



## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Main characteristics

 Recognized

### 650 to 1300VAC / 63 to 2800A.

- Exceptionally low  $I^2t$ , Watt losses.
- Non-magnetic construction, highly reliable low voltage.
- Indicator system.
- Conformity to UL, CSA investigated, 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  $I^2t$  ( $I^2t_p$ ) at 1 ms
  - total operating  $I^2t$  ( $I^2t_t$ ) at 1000 V and 850V(1)f=50Hz,  $\cos \varphi = 0.15$ , 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.



Estimated breaking capacity: 300 kA

### PSC 650 to 1300VAC US and European standard

| Size | Nominal Voltage $U_N$ (VAC) |      | Ampere Rating (A) | Pre-arcing $I^2t$ @ 1ms (kA $^2$ s) | Total $I^2t$ @ 1000V (*) @ $U_n$ (kA $^2$ s) | Power (W)    |        | Tested Breaking capacity |               |
|------|-----------------------------|------|-------------------|-------------------------------------|----------------------------------------------|--------------|--------|--------------------------|---------------|
|      | IEC                         | UL   |                   |                                     |                                              | End contacts | Blades | IEC                      | USA           |
| 70   | 1250                        | 1300 | 50                | 0,116                               | 0,7                                          | 16           | 16     | 100kA @ 1250V            | 100kA @ 1300V |
|      |                             |      | 63                | 0,210                               | 1,2                                          | 26           | 26     |                          |               |
|      |                             |      | 80                | 0,470                               | 2,7                                          | 27           | 27     |                          |               |
|      |                             |      | 100               | 0,830                               | 4,8                                          | 30           | 30     |                          |               |
|      |                             |      | 125               | 1,30                                | 7,5                                          | 38           | 38     |                          |               |
|      |                             |      | 160               | 2,55                                | 15                                           | 45           | 45     |                          |               |
|      | 1200                        | 1300 | 200               | 4,7                                 | 27                                           | 54           | 56     | 100kA @ 1200V            | 100kA @ 1300V |
|      |                             |      | 250               | 9,6                                 | 55                                           | 58           | 61     |                          |               |
|      |                             |      | 280               | 14                                  | 82                                           | 61           | 64     |                          |               |
|      |                             |      | 315               | 20                                  | 115                                          | 66           | 72     |                          |               |
|      |                             |      | 350               | 28                                  | 158                                          | 68           | 75     |                          |               |
|      |                             |      | 400               | 39                                  | 224                                          | 81           | 90     |                          |               |
| 71   | 1100                        | 1200 | 450               | 62                                  | 356                                          | 82           | 82     | 150kA @ 1100V            | 150kA @ 1200V |
|      |                             |      | 500               | 84                                  | 483                                          | 83           | 83     |                          |               |
|      |                             |      | 550               | 128                                 | 576(*)                                       | 83           | 83     |                          |               |
|      |                             |      | 630               | 176                                 | 730(*)                                       | 91           | 91     |                          |               |
|      |                             |      | 800               | 290                                 | 1540(*)                                      | 116          | 116    |                          |               |
|      |                             |      | 900               | 446                                 | 2010(*)                                      | 120          | 120    |                          |               |
|      | 1000                        | 1100 | 630               | 125                                 | 725                                          | X            | X      | 150kA @ 1000V            | 150kA @ 1100V |
|      |                             |      | 700               | 180                                 | 1040                                         | 105          | 105    |                          |               |
|      |                             |      | 800               | 290                                 | 1540(*)                                      | 116          | 116    |                          |               |
|      |                             |      | 900               | 446                                 | 2010(*)                                      | 120          | 120    |                          |               |
|      |                             |      | 1000              | 630                                 | 725                                          | X            | X      |                          |               |
|      |                             |      | 1100              | 900                                 | 1540(*)                                      | 116          | 116    |                          |               |

(1) at 850 V

(2) does not exist with blades



## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Main characteristics

### PSC 650 to 1300VAC US and European standard

| Size   | Nominal Voltage<br>U <sub>N</sub> (VAC) |      | Ampere<br>Rating (A) | Pre-arcing<br>I <sub>pt</sub> @ 1 ms<br>(kA <sub>2s</sub> ) | Total I <sub>pt</sub> @<br>1000V<br>(*) @ U <sub>N</sub><br>(kA <sub>2s</sub> ) | Power (W)    |        | Tested Breaking capacity<br>Estimated B.C 300 kA |               |
|--------|-----------------------------------------|------|----------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------|--------------|--------|--------------------------------------------------|---------------|
|        | IEC                                     | UL   |                      |                                                             |                                                                                 | End contacts | Blades | IEC                                              | USA           |
| 72     | 1250                                    | 1300 | 280                  | 10                                                          | 60                                                                              | 72           | 72     | 100kA @ 1250V                                    | 100kA @ 1300V |
|        |                                         |      | 315                  | 15                                                          | 87                                                                              | 76           | 76     |                                                  |               |
|        |                                         |      | 350                  | 21                                                          | 120                                                                             | 77           | 77     |                                                  |               |
|        |                                         |      | 400                  | 32,5                                                        | 190                                                                             | 80           | 80     |                                                  |               |
|        |                                         |      | 450                  | 44                                                          | 255                                                                             | 87           | 89     |                                                  |               |
|        |                                         |      | 500                  | 57                                                          | 330                                                                             | 94           | 98     |                                                  |               |
|        |                                         |      | 550                  | 68                                                          | 390                                                                             | 110          | 120    |                                                  |               |
|        |                                         |      | 630                  | 105                                                         | 610                                                                             | 113          | X      |                                                  |               |
|        | 1100                                    | 1200 | 630                  | 105                                                         | 610                                                                             | X            | 125    | 150kA @ 1100V                                    | 150kA @ 1200V |
|        |                                         |      | 700                  | 145                                                         | 815                                                                             | 122          | 140    |                                                  |               |
|        |                                         |      | 800                  | 215                                                         | 1240                                                                            | 125          | 146    |                                                  |               |
|        | 1000                                    | 1100 | 700                  | 145                                                         | 815                                                                             | X            | 140    | 150kA @ 1000V                                    | 150kA @ 1100V |
|        |                                         |      | 800                  | 215                                                         | 1240                                                                            | X            | 146    |                                                  |               |
|        | 850                                     | 900  | 900                  | 312                                                         | 1800                                                                            | 130          | 152    | 100kA @ 850V                                     | 100kA @ 900V  |
|        |                                         |      | 1000                 | 439                                                         | 2150(*)                                                                         | 136          | 136    |                                                  |               |
| 73     | 1250                                    | 1300 | 315                  | 12                                                          | 68                                                                              | 84           | 84     | 100kA @ 1250V                                    | 100kA @ 1300V |
|        |                                         |      | 350                  | 17                                                          | 100                                                                             | 86           | 86     |                                                  |               |
|        |                                         |      | 375                  | 19                                                          | 110                                                                             |              |        |                                                  |               |
|        |                                         |      | 400                  | 25                                                          | 145                                                                             | 93           | 93     |                                                  |               |
|        |                                         |      | 450                  | 35,5                                                        | 205                                                                             | 99           | 100    |                                                  |               |
|        |                                         |      | 500                  | 44                                                          | 255                                                                             | 110          | 112    |                                                  |               |
|        |                                         |      | 550                  | 57                                                          | 330                                                                             | 116          | 120    |                                                  |               |
|        |                                         |      | 630                  | 84                                                          | 485                                                                             | 125          | 132    |                                                  |               |
|        |                                         |      | 700                  | 110                                                         | 640                                                                             | 135          | X      |                                                  |               |
|        |                                         |      | 800                  | 190                                                         | 1090                                                                            | 136          | X      |                                                  |               |
|        | 1200                                    | 1300 | 700                  | 110                                                         | 640                                                                             | X            | 146    | 100kA @ 1200V                                    | 100kA @ 1300V |
|        |                                         |      | 900                  | 250                                                         | 1090                                                                            | 150          | X      |                                                  |               |
|        | 1100                                    | 1200 | 800                  | 190                                                         | 1090                                                                            | X            | 148    | 150kA @ 1100V                                    | 150kA @ 1200V |
|        |                                         |      | 900                  | 250                                                         | 1440                                                                            | X            | 170    |                                                  |               |
|        | 1000                                    | 1100 | 1000                 | 370                                                         | 2130                                                                            | 152          | 168    | 150kA @ 1000V                                    | 150kA @ 1100V |
|        |                                         |      | 1100                 | 445                                                         | 2555                                                                            | 168          | 208    |                                                  |               |
|        | 950                                     | 1000 | 1100                 | 445                                                         | 2430(*)                                                                         | 168          | X      | 150kA @ 950V                                     | 150kA @ 1000V |
|        |                                         |      | 1000                 | 370                                                         | 1920(*)                                                                         | X            | 174    |                                                  |               |
|        | 900                                     | 1000 | 1100                 | 445                                                         | 2280(*)                                                                         | X            | 208    | 150kA @ 900V                                     | 150kA @ 1000V |
|        |                                         |      | 1250                 | 585                                                         | 3080(*)                                                                         | 186          | X      |                                                  |               |
|        |                                         |      | 1400                 | 755                                                         | 4100(*)                                                                         | 210          | X      |                                                  |               |
|        | 850                                     | 900  | 1400                 | 755                                                         | 3700(*)                                                                         | 210          | X      | 150kA @ 850V                                     | 150kA @ 900V  |
|        |                                         |      | 1500                 | 1180                                                        | 4750(*)                                                                         | 200          | X      |                                                  |               |
|        | 690                                     | 700  | 1600                 | 1430                                                        | 5740(*)                                                                         | 203          | X      | 180kA @ 690V                                     | 180kA @ 700V  |
|        |                                         |      | 1800                 | 2040                                                        | 7150(*)                                                                         | 206          | X      |                                                  |               |
| 2 x 72 | 1250                                    |      | 630                  | 60                                                          | 348                                                                             | 160          |        | 100kA @ 1250V                                    |               |
|        |                                         |      | 700                  | 84                                                          | 480                                                                             | 162          |        |                                                  |               |
|        |                                         |      | 800                  | 130                                                         | 760                                                                             | 168          |        |                                                  |               |
|        |                                         |      | 900                  | 176                                                         | 1020                                                                            | 183          |        |                                                  |               |
|        |                                         |      | 1000                 | 228                                                         | 1320                                                                            | 197          |        |                                                  |               |
|        |                                         |      | 1100                 | 272                                                         | 1560                                                                            | 231          |        |                                                  |               |
|        | 1100                                    |      | 1250                 | 426                                                         | 2440                                                                            | 237          |        | 100kA @ 1100V                                    |               |
|        |                                         |      | 1400                 | 568                                                         | 3260                                                                            | 256          |        |                                                  |               |
|        |                                         |      | 1600                 | 860                                                         | 4895                                                                            | 262          |        |                                                  |               |
|        | 1000                                    |      | 1800                 | 1250                                                        | 6350(*)                                                                         | 275          |        | 100kA @ 1000V                                    |               |
|        |                                         |      | 2000                 | 1760                                                        | 7570(*)                                                                         | 285          |        |                                                  |               |
|        | 650                                     |      | 2200                 | 2410                                                        | 8350(*)                                                                         | 320          |        | 100kA @ 650V                                     |               |
|        |                                         |      | 2500                 | 3470                                                        | 12000(*)                                                                        | 340          |        |                                                  |               |
| 2 x 73 | 1250                                    |      | 800                  | 100                                                         | 580                                                                             | 195          |        | 100kA @ 1250V                                    |               |
|        |                                         |      | 900                  | 142                                                         | 820                                                                             | 208          |        |                                                  |               |
|        |                                         |      | 1000                 | 176                                                         | 1000                                                                            | 231          |        |                                                  |               |
|        |                                         |      | 1100                 | 228                                                         | 1300                                                                            | 244          |        |                                                  |               |
|        |                                         |      | 1250                 | 336                                                         | 1900                                                                            | 262          |        |                                                  |               |
|        | 1100                                    |      | 1400                 | 440                                                         | 2600                                                                            | 283          |        | 100kA @ 1100V                                    |               |
|        |                                         |      | 1600                 | 760                                                         | 4400                                                                            | 286          |        |                                                  |               |
|        |                                         |      | 1800                 | 1000                                                        | 5800                                                                            | 315          |        |                                                  |               |
|        | 1000                                    |      | 2000                 | 1480                                                        | 8500                                                                            | 319          |        | 120kA @ 1000V                                    |               |
|        |                                         |      | 2200                 | 1780                                                        | 9632(*)                                                                         | 353          |        |                                                  |               |
|        | 950                                     |      | 2500                 | 2340                                                        | 12075(*)                                                                        | 390          |        | 110kA @ 950V                                     |               |
|        |                                         |      | 2800                 | 3000                                                        | 15000(*)                                                                        | 440          |        |                                                  |               |
|        | 600                                     |      | 3000                 | 4980                                                        | 15700(*)                                                                        | 405          |        | 200kA @ 600V                                     |               |
|        |                                         |      | 3200                 | 5720                                                        | 19030(*)                                                                        | 426          |        |                                                  |               |
|        | 550                                     |      | 3600                 | 8160                                                        | 25200(*)                                                                        | 430          |        | 200kA @ 550V                                     |               |
|        |                                         |      |                      |                                                             |                                                                                 |              |        |                                                  |               |

(1) at 850 V

(2) does not exist with blades

12/04



# Semiconductor (AC) fuses

## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC American Terminals - 70 - 73 End contacts

| Size | Designation |    |     |         | Reference Number | Weight (g) | Packaging | Catalog Number  |
|------|-------------|----|-----|---------|------------------|------------|-----------|-----------------|
| 70   | A130URD     | 70 | TTI | 0063    | Q301015          | 350        | 3         | A130UD70TTI63   |
|      | A130URD     | 70 | TTI | 0080    | R301016          |            |           | A130UD70TTI80   |
|      | A130URD     | 70 | TTI | 0100    | S301017          |            |           | A130UD70TTI100  |
|      | A130URD     | 70 | TTI | 0125    | T301018          |            |           | A130UD70TTI125  |
|      | A130URD     | 70 | TTI | 0160    | V301019          |            |           | A130UD70TTI160  |
|      | A130URD     | 70 | TTI | 0200    | W301020          |            |           | A130UD70TTI200  |
|      | A130URD     | 70 | TTI | 0250    | X301021          |            |           | A130UD70TTI250  |
|      | A130URD     | 70 | TTI | 0280    | Y301022          |            |           | A130UD70TTI280  |
|      | A130URD     | 70 | TTI | 0315    | Z301023          |            |           | A130UD70TTI315  |
|      | A120URD     | 70 | TTI | 0350    | A301024          |            |           | A120UD70TTI350  |
| 71   | A130URD     | 71 | TTI | 0160    | B301025          | 500        | 3         | A130UD71TTI160  |
|      | A130URD     | 71 | TTI | 0200    | C301026          |            |           | A130UD71TTI200  |
|      | A130URD     | 71 | TTI | 0250    | D301027          |            |           | A130UD71TTI250  |
|      | A130URD     | 71 | TTI | 0280    | E301028          |            |           | A130UD71TTI280  |
|      | A130URD     | 71 | TTI | 0315    | F301029          |            |           | A130UD71TTI315  |
|      | A130URD     | 71 | TTI | 0350    | G301030          |            |           | A130UD71TTI350  |
|      | A130URD     | 71 | TTI | 0400    | H301031          |            |           | A130UD71TTI400  |
|      | A130URD     | 71 | TTI | 0450    | J301032          |            |           | A130UD71TTI450  |
|      | A130URD     | 71 | TTI | 0500    | K301033          |            |           | A130UD71TTI500  |
|      | A120URD     | 71 | TTI | 0550    | L301034          |            |           | A120UD71TTI550  |
| 72   | A120URD     | 71 | TTI | 0630    | M301035          |            |           | A120UD71TTI630  |
|      | A130URD     | 72 | TTI | 0280    | N301036          | 850        | 3         | A130UD72TTI280  |
|      | A130URD     | 72 | TTI | 0315    | P301037          |            |           | A130UD72TTI315  |
|      | A130URD     | 72 | TTI | 0350    | Q301038          |            |           | A130UD72TTI350  |
|      | A130URD     | 72 | TTI | 0400    | R301039          |            |           | A130UD72TTI400  |
|      | A130URD     | 72 | TTI | 0450    | S301040          |            |           | A130UD72TTI450  |
|      | A130URD     | 72 | TTI | 0500    | T301041          |            |           | A130UD72TTI500  |
|      | A130URD     | 72 | TTI | 0550    | V301042          |            |           | A130UD72TTI550  |
|      | A130URD     | 72 | TTI | 0630    | W301043          |            |           | A130UD72TTI630  |
|      | A120URD     | 72 | TTI | 0700    | X301044          |            |           | A120UD72TTI700  |
|      | A120URD     | 72 | TTI | 0800    | Y301045          |            |           | A120UD72TTI800  |
| 73   | A130URD     | 73 | TTI | 0315    | Z301046          | 1250       | 3         | A130UD73TTI315  |
|      | A130URD     | 73 | TTI | 0350    | A301047          |            |           | A130UD73TTI350  |
|      | A130URD     | 73 | TTI | 0400    | B301048          |            |           | A130UD73TTI400  |
|      | A130URD     | 73 | TTI | 0450    | C301049          |            |           | A130UD73TTI450  |
|      | A130URD     | 73 | TTI | 0500    | D301050          |            |           | A130UD73TTI500  |
|      | A130URD     | 73 | TTI | 0550    | E301051          |            |           | A130UD73TTI550  |
|      | A130URD     | 73 | TTI | 0630    | F301052          |            |           | A130UD73TTI630  |
|      | A130URD     | 73 | TTI | 0700    | G301053          |            |           | A130UD73TTI700  |
|      | A130URD     | 73 | TTI | 0800    | H301054          |            |           | A130UD73TTI800  |
|      | A130URD     | 73 | TTI | 0900 ** | J301055          |            |           | A130UD73TTI900  |
|      | A110URD     | 73 | TTI | 1000 ** | K301056          |            |           | A110UD73TTI1000 |
|      | A100URD     | 73 | TTI | 1100 ** | L301057          |            |           | A100UD73TTI1100 |
|      | A100URD     | 73 | TTI | 1250 ** | M301058          |            |           | A100UD73TTI1250 |
|      | A090URD     | 73 | TTI | 1400 ** | N301059          |            |           | A090UD73TTI1400 |
|      | A070URD     | 73 | TTI | 1600 ** | Q300877          |            |           | A070UD73TTI1600 |
|      | A065URD     | 73 | TTI | 1800 ** | R300878          |            |           | A065UD73TTI1800 |

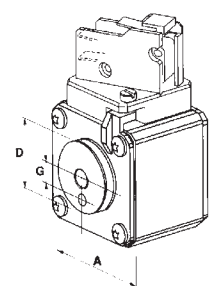
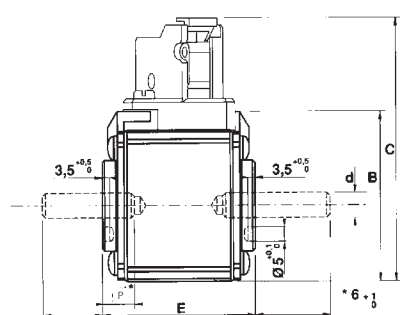
| Size | A                | B                | C               | D                                         | E±1            | d        | G±0.1        | P±0.1       |
|------|------------------|------------------|-----------------|-------------------------------------------|----------------|----------|--------------|-------------|
| 70   | 40<br>1-9/16"    | 46,5<br>1-27/32" | 82<br>3-7/32"   | 26<br>1-1/64"                             | 74<br>2-29/32" | 5/16"-18 | 9<br>23/64"  | 6<br>15/64" |
| 71   | 51<br>2"         | 56,5<br>2-7/32"  | 91<br>3-37/64"  | 30<br>1-3/16"                             | 74<br>2-29/32" | 5/16"-18 | 9<br>23/64"  | 9<br>23/64" |
| 72   | 60<br>2-3/8"     | 65,5<br>2-37/64" | 100<br>3-15/16" | 38 ; (42mm **)<br>1-1/2" ; (1-21/32" **)  | 74<br>2-29/32" | 3/8"-16  | 15<br>19/32" | 9<br>23/64" |
| 73   | 74,5<br>2-15/16" | 79,5<br>3-1/8"   | 114<br>4-1/2"   | 46 ; (52mm **)<br>1-13/16" ; (2-1/16" **) | 74<br>2-29/32" | 1/2"-13  | 15<br>19/32" | 9<br>23/64" |

### Note:

Dimensions in mm

Dimensions in inches

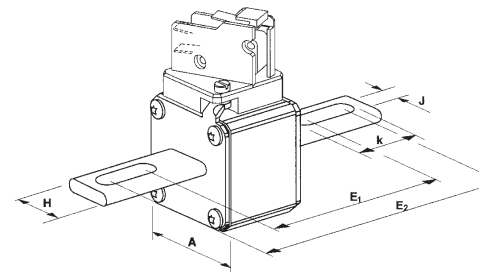
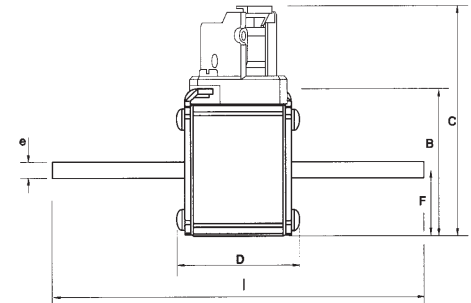
Microswitches and threaded studs supplied separately





## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC American Terminals - 70 - 73 Blades

| Size | Designation          | Reference Number | Weight (g) | Packaging | Catalog Number |
|------|----------------------|------------------|------------|-----------|----------------|
| 70   | A 130 URD 70 LI 0050 | -                | 380        | 3         | -              |
|      | A 130 URD 70 LI 0063 | W300652          |            |           | A130UD70LI063  |
|      | A 130 URD 70 LI 0080 | X300653          |            |           | A130UD70LI080  |
|      | A 130 URD 70 LI 0100 | Y300654          |            |           | A130UD70LI100  |
|      | A 130 URD 70 LI 0125 | Z300655          |            |           | A130UD70LI125  |
|      | A 130 URD 70 LI 0160 | A300656          |            |           | A130UD70LI160  |
|      | A 130 URD 70 LI 0200 | B300657          |            |           | A130UD70LI200  |
|      | A 130 URD 70 LI 0250 | C300658          |            |           | A130UD70LI250  |
|      | A 130 URD 70 LI 0280 | Q300716          |            |           | A130UD70LI280  |
|      | A 130 URD 70 LI 0315 | D300659          |            |           | A130UD70LI315  |
|      | A 120 URD 70 LI 0350 | E300660          |            |           | A120UD70LI350  |
| 71   | A 130 URD 71 LI0160  | E300752          | 630        | 3         | A130UD71LI160  |
|      | A 130 URD 71 LI0200  | F300661          |            |           | A130UD71LI200  |
|      | A 130 URD 71 LI0250  | G300662          |            |           | A130UD71LI250  |
|      | A 130 URD 71 LI0280  | R300717          |            |           | A130UD71LI280  |
|      | A 130 URD 71 LI0315  | H300663          |            |           | A130UD71LI315  |
|      | A 130 URD 71 LI0350  | J300664          |            |           | A130UD71LI350  |
|      | A 130 URD 71 LI0400  | K300665          |            |           | A130UD71LI400  |
|      | A 130 URD 71 LI0450  | L300666          |            |           | A130UD71LI450  |
|      | A 120 URD 71 LI0500  | M300667          |            |           | A120UD71LI500  |
|      | A 120 URD 71 LI0550  | N300668          |            |           | A120UD71LI550  |
|      | A 110 URD 71 LI0630  | P300669          |            |           | A110UD71LI630  |
| 72   | A 130 URD 72 LI 0280 | Q300670          | 860        | 3         | A130UD72LI280  |
|      | A 130 URD 72 LI 0315 | R300671          |            |           | A130UD72LI315  |
|      | A 130 URD 72 LI 0350 | S300672          |            |           | A130UD72LI350  |
|      | A 130 URD 72 LI 0400 | T300673          |            |           | A130UD72LI400  |
|      | A 130 URD 72 LI 0450 | V300674          |            |           | A130UD72LI450  |
|      | A 130 URD 72 LI 0500 | W300675          |            |           | A120UD72LI500  |
|      | A 130 URD 72 LI 0550 | X300676          |            |           | A130UD72LI550  |
|      | A 120 URD 72 LI 0630 | Y300677          |            |           | A120UD72LI630  |
|      | A 110 URD 72 LI 0700 | Z300678          |            |           | A110UD72LI700  |
|      | A 110 URD 72 LI 0800 | A300679          |            |           | A110UD72LI800  |
| 73   | A 130 URD 73 LI 0315 | B300680          | 1250       | 1-3       | A130UD73LI315  |
|      | A 130 URD 73 LI 0350 | C300681          |            |           | A130UD73LI350  |
|      | A 130 URD 73 LI 0400 | D300682          |            |           | A130UD73LI400  |
|      | A 130 URD 73 LI 0450 | E300683          |            |           | A130UD73LI450  |
|      | A 130 URD 73 LI 0500 | F300684          |            |           | A120UD73LI500  |
|      | A 130 URD 73 LI 0550 | G300685          |            |           | A130UD73LI550  |
|      | A 130 URD 73 LI 0630 | H300686          |            |           | A130UD73LI630  |
|      | A 130 URD 73 LI 0700 | J300687          |            |           | A130UD73LI700  |
|      | A 120 URD 73 LI 0800 | K300688          |            |           | A120UD73LI800  |
|      | A 110 URD 73 LI 0900 | L300689          |            |           | A110UD73LI900  |
|      | A 100 URD 73 LI 1000 | M300690          |            |           | A100UD73LI1000 |
|      | A 100 URD 73 LI 1100 | N300691          |            |           | A100UD73LI1100 |
|      | A 100 URD 73 LI 1250 | J301193          |            |           | A100UD73LI1250 |
|      | A 90 URD 73 LI 1400  | K301194          |            |           | A90UD73LI1400  |



Rated voltage 900 V to 1300 V as per American standard.

Microswitches supplied separately

| Size | A                | B                | C               | D                         | E1±1,3           | E2±1,3            | F                | H             | J              | k             | L±1,5            | e           |
|------|------------------|------------------|-----------------|---------------------------|------------------|-------------------|------------------|---------------|----------------|---------------|------------------|-------------|
| 70   | 40<br>1-9/16"    | 46,5<br>1-27/32" | 82<br>3-7/32"   | 71<br>2-5/32"             | 91,4<br>3-13/32" | 130,4<br>5-1/8"   | 21<br>53/64"     | 25<br>1"      | 10,5<br>13/32" | 30<br>1-3/16" | 152,4<br>6"      | 6<br>15/64" |
| 71   | 51<br>2"         | 56,5<br>2-7/32"  | 91<br>3-37/64"  | 71<br>2-25/32"            | 91,4<br>3-19/32" | 130,4<br>5-1/8"   | 25,5<br>1"       | 25<br>1"      | 10,5<br>13/32" | 30<br>1-3/16" | 152,4<br>6"      | 6<br>15/64" |
| 72   | 60<br>2-23/64"   | 65,5<br>2-37/64" | 100<br>3-15/16" | 71<br>2-25/32"            | 97,6<br>3-23/32" | 132,4<br>5-13/64" | 30<br>1-3/16"    | 32<br>1-1/4"  | 14,6<br>9/16"  | 32<br>1-1/4"  | 157,4<br>6-3/16" | 6<br>15/64" |
| 73   | 74,5<br>2-15/16" | 79,5<br>3-1/8"   | 114<br>4-1/2"   | 72<br>2-53/64" (2-15/16") | 98,8<br>3-57/64" | 131,4<br>5-11/64" | 37,2<br>1-15/32" | 40<br>1-9/16" | 15,9<br>5/8"   | 32<br>1-1/4"  | 157,4<br>6-3/16" | 6<br>15/64" |

### Note:

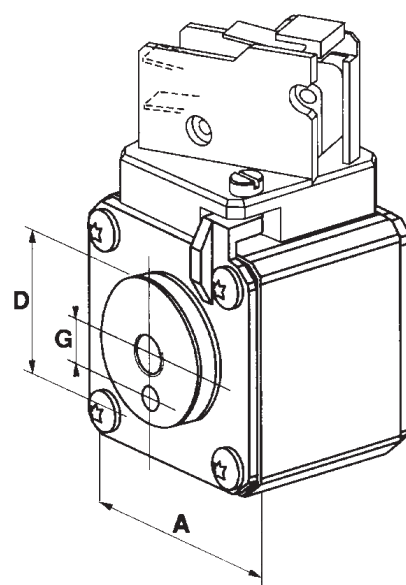
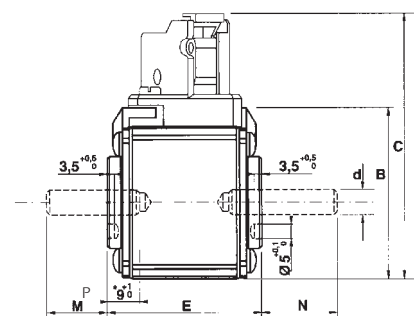
Dimensions in mm

Dimensions in inches



## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC IEC Terminals - French 70 - 73 End contacts

| Size | Designation            | Reference Number | Weight (g) | Packaging | Catalog Number  |
|------|------------------------|------------------|------------|-----------|-----------------|
| 70   | 12,5 URD 70 TT F 0050  | C301095          | 350        | 3         | PC70UD13C50TF   |
|      | 12,5 URD 70 TT F 0063  | M300483          |            |           | PC70UD13C63TF   |
|      | 12,5 URD 70 TT F 0080  | N300484          |            |           | PC70UD13C80TF   |
|      | 12,5 URD 70 TT F 0100  | P300485          |            |           | PC70UD13C100TF  |
|      | 12,5 URD 70 TT F 0125  | Q300486          |            |           | PC70UD13C125TF  |
|      | 12,5 URD 70 TT F 0160  | R300487          |            |           | PC70UD13C160TF  |
|      | 12,5 URD 70 TT F 0200  | S300488          |            |           | PC70UD13C200TF  |
|      | 12,5 URD 70 TT F 0250  | T300489          |            |           | PC70UD13C250TF  |
|      | 12 URD 70 TT F 0280    | N300714          |            |           | PC70UD12C280TF  |
|      | 12 URD 70 TT F 0315    | V300490          |            |           | PC70UD12C315TF  |
|      | 11 URD 70 TT F 0350    | W300491          |            |           | PC70UD11C350TF  |
|      | 11 URD 70 TT F 0400    | E300867          |            |           | PC70UD11C400TF  |
|      | 11 URD 70 TT F 0450    | H301284          |            |           | PC70UD11C450TF  |
|      | 10 URD 70 TT F 0500    | J301285          |            |           | PC70UD10C500TF  |
|      | 8 URD 70 TT F 0550     | K301286          |            |           | PC70UD80V550TF  |
| 71   | 12,5 URD 71 TT F 0160  | B300749          | 520        | 3         | PC71UD13C160TF  |
|      | 12,5 URD 71 TT F 0200  | Z300517          |            |           | PC71UD13C200TF  |
|      | 12,5 URD 71 TT F 0250  | A300518          |            |           | PC71UD13C250TF  |
|      | 12,5 URD 71 TT F 0280  | P300715          |            |           | PC71UD13C280TF  |
|      | 12,5 URD 71 TT F 0315  | B300519          |            |           | PC71UD13C315TF  |
|      | 12,5 URD 71 TT F 0350  | C300520          |            |           | PC71UD13C350TF  |
|      | 12,5 URD 71 TT F 0400  | D300521          |            |           | PC71UD13C400TF  |
|      | 12,5 URD 71 TT F 0450  | E300522          |            |           | PC71UD13C450TF  |
|      | 11 URD 71 TT F 0500    | F300523          |            |           | PC71UD11C500TF  |
|      | 11 URD 71 TT F 0550    | G300524          |            |           | PC71UD11C550TF  |
|      | 11 URD 71 TT F 0630    | H300525          |            |           | PC71UD11C630TF  |
|      | 10 URD 71 TT F 0700    | M301288          |            |           | PC71UD10C700TF  |
|      | 9 URD 71 TT F 0800     | Z300862          |            |           | PC71UD90V800TF  |
|      | 8 URD 71 TT F 0900     | N301289          |            |           | PC71UD80VC900TF |
|      | 12,5 URD 72 TT F 0250  | X301573          | 800        | 3         | PC72UD13C250TF  |
| 72   | 12,5 URD 72 TT F 0280  | Y300493          |            |           | PC72UD13C280TF  |
|      | 12,5 URD 72 TT F 0315  | Z300494          |            |           | PC72UD13C315TF  |
|      | 12,5 URD 72 TT F 0350  | A300495          |            |           | PC72UD13C350TF  |
|      | 12,5 URD 72 TT F 0400  | B300496          |            |           | PC72UD13C400TF  |
|      | 12,5 URD 72 TT F 0450  | C300497          |            |           | PC72UD13C450TF  |
|      | 12,5 URD 72 TT F 0500  | D300498          |            |           | PC72UD13C500TF  |
|      | 12,5 URD 72 TT F 0550  | E300499          |            |           | PC72UD13C550TF  |
|      | 12,5 URD 72 TT F 0630  | F300500          |            |           | PC72UD13C630TF  |
|      | 11 URD 72 TT F 0700**  | G300501          |            |           | PC72UD11C700TF  |
|      | 11 URD 72 TT F 0800**  | H300502          |            |           | PC72UD11C800TF  |
|      | 10 URD 72 TT F 0900**  | G300869          |            |           | PC72UD10C900TF  |
|      | 8,5 URD 72 TT F 1000** | T301294          |            |           | PC72UD85V1000TF |
| 73   | 12,5 URD 73 TT F 0315  | J300503          | 1250       | 1         | PC73UD13C315TF  |
|      | 12,5 URD 73 TT F 0350  | K300504          |            |           | PC73UD13C350TF  |
|      | 12,5 URD 73 TT F 0400  | L300505          |            |           | PC73UD13C400TF  |
|      | 12,5 URD 73 TT F 0450  | M300506          |            |           | PC73UD13C450TF  |
|      | 12,5 URD 73 TT F 0500  | N300507          |            |           | PC73UD13C500TF  |
|      | 12,5 URD 73 TT F 0550  | P300508          |            |           | PC73UD13C550TF  |
|      | 12,5 URD 73 TT F 0630  | Q300509          |            |           | PC73UD13C630TF  |
|      | 12,5 URD 73 TT F 0700  | R300510          |            |           | PC73UD13C700TF  |
|      | 12,5 URD 73 TT F 0800  | S300511          |            |           | PC73UD13C800TF  |
|      | 12 URD 73 TT F 0900**  | T300512          |            |           | PC73UD12C900TF  |
|      | 10 URD 73 TT F 1000**  | V300513          |            |           | PC73UD10C1000TF |
|      | 9,5 URD 73 TT F 1100** | W300514          |            |           | PC73UD95V800TFB |
|      | 9 URD 73 TT F 1250**   | T300696          |            |           | PC73UD90V13CTF  |
|      | 8,5 URD 73 TT F 1400** | S300718          |            |           | PC73UD85C14CTF  |
|      | 6,9 URD 73 TT F 1600** | B301301          |            |           | PC73UD69V16CTF  |
|      | 6 URD 73 TT F 1800**   | C301302          |            |           | PC73UD60V18CTF  |



Microswitches and threaded studs  
supplied separately

**Note:**  
Dimensions in mm  
Dimensions in inches

| Size | A                | B                | C               | D                                         | M* | N* | E±1            | d   | G±0.1        | P±0.1       |
|------|------------------|------------------|-----------------|-------------------------------------------|----|----|----------------|-----|--------------|-------------|
| 70   | 40<br>1-9/16"    | 46,5<br>1-27/32" | 82<br>3-7/32"   | 26<br>1-1/64"                             | 22 | 27 | 74<br>2-29/32" | M8  | 9<br>23/64"  | 6<br>15/64" |
| 71   | 51<br>2"         | 56,5<br>2-7/32"  | 91<br>3-37/64"  | 30<br>1-3/16"                             | 19 | 24 | 74<br>2-29/32" | M8  | 9<br>23/64"  | 9<br>23/64" |
| 72   | 60<br>2-3/8"     | 65,5<br>2-37/64" | 100<br>3-15/16" | 38 ; (42mm **)<br>1-1/2" ; (1-21/32" **)  | 19 | 39 | 74<br>2-29/32" | M10 | 15<br>19/32" | 9<br>23/64" |
| 73   | 74,5<br>2-15/16" | 79,5<br>3-1/8"   | 114<br>4-1/2"   | 46 ; (52mm **)<br>1-13/16" ; (2-1/16" **) | 24 | 39 | 74<br>2-29/32" | M12 | 15<br>19/32" | 9<br>23/64" |

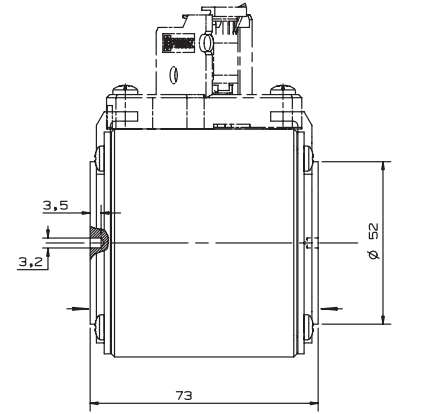


## Protistor® Square-body Fuses

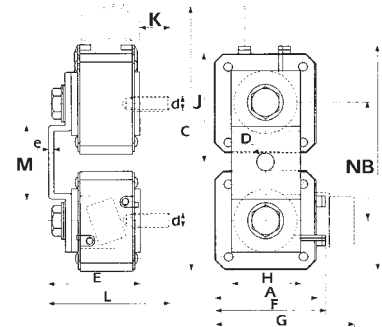
PSC aR sizes 7x - 650 V to 1300 VAC

IEC Terminals - French 272 - 273 End contacts

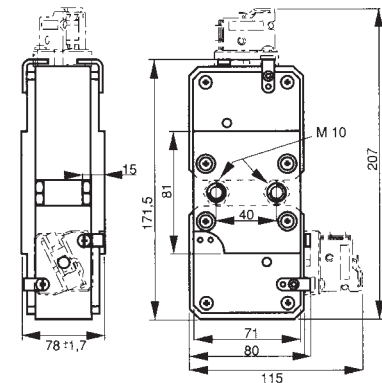
| Size   | Designation           | Reference Number | Weight (g) | Packaging | Catalog Number  |
|--------|-----------------------|------------------|------------|-----------|-----------------|
| 73     | 12,5 URD 73 PPAF 0315 | H300640          | 1250       | 1         | PC73UD13C315PP4 |
|        | 12,5 URD 73 PPAF 0350 | J300641          |            |           | PC73UD13C350PP4 |
|        | 12,5 URD 73 PPAF 0400 | K300642          |            |           | PC73UD13C405PP4 |
|        | 12,5 URD 73 PPAF 0450 | L300643          |            |           | PC73UD13C450PP4 |
|        | 12,5 URD 73 PPAF 0500 | M300644          |            |           | PC73UD13C500PP4 |
|        | 12,5 URD 73 PPAF 0550 | N300645          |            |           | PC73UD13C550PP4 |
|        | 12,5 URD 73 PPAF 0630 | P300646          |            |           | PC73UD13C630PP4 |
|        | 12,5 URD 73 PPAF 0700 | Q300647          |            |           | PC73UD13C700PP4 |
|        | 12,5 URD 73 PPAF 0800 | R300648          |            |           | PC73UD13C800PP4 |
|        | 12 URD 73 PPAF 0900   | S300649          |            |           | PC73UD12C900PP4 |
|        | 10 URD 73 PPAF 1000   | T300650          |            |           | PC73UD10C10CP4  |
|        | 9,5 URD 73 PPAF 1100  | V300651          |            |           | PC73UD95V11CPP4 |
|        | 9 URD 73 PPAF 1250    | T300719          |            |           | PC73UD90V13CP4  |
|        | 8,5 URD 73 PPAF 1400  | V300720          |            |           | PC73UD85V14CP4  |
| 2 x 72 | 12,5 URD 272 TTF 0630 | W300721          | 1900       | 1         | PC272UD13C630TF |
|        | 12,5 URD 272 TTF 0700 | X300722          |            |           | PC272UD13C700TF |
|        | 12,5 URD 272 TTF 0800 | Y300723          |            |           | PC272UD13C800TF |
|        | 12,5 URD 272 TTF 0900 | Z300724          |            |           | PC272UD13C900TF |
|        | 12,5 URD 272 TTF 1000 | A300725          |            |           | PC272UD13C10CTF |
|        | 12,5 URD 272 TTF 1100 | B300726          |            |           | PC272UD13C11CTF |
|        | 11 URD 272 TTF 1250   | M302231          |            |           | PC272UD11C13CTF |
|        | 11 URD 272 TTF 1400   | D300728          |            |           | PC272UD11C14CTF |
|        | 10 URD 272 TTF 1600   | L302230          |            |           | PC272UD10C16CTF |
|        | 9 URD 272 TTF 1800    | E301994          |            |           | PC272UD90V18CTF |
|        | 7,5 URD 272 TTF 2000  | F301995          |            |           | PC272UD75V20CTF |
|        | 6,5 URD 272 TTF 2200  | G301996          |            |           | PC272UD65V22CTF |
|        | 6,5 URD 272 TTF 2500  | H301997          |            |           | PC272UD65V25CTF |
| 2 x 73 | 12,5 URD 273 TTF 0800 | F300730          | 2600       | 1         | PC273UD13C800TF |
|        | 12,5 URD 273 TTF 0900 | G300731          |            |           | PC273UD13C900TF |
|        | 12,5 URD 273 TTF 1000 | H300732          |            |           | PC273UD13C10CTF |
|        | 12,5 URD 273 TTF 1100 | J300733          |            |           | PC273UD13C11CTF |
|        | 12,5 URD 273 TTF 1250 | K300734          |            |           | PC273UD13C13CTF |
|        | 11 URD 273 TTF 1400   | K302229          |            |           | PC273UD11C14CTF |
|        | 11 URD 273 TTF 1600   | J302228          |            |           | PC273UD11C16CTF |
|        | 11 URD 273 TTF 1800   | S302236          |            |           | PC273UD11C18CTF |
|        | 10 URD 273 TTF 2000   | P300738          |            |           | PC273UD10C20CTF |
|        | 9,5 URD 273 TTF 2200  | Q300739          |            |           | PC273UD95V22CTF |
|        | 9,5 URD 273 PLAF 2200 | M301909          |            |           | PC76UD95V22CP11 |
|        | 9 URD 273 PLAF 2500   | R300740          |            |           | PC76UD90V25CP11 |
|        | 8,5 URD 273 PLAF 2800 | S300741          |            |           | PC76UD85V28CP11 |
|        | 6 URD 273 PLAF 3000   | K301999          |            |           | PC76UD60V30CP11 |
|        | 6 URD 273 PLAF 3200   | M302001          |            |           | PC76UD60V32CP11 |
|        | 5,5 URD 273 PLAF 3600 | N302002          |            |           | PC76UD55V36CP11 |



73 PPAF



272 & 273 TTF



273 PLAF

Microswitches and threaded studs supplied separately

|            | A    | B     | C   | D  | E  | F    | G   | H  | J  | K  | d    | e | L   | M  | N  |
|------------|------|-------|-----|----|----|------|-----|----|----|----|------|---|-----|----|----|
| 2 x 72 TTF | 60   | 138,5 | 172 | 11 | 91 | 65,5 | 100 | 35 | 66 | 39 | M 10 | 4 | 131 | 48 | 72 |
| 2 x 73 TTF | 74,5 | 167   | 200 | 13 | 91 | 79,5 | 114 | 50 | 80 | 39 | M 12 | 4 | 131 | 54 | 86 |

### Note:

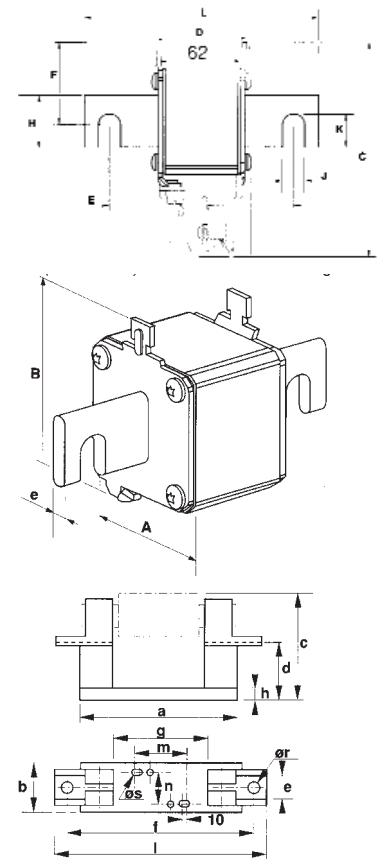
Dimensions in mm



# Semiconductor (AC) fuses

## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC IEC Terminals - French 70 - 73 Blades

| Size | Designation          | Reference Number | Weight (g) | Pack. | Base    | I/I <sub>N</sub> * | Catalog Number |
|------|----------------------|------------------|------------|-------|---------|--------------------|----------------|
| 70   | 12,5 URD 70 E F 0063 | P300600          | 380        | 3     | SP 70   | 1                  | PC70UD13C63EF  |
|      | 12,5 URD 70 E F 0080 | Q300601          |            |       |         | 1                  | PC70UD13C80EF  |
|      | 12,5 URD 70 E F 0100 | R300602          |            |       |         | 1                  | PC70UD13C100EF |
|      | 12,5 URD 70 E F 0125 | S300603          |            |       |         | 0,95               | PC70UD13C125EF |
|      | 12,5 URD 70 E F 0160 | T300604          |            |       |         | 0,90               | PC70UD13C160EF |
|      | 12,5 URD 70 E F 0200 | V300605          |            |       |         | 0,85               | PC70UD13C200EF |
|      | 12,5 URD 70 E F 0250 | W300606          |            |       |         | 0,80               | PC70UD13C250EF |
|      | 12 URD 70 E F 0280   | L300712          |            |       |         | 0,80               | PC70UD12C280EF |
|      | 12 URD 70 E F 0315   | X300607          |            |       |         | 0,75               | PC70UD12C315EF |
|      | 11 URD 70 E F 0350   | Y300608          |            |       |         | 0,75               | PC70UD11C350EF |
|      | 12,5 URD 71 E F 0160 | C300750          |            |       |         | 1                  | PC71UD13C160EF |
| 71   | 12,5 URD 71 E F 0200 | Z300609          | 570        | 3     | SE 71   | 1                  | PC71UD13C200EF |
|      | 12,5 URD 71 E F 0250 | A300610          |            |       |         | 1                  | PC71UD13C250EF |
|      | 12,5 URD 71 E F 0280 | M300713          |            |       |         | 0,95               | PC71UD13C280EF |
|      | 12,5 URD 71 E F 0315 | B300611          |            |       |         | 0,95               | PC71UD13C315EF |
|      | 12,5 URD 71 E F 0350 | C300612          |            |       |         | 0,90               | PC71UD13C350EF |
|      | 12,5 URD 71 E F 0400 | D300613          |            |       |         | 0,90               | PC71UD13C400EF |
|      | 12,5 URD 71 E F 0450 | E300614          |            |       |         | 0,85               | PC71UD13C450EF |
|      | 11 URD 71 E F 0500   | F300615          |            |       |         | 0,85               | PC71UD11C500EF |
|      | 11 URD 71 E F 0550   | G300616          |            |       |         | 0,80               | PC71UD11C550EF |
|      | 10 URD 71 E F 0630   | H300617          |            |       |         | 0,80               | PC71UD10C630EF |
|      | 12,5 URD 72 E F 0280 | J300618          | 800        | 3     | SE 72   | 1                  | PC72UD13C280EF |
| 72   | 12,5 URD 72 E F 0315 | K300619          |            |       |         | 1                  | PC72UD13C315EF |
|      | 12,5 URD 72 E F 0350 | L300620          |            |       |         | 1                  | PC72UD13C350EF |
|      | 12,5 URD 72 E F 0400 | M300621          |            |       |         | 1                  | PC72UD13C400EF |
|      | 12,5 URD 72 E F 0450 | N300622          |            |       |         | 0,95               | PC72UD13C450EF |
|      | 12,5 URD 72 E F 0500 | P300623          |            |       |         | 0,90               | PC72UD13C500EF |
|      | 12,5 URD 72 E F 0550 | Q300624          |            |       |         | 0,85               | PC72UD13C550EF |
|      | 11 URD 72 E F 0630   | R300625          |            |       |         | 0,85               | PC72UD11C630EF |
|      | 10 URD 72 E F 0700   | S300626          |            |       |         | 0,80               | PC72UD10C700EF |
|      | 10 URD 72 E F 0800   | T300627          |            |       |         | 0,80               | PC72UD10C800EF |
|      | 12,5 URD 73 E F 0315 | V300628          | 1150       | 1     | SF50-73 | 1                  | PC73UD13C315EF |
| 73   | 12,5 URD 73 E F 0350 | W300629          |            |       |         | 1                  | PC73UD13C350EF |
|      | 12,5 URD 73 E F 0400 | X300630          |            |       |         | 1                  | PC73UD13C400EF |
|      | 12,5 URD 73 E F 0450 | Y300631          |            |       |         | 1                  | PC73UD13C450EF |
|      | 12,5 URD 73 E F 0500 | Z300632          |            |       |         | 1                  | PC73UD13C500EF |
|      | 12,5 URD 73 E F 0550 | A300633          |            |       |         | 0,95               | PC73UD13C550EF |
|      | 12,5 URD 73 E F 0630 | B300634          |            |       |         | 0,95               | PC73UD13C630EF |
|      | 12 URD 73 E F 0700   | C300635          |            |       |         | 0,90               | PC73UD12C700EF |
|      | 11 URD 73 E F 0800   | D300636          |            |       |         | 0,90               | PC73UD11C800EF |
|      | 10 URD 73 E F 0900   | E300637          |            |       |         | 0,85               | PC73UD10C900EF |
|      | 9 URD 73 E F 1000    | F300638          |            |       |         | 0,85               | PC73UD90V10CEF |
|      | 9 URD 73 E F 1100    | G300639          |            |       |         | 0,80               | PC73UD90V11CEF |



Pull out grip PM7 (V097676)  
in size 70-71-72

\* I/I<sub>N</sub> : Ratio "maximum  
continuous permissible RMS  
current I<sub>N</sub>" for a fuse fitted into  
the bases.

Fuse holders and microswitches supplied separately

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

|    | A    | B    | C   | D  | E <sup>±1,3</sup> | L <sup>±1,3</sup> | F  | H  | J    | k    | e |
|----|------|------|-----|----|-------------------|-------------------|----|----|------|------|---|
| 70 | 40   | 62   | 96  | 67 | 100               | 123,4             | 38 | 18 | 9    | 11   | 6 |
| 71 | 51   | 69   | 103 | 68 | 110               | 133,4             | 39 | 25 | 10,5 | 16   | 6 |
| 72 | 60   | 78   | 112 | 68 | 114,4             | 149,4             | 43 | 32 | 13   | 21,2 | 6 |
| 73 | 74,5 | 92,5 | 127 | 68 | 114,4             | 149,4             | 57 | 40 | 13   | 19,5 | 6 |

**Note:** dimensions in mm

| Fuse holders | Ref. N° | Cat. N° | a   | b  | c   | d    | e  | f   | g  | h   | l   | m  | n  | r    | s   | Weight (g) |
|--------------|---------|---------|-----|----|-----|------|----|-----|----|-----|-----|----|----|------|-----|------------|
| SP 70        | F096099 | SP70    | 148 | 42 | 92  | 47,5 | 26 | 168 | 88 | 10  | 188 | 60 | 28 | 8,5  | 5,5 | 400        |
| SE 51-71     | V098711 | SE71    | 148 | 42 | 103 | 47   | 32 | 182 | 85 | 8,5 | 214 | 60 | 28 | 10,5 | 5,5 | 470        |
| SE 52-72     | W098712 | SE72    | 150 | 54 | 114 | 49   | 42 | 204 | 80 | 10  | 240 | 45 | 35 | 12,5 | 8,5 | 940        |
| SF 53-73     | C209187 | SF50-73 | 160 | 60 | 142 | 55   | 40 | 210 | 80 | 10  | 250 | 40 | 35 | 18   | 9   | 2000       |

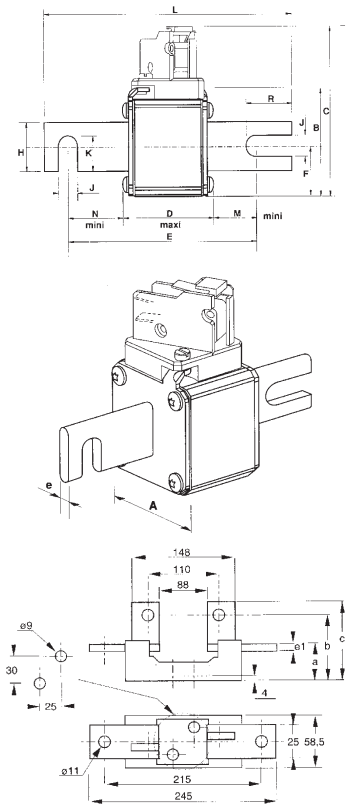


## Protistor® Square-body Fuses

PSC aR sizes 7x - 650 V to 1300 VAC

IEC Terminals - German 70 - 73 Blades (DIN 110)

| Size | Designation             | Reference Number | Weight (g) | Pack. | *I/In Base |         | Catalog Number  |
|------|-------------------------|------------------|------------|-------|------------|---------|-----------------|
|      |                         |                  |            |       | F098031    | L091941 |                 |
| 70   | 12,5 URD 70 D 11 A 0063 | V300536          | 380        | 3     | 1          | 1       | PC70UD13C63D1A  |
|      | 12,5 URD 70 D 11 A 0080 | W300537          |            |       | 1          | 1       | PC70UD13C80D1A  |
|      | 12,5 URD 70 D 11 A 0100 | X300538          |            |       | 1          | 1       | PC70UD13C100D1A |
|      | 12,5 URD 70 D 11 A 0125 | Y300539          |            |       | 1          | 1       | PC70UD13C125D1A |
|      | 12,5 URD 70 D 11 A 0160 | Z300540          |            |       | 1          | 1       | PC70UD13C160D1A |
|      | 12,5 URD 70 D 11 A 0200 | A300541          |            |       | 1          | 1       | PC70UD13C200D1A |
|      | 12,5 URD 70 D 11 A 0250 | B300542          |            |       | 1          | 1       | PC70UD13C250D1A |
|      | 12 URD 70 D 11 A 0280   | J300710          |            |       | 1          | 1       | PC70UD12C280D1A |
|      | 12 URD 70 D 11 A 0315   | C300543          |            |       | 1          | 1       | PC70UD12C315D1A |
|      | 11 URD 70 D 11 A 0350   | D300544          |            |       | 1          | 1       | PC70UD11C350D1A |
| 71   | 12,5 URD 71 D 11 A 0160 | D300751          | 570        | 3     | 1          | 1       | PC71UD13C160D1A |
|      | 12,5 URD 71 D 11 A 0200 | E300545          |            |       | 1          | 1       | PC71UD13C200D1A |
|      | 12,5 URD 71 D 11 A 0250 | F300546          |            |       | 1          | 1       | PC71UD13C250D1A |
|      | 12,5 URD 71 D 11 A 0280 | K300711          |            |       | 1          | 1       | PC71UD12C280D1A |
|      | 12,5 URD 71 D 11 A 0315 | G300547          |            |       | 1          | 1       | PC71UD12C315D1A |
|      | 12,5 URD 71 D 11 A 0350 | H300548          |            |       | 1          | 1       | PC71UD13C350D1A |
|      | 12,5 URD 71 D 11 A 0400 | J300549          |            |       | 1          | 1       | PC71UD13C400D1A |
|      | 12,5 URD 71 D 11 A 0450 | K300550          |            |       | 0,95       | 1       | PC71UD13C450D1A |
|      | 11 URD 71 D 11 A 0500   | L300551          |            |       | 0,95       | 1       | PC71UD11C500D1A |
|      | 11 URD 71 D 11 A 0550   | M300552          |            |       | 0,90       | 1       | PC71UD13C550D1A |
| 72   | 10 URD 71 D 11 A 0630   | N300553          | 800        | 3     | 0,90       | 0,95    | PC71UD10C630D1A |
|      | 12,5 URD 72 D 11 A 0280 | P300554          |            |       | 1          | 1       | PC72UD13C280D1A |
|      | 12,5 URD 72 D 11 A 0315 | Q300555          |            |       | 1          | 1       | PC72UD13C315D1A |
|      | 12,5 URD 72 D 11 A 0350 | R300556          |            |       | 1          | 1       | PC72UD13C350D1A |
|      | 12,5 URD 72 D 11 A 0400 | S300557          |            |       | 1          | 1       | PC72UD13C400D1A |
|      | 12,5 URD 72 D 11 A 0450 | T300558          |            |       | 1          | 1       | PC72UD13C450D1A |
|      | 12,5 URD 72 D 11 A 0500 | V300559          |            |       | 0,95       | 1       | PC72UD13C500D1A |
|      | 12,5 URD 72 D 11 A 0550 | W300560          |            |       | 0,90       | 0,95    | PC72UD13C550D1A |
|      | 11 URD 72 D 11 A 0630   | X300561          |            |       | 0,90       | 0,95    | PC72UD11C630D1A |
|      | 10 URD 72 D 11 A 0700   | Y300562          |            |       | 0,85       | 0,90    | PC72UD10C700D1A |
| 73   | 10 URD 72 D 11 A 0800   | Z300563          | 1150       | 3     | 0,85       | 0,90    | PC72UD10C800D1A |
|      | 12,5 URD 73 D 11 A 0315 | A300564          |            |       | 1          | 1       | PC73UD13C315D1A |
|      | 12,5 URD 73 D 11 A 0350 | B300565          |            |       | 1          | 1       | PC73UD13C350D1A |
|      | 12,5 URD 73 D 11 A 0400 | C300566          |            |       | 0,95       | 1       | PC73UD13C400D1A |
|      | 12,5 URD 73 D 11 A 0450 | D300567          |            |       | 0,95       | 1       | PC73UD13C450D1A |
|      | 12,5 URD 73 D 11 A 0500 | E300568          |            |       | 0,90       | 1       | PC73UD13C500D1A |
|      | 12,5 URD 73 D 11 A 0550 | F300569          |            |       | 0,90       | 0,95    | PC73UD13C550D1A |
|      | 12,5 URD 73 D 11 A 0630 | G300570          |            |       | 0,85       | 0,95    | PC73UD13C630D1A |
|      | 12 URD 73 D 11 A 0700   | H300571          |            |       | 0,85       | 0,90    | PC73UD12C700D1A |
|      | 11 URD 73 D 11 A 0800   | J300572          |            |       | 0,85       | 0,90    | PC73UD11C800D1A |
| 73   | 10 URD 73 D 11 A 0900   | K300573          |            |       | 0,80       | 0,85    | PC73UD10C900D1A |
|      | 9 URD 73 D 11 A 1000    | L300574          |            |       | 0,80       | 0,85    | PC73UD90V10CD1A |
|      | 9 URD 73 D 11 A 1100    | M300575          |            |       | 0,75       | 0,80    | PC73UD90V11CD1A |



Pull out grip PM7 (V097676) in size 70-71-72

Microswitches supplied separately

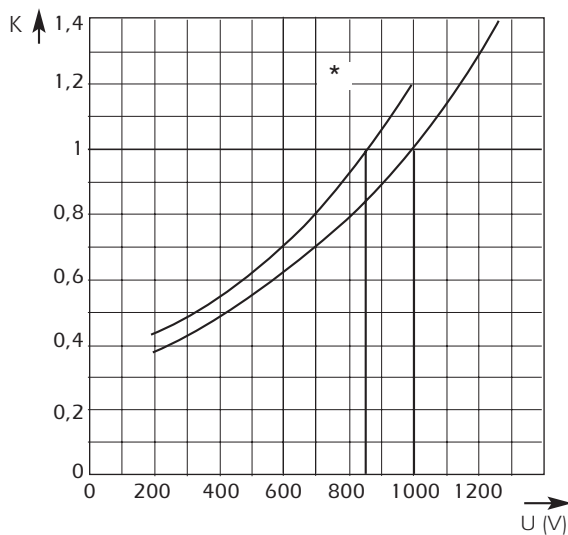
|    | A    | B    | C   | D  | E±1,1 | F    | H  | J    | K    | L±1,5 | M    | N    | R    | e |
|----|------|------|-----|----|-------|------|----|------|------|-------|------|------|------|---|
| 70 | 40   | 46,5 | 82  | 71 | 100,4 | 21   | 25 | 10,5 | 17,7 | 133,4 | 11,5 | 18,5 | 25,2 | 6 |
| 71 | 51   | 56,5 | 91  | 71 | 100,4 | 25,5 | 25 | 10,5 | 17,7 | 133,4 | 11,5 | 18,5 | 25,2 | 6 |
| 72 | 60   | 65,5 | 100 | 71 | 100,4 | 30   | 32 | 10,5 | 21,2 | 133,4 | 11,5 | 18,5 | 25,2 | 6 |
| 73 | 74,5 | 79,5 | 114 | 72 | 100,4 | 37,2 | 40 | 10,5 | 25,2 | 133,4 | 11   | 18   | 25,2 | 6 |

| Fuse holders      | Ref. N° | Cat. N°      | a  | b  | c  | e1 | Weight (g) |
|-------------------|---------|--------------|----|----|----|----|------------|
| SI DIN 110 630 A  | F098031 | SIDN110630A  | 40 | 68 | 82 | 5  | 1060       |
| SI DIN 110 1250 A | L091941 | SIDN1101250A | 45 | 73 | 87 | 10 | 1320       |



## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

### Multiplier coefficient



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

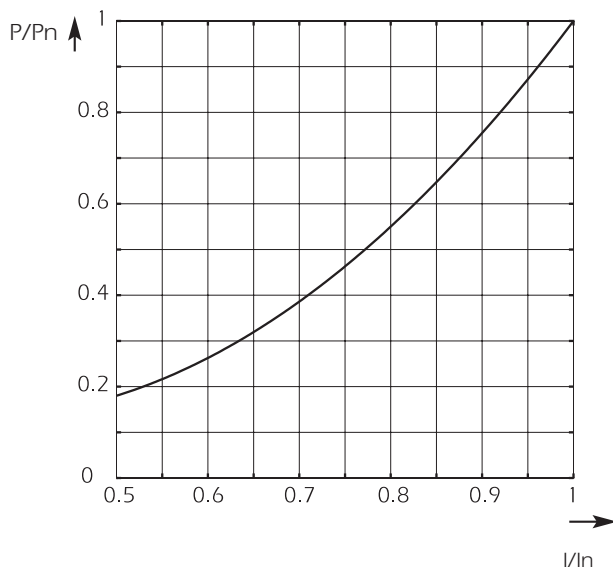
Example:  
Fuse 350 A in size 70.  
 $I_p = 10\,000\text{ A}$   $U = 1100\text{ V}$

At 1000 V  
 $I^2t_t = 115\,000\text{ A}^2\text{s}$   $T_t = 7\text{ ms}$

At 1100 V  
 $I^2t_t = 115\,000 \times 1.13 = 130\,000\text{ A}^2\text{s}$   
 $T_t = 7 \times 1.13 = 7.9\text{ ms}$

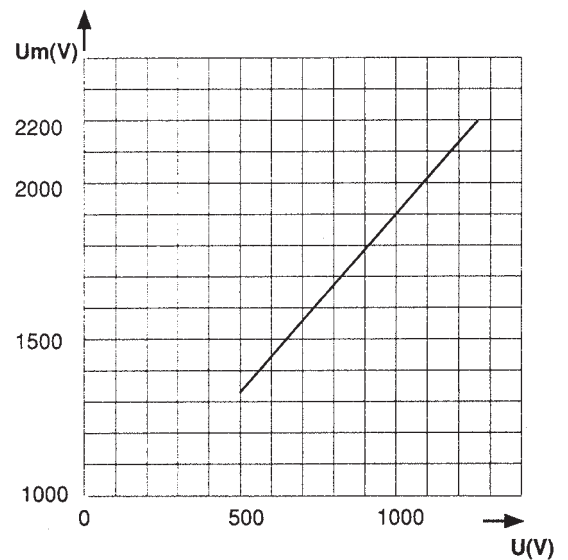
\* curve for fuses with  $I^2t$  published at 850VAC

### Dissipated power



Above left: Curve enabling calculation of dissipated power  $P$  by a fuse rated  $I_{Nv}$  as a function of the RMS current  $I$ , in multiples of  $I_{Nv}$ , in steady state.

### Arc voltage



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

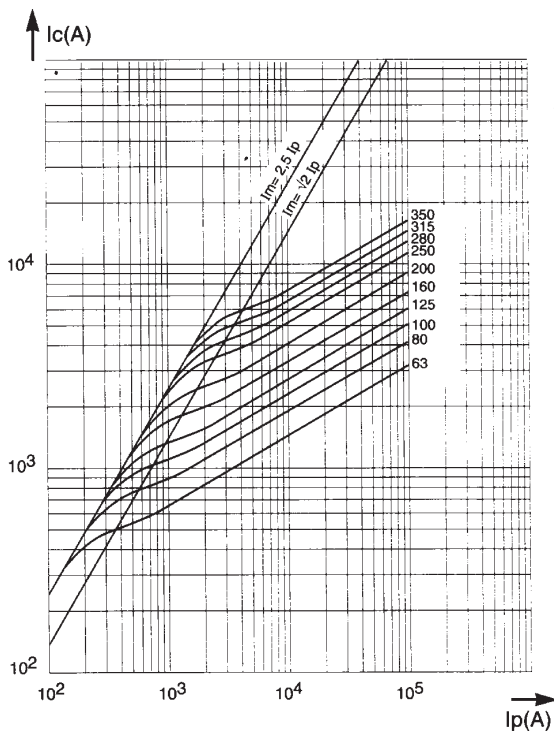


## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

### Size 70

#### Cut-off characteristics

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

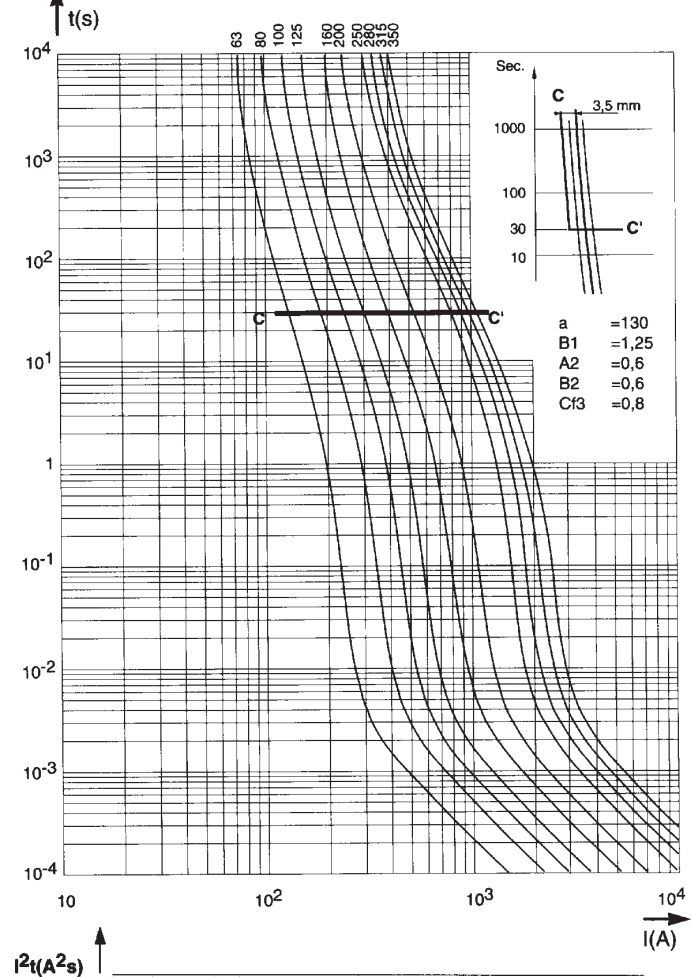


#### Time-current characteristics

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, 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.

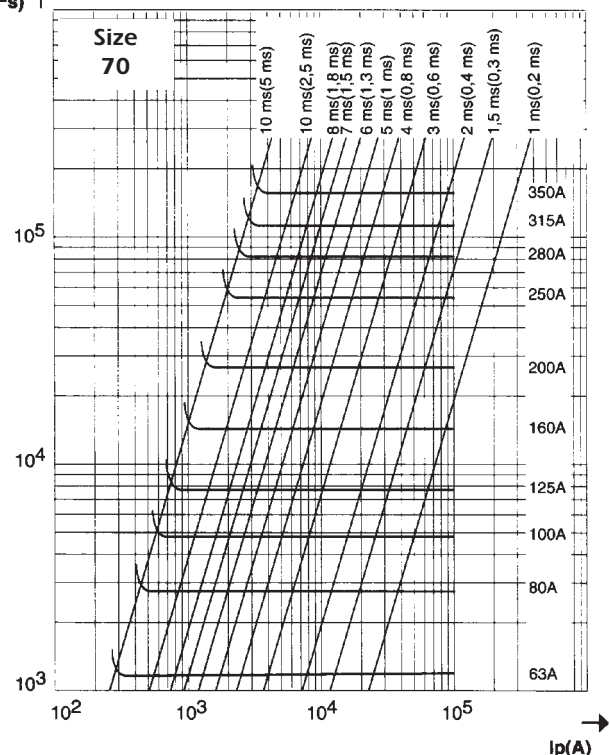
#### Time-current characteristics



#### Maximum values of total operating $I^2t$ and total operating times

Horizontal curves indicating the maximum values of total operating  $I^2t$  ( $I^2t_t$ ) as function of the prospective current  $I_p$  at 1000V or 850 V(\*),  $\cos \varphi = 0.15$ .

The oblique lines indicate the corresponding total operating time  $T_t$ , with pre-arcing time in brackets.



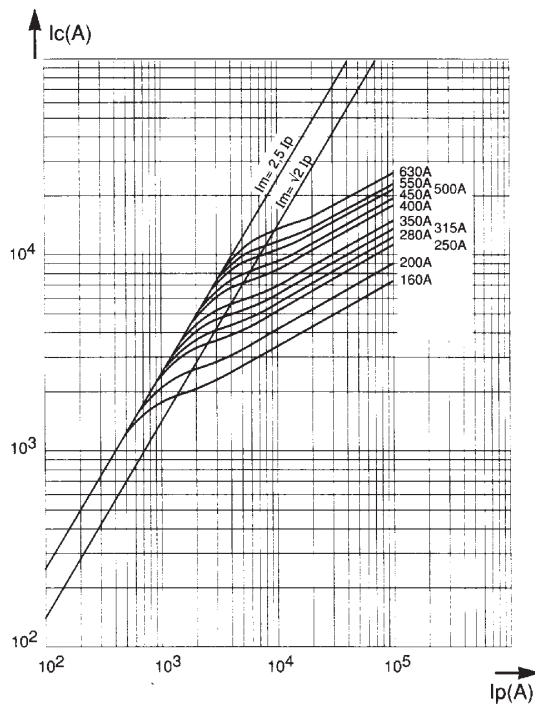


# Semiconductor (AC) fuses

## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

### Cut-off characteristics

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

Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current  $I$ .

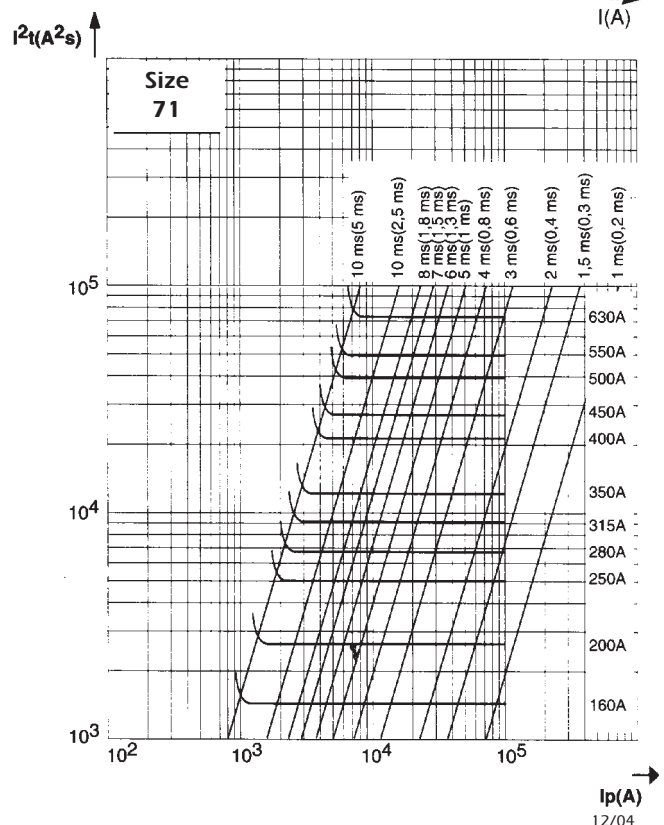
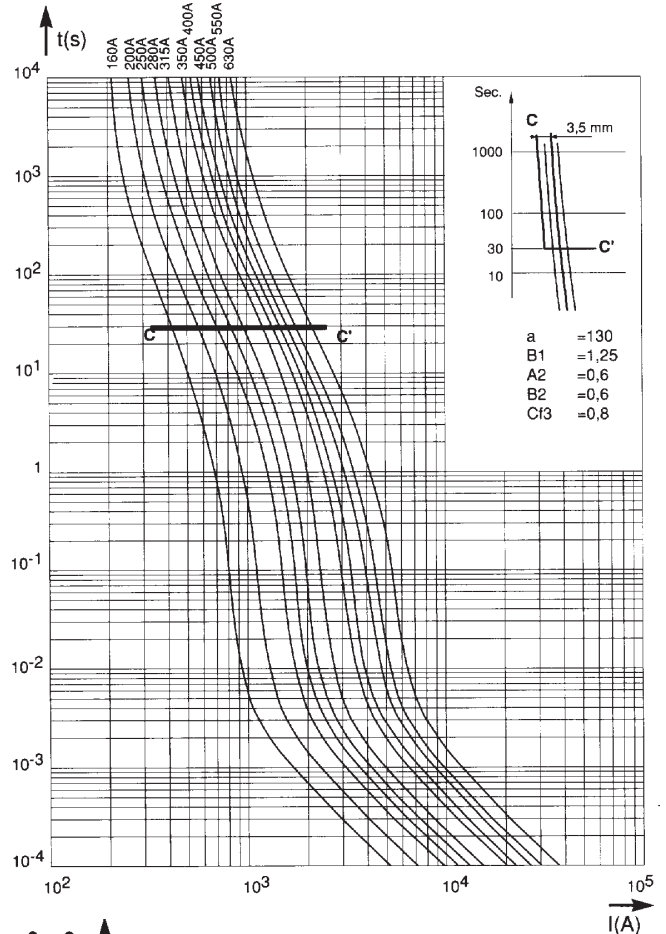
- Tolerances on this current  $\pm 8\%$ .
- Beyond 30 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, 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

Horizontal curves indicating the maximum values of total operating  $I^2t$  ( $I^2t_t$ ) as function of the prospective current  $I_p$  at 1000V or 850 V(\*),  $\cos \varphi = 0.15$ .

The oblique lines indicate the corresponding total operating time  $T_t$  with pre-arcing time in brackets.

### Size 71 Time-current characteristics



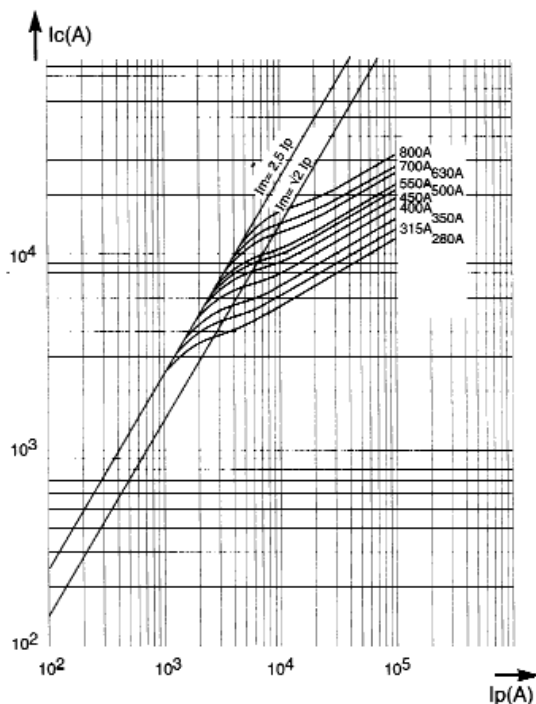


## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

### Size 72

#### 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

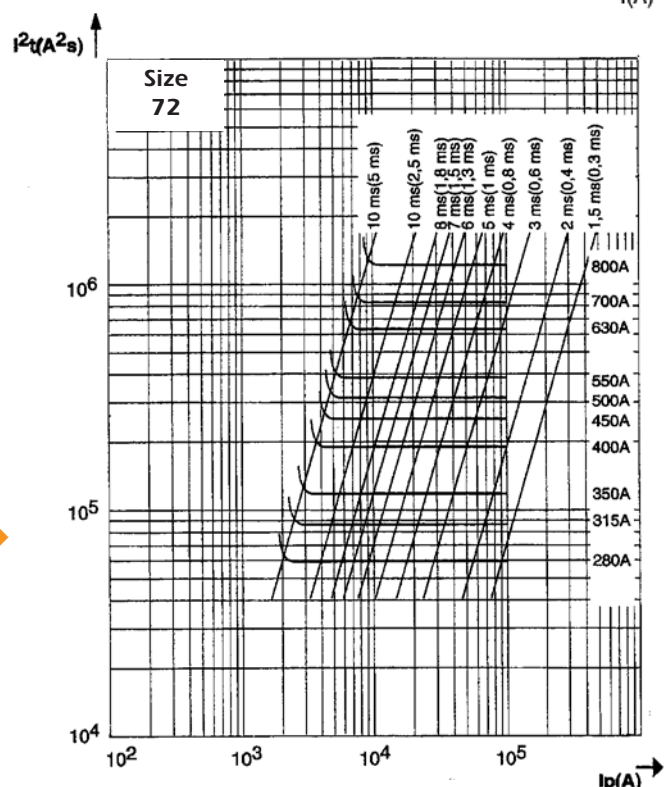
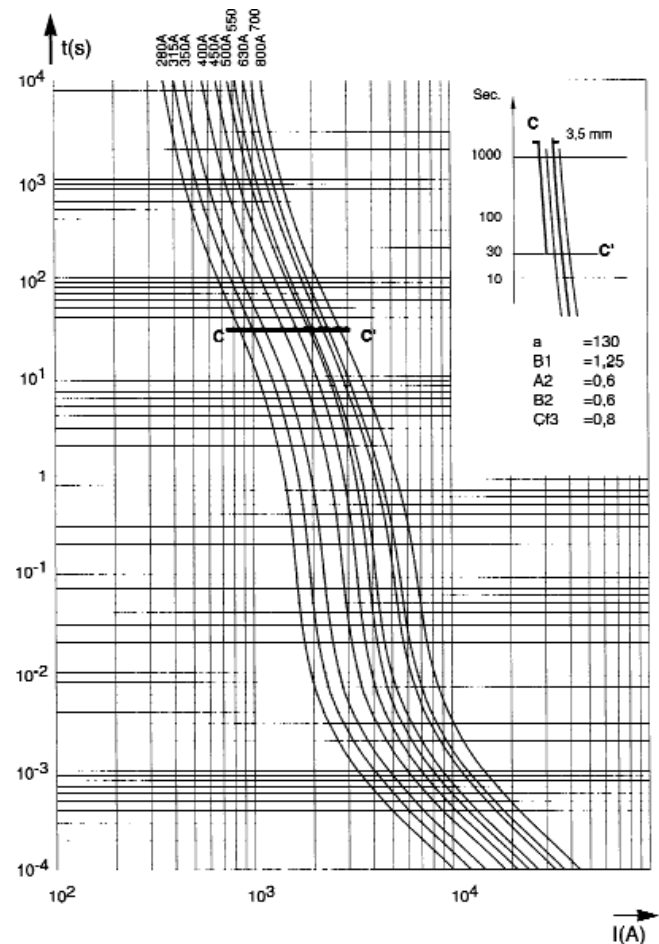
Above, left: Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current  $I$ .

- Tolerances on this current  $\pm 8\%$ .
- Beyond 30 sec, 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 1000V or 850 V(\*),  $\cos \varphi = 0.15$ .  
The oblique lines indicate the corresponding total operating time  $T_t$ , with pre-arcing time in brackets.

#### Time-current characteristics



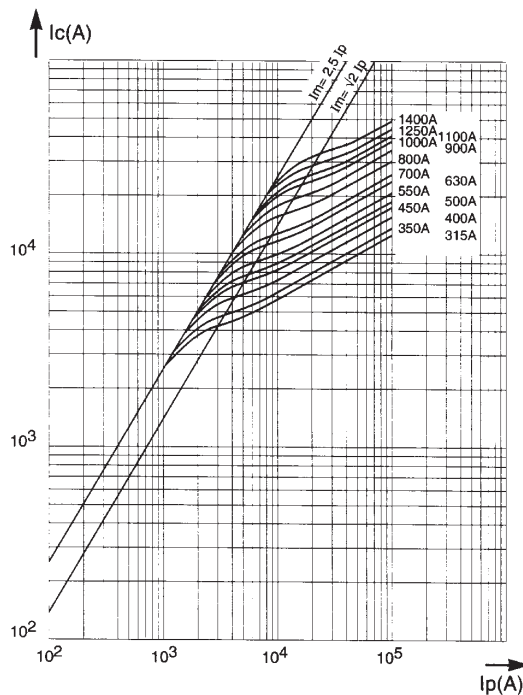


## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

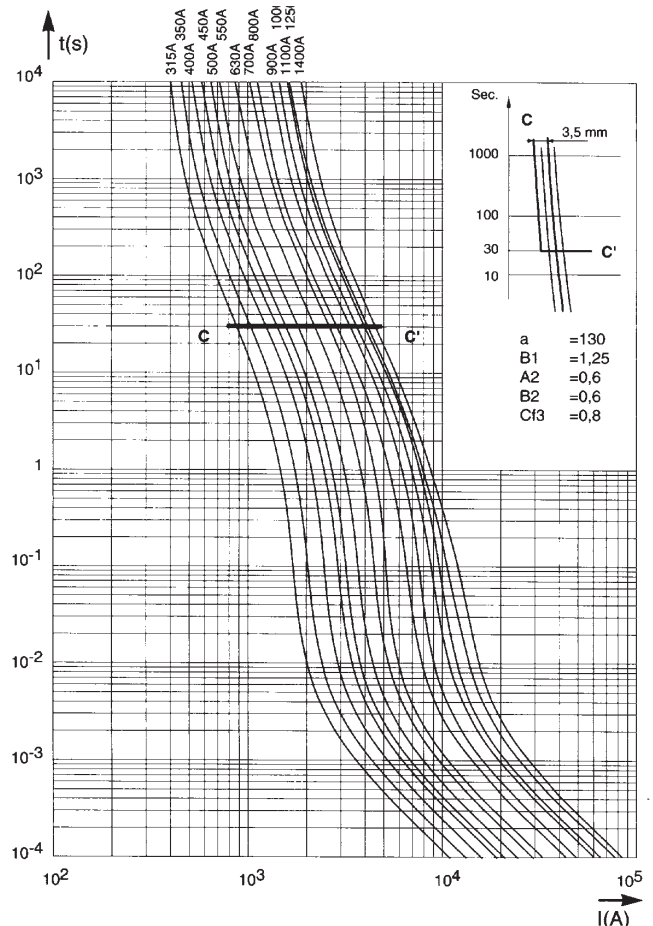
Size 73

### Cut-off characteristics

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



### Time-current characteristics

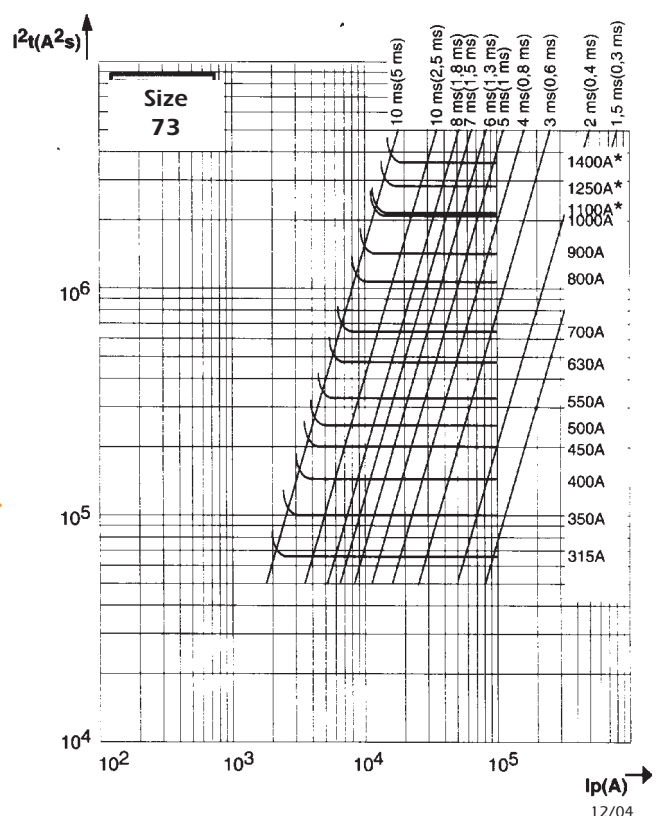
Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current  $I$ .

- Tolerances on this current  $\pm 8\%$ .
- Beyond 30 sec, 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

Horizontal curves indicating the maximum values of total operating  $I^2t$  ( $I^2t_t$ ) as function of the prospective current  $I_p$  at 1000V or 850 V(\*),  $\cos \varphi = 0.15$ .

The oblique lines indicate the corresponding total operating time  $T_t$  with pre-arcing time in brackets.



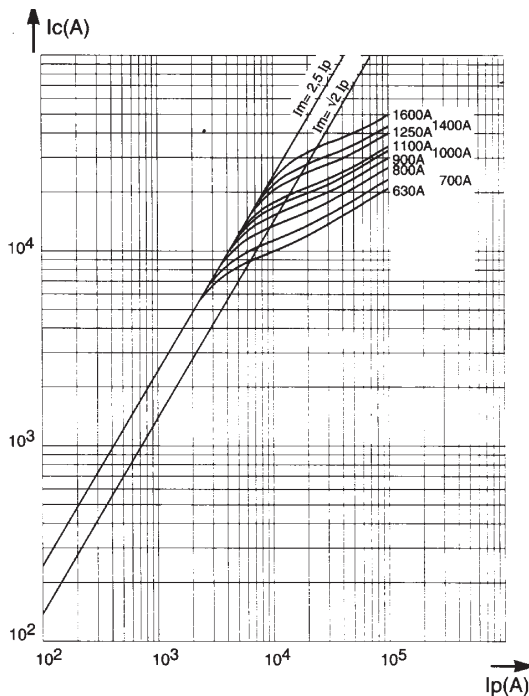


## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

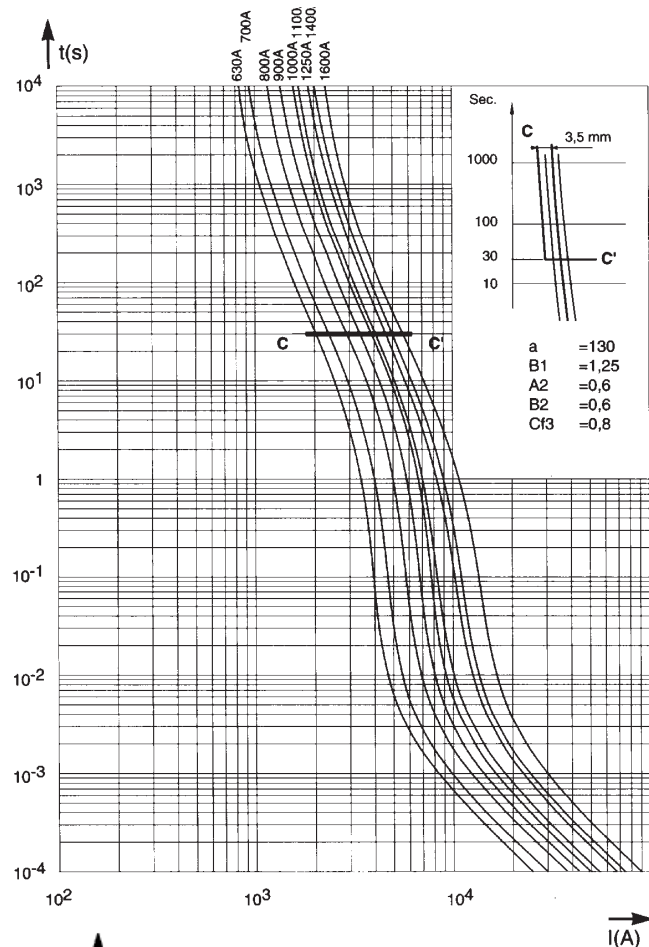
### Size 2x72

#### Cut-off characteristics

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



#### Time-current characteristics

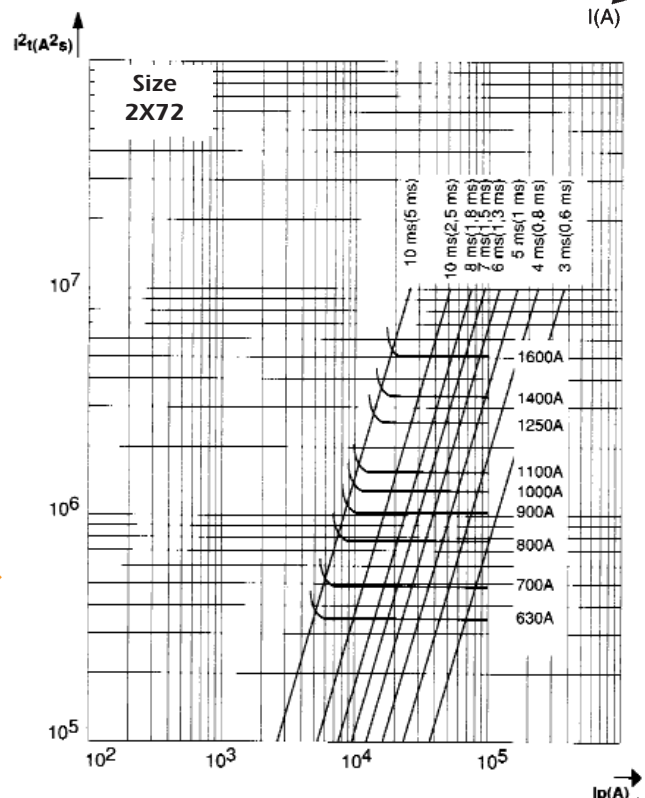
Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current  $I$ .

- Tolerances on this current  $\pm 8\%$ .
- Beyond 30 sec, 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

Horizontal curves indicating the maximum values of total operating  $I^2t$  ( $I^2t_t$ ) as function of the prospective current  $I_p$  at 1000V or 850 V(\*),  $\cos \varphi = 0.15$ .

The oblique lines indicate the corresponding total operating time  $T_t$ , with pre-arcing time in brackets.



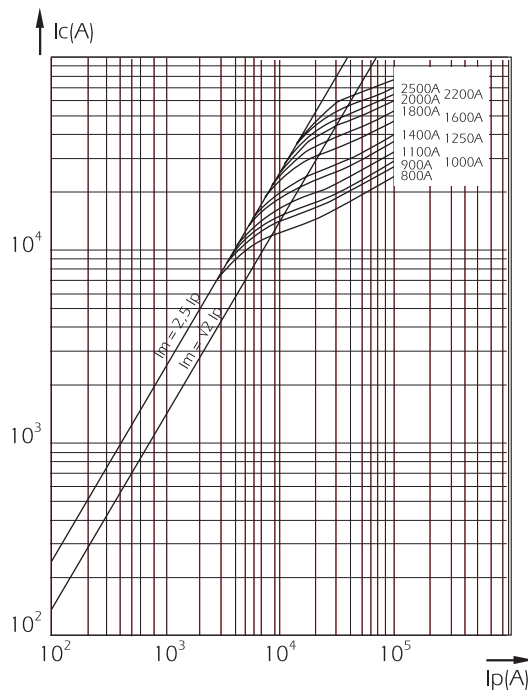


## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

Size 2x72

### Cut-off characteristics

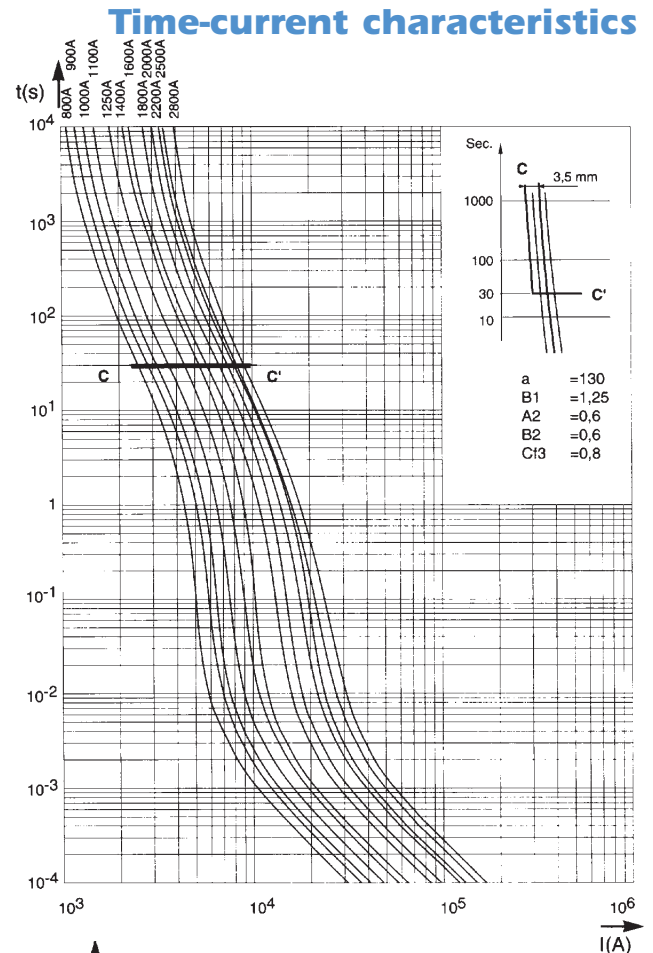
Curves indicating for each rated current the peak value  $I_C$  that the current may reach as a function of the prospective fault current  $I_p$ .



### Time-current characteristics

Curves indicating pre-arcing time for each rated current as a function of RMS value of pre-arcing current  $I$ .

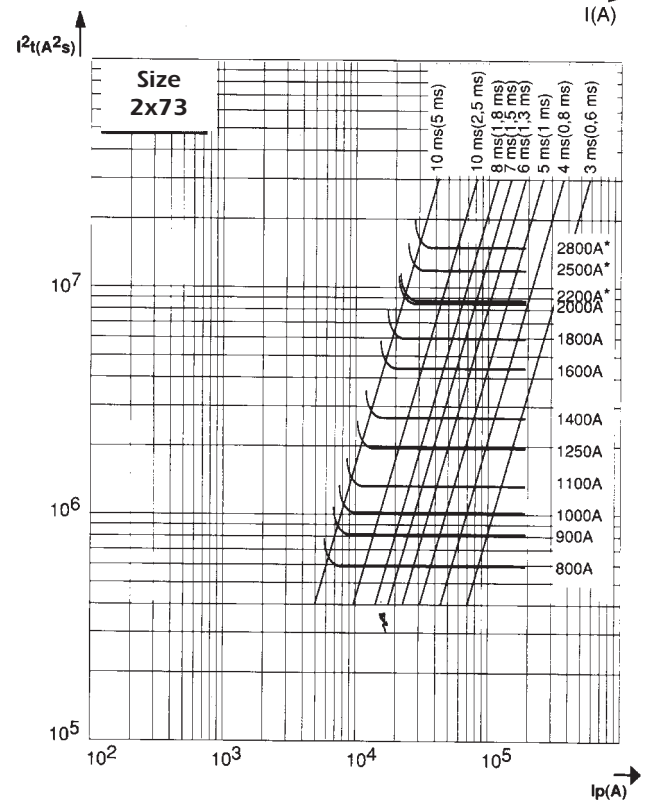
- Tolerances on this current  $\pm 8\%$ .
- Beyond 30 sec, small overloads must be eliminated by another device.
- Curve CC' represents the maximum times taken by the associated device to clear small overloads; only its horizontal line is represented. Its oblique line must be plotted according to sketch, 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

Horizontal curves indicating the maximum values of total operating  $I^2t$  ( $I^2t_t$ ) as function of the prospective current  $I_p$  at 1000V or 850 V(\*),  $\cos \varphi = 0.15$ .

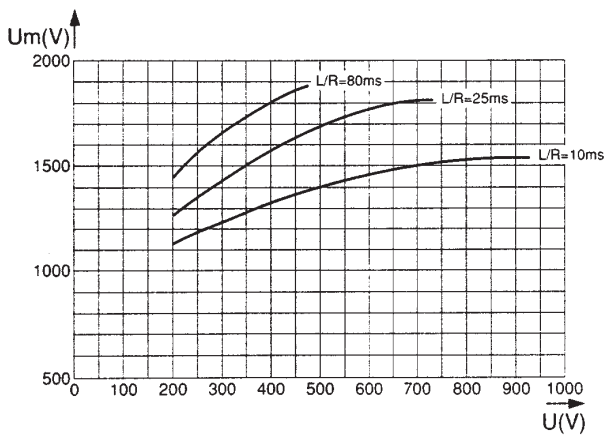
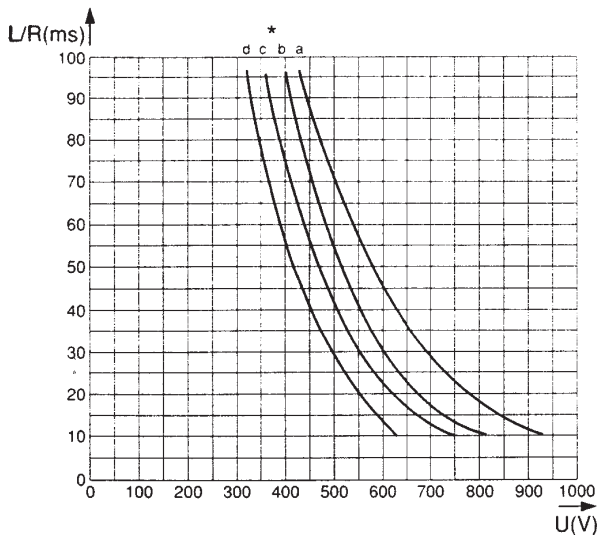
The oblique lines indicate the corresponding total operating time  $T_t$ , with pre-arcing time in brackets.





## Protistor® Square-body Fuses PSC aR sizes 7x - 650 V to 1300 VAC Curves set

### DC working voltage possibilities



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.

$I_{pm} (1)$  values indicate the minimum breaking current in Amperes (A).

Remark: When the fault current  $di/dt$  is very large, this condition can be exceeded. It 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.

| Rated current $I_N$ (A) | Curves (*) and $I_{pm} (1)$ corresponding to the rating |                         |                         |                         |                         |                           |
|-------------------------|---------------------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------------|
|                         |                                                         | 70<br>* $I_{pm}$<br>(A) | 71<br>* $I_{pm}$<br>(A) | 72<br>* $I_{pm}$<br>(A) | 73<br>* $I_{pm}$<br>(A) | 2x72<br>* $I_{pm}$<br>(A) |
| 63                      | a                                                       | 270                     |                         |                         |                         |                           |
| 80                      | a                                                       | 400                     |                         |                         |                         |                           |
| 100                     | a                                                       | 520                     |                         |                         |                         |                           |
| 125                     | a                                                       | 700                     |                         |                         |                         |                           |
| 160                     | a                                                       | 950                     | a 950                   |                         |                         |                           |
| 200                     | a                                                       | 1300                    | a 1300                  |                         |                         |                           |
| 250                     | a                                                       | 1800                    | a 1800                  |                         |                         |                           |
| 280                     | b                                                       | 2200                    | a 2000                  | a 1800                  |                         |                           |
| 315                     | b                                                       | 2600                    | a 2300                  | a 2200                  | a 2000                  |                           |
| 350                     | c                                                       | 3000                    | a 2700                  | a 2600                  | a 2400                  |                           |
| 400                     |                                                         |                         | b 3500                  | a 3200                  | a 3000                  |                           |
| 450                     |                                                         |                         | b 4000                  | a 3800                  | a 3500                  |                           |
| 500                     |                                                         |                         | c 4800                  | a 4600                  | a 3900                  |                           |
| 550                     |                                                         |                         | c 5200                  | b 5000                  | a 4400                  |                           |
| 630                     |                                                         |                         | c 6400                  | b 6200                  | a 5300                  | a 4400                    |
| 700                     |                                                         |                         |                         | c 6800                  | a 6000                  | a 5200                    |
| 800                     |                                                         |                         |                         | c 8000                  | b 8000                  | a 6400                    |
| 900                     |                                                         |                         |                         |                         | b 9000                  | a 7600                    |
| 1000                    |                                                         |                         |                         |                         | c 11000                 | a 9200                    |
| 1100                    |                                                         |                         |                         |                         | c 12000                 | b 10000                   |
| 1250                    |                                                         |                         |                         |                         | c 13500                 | b 12400                   |
| 1400                    |                                                         |                         |                         |                         | c 15000                 | c 13600                   |
| 1600                    |                                                         |                         |                         |                         |                         | c 16000                   |
| 1800                    |                                                         |                         |                         |                         |                         |                           |
| 2000                    |                                                         |                         |                         |                         |                         |                           |
| 2200                    |                                                         |                         |                         |                         |                         |                           |
| 2500                    |                                                         |                         |                         |                         |                         |                           |
| 2800                    |                                                         |                         |                         |                         |                         |                           |



## Protistor® Square-body Fuses PSC aR sizes 7x - 650V to 1300 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
- STANDRAD 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<br>MS 3V 1-5 UR    | 1000 V                             | 20 V<br>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<br>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<br>MS 3V 1-9 BS | 1000 V                             | 10 V<br>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<br>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<br>MS 7V 1-5 ET | 1000V<br>1500V                     | 10 V<br>10 mA                      | 3 A            | 50/60 Hz | 3 A                   | 3 A   | 3 A    | 2 A                            | 1 A   | 1 A   | 8,5 kV                        | 14 kV                                   |                               |
|                              |                                    |                                    |                | 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

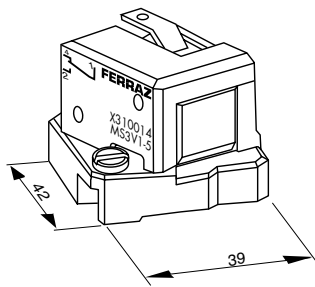
**Warning:** microswitch systems exclusively designed for FERRAZ SHAWMUT.  
PSC Fuses fitted a petented trip-indicator, saving use of EDV



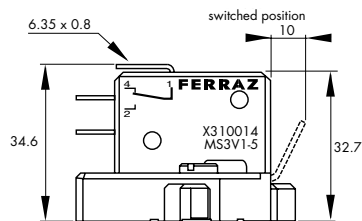
## Protistor® Square-body Fuses PSC aR sizes 7x - 650V to 1300 VAC Microswitches for PSC 3x & 7x

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

These patented indication systems are exclusively hand resettable.



(fig. 1)

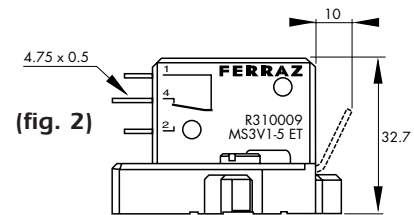


| Fuse size        | Designation             | Ref. Number | Indication style             | Weight (g) | Pack.    | Catalog Number  |
|------------------|-------------------------|-------------|------------------------------|------------|----------|-----------------|
| 30, 31<br>32, 33 | MS 3V 1-5<br>(fig.1)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

(3) Same as fig.1

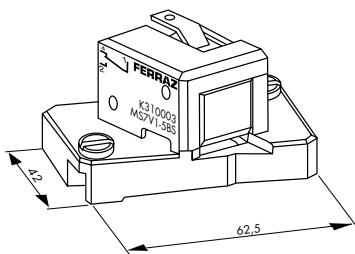
(4) Same dimensions as figure 1  
but with 2 microswitches side by side

(9) Watertightness class

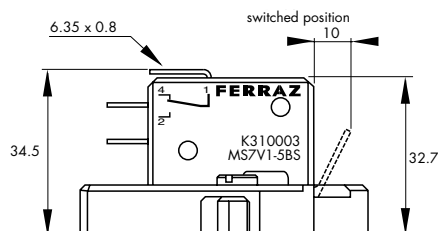


(fig. 2)

### MS 7V...



(fig. 5)



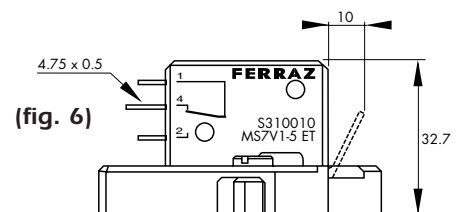
| Fuse size        | Designation             | Ref. Number | Indication style             | Weight (g) | Pack.    | Catalog Number  |
|------------------|-------------------------|-------------|------------------------------|------------|----------|-----------------|
| 70, 71<br>72, 73 | MS 7V 1-5<br>(fig.5)    | J310002     | Standard NO-NC               | 45         | 3 pieces | MS7 V1-5        |
|                  | MS 7V 1-5 UR            | Z310039     |                              |            |          | MS7 V1-5UR      |
|                  | MS 7V 1-5 BS<br>(3)     | K310003     | Low level NO-NC              | 45         | 3 pieces | MS7-V1-5BS      |
|                  | MS 7V 1-9 BS<br>(4)     | P310007     | Double pole<br>Low level     | 55         | 3 pieces | MS7V1-9BS       |
|                  | MS 7V 1-5 ET<br>(fig.6) | S310010     | Low level NO-NC<br>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 aR sizes 7x - 650 V to 1300 VAC Metric-studs

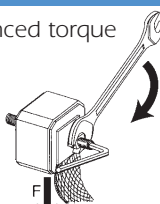
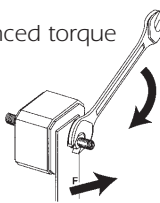
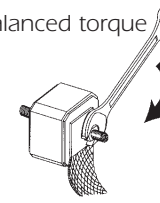
### Metric studs for threaded terminal fuses



| Type and fuse size                                                                                 | Designation                               | Ref. Number | Unit weight (g) | Pack.   | Catalog Number    |
|----------------------------------------------------------------------------------------------------|-------------------------------------------|-------------|-----------------|---------|-------------------|
| <br>Sizes 0 and 1 | HC stud pair<br>M8x30 & M8x35             | S098801     | 23              | 6 pairs | STU M8x30 M8x35   |
|                                                                                                    | Size 2<br>HC stud pair<br>M10x30 & M10x50 | T098802     | 40              | 6 pairs | STU M10x30 M10x50 |
|                                                                                                    | Size 3<br>HC stud pair<br>M12x35 & M12x50 | V098803     | 60              | 6 pairs | STU M12x35 M12x50 |
| <br>Size 2       | HC stud pair<br>M10x50                    | W098804     | 45              | 6 pairs | STU M10x50        |
|                                                                                                    | Size 3<br>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 tightening torque (Nm) (1) | Maximum nut tightening torque (Nm) (1) |
|----------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------|----------------------------------------|
| <br>Balanced torque   | M8x30 & M8x35   | 10                                      | 13.5                                   |
|                                                                                                          | M10x30 & M10x50 | 15                                      | 26                                     |
|                                                                                                          | M12x35 & M12x50 | 15                                      | 46                                     |
| <br>Balanced torque   | M8x30 & M8x35   | 10                                      | 13.5                                   |
|                                                                                                          | M10x30 & M10x50 | 15                                      | 26                                     |
|                                                                                                          | M12x35 & M12x50 | 15                                      | 46                                     |
| <br>Unbalanced torque | M8x30 & M8x35   | 10                                      | 13.5                                   |
|                                                                                                          | M10x30 & M10x50 | 15                                      | 26                                     |
|                                                                                                          | M12x35 & M12x50 | 15                                      | 46                                     |

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



## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC Main characteristics



Ferraz Shawmut 1500 V PSC fuse-links provide maximum flexibility in equipment design and ultimate protection for today's power conversion equipment. These square body fuse-links are available in three different body sizes, each size having four world-wide acceptable mounting styles. The different mounting styles and body sizes along with a broad range of ampere ratings allow greatest flexibility in equipment design.

The Ferraz Shawmut PSC fuses have been engineered to provide state-of-the-art protection for SCRs, diodes, thyristors, GTO's and IGBT devices. They have pure silver die-cut elements embedded in solidified sand which helps control arcing characteristics for low  $I^2t$  and high breaking capacity. All contact surfaces are silver plated and all hardware is non-magnetic.

All fuse links are equipped with a low voltage trip-indicator. This trip-indicator can operate a field mountable microswitch which is easily mounted directly on to the fuse even while in service.

### Highlights

- Extremely Fast Acting
- Current Limiting
- Very Low  $I^2t$
- Worldwide Acceptability
- Superior Cycling Ability

### Applications

Protection of rectifiers, inverters, DC drives, UPS Systems, reduced voltage motor starters, and other equipment in globally accepted applications

### Ratings

**AC:** 100 - 1500A  
1500 VAC  
200 KA IR

**DC:** Consult us

### Approvals

**C:** Tested to IEC 60269.4 at UN +10 %

### Features/Benefits

**Choice of mounting styles** gives wide choice for equipment design

**Broad range of ampere ratings** in a given body size for design flexibility

**IEC 60269-4 compliance** for fuses for worldwide semiconductor applications



## Protistor® Square-body Fuses

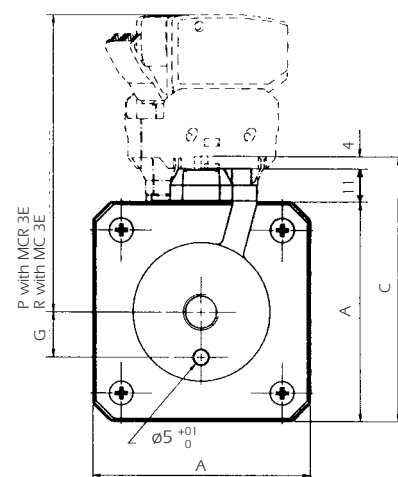
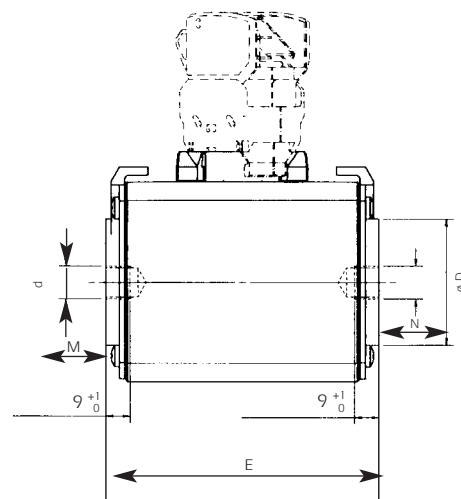
### PSC aR sizes 9x - 1500 VAC

### Main characteristics

| Voltage<br><br>(V) | Size | Type | Rating<br><br>(A) | Maximum I <sup>2</sup> t<br>under 1500V<br>(kA²S) | Power losses in watts     |      |                     |      | Breaking<br>capacities<br>kA |
|--------------------|------|------|-------------------|---------------------------------------------------|---------------------------|------|---------------------|------|------------------------------|
|                    |      |      |                   |                                                   | End contacts<br>0,8 In In |      | Blades<br>0,8 In In |      |                              |
| 1 500 V            | 91   | URF  | 100               | 10                                                | 18,5                      | 35   | 18,5                | 35   | 1 500 V<br>200 kA            |
|                    |      | URF  | 125               | 15                                                | 23                        | 43   | 23                  | 43   |                              |
|                    |      | URF  | 160               | 24,5                                              | 29                        | 55   | 29                  | 55   |                              |
|                    |      | URF  | 180               | 32,5                                              | 33                        | 62   | 33                  | 63   |                              |
|                    |      | URG  | 200               | 50                                                | 27,5                      | 52   | 28                  | 53,5 |                              |
|                    |      | URK  | 225               | 78                                                | 31                        | 58,5 | 31                  | 59   |                              |
|                    |      | URH  | 250               | 246                                               | 25                        | 47   | 25                  | 47   |                              |
|                    |      | URH  | 315               | 384                                               | 31                        | 59   | 31                  | 59   |                              |
|                    |      | URH  | 350               | 466                                               | 35                        | 66   | 35                  | 66   |                              |
|                    | 92   | URF  | 200               | 40                                                | 36,5                      | 69   | 37,5                | 71   |                              |
|                    |      | URG  | 250               | 84                                                | 37,5                      | 73   | 39                  | 76   |                              |
|                    |      | URK  | 315               | 144                                               | 46                        | 91   | 46,5                | 95   |                              |
|                    |      | URK  | 350               | 200                                               | 51                        | 101  | 52                  | 106  |                              |
|                    |      | URH  | 400               | 669                                               | 41,5                      | 83   | 44                  | 90   |                              |
|                    |      | URH  | 500               | 983                                               | 50,5                      | 101  | 53,5                | 109  |                              |
|                    |      | URH  | 550               | 1 190                                             | 57,5                      | 115  | 61                  | 124  |                              |
|                    | 93   | URF  | 250               | 60                                                | 48                        | 95   | 49,5                | 98   |                              |
|                    |      | URF  | 315               | 94                                                | 61                        | 120  | 62                  | 123  |                              |
|                    |      | URF  | 350               | 135                                               | 67                        | 133  | 69                  | 137  |                              |
|                    |      | URG  | 375               | 185                                               | 62                        | 125  | 64,5                | 130  |                              |
|                    |      | URK  | 400               | 240                                               | 60                        | 122  | 61,5                | 128  |                              |
|                    |      | URK  | 450               | 305                                               | 67                        | 137  | 69                  | 144  |                              |
|                    |      | URK  | 500               | 375                                               | 77                        | 158  | 79                  | 165  |                              |
|                    |      | URH  | 630               | 1 570                                             | 62,5                      | 125  | 67                  | 136  |                              |
|                    |      | URJ  | 700               | 2 500                                             | 67                        | 131  | 73                  | 143  |                              |
|                    |      | URB  | 750               | 3 000                                             | 73                        | 143  | 80                  | 156  |                              |
|                    | 2X92 | URG  | 500               | 335                                               | 77,5                      | 152  |                     |      |                              |
|                    |      | URK  | 630               | 576                                               | 93                        | 190  |                     |      |                              |
|                    |      | URK  | 700               | 800                                               | 104                       | 212  |                     |      |                              |
|                    |      | URH  | 800               | 2 680                                             | 87                        | 177  |                     |      |                              |
|                    |      | URH  | 1 000             | 3 930                                             | 106                       | 216  |                     |      |                              |
|                    |      | URH  | 1 100             | 4 760                                             | 120                       | 246  |                     |      |                              |
|                    | 2X93 | URG  | 750               | 740                                               | 129                       | 260  |                     |      |                              |
|                    |      | URK  | 800               | 960                                               | 122                       | 256  |                     |      |                              |
|                    |      | URK  | 900               | 1 220                                             | 138                       | 288  |                     |      |                              |
|                    |      | URK  | 1 000             | 1 500                                             | 160                       | 332  |                     |      |                              |
|                    |      | URH  | 1 250             | 6 280                                             | 131                       | 268  |                     |      |                              |
|                    |      | URJ  | 1 400             | 10 000                                            | 143                       | 280  |                     |      |                              |
|                    |      | URB  | 1 500             | 12 000                                            | 148                       | 310  |                     |      |                              |

## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC French End contacts

| Size | Designation        | Reference Number | Weight (g) | Packaging | Catalog Number |
|------|--------------------|------------------|------------|-----------|----------------|
| 91   | 15 URF 91 TTF 0100 | W 076 149        | 650        | 1         | PC91UF15C100TF |
|      | 15 URF 91 TTF 0125 | X 076 150        |            |           | PC91UF15C125TF |
|      | 15 URF 91 TTF 0160 | Y 076 151        |            |           | PC91UF15C160TF |
|      | 15 URG 91 TTF 0200 | A 076 153        |            |           | PC91UG15C200TF |
|      | 15 URK 91 TTF 0225 | B 076 154        |            |           | PC91UK15C225TF |
|      | 15 URH 91 TTF 0250 | C 076 155        |            |           | PC91UH15C250TF |
|      | 15 URH 91 TTF 0315 | D 076 156        |            |           | PC91UH15C315TF |
|      | 15 URH 91 TTF 0350 | E 076 157        |            |           | PC91UH15C350TF |
| 92   | 15 URF 92 TTF 0200 | F 076 158        | 900        | 1         | PC92UF15C200TF |
|      | 15 URG 92 TTF 0250 | G 076 159        |            |           | PC92UG15C250TF |
|      | 15 URK 92 TTF 0315 | H 076 160        |            |           | PC92UK15C315TF |
|      | 15 URK 92 TTF 0350 | J 076 161        |            |           | PC92UK15C350TF |
|      | 15 URH 92 TTF 0400 | K 076 162        |            |           | PC92UH15C400TF |
|      | 15 URK 92 TTF 0400 | M 076 003        |            |           | PC92UK15C400TF |
|      | 15 URH 92 TTF 0500 | V 076 194        |            |           | PC92UH15C500TF |
|      | 15 URH 92 TTF 0550 | L 076 163        |            |           | PC92UH15C550TF |
| 93   | 15 URF 93 TTF 0230 | L 097 829        | 1250       | 1         | PC93UF15C230TF |
|      | 15 URF 93 TTF 0250 | M 076 164        |            |           | PC93UF15C250TF |
|      | 15 URF 93 TTF 0315 | N 076 165        |            |           | PC93UF15C315TF |
|      | 15 URF 93 TTF 0350 | P 076 166        |            |           | PC93UF15C350TF |
|      | 15 URG 93 TTF 0375 | Q 076 167        |            |           | PC93UG15C375TF |
|      | 15 URK 93 TTF 0400 | R 076 168        |            |           | PC93UK15C400TF |
|      | 15 URK 93 TTF 0450 | J 076 092        |            |           | PC93UK15C450TF |
|      | 15 URK 93 TTF 0500 | T 076 170        |            |           | PC93UK15C500TF |
|      | 15 URH 93 TTF 0630 | V 076 171        |            |           | PC93UH15C630TF |
|      | 15 URJ 93 TTF 0700 | W 076 172        |            |           | PC93UJ15C700TF |
|      | 15 URB 93 TTF 0750 | X 076 173        |            |           | PC93UB15C750TF |



Microswitches : MC3E1-5N - Ref. D310020

MC3E1-5NBS - Ref. E310021

MC3E1-9NBS - Ref. F310022

MC3E1-5NET - Ref. L310027

MCR3E1-5N - Ref. G310023

MCR3E1-5NBS - Ref. P310030

MCR3E1-9NBS - Ref. H310024

MCR3E1-5NET - Ref. Q310031

For operating voltage  
1250 VAC - DC max.

Insulation voltage 2200 VAC - DC

Threaded studs and microswitches supplied separately

| Size | A        | C     | D        | M* | N* | E±1,7 | d   | G±0,1  | P     | R     |
|------|----------|-------|----------|----|----|-------|-----|--------|-------|-------|
| 91   | 51       | 66    | 30       | 19 | 24 | 101   | M8  | 9      | 87,5  | 72,5  |
|      | 2"       | 2,6"  | 1-3/16"  |    |    | 3,98" |     | 23/64" | 3,45" | 2,85" |
| 92   | 60       | 74    | 38       | 19 | 39 | 101   | M10 | 15     | 91,5  | 76,5  |
|      | 2-3/8"   | 2,95" | 1-1/2"   |    |    | 3,98" |     | 19/32" | 3,6"  | 3"    |
| 93   | 74,5     | 88    | 46       | 24 | 39 | 101   | M12 | 15     | 98,5  | 83,5  |
|      | 2-15/16" | 3,5"  | 1-13/16" |    |    | 3,98" |     | 19/32" | 3,9"  | 3,29" |

**Note :** dimensions in mm and inches

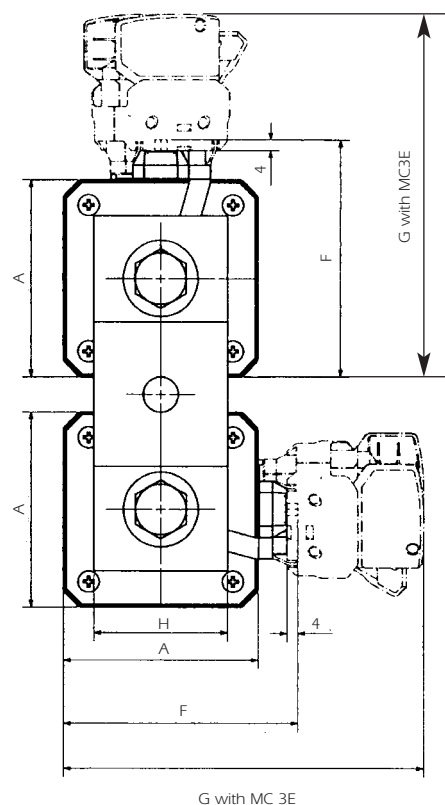
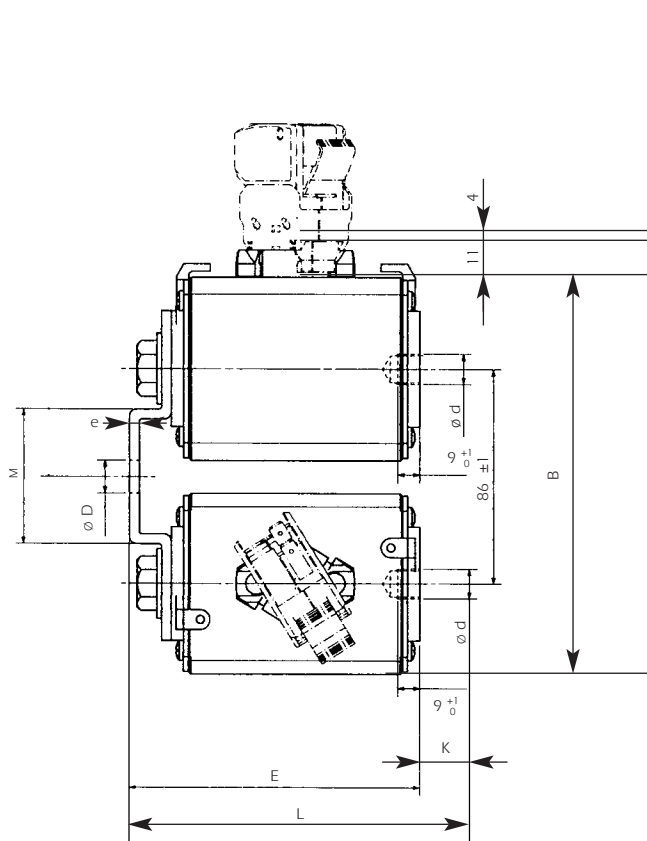
M and N dimensions are with Metric studs Ref. Number S098801 for size 91 T098802 for size 92 and V098803 for size 93.

Maximum balanced nut tightening torque: 13,5 Nm (M8) - 26 Nm (M10)

46 Nm (M12)

## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC French End contacts

| Size | Designation         | Reference Number | Weight (g) | Packaging | Catalog Number  |
|------|---------------------|------------------|------------|-----------|-----------------|
| 2x92 | 15 URG 292 TTF 0500 | Y 076 174        | 2460       | 1         | PC292UG15C500TF |
|      | 15 URK 292 TTF 0630 | Z 076 175        |            |           | PC292UK15C630TF |
|      | 15 URK 292 TTF 0700 | A 076 176        |            |           | PC292UK15C700TF |
|      | 15 URH 292 TTF 0800 | B 076 177        |            |           | PC292UH15C800TF |
|      | 15 URH 292 TTF 1000 | C 076 178        |            |           | PC292UH15C10CTF |
|      | 15 URH 292 TTF 1100 | D 076 179        |            |           | PC292UH15C11CTF |
| 2x93 | 15 URG 293 TTF 0750 | P 081 755        | 3450       | 1         | PC293UG15C750TF |
|      | 15 URK 293 TTF 0800 | F 076 181        |            |           | PC293UK15C800TF |
|      | 15 URK 293 TTF 0900 | G 076 182        |            |           | PC293UK15C900TF |
|      | 15 URK 293 TTF 1000 | Q 081 756        |            |           | PC293UK15C10CTF |
|      | 15 URH 293 TTF 1250 | R 081 757        |            |           | PC293UH15C13CTF |
|      | 15 URJ 293 TTF 1400 | S 081 758        |            |           | PC293UJ15C14CTF |
|      | 15 URB 293 TTF 1500 | X 081 854        |            |           | PC293UB15C15CTF |



Threaded studs and microswitches  
supplied separately

| Size    | A    | B   | D  | E <sup>±1.7</sup> | F  | G     | H  | K  | d   | e | L   | M  | N  |
|---------|------|-----|----|-------------------|----|-------|----|----|-----|---|-----|----|----|
| 2x92 TT | 60   | 147 | 11 | 118               | 74 | 106,5 | 35 | 40 | M10 | 4 | 158 | 48 | 72 |
| 2x93 TT | 74,5 | 164 | 13 | 118               | 88 | 121   | 50 | 40 | M12 | 4 | 158 | 54 | 86 |

Dimensions in mm

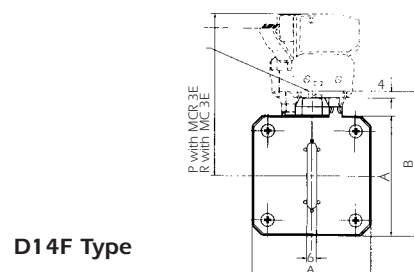
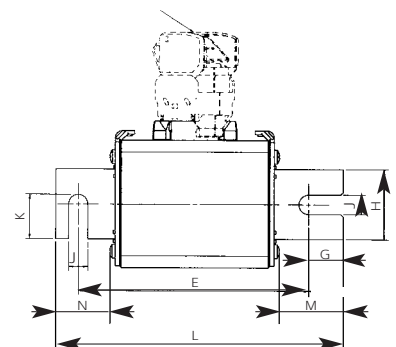
K dimensions are with studs Ref. Number W098804 in size 2x92 and X098805 in size 2x93.

Maximum balanced nut tightening torque: 26 Nm (M10) and 46 Nm - (M12)

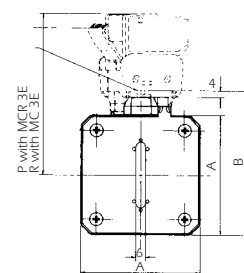
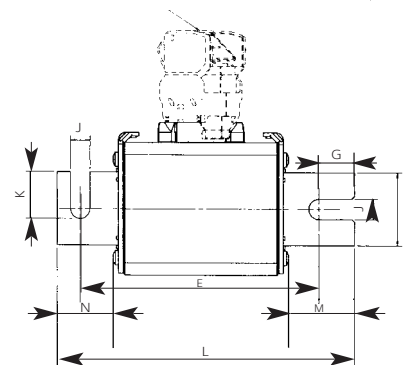
## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC German Blades (DIN 140)

| Size | Designation         | Reference Number | Weight (g) | Packaging | Catalog Number  |
|------|---------------------|------------------|------------|-----------|-----------------|
| 91   | 15 URF 91 D14F 0100 | Z 076 060        | 800        | 1         | PC91UH15C100D4F |
|      | 15 URF 91 D14F 0125 | A 076 061        |            |           | PC91UF15C125D4F |
|      | 15 URF 91 D14F 0160 | B 076 062        |            |           | PC91UF15C160D4F |
|      | 15 URF 91 D14F 0180 | C 076 063        |            |           | PC91UF15C180D4F |
|      | 15 URG 91 D14F 0200 | D 076 064        |            |           | PC91UG15C200D4F |
|      | 15 URH 91 D14F 0250 | T 076 101        |            |           | PC91UH15C250D4F |
|      | 15 URH 91 D14F 0315 | V 076 102        |            |           | PC91UH15C315D4F |
|      | 15 URH 91 D14F 0350 | W 076 103        |            |           | PC91UH15C350D4F |
|      | 15 URF 91 D14A 0100 | V 221 232*       |            |           | PC91UF15C100D4A |
|      | 15 URF 91 D14A 0125 | M 210 737*       |            |           | PC91UF15C125D4A |
|      | 15 URF 91 D14A 0160 | L 077 037*       |            |           | PC91UF15C160D4A |
|      | 15 URF 91 D14A 0180 | -                |            |           |                 |
|      | 15 URG 91 D14A 0200 | A 221 214*       |            |           | PC91UG15C200D4A |
|      | 15 URH 91 D14A 0250 | D 221 309*       |            |           | PC91UH15C250D4A |
|      | 15 URH 91 D14A 0315 | -                |            |           |                 |
|      | 15 URH 91 D14A 0350 | -                |            |           |                 |
| 92   | 15 URF 92 D14F 0200 | F 076 066        | 1100       | 1         | PC92UF15C200D4F |
|      | 15 URG 92 D14F 0250 | G 076 067        |            |           | PC92UG15C250D4F |
|      | 15 URK 92 D14F 0315 | H 076 068        |            |           | PC92UK15C315D4F |
|      | 15 URK 92 D14F 0350 | J 076 069        |            |           | PC92UK15C350D4F |
|      | 15 URH 92 D14F 0400 | X 076 104        |            |           | PC92UH15C400D4F |
|      | 15 URH 92 D14F 0500 | Y 076 105        |            |           | PC92UH15C500D4F |
|      | 15 URH 92 D14F 0550 | Z 076 106        |            |           | PC92UH15C550D4F |
|      | 15 URF 92 D14A 0200 | -                |            |           |                 |
|      | 15 URG 92 D14A 0250 | -                |            |           |                 |
|      | 15 URK 92 D14A 0315 | C 097 959*       |            |           | PC92UK15C315D4A |
| 93   | 15 URH 92 D14A 0550 | K 078 278*       | 1800       | 1         | PC92UH15C550D4A |
|      | 15 URF 93 D14F 0250 | K 076 070        |            |           | PC93UF15C250D4F |
|      | 15 URF 93 D14F 0315 | L 076 071        |            |           | PC93UF15C315D4F |
|      | 15 URF 93 D14F 0350 | M 076 072        |            |           | PC93UF15C350D4F |
|      | 15 URG 93 D14F 0375 | N 076 073        |            |           | PC93UG15C375D4F |
|      | 15 URK 93 D14F 0400 | P 076 074        |            |           | PC93UK15C400D4F |
|      | 15 URK 93 D14F 0450 | Q 076 075        |            |           | PC93UK15C450D4F |
|      | 15 URK 93 D14F 0500 | R 076 076        |            |           | PC93UK15C500D4F |
|      | 15 URH 93 D14F 0630 | A 076 107        |            |           | PC93UH15C630D4F |
|      | 15 URJ 93 D14F 0700 | B 076 108        |            |           | PC93UJ15C700D4F |
|      | 15 URB 93 D14F 0750 | S 076 123        |            |           | PC93UB15C750D4F |
|      | 15 URF 93 D14A 0250 | -                |            |           |                 |
|      | 15 URF 93 D14A 0315 | -                |            |           |                 |
|      | 15 URF 93 D14A 0350 | -                |            |           |                 |
|      | 15 URG 93 D14A 0375 | -                |            |           |                 |
|      | 15 URK 93 D14A 0400 | -                |            |           |                 |
|      | 15 URK 93 D14A 0450 | J078277          |            |           | PC93UK15C450D4A |
|      | 15 URK 93 D14A 0500 |                  |            |           |                 |

\* D14A Type



D14F Type



| Fuse Size  | A    | B  | E <sup>±2</sup> | H  | J    | K    | L <sup>±2</sup> | M    | N    | P    | R    |
|------------|------|----|-----------------|----|------|------|-----------------|------|------|------|------|
| 91 DIN 140 | 51   | 66 | 133-145         | 25 | 11,1 | 17,7 | 166             | 37,2 | 31,6 | 87,5 | 72,5 |
| 92 DIN 140 | 60   | 74 | 133-145         | 32 | 11,1 | 21,5 | 166             | 37,2 | 31,6 | 91,5 | 76,5 |
| 93 DIN 140 | 74,5 | 88 | 133-145         | 40 | 11,1 | 25,5 | 166             | 36,7 | 31,1 | 98,3 | 83,5 |

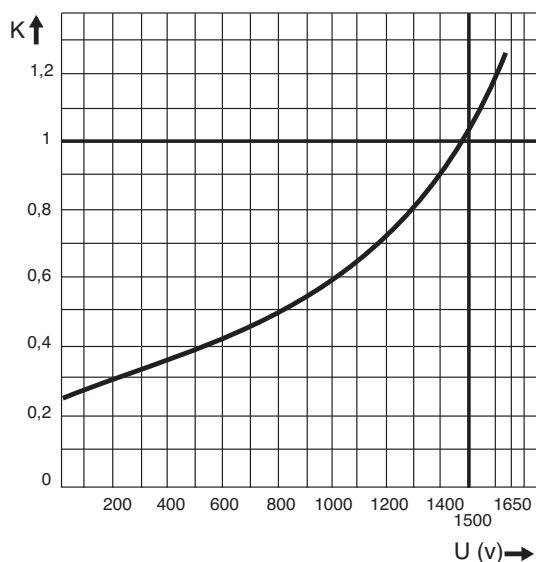
For other terminals: "US blades"; "D17A"; D17F; "D21A"; "D21F" consult us.  
Microswitches supplied separately

# Semiconductor (AC) fuses

## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC Curves set

### I<sup>2</sup>t corrective K factor

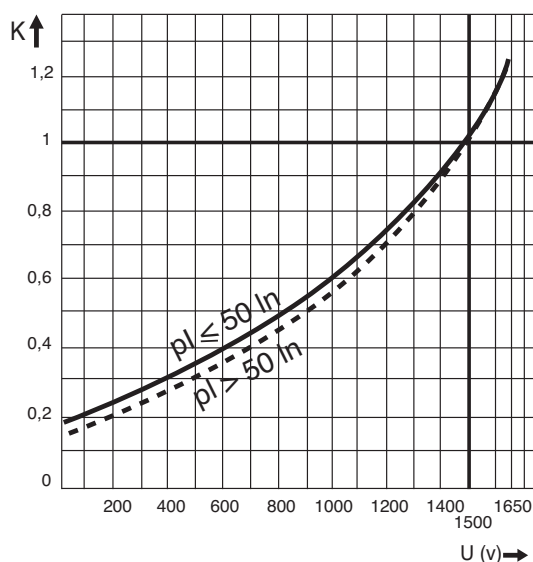
#### URF/URG/URK



**U:** R.M.S. working voltage V

**K:** I<sup>2</sup>t corrective coefficient versus U

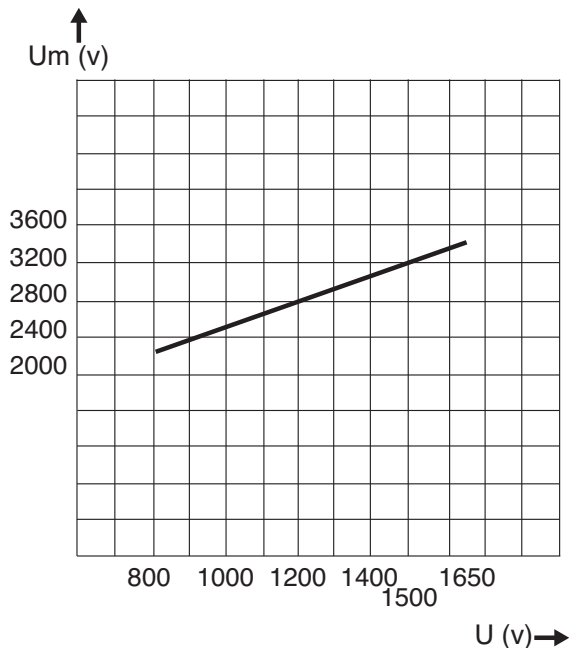
#### URB/URH/URJ



**pl:** Prospective Current in the fuse

### Arc voltage

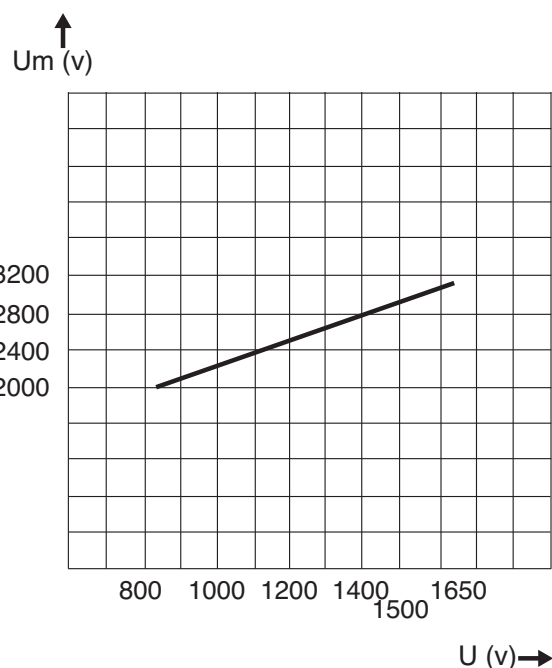
#### URF/URG/URK



**Um:** arc voltage

**U:** R.M.S. working voltage V

#### URB/URH/URJ

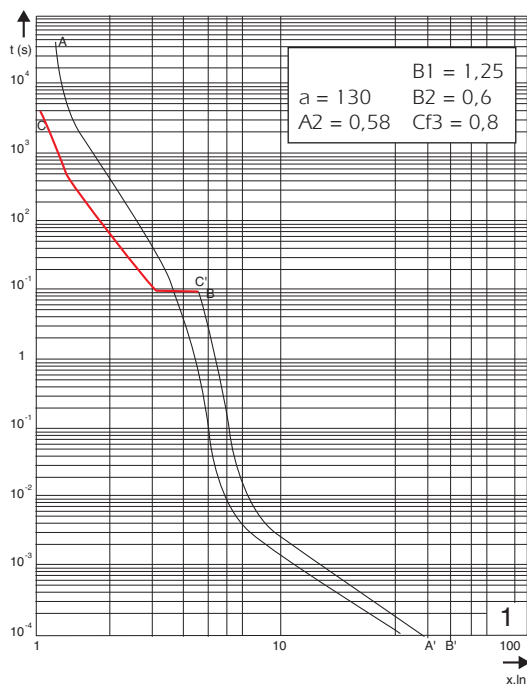




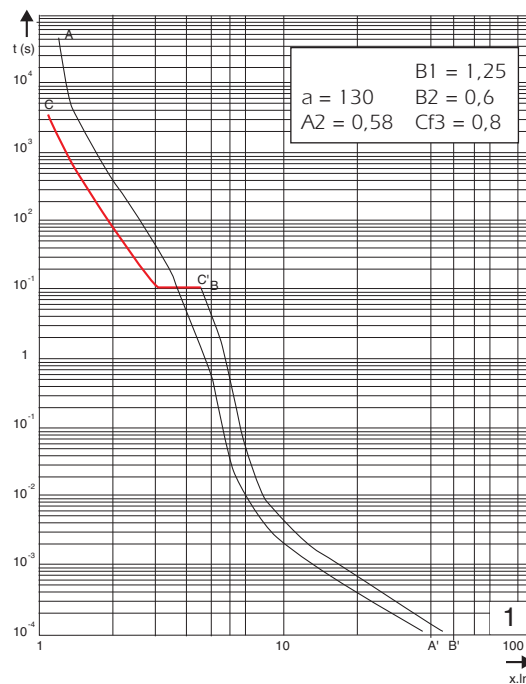
## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC Curves set

### Times/Current Characteristics

#### URF



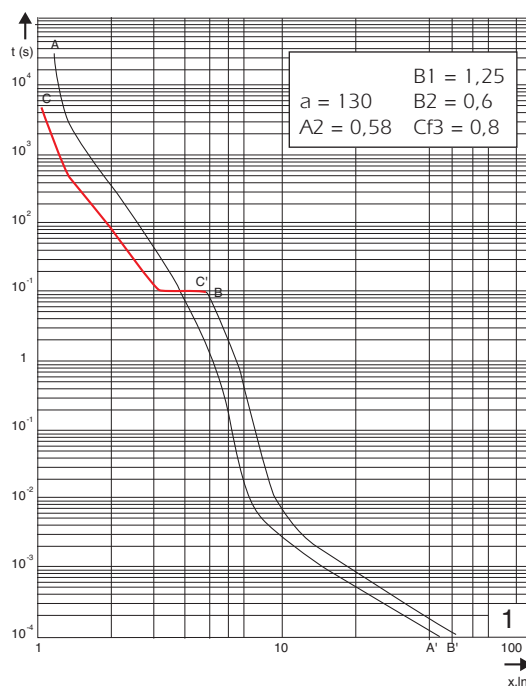
#### URG



**t:** actual prearcing time (s) (average value)

**x:I<sub>n</sub>:** R.M.S. value of prearc current in multiples of rated current

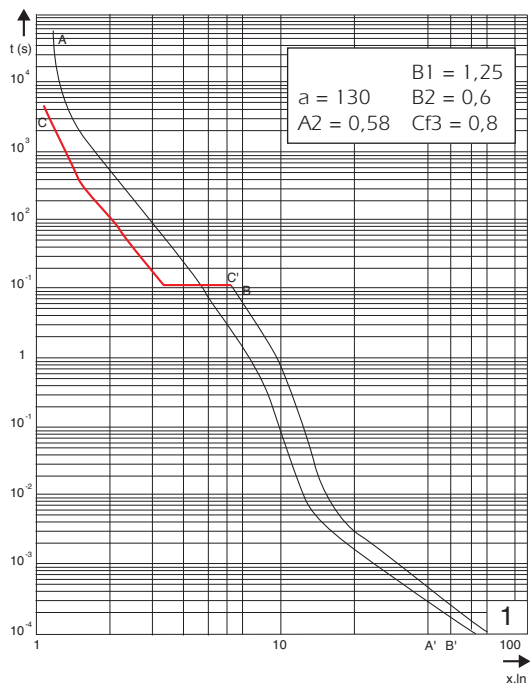
#### URK



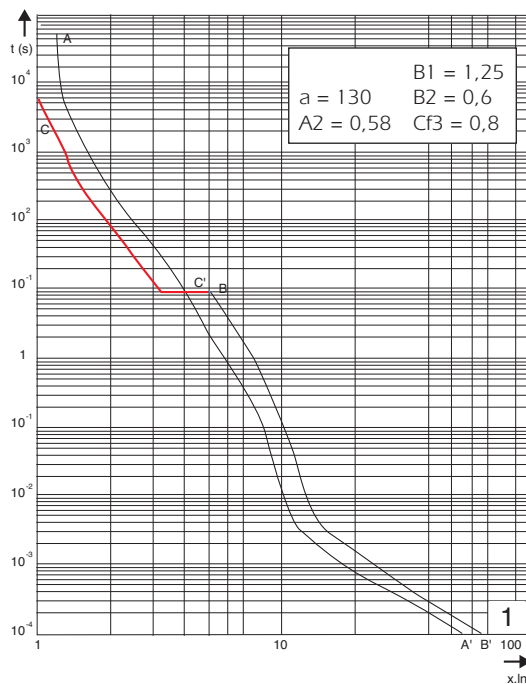


## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC Curves set

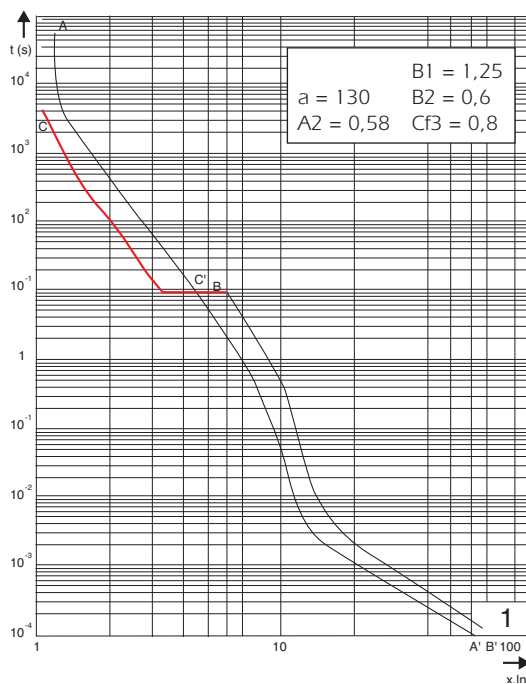
### URB



### URH



### URJ





## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC Fuses bases for German Blades (DIN 140)

### Fuse Holders

For D14F size 91 use fuse holder SE 43-91 Ref Number X226179

For D14F sizes 92 and 93 use fuse holder SE 43-92 Ref Number Y226180

For D14F size 93 use fuse holder SF 50-93 Ref X209090

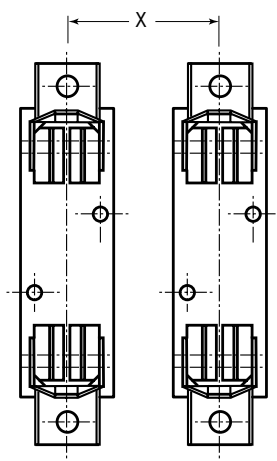
These fuse holders are usable with D14F fuses and MC3E1-. N.microswitches.

For D14A size 91 use fuse holder SE 43-91 Ref Number X226179

For D14A size 92 and 93 use fuse holder SE 43-92 Ref Number Y226180

For D14A size 93 use fuse holder SF 50-93 Ref. X209090

These fuses D14A are usable with all MC3E1-.N.and MCR 3E1-.N microswitches on all fuses holders.



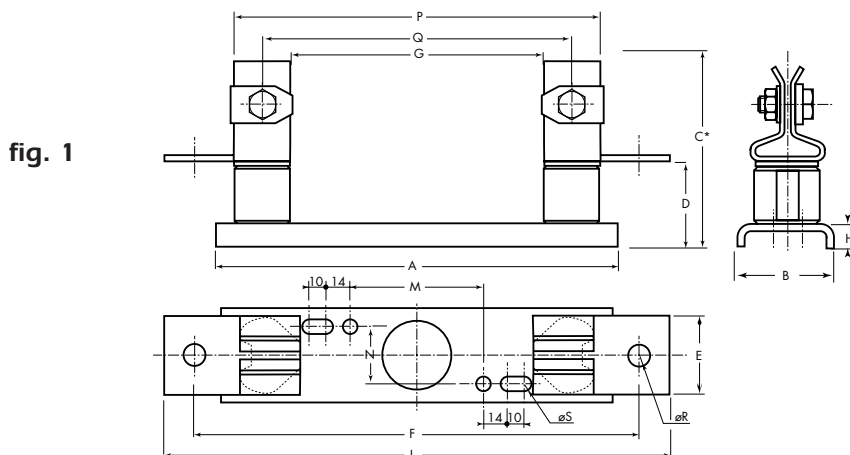
| Distance "X" between poles axes (without partition) |         |                   |        |        |
|-----------------------------------------------------|---------|-------------------|--------|--------|
| Fuses bases                                         |         | Operating Voltage |        |        |
|                                                     |         | 1000 V            | 1250 V | 1500 V |
| SE 43-91                                            | X226179 | 71                | 76     | 79     |
| SE 43-92                                            | Y226180 | 80                | 85     | 88     |
| SF 50-93                                            | X209090 | 94,5              | 99,5   | 102,5  |

## Protistor® Square-body Fuses

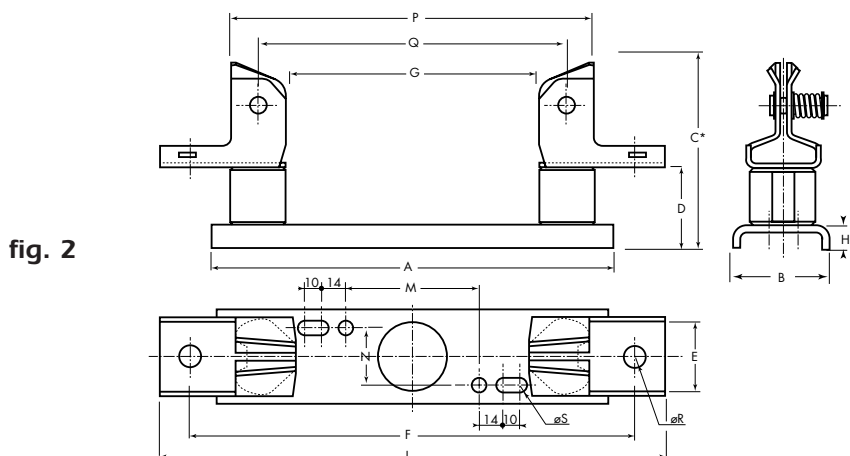
PSC aR sizes 9x - 1500 VAC

Fuses bases for German Blades (DIN 140)

### "SF" BOLTED TIGHTENING (SF 50-93)



### "SE" ELASTIC TIGHTENING (SE 43-91 ; SE 43-92)



| Reference Number | Designation | Drawing# | Catalog Number | A   | B  | C*  | D  | E  | F   | G   | H  | L   | M  | N  | P   | Q   | ØR   | ØS  |
|------------------|-------------|----------|----------------|-----|----|-----|----|----|-----|-----|----|-----|----|----|-----|-----|------|-----|
| X226179          | SE 43-91    | 2        | SE43-91        | 174 | 42 | 121 | 53 | 32 | 209 | 111 | 10 | 241 | 86 | 28 | 161 | 136 | 10,5 | 5,5 |
| Y226180          | SE 43-92    | 2        | SE43-92        | 176 | 54 | 131 | 55 | 42 | 230 | 106 | 15 | 266 | 23 | 35 | 176 | 141 | 12,5 | 8,5 |
| X209090          | SF 50-93    | 1        | SF50-93        | 200 | 60 | 176 | 70 | 40 | 236 | 106 | 15 | 276 | 47 | 35 | 176 | 141 | 18   | 8,5 |

\* C are the dimensions to the top of the "D14F" fuses

## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC Microswitches for other square-body Protistor®



- REMOTE SIGNALING SYSTEMS FOR FITTING ON  
FERRAZ SHAWMUT FUSES EQUIPPED WITH MICROSWITCH SUPPORT:  
all square-body sizes 44 / 8X / 9X / 12X / 17X / 30X and 60X
- PERMANENT INDICATION OF FUSE STATE
  - CONDUCTIVE
  - BLOWN
- MANUAL RESETTING
- STANDARD AND LOW ELECTRICAL LEVEL WITH DIFFERENT INSULATION LEVELS
- VAPOR AND WATERTIGHT MODEL FOR USE IN CORROSIVