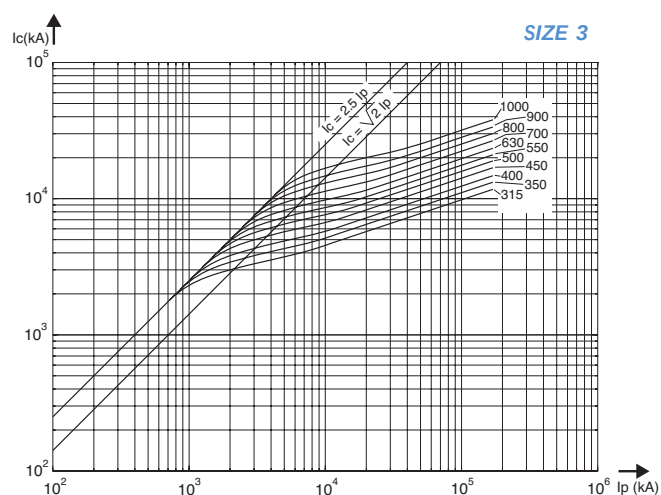
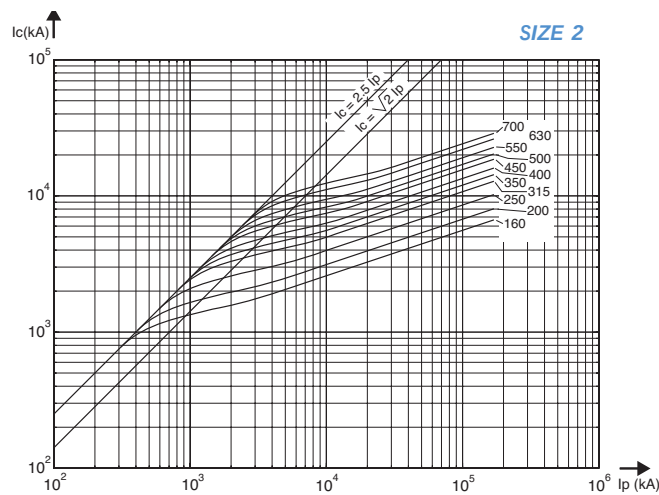
Semiconductor (AC) fuses

Protistor® Square-body Fuses
NH Plain Blades - 690 VAC
aR - 690 VAC sizes 000 to 3

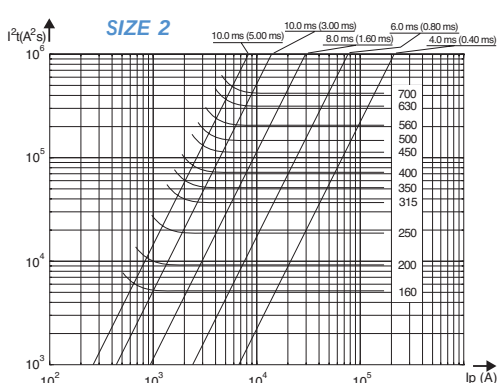
Times/Current Characteristics



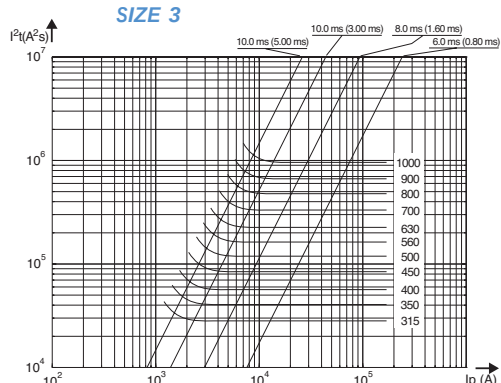
Cut off characteristics - Peak let thru current



Total I^2t and total operating time @ 690 V



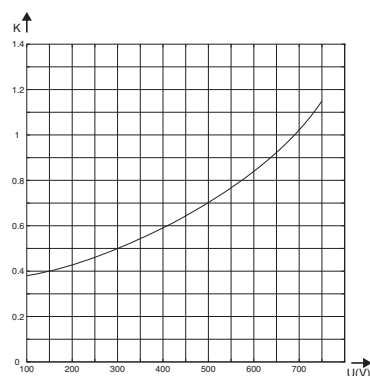
Value between parentheses pertain to prearcing I^2t



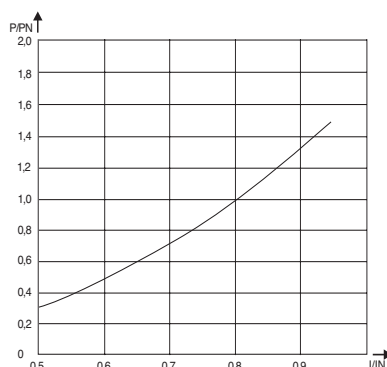


Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3

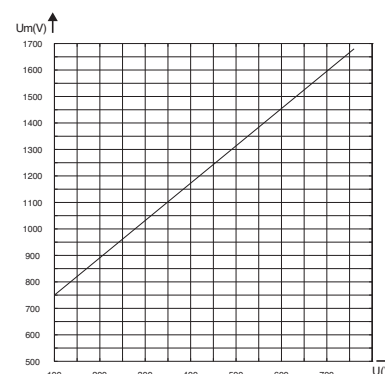
$k=f(U)$
Multiplier coefficient
to calculate total I^2t
and total operating time



P/P_N
Multiplier coefficient
to calculate the power
losses at various currents



Peak arc voltage



Derating in fuse holders

- 1- Derating for fuse holder unprotected
- 2- Derating for finger safe fuseholders and switch disconnecter Linocur
- 3- Derating for fused switch-disconnectors ITC
- 4- Derating for fused switch-disconnectors ITC with finger safe protection

	In	1	2	3	4
Size 000	16	1,00	1,00	1,00	1,00
	20	1,00	1,00	1,00	1,00
	25	1,00	1,00	1,00	1,00
	32	1,00	1,00	1,00	1,00
	40	1,00	1,00	1,00	1,00
	50	1,00	1,00	0,90	0,90
	63	1,00	1,00	0,90	0,90
	80	1,00	0,90	0,75	0,75
	100	1,00	0,90	0,75	0,75
	125	1,00	0,85	0,70	0,70
	160	0,90	0,75	0,60	0,60
	200	0,85	0,70	0,55	0,55
Size 00	250	0,75	0,60	0,50	0,50
	315	0,70	0,55	0,45	0,45
	20	1,00	1,00	1,00	1,00
	25	1,00	1,00	1,00	1,00
	32	1,00	1,00	1,00	1,00
	40	1,00	1,00	1,00	1,00
	50	1,00	1,00	1,00	1,00
	63	1,00	1,00	1,00	1,00
	80	1,00	0,95	0,95	0,95
	100	1,00	0,90	0,90	0,90
Size 0	125	1,00	0,85	0,85	0,85
	160	0,90	0,75	0,75	0,75
	200	0,85	0,70	0,70	0,70
	250	0,80	0,65	0,65	0,65
	315	0,70	0,55	0,55	0,55
	32	1,00			
	40	1,00			
	50	1,00			
	63	1,00			
	80	0,95			
	100	0,95			
	125	0,85			
	160	0,85			
	200	0,80			
	250	0,75			
	315	0,65			

	In	1	2	3	4
Size 1	63	1,00	0,95	1,00	1,00
	80	0,95	0,85	0,95	0,90
	100	0,85	0,75	0,85	0,80
	125	0,85	0,75	0,85	0,80
	160	0,80	0,70	0,80	0,75
	200	0,80	0,70	0,80	0,70
	250	0,75	0,70	0,75	0,70
	315	0,75	0,65	0,75	0,70
	350	0,70	0,65	0,70	0,65
	400	0,65	0,60	0,65	0,60
Size 2	160	0,90	0,80	0,90	0,85
	200	0,85	0,75	0,85	0,80
	250	0,85	0,70	0,80	0,75
	315	0,75	0,65	0,70	0,65
	350	0,70	0,65	0,70	0,65
	400	0,70	0,60	0,70	0,60
	450	0,70	0,60	0,65	0,60
	500	0,70	0,60	0,65	0,60
	550	0,65	0,60	0,65	0,60
	630	0,65	0,55	0,65	0,60
Size 3	700	0,60	0,55	0,60	0,55
	315	0,85	0,75	0,80	0,75
	350	0,85	0,75	0,80	0,75
	400	0,80	0,70	0,75	0,70
	450	0,80	0,70	0,75	0,70
	500	0,75	0,65	0,75	0,70
	550	0,75	0,65	0,75	0,70
	630	0,70	0,60	0,70	0,65
	700	0,70	0,60	0,65	0,60
	800	0,65	0,55	0,60	0,55
	900	0,60	0,50	0,60	0,55
	1000	0,60	0,50	0,55	0,50



Protistor® Square-body Fuses NH Plain Blades - 690 VAC aR - 690 VAC sizes 000 to 3



Fuse holders and switch-disconnector



Fuse holder
unprotect



Fuse holder
finger safe



Switch
Disconnecter



Fuse switch
Disconnecter
fast handle

Type	Characteristics	Poles	Size 000/00	Size 0	Size 1	Size 2	Size 3
Fuse holder	Unprotected (4) screw connection for hole and bar terminals for 35mm Din rail	1	R216192	T218241	A223008	E211075	X213644
		2	F218758	G218759	G200796	V211595	B214154
		3	V219277	W219278	Y201340	D212109	F214664
		4	Z223007	H222486	H201855	R212627	K215174
	Unprotected (4) screw connection for holes or bar terminals for panels	1	F215170	N216695	E218757	F201853	W213643
		2	A217212	B217213	F222484	S211593	D214662
		3	F217723	G217724	Y223006	B212107	H215172
		4	S219275	R218239	X201339	C213143	L215681
	Finger Safe Protected screw connection for hole and bar terminals for DIN rail	1	S218240	G226717	P226724	R226726	T226728
		3	G222485	J226719A	Q226725	S226727	V226729
Switch- disconnecter	Horizontal Linocur AC23	1	N216626 N222882				
		2	B218685 C201781				
		3	Y212035 W213574				
Fused switch- disconnecter front handle	ITCP 160 III(4)	3	F210409				
	ITC 63 III complete (5)	3	G210824				
	ITC 160 III complete (5)	3	K227824				
	ITC 250 III complete (5)	3			N210830 + Y210770 (3)		
	ITC 400 III complete(5)	3				Q210832 + Y210770 (3)	
	ITC 630 III complete(5)	3					P210831 + Y210770 (3) W229674
	ITC 800 III complete(5)	3					+ Y210770 (3)

(1) Impossible to use microswitch
(2) The axis of operation must be fragmented if the heighten (Y210770A) is not used - Internal or external control.
(3) Necessary heighten for the use of microswitch (F210156C or G210157C)
(4) Unprotected against accidental contact-not finger safe
(5) Finger safe
"Warning" : for all holders, please check maximum fuse and fuse holder operating limit".



Protistor® Square-body Fuses

PSC gR/aR sizes 000/00

Microswitches for PSC sizes 000/00 for 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



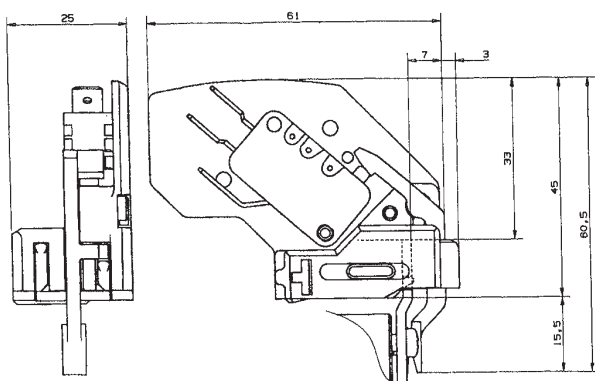
Main Characteristics

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)

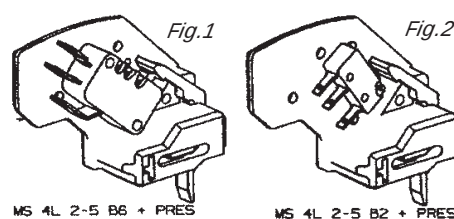
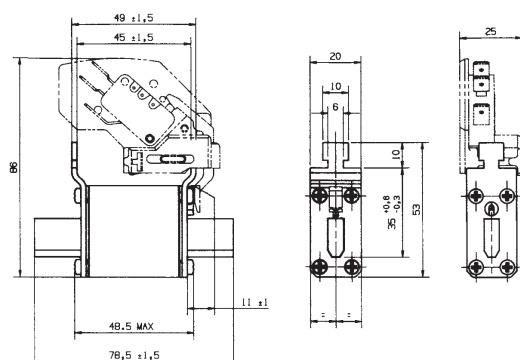
** Between power circuit and microswitch terminals Uimp: impulse voltage as per IEC 60947-1

*** 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



Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Main characteristics



6,9 gRB 71 PA 200



6,9 gRB 73 TTF 1000
+ MS7V1-5 UR



6,9 gRB 70 EF 400

Ferraz Shawmut PSC-gRB 690 VAC fuse-links provide maximum flexibility in equipment design and ultimate protection for today's power conversion equipment.

This range is a fast acting, full range fuses engineered to provide state of the art protection for power semiconductors such as diodes, thyristors.

These square body fuse-links are available in various body sizes with a broad range of ampere ratings allowing the greatest flexibility in equipment design.

They have pure silver fuse elements embedded in solidified sand which provides optimized I^2t and high breaking capacity. All contact surfaces are plated and all hardware non-magnetic.

All fuses are standard with a low voltage blown fuse indicator. This indicator can operate a microswitch which is easily mounted directly on to the fuse in service.

Feature

- Full range (gR curve), fast acting
- Highly current limiting.
- High breaking capacities
- Very low I^2t
- Worldwide mounting acceptance.
- Superior cycling ability.
- High withstanding in rush current and overloads

Ratings

AC: up to 1000 A 690 VAC
150 kA IR

DC: Consult Factory

Applications

Protection of rectifiers, inverters, static switch, AC & DC drives and UPS systems.

AC: Tested to IEC 60269.4

approvals

Features/Benefits

Wide range of mounting styles

Broad range of ampere ratings in each body size for design flexibility

IEC 60269-4 compliance for fuses for worldwide semiconductor applications



6,9 gRB 73 DIIA 1000



Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Main characteristics

Voltage	Size	Type	Rating In (A)	Pre-Arcing I ² t @ 1ms kA²s	Total I ² t @ 690V kA²s	PN: Power losses (W)				Breaking capacities (kA)
						End contacts		Blades		
						0,8 In	In	0,8In	In	
690V	70	gRB	50	0,12	0,7	9	17	9	17	150
		gRB	63	0,27	1,6	9	18	9	18	
		gRB	80	0,47	2,8	11	22	11	22	
		gRB	100	1,06	6,2	12	23	12	23	
		gRB	125	1,9	11,2	13	26	13	26	
		gRB	160	4,2	25	15	29	15	29	
		gRB	200	7,5	44	17	33	17	34	
		gRB	250	13,5	79	20	39	20	40	
		gRB	315	24	142	23	46	24	47	
		gRB	350	41	240	23	46	24	47	
	71	gRB	125	1,06	6,2	18	35	18	35	
		gRB	160	2,4	14	19	38	19	38	
		gRB	200	5	29,5	21	41	21	42	
		gRB	250	9,5	56	23	46	24	48	
		gRB	315	18,5	108	27	53	27	54	
		gRB	350	23	140	29	58	30	60	
		gRB	400	38	225	30	59	31	61	
		gRB	450	62	360	30	59	31	61	
		gRB	500	78	460	32	64	34	67	
		gRB	200	4,2	25	23	45	23	45	
	72	gRB	250	8,5	50	25	49	25	50	
		gRB	315	17	100	28	55	29	57	
		gRB	350	23	140	29	58	30	60	
		gRB	400	34	200	32	63	33	65	
		gRB	450	47	280	34	67	35	70	
		gRB	500	68	400	35	69	36	72	
		gRB	550	84	495	38	75	39	78	
		gRB	630	124	730	41	81	43	86	
		gRB	700	155	910	45	89	48	95	
		gRB	315	12	69	33	66	34	67	
	73	gRB	350	17	100	34	68	35	69	
		gRB	400	27	160	36	71	37	73	
		gRB	450	34	200	40	79	41	82	
gRB		500	47	280	42	84	43	86		
gRB		550	68	400	42	84	44	87		
gRB		630	102	600	45	89	47	94		
gRB		700	139	820	47	94	50	100		
gRB		800	227	1330	48	96	52	104		
gRB		900	280	1640	55	109	60	119		
gRB		1000	385	2270	58	115	64	127		

Time/current characteristics
Cut off characteristics
Total I²t and total operating time
Other curves

} see following pages



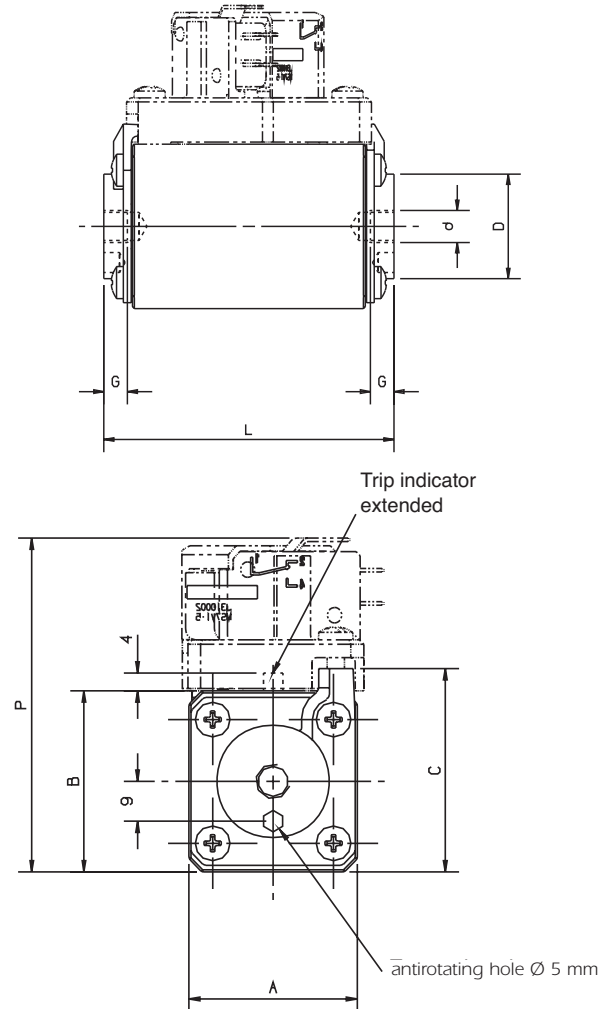
Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC French 70-73 End contacts

Size	Designation	Reference Number	Weight (g)	Catalog Number
70	6,9 gRB 70 TTF 050	C301279	340	PC70GB69V50TF
	6,9 gRB 70 TTF 063	D301280		PC70GB69V63TF
	6,9 gRB 70 TTF 080	E301281		PC70GB69V80TF
	6,9 gRB 70 TTF 100	F301282		PC70GB69V100TF
	6,9 gRB 70 TTF 125	G301283		PC70GB69V125TF
	6,9 gRB 70 TTF 160	L301310		PC70GB69V160TF
	6,9 gRB 70 TTF 200	M301311		PC70GB69V200TF
	6,9 gRB 70 TTF 250	N301312		PC70GB69V250TF
	6,9 gRB 70 TTF 315	P301313		PC70GB69V315TF
71	6,9 gRB 71 TTF 125	Q301314	520	PC71GB69V125TF
	6,9 gRB 71 TTF 160	R301315		PC71GB69V160TF
	6,9 gRB 71 TTF 200	S301316		PC71GB69V200TF
	6,9 gRB 71 TTF 250	T301317		PC71GB69V250TF
	6,9 gRB 71 TTF 315	N301427		PC71GB69V315TF
	6,9 gRB 71 TTF 350	V301318		PC71GB69V350TF
	6,9 gRB 71 TTF 400	W301319		PC71GB69V400TF
	6,9 gRB 71 TTF 450	X301320		PC71GB69V450TF
	6,9 gRB 71 TTF 500	S301707		PC71GB69V500TF
72	6,9 gRB 72 TTF 200	F301328	810	PC72GB69V200TF
	6,9 gRB 72 TTF 250	G301329		PC72GB69V250TF
	6,9 gRB 72 TTF 315	H301330		PC72GB69V315TF
	6,9 gRB 72 TTF 350	W301710		PC72GB69V350TF
	6,9 gRB 72 TTF 400	J301331		PC72GB69V400TF
	6,9 gRB 72 TTF 450	X301711		PC72GB69V450TF
	6,9 gRB 72 TTF 500	K301332		PC72GB69V500TF
	6,9 gRB 72 TTF 550	L301333		PC72GB69V550TF
	6,9 gRB 72 TTF 630	M301334		PC72GB69V630TF
73	6,9 gRB 72 TTF 700	Y301712	1220	PC72GB69V700TF
	6,9 gRB 73 TTF 315	W301342		PC73GB69V315TF
	6,9 gRB 73 TTF 350	B301715		PC73GB69V350TF
	6,9 gRB 73 TTF 400	X301343		PC73GB69V400TF
	6,9 gRB 73 TTF 450	Y301344		PC73GB69V450TF
	6,9 gRB 73 TTF 500	C301716		PC73GB69V500TF
	6,9 gRB 73 TTF 550	Z301345		PC73GB69V550TF
	6,9 gRB 73 TTF 630	A301346		PC73GB69V630TF
	6,9 gRB 73 TTF 700	B301347		PC73GB69V700TF
73	6,9 gRB 73 TTF 800	D301717	1220	PC73GB69V800TF
	6,9 gRB 73 TTF 900	S301638		PC73GB69V900TF
	6,9 gRB 73 TTF 1000	F301719		PC73GB69V100TF

Packaging: 3 pieces sizes 70 and 71 / 1 piece size 72 and 73

Microswitches:	MS 7V 1-5	Réf.J310002	Standard NO-NC
	MS 7V 1-5 UR	Réf.Z310039	Standard NO-NC
	MS 7V 1-5 BS	Réf.K310003	Low level NO-NC
	MS 7V 1-9 BS	Réf.P310007	Double pole NO-NC-low level
	MS 7V 1-5 ET	Réf.S310010	Low level NO-NC-IP 50



Threaded studs :

M8 x 20 mm: Réf.V099171
M10 x 30 mm: Réf.M099946
M12 x 35 mm: Réf.J099966
exists in other length

Threaded studs and Microswitches supplied separately

Size	A	B	C	D	L	d	G°	P
70	39,8	41,8	46,5	26	74	M 8	6	81,8
	1.57"	1.65"	1.83"	1.02"	2.91"		0.24"	3.22"
71	51	51	56,5	30	74	M 8	9	85.5
	2.00"	2.00"	2.22"	1.18"	2.91"		0.35"	3.37"
72	60	60	65.5	38	74	M 10	9	93.6
	2.36"	2.36"	2.58"	1.50"	2.91"		0.35"	3.69"
73	74,4	74,4	78,5	46	74	M 12	9	107.6
	2.93"	2.93"	3.09"	1.81"	2.91"		0.35"	4.24"

Fuse holder solution, see Fuse gear section.



Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC French 70-73 Blades

Size	Designation	Reference Number	Weight (g)	Catalog Number
70	6,9 gRB 70 EF 050	P301405	370	PC70GB69V50EF
	6,9 gRB 70 EF 063	Q301406		PC70GB69V63EF
	6,9 gRB 70 EF 080	R301407		PC70GB69V80EF
	6,9 gRB 70 EF 100	S301408		PC70GB69V100EF
	6,9 gRB 70 EF 125	T301409		PC70GB69V125EF
	6,9 gRB 70 EF 160	V301410		PC70GB69V160EF
	6,9 gRB 70 EF 200			
	6,9 gRB 70 EF 250			
	6,9 gRB 70 EF 315			
	6,9 gRB 70 EF 350			
71	6,9 gRB 71 EF 125	Y301321	540	PC71GB69V125EF
	6,9 gRB 71 EF 160	Z301322		PC71GB69V160EF
	6,9 gRB 71 EF 200	A301323		PC71GB69V200EF
	6,9 gRB 71 EF 250	B301324		PC71GB69V250EF
	6,9 gRB 71 EF 315			
	6,9 gRB 71 EF 350	C301325		PC71GB69V350EF
	6,9 gRB 71 EF 400	D301326		PC71GB69V400EF
	6,9 gRB 71 EF 450	E301327		PC71GB69V450EF
	6,9 gRB 71 EF 500	G301858		PC71GB69V500EF
	6,9 gRB 71 EF 550			
72	6,9 gRB 72 EF 200	N301335	810	PC72GB69V200EF
	6,9 gRB 72 EF 250	P301336		PC72GB69V250EF
	6,9 gRB 72 EF 315	Q301337		PC72GB69V315EF
	6,9 gRB 72 EF 350			
	6,9 gRB 72 EF 400	R301338		PC72GB69V400EF
	6,9 gRB 72 EF 450			
	6,9 gRB 72 EF 500	S301339		PC72GB69V500EF
	6,9 gRB 72 EF 550	T301340		PC72GB69V550EF
	6,9 gRB 72 EF 630	V301341		PC72GB69V630EF
	6,9 gRB 72 EF 700			
73	6,9 gRB 73 EF 315	C301348	1150	PC73GB69V315EF
	6,9 gRB 73 EF 350			
	6,9 gRB 73 EF 400	D301349		PC73GB69V400EF
	6,9 gRB 73 EF 450	E301350		PC73GB69V450EF
	6,9 gRB 73 EF 500			
	6,9 gRB 73 EF 550	F301351		PC73GB69V550EF
	6,9 gRB 73 EF 630	G301352		PC73GB69V630EF
	6,9 gRB 73 EF 700	H301353		PC73GB69V700EF
	6,9 gRB 73 EF 800			
	6,9 gRB 73 EF 900			
	6,9 gRB 73 EF 1000			

Packaging: 3 pieces sizes 70 and 71 / 1 piece size 72 and 73

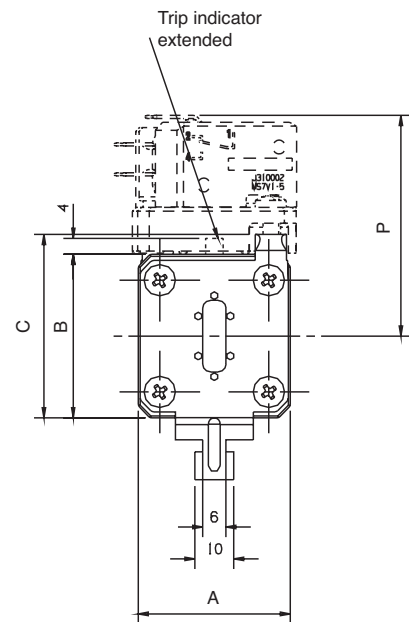
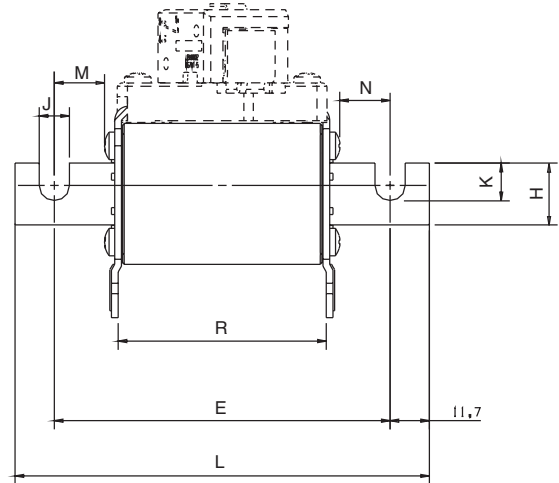
Microswitches: MS 7V 1-5
MS 7V 1-5 UR
MS 7V 1-5 BS
MS 7V 1-9 BS
MS 7V 1-5 ET



Réf.J310002
Réf.Z310039
Réf.K310003
Réf.P310007
Réf.S310010

Standard NO-NC
Standard NO-NC
Low level NO-NC
Double pole NO-NC-low level
Low level NO-NC-IP 50

Microswitches supplied separately



Size	A	B	C	E ^{±1,3}	H	J	K	L ^{±1,5}	M	N	P	R
70	39,8 1.57"	41,8 1.65"	46,5 1.83"	100 3.94"	18 0.71"	9 0.35"	11 0.43"	123,4 4.86"	28,2 1.11"	28,2 1.11"	77 3.03"	68 2.68"
71	51 2.00"	51 2.00"	56,5 2.22"	110 4.33"	25 0.98"	10,5 0.41"	16 0.63"	133,4 5.25"	32,7 1.29"	32,7 1.29"	91 3.58"	68 2.68"
72	60 2.36"	60 2.36"	65,5 2.58"	114,4 4.50"	32 1.26"	13 0.51"	21,2 0.83"	149,4 5.88"	40,7 1.60"	40,7 1.60"	100 3.93"	68 2.68"
73	74,4 2.93"	74,4 2.93"	78,5 3.09"	114,4 4.50"	40 1.58"	13 0.51"	19,5 0.77"	149,4 5.88"	40,7 1.60"	40,7 1.60"	114,4 4.50"	68 2.68"

Reinforced and longer knives available under designation ESF

Fuse holder solution, see Fuse gear section.



Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC German 70-73 End contacts

Size	Designation	Reference Number	Weight (g)	Catalog Number
70*	6,9 gRB 70 D11A 050		370	
	6,9 gRB 70 D11A 063			
	6,9 gRB 70 D11A 080			
	6,9 gRB 70 D11A 100	Q302027		PC70GB69V100D1A
	6,9 gRB 70 D11A 125			
	6,9 gRB 70 D11A 160	R301591		PC70GB69V160D1A
	6,9 gRB 70 D11A 200	S301592		PC70GB69V200D1A
	6,9 gRB 70 D11A 250	Z301943		PC70GB69V250D1A
	6,9 gRB 70 D11A 315	J301584		PC70GB69V315D1A
	6,9 gRB 70 D11A 350	W302124		PC70GB69V350D1A
	6,9 gRB 71 D11A 125	B302658		PC71GB69V125D1A
	6,9 gRB 71 D11A 160	C302659		PC71GB69V160D1A
71*	6,9 gRB 71 D11A 200	C302682	540	PC71GB69V200D1A
	6,9 gRB 71 D11A 250	R302143		PC71GB69V250D1A
	6,9 gRB 71 D11A 315			
	6,9 gRB 71 D11A 350	T302214		PC71GB69V350D1A
	6,9 gRB 71 D11A 400			
	6,9 gRB 71 D11A 450	R301637		PC71GB69V450D1A
	6,9 gRB 71 D11A 500	A301737		PC71GB69V500D1A
	6,9 gRB 72 D11A 200			
72**	6,9 gRB 72 D11A 250	T302697	800	
	6,9 gRB 72 D11A 315	V302698		
	6,9 gRB 72 D11A 350	E302500		PC72GB69V350D1A
	6,9 gRB 72 D11A 400	V302215		PC72GB69V400D1A
	6,9 gRB 72 D11A 450	Q302671		PC72GB69V450D1A
	6,9 gRB 72 D11A 500			
	6,9 gRB 72 D11A 550	L301724		PC72GB69V550D1A
	6,9 gRB 72 D11A 630			
	6,9 gRB 72 D11A 700			
	6,9 gRB 73 D11A 315			
73**	6,9 gRB 73 D11A 350		1150	
	6,9 gRB 73 D11A 400			
	6,9 gRB 73 D11A 450			
	6,9 gRB 73 D11A 500	W302216		PC73GB69V500D1A
	6,9 gRB 73 D11A 550	R302672		PC73GB69V550D1A
	6,9 gRB 73 D11A 630			
	6,9 gRB 73 D11A 700	F301765		PC73GB69V700D1A
	6,9 gRB 73 D11A 800			
	6,9 gRB 73 D11A 900			
	6,9 gRB 73 D11A 1000	S302673		PC73GB69V10CD1A

Packaging: *3 pieces

** 1 piece

Microswitches: MS 7V 1-5

MS 7V 1-5 UR

MS 7V 1-5 BS

MS 7V 1-9 BS

MS 7V 1-5 ET



Réf.J310002

Réf.Z310039

Réf.K310003

Réf.P310007

Réf.S310010

Standard NO-NC

Standard NO-NC

Low level NO-NC

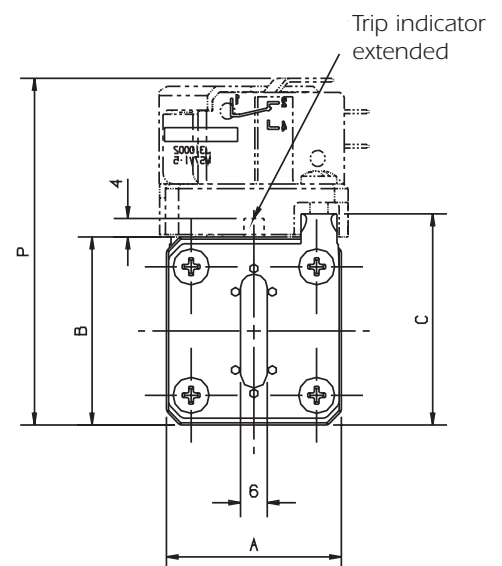
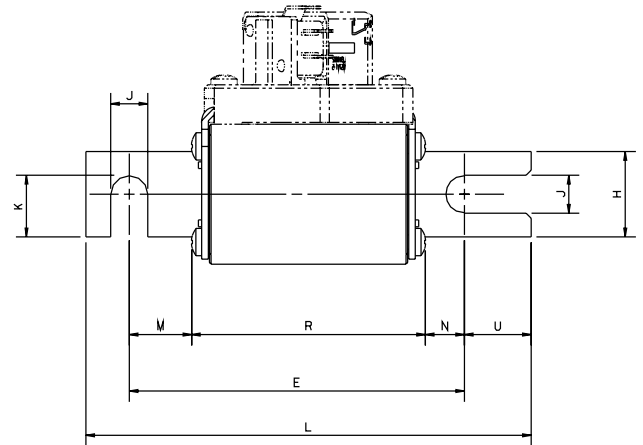
Double pole NO-NC-low level

Low level NO-NC-IP 50

Microswitches supplied separately

Size	A	B	C	E ^{1,3}	H	J	K	L	M	N	P	R
70	39,8	41,8	46,5	100,4	25	10,5	17,7	133,4	18,5	11,5	81,4	70,4
	1.57"	1.65"	1.83"	3.95"	0.98"	0.41"	0.70"	5.25"	0.73"	0.43"	3.20"	2.77"
71	51	51	56,5	100,4	25	10,5	17,7	133,4	18,5	11,5	91	70,4
	2.00"	2.00"	2.22"	3.95"	0.98"	0.41"	0.70"	5.25"	0.73"	0.45"	3.68"	2.77"
72	60	60	65,5	100,4	32	11,1	21,2	133,4	18,5	11,5	93,6	70,4
	2.36"	2.36"	2.58"	3.95"	1.26"	0.44"	0.83"	5.25"	0.73"	0.45"	3.69"	2.77"
73	74,4	74,4	78,5	100,4	40	10,5	25,2	133,4	18	11	114,4	70,4
	2.93"	2.93"	3.09"	3.95"	1.58"	0.41"	1.00"	5.25"	0.71"	0.43"	4.50"	2.77"

Fuse holder solution, see Fuse gear section.





Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC IEC Terminals 70-73 Blades

Size	Designation	Reference Number	Weight (g)	Catalog Number
70*	6,9 gRB 70 PA 050	Q301245	340	PC70GB69V50PA
	6,9 gRB 70 PA 063	R301246		PC70GB69V63PA
	6,9 gRB 70 PA 080	S301247		PC70GB69V80PA
	6,9 gRB 70 PA 100	T301248		PC70GB69V100PA
	6,9 gRB 70 PA 125	T301179		PC70GB69V125PA
	6,9 gRB 70 PA 160	F301190		PC70GB69V160PA
	6,9 gRB 70 PA 200	S301178		PC70GB69V200PA
	6,9 gRB 70 PA 250	V301249		PC70GB69V250PA
	6,9 gRB 70 PA 315	W301250		PC70GB69V315PA
	6,9 gRB 70 PA 350	X301251		PC70GB69V350PA
71*	6,9 gRB 71 PA 125	Y301252	550	PC71GB69V125PA
	6,9 gRB 71 PA 160	Z301253		PC71GB69V160PA
	6,9 gRB 71 PA 200	A301254		PC71GB69V200PA
	6,9 gRB 71 PA 250	B301255		PC71GB69V250PA
	6,9 gRB 71 PA 315	R301177		PC71GB69V315PA
	6,9 gRB 71 PA 350	E301258		PC71GB69V350PA
	6,9 gRB 71 PA 400	V301226		PC71GB69V400PA
	6,9 gRB 71 PA 450	C301256		PC71GB69V450PA
	6,9 gRB 71 PA 500	D301257		PC71GB69V500PA
72*	6,9 gRB 72 PA 200	F301259	820	PC72GB69V200PA
	6,9 gRB 72 PA 250	G301260		PC72GB69V250PA
	6,9 gRB 72 PA 315	H301261		PC72GB69V315PA
	6,9 gRB 72 PA 350	J301262		PC72GB69V350PA
	6,9 gRB 72 PA 400	K301263		PC72GB69V400PA
	6,9 gRB 72 PA 450	L301264		PC72GB69V450PA
	6,9 gRB 72 PA 500	M301265		PC72GB69V500PA
	6,9 gRB 72 PA 550	N301266		PC72GB69V550PA
	6,9 gRB 72 PA 630	P301267		PC72GB69V630PA
	6,9 gRB 72 PA 700	Q301268		PC72GB69V700PA
73**	6,9 gRB 73 PA 315	R301269	1120	PC73GB69V315PA
	6,9 gRB 73 PA 350	S301270		PC73GB69V350PA
	6,9 gRB 73 PA 400	T301271		PC73GB69V400PA
	6,9 gRB 73 PA 450	V301272		PC73GB69V450PA
	6,9 gRB 73 PA 500	W301273		PC73GB69V500PA
	6,9 gRB 73 PA 550	N301404		PC73GB69V550PA
	6,9 gRB 73 PA 630	X301274		PC73GB69V630PA
	6,9 gRB 73 PA 700	Y301275		PC73GB69V700PA
	6,9 gRB 73 PA 800	Z301276		PC73GB69V800PA
	6,9 gRB 73 PA 900	A301277		PC73GB69V900PA
	6,9 gRB 73 PA 1000	B301278		PC73GB69V1000PA

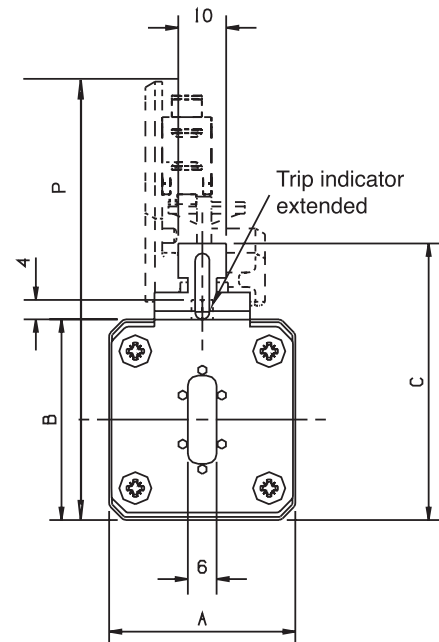
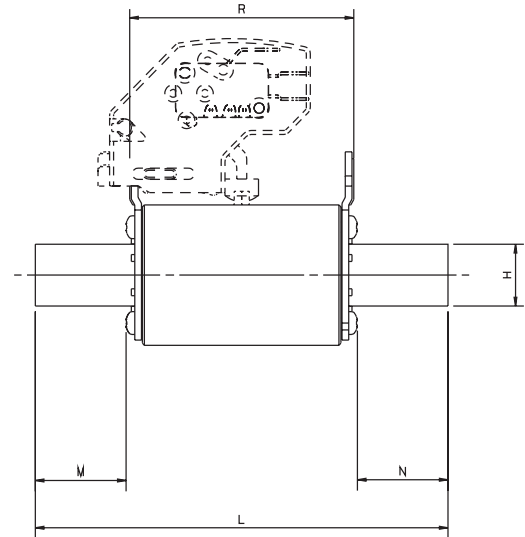
Packaging: *3 pieces - ** 1 piece

Size Fuses	Microswitches		
70	MS PA 2-5T70	Réf.T210398	OF Standard
	MS PA 2-9T70	Réf.V210399	Double OF side by side
	MS PA 2-5 B2T70	Réf.W210400	OF Terminals 2.8 mm
71-72-73	MS PA 2-5	Réf.H210158	OF Standard
	MS PA 2-9V	Réf.J210159	Double OF side by side
	MS PA 2-5 B2	Réf.C210160	OF Terminals 2.8 mm

Microswitches supplied separately

Size	A	B	C	H	L ^{±1.5}	M	N	P	R
70	39,8	41,8	57	18	123,4	26,2	26,2	90	67
	1.57"	1.65"	2.24"	0.71"	4.86"	1.03"	1.03"	3.54"	2.64"
71	51	51	63	25	133,4	26,2	26,2	96	68
	2.00"	2.00"	2.48"	0.98"	5.25"	1.03"	1.03"	3.79"	2.68"
72	60	60	72	32	149,4	39,2	39,2	105	68
	2.36"	2.36"	2.84"	1.26"	5.88"	1.54"	1.54"	4.15"	2.68"
73	74,4	74,4	87,5	40	149,4	39,2	39,2	121	68
	2.93"	2.93"	3.45"	1.58"	5.88"	1.54"	1.54"	4.76"	2.68"

180° position trip indicator available under PV designation but no microswitch possible Fuse holder solution, see Gear and Fuse gear section

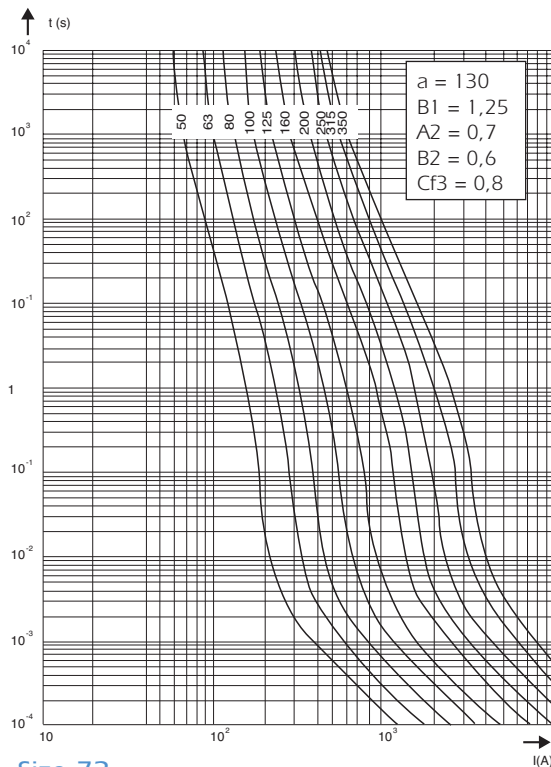




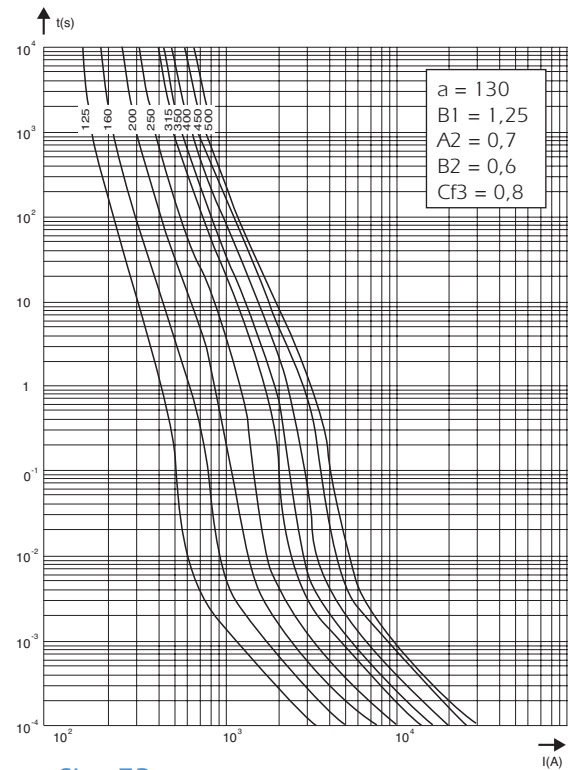
Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Curves set

Times/Current Characteristics

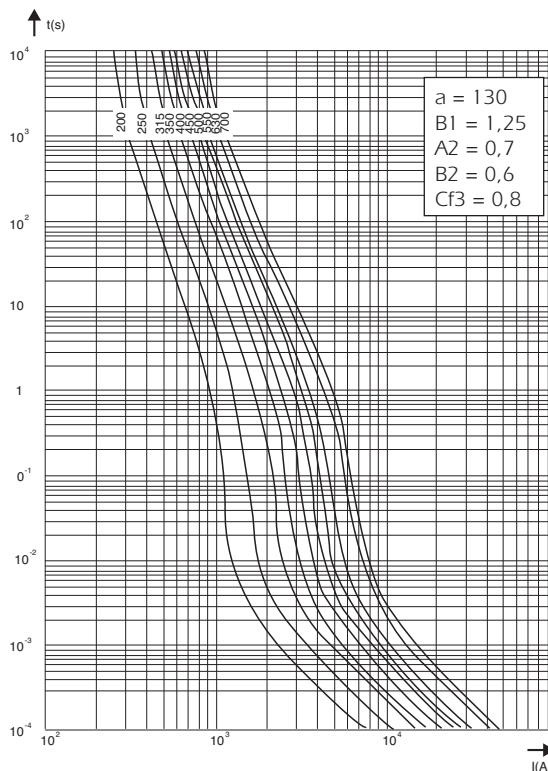
Size 70



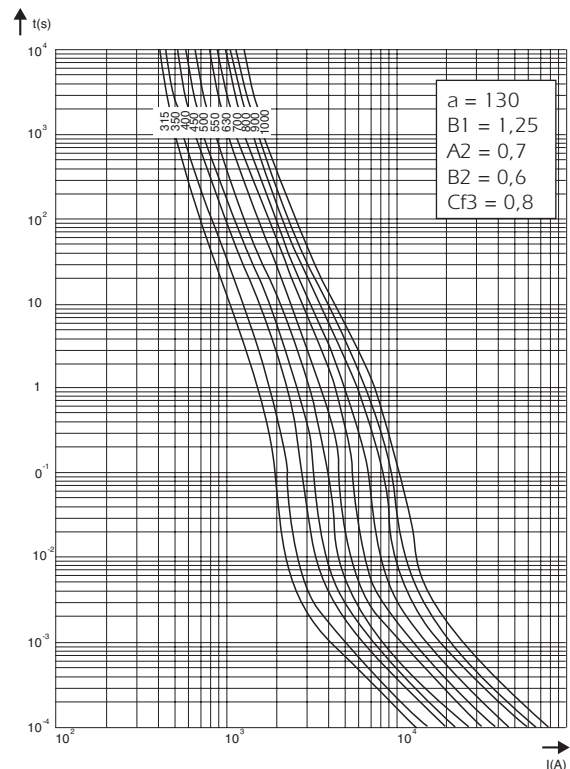
Size 71



Size 72



Size 73

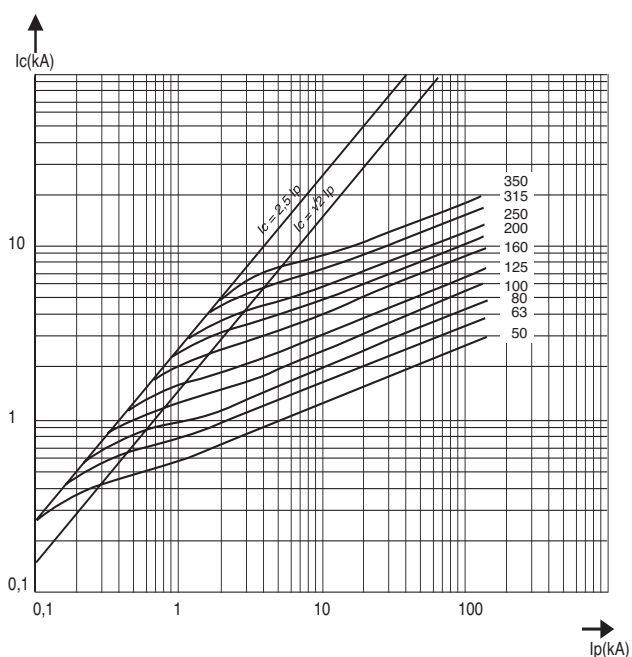




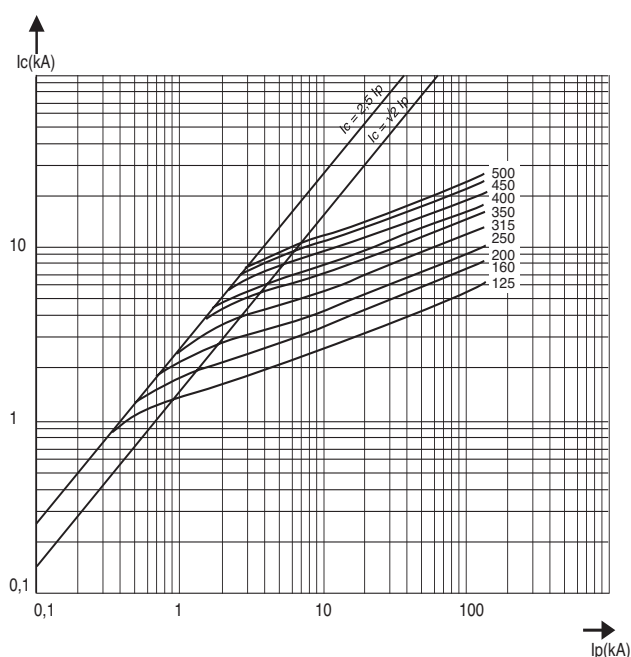
Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Curves set

Cut off characteristics Peak let thru current

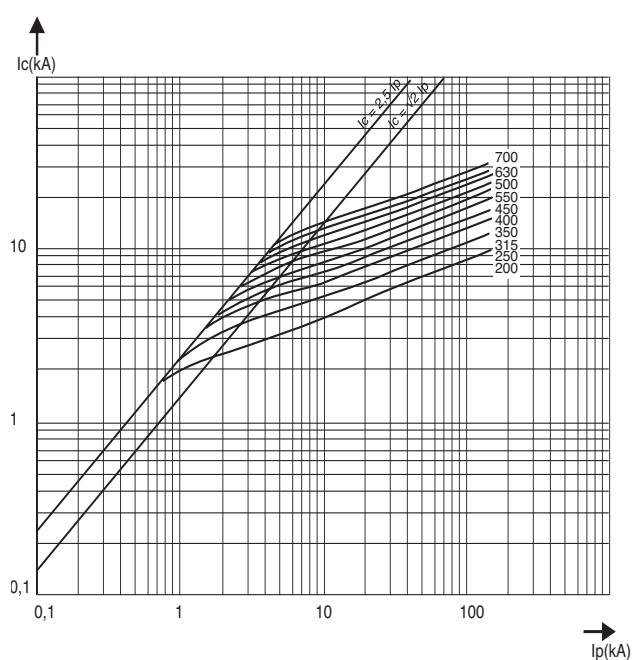
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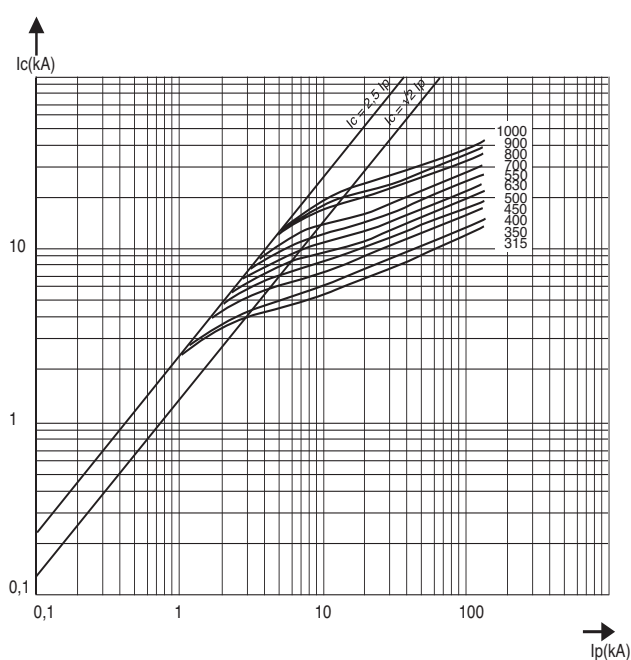
Size 71



Size 72



Size 73

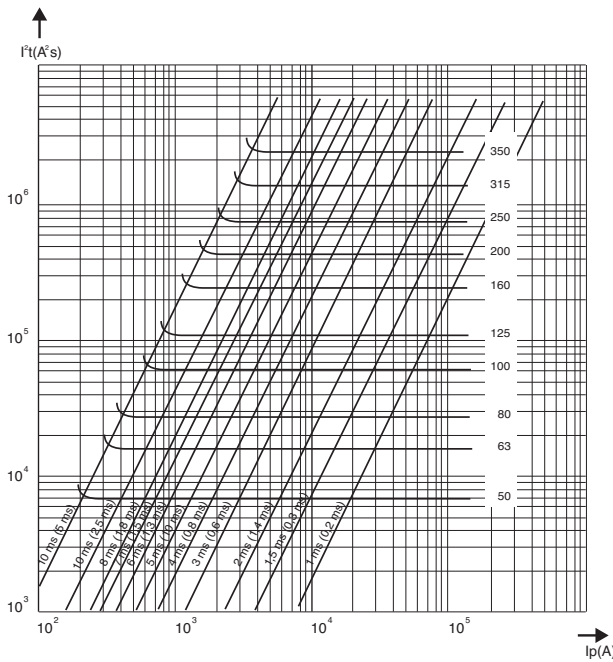




Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Curves set

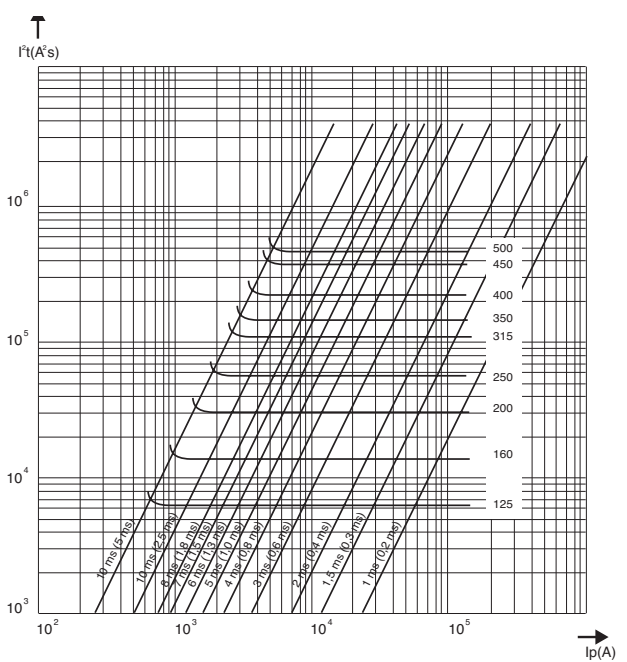
Total I^2t and total operating time @ 690 V

Size 70

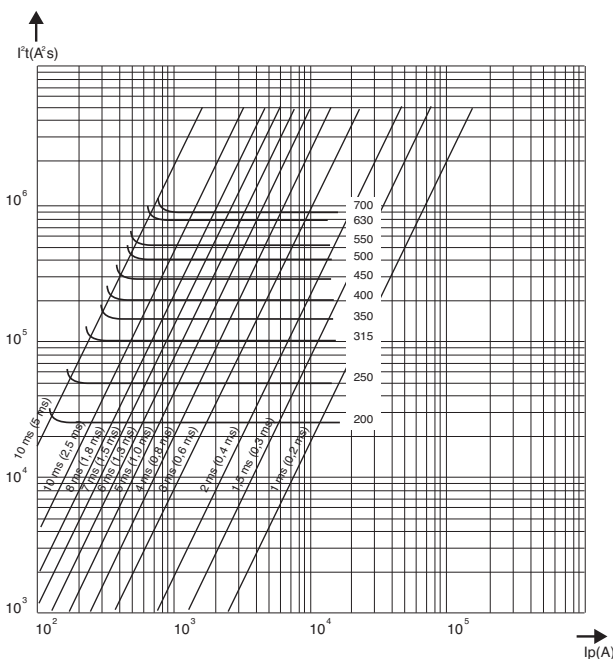


Value between parentheses pertain to prearcing I^2t

Size 71

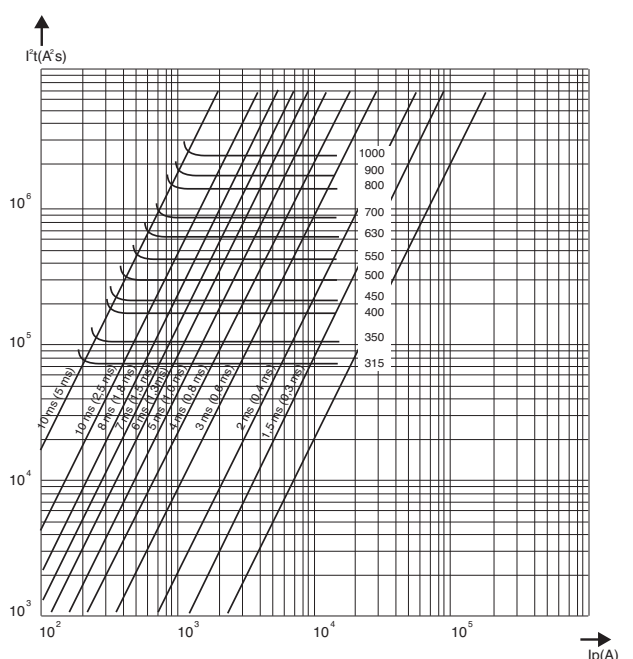


Size 72



Value between parentheses pertain to prearcing I^2t

Size 73

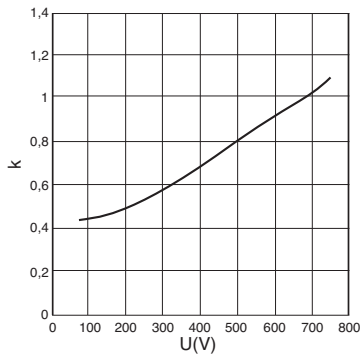


Semiconductor (AC) fuses

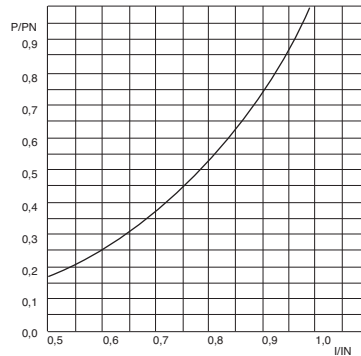


Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Curves set

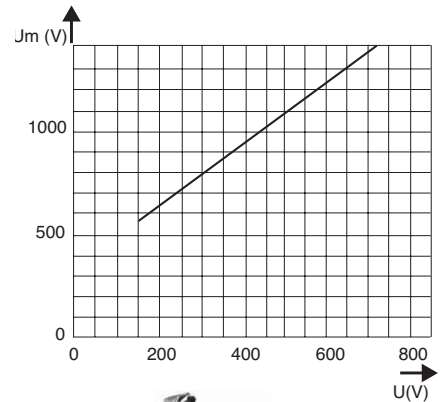
$k=f(U)$
Multiplier coefficient
to calculate total I^2t
and total operating time



P/P_N
Multiplier coefficient
to calculate the power
losses at various currents



Peak arc voltage



PA terminals fuse holder

Size	1 pole	2 poles	3 poles	4 poles	wall	separators	fuse shields
70	T218241	G218759	W219278	H222486	Z213669	V216724	K200822
71	A223008	G200796	Y201340	H201855	J214690	N217753	M222513
72	E211075	V211595	D212109	R212627	J214690	N217753	Y211621
73	X213644	B214154	F214664	K215174	Q215708	M218787	X212655



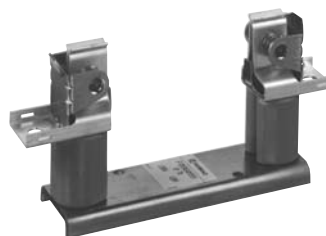
End contacts TTF terminal fuse holders

Size	1 pole
70/71	C301233
72/73	E301235



French blades EF terminal fuse holders

Size	SP/SE/SF
70	F096099
71	V098711
72	W098712
73	C209187



Din blades 110 mm DI N 43653 terminal fuse holders

Size	Fuses holders
70/71/72/73	L091941



Warning: for all holders, please check maximum fuse and fuse holders operating limit. in Gear and Fuse gear section
Tightning torque see Gear and Fuse gear section.



Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Microswitches PSC 3x & 7x

- MICROSWITCH SYSTEMS ADAPTED
TO THE FOLLOWING FERRAZ SHAWMUT FUSES ONLY:
- PSC sizes 30, 31, 32, 33, 2x32, 2x33 / 70, 71, 72, 73, 272, 273
except plain blades
- PSC LR sizes 33, 233, 73, 273
- PERMANENT INDICATION OF FUSE STATE: CONDUCTIVE
BLOWN
- MANUAL RESETTING
- STANDARD AND LOW ELECTRICAL LEVEL WITH DIFFERENT INSULATION LEVELS
- BS TYPE FOR USE IN CORROSIVE ATMOSPHERE
- MS 3V 1-5 UR AND MS 7V 1-5 UR TYPE UL ARE RECOGNIZED



MS 7V 1-5

Main Characteristics

Code	AC Insulation voltage rating (***)	Positive operating voltage/current	Current rating	Current	Breaking Capacity						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 3V 1-5 MS 3V 1-5 UR	1000 V	20 V 50 mA	10 A	50/60 Hz	10 A	10 A	10 A	10 A	10 A	10 A	8,5 kV	14 kV	H.B
MS 7V 1-5 MS 7V 1-5 UR	1500V			DC	8 A	0,4 A	0,2 A	4 A	0,2 A	0,1 A	12 kV	20 kV	
MS 3V 1-5 BS MS 3V 1-9 BS	1000 V	10 V 10 mA	3 A	50/60 Hz	3 A	3 A	3 A	2 A	1 A	1 A	8,5 kV	14 kV	
MS 7V 1-5 BS MS 7V 1-9 BS	1500V			DC	3 A	0,5 A	0,25 A	3 A	0,2 A	0,1 A	12 kV	20 kV	
MS 3V 1-5 ET MS 7V 1-5 ET	1000V	10 V 10 mA	3 A	50/60 Hz	3 A	3 A	3 A	2 A	1 A	1 A	8,5 kV	14 kV	
	1500V			DC	3 A	0,5 A	-	2 A	0,2 A	-	12 kV	20 kV	

* 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

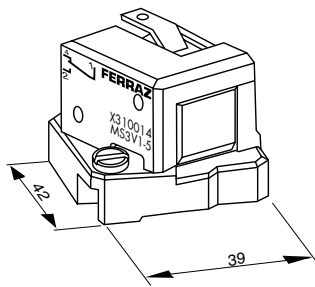
Warning: microswitch systems exclusively designed for FERRAZ SHAWMUT.
PSC Fuses fitted a petented trip-indicator, saving use of EDV



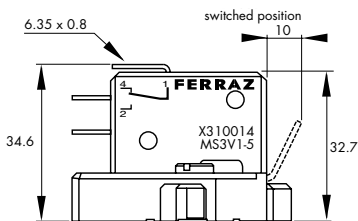
Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Microswitches for PSC 3x & 7x

Indication systems for PSC Fuse sizes 30 to 73 MS 3V...

These patented indication systems are exclusively hand resettable.



(fig. 1)

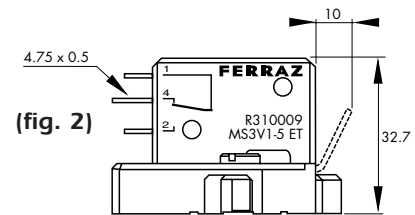


Fuse size	Designation	Ref. Number	Indication style	Weight (g)	Pack.	Catalog Number
30, 31 32, 33	MS 3V 1-5 (fig.1)	X310014	Standard NO-NC	34	3 pieces	MS3 V1-5
	MS 3V 1-5 UR	Y310038				MS3 V1-5UR
	MS 3V 1-5 BS (3)	W310013	Low level NO-NC	34	3 pieces	MS3-V1-5BS
	MS 3V 1-9 BS (4)	T310011	Double pole Low level	44	3 pieces	MS3V1-9BS
	MS 3V 1-5 ET (fig.2)	R310009	Low level NO-NC IP 50 (9)	34	3 pieces	MS3V1-5 ETANCHE

(3) Same as fig.1

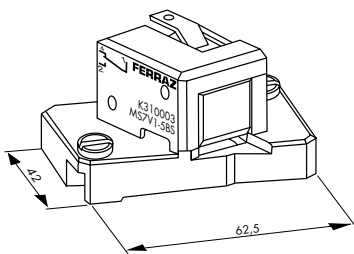
(4) Same dimensions as figure 1 but with 2 microswitches side by side

(9) Watertightness class

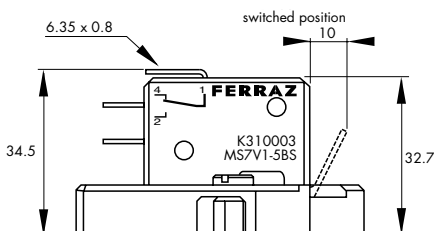


(fig. 2)

MS 7V...



(fig. 5)



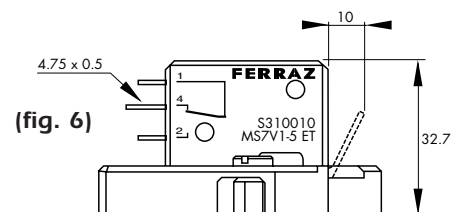
Fuse size	Designation	Ref. Number	Indication style	Weight (g)	Pack.	Catalog Number
70, 71 72, 73	MS 7V 1-5 (fig.5)	J310002	Standard NO-NC	45	3 pieces	MS7 V1-5
	MS 7V 1-5 UR	Z310039				MS7 V1-5UR
	MS 7V 1-5 BS (3)	K310003	Low level NO-NC	45	3 pieces	MS7-V1-5BS
	MS 7V 1-9 BS (4)	P310007	Double pole Low level	55	3 pieces	MS7V1-9BS
	MS 7V 1-5 ET (fig.6)	S310010	Low level NO-NC IP 50 (9)	55	3 pieces	MS7V1-5 ETANCHE

(7) Same as fig. 5

(8) Same dimensions as figure 5 but with 2 microswitches side by side

(9) Watertightness class

Warning: Microswitch systems exclusively designed for FERRAZ SHAWMUT PSC fuses fitted with a patented trip-indicator, saving use of EDV.



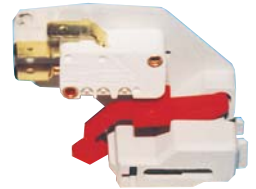
(fig. 6)

Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Microswitches for PSC 70-73 Plain blades

MICROSWITCH SYSTEMS ADAPTED TO THE FOLLOWING FERRAZ SHAWMUT
FUSES ONLY:

PSC sizes 70, 71, 72, 73 PLAIN BLADES (PA)

MS PA 2-5



Main Characteristics

Code	AC Insulation voltage rating (***)	Positive operating voltage/current	Current rating	Current	Breaking Capacity						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 PA 2-5	1500 V	20 V	10 A	50/60 Hz	10 A	10 A	10 A	10 A	10 A	10 A	9 kV	13 kV	V0
MS PA 2-9		50 mA		DC	8 A	0,4 A	0,2 A	4 A	0,2 A	0,1 A			
MS PA 2-5 B2	1500 V	20 V/100 mA	5 A	50 Hz	4 A	4 A	5 A	-	5 A	5 A	12 kV	16 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

Exclusive "MS PA" indication systems are automatically resettable

MS PA...

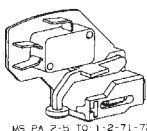
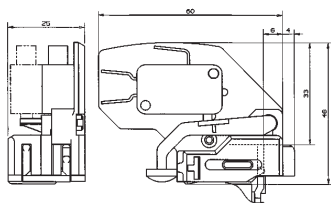


Fig.7

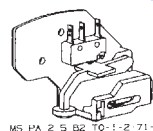


Fig.8

Fuse size	Code	Ref. Number	Indication style	Weight (g)	Pack.	Catalog Number
71-72-73	MS PA 2-5	H210158	OF Standard (fig. 7)	32,5	1	MSPA 2-5
	MS PA 2-9V	J210159	Double (fig.7) OF side by side	39,5	1	MSPA 2-9
	MS PA 2-5 B2	C210360	OF Terminals 2,8 (fig. 8)	27	1	MSPA 2-5B2
70	MS PA 2-5	T210398	OF Standard (fig.7)	31	1	MSPA 2-5T70
	MS PA 2-9	V210399	Double (fig.7) OF side by side	37	1	MSPA 2-9T70
	MS PA 2-5 B2	W210400	OF Terminals 2,8 (fig.8)	27	1	MSPA 2-5B2T70

Semiconductor (AC) fuses

Protistor® Square-body Fuses PSC gR sizes 7x - 690 VAC Metric-studs

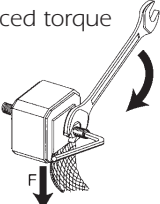
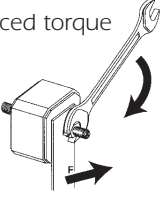
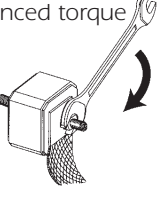
Metric studs for threaded terminal fuses



Type and fuse size	Designation	Ref. Number	Unit weight (g)	Pack.	Catalog Number
 Sizes 0 and 1 Size 2 Size 3	HC stud pair M8x30 & M8x35	S098801	23	6 pairs	STU M8x30 M8x35
	HC stud pair M10x30 & M10x50	T098802	40	6 pairs	STU M10x30 M10x50
	HC stud pair M12x35 & M12x50	V098803	60	6 pairs	STU M12x35 M12x50
 Size 2 Size 3	HC stud pair M10x50	W098804	45	6 pairs	STU M10x50
	HC stud pair M12x50	X098805	45	6 pairs	STU M12x50

We recommend the use of studs, whose quality is suited to all FERRAZ SHAWMUT square-body fuses with terminals

Stud mounting

Torque type	Stud type	Maximum stud tightning torque (Nm) (1)	Maximum nut tightning torque (Nm) (1)
Balanced torque 	M8x30 & M8x35 M10x30 & M10x50 M12x35 & M12x50	10 15 15	13.5 26 46
Balanced torque 	M8x30 & M8x35 M10x30 & M10x50 M12x35 & M12x50	10 15 15	13.5 26 46
Unbalanced torque 	M8x30 & M8x35 M10x30 & M10x50 M12x35 & M12x50	10 15 15	13.5 26 46

(1) Factory limit on torque at 20°C ambient: +0, -2Nm; except on 46Nm value (+0, -4Nm)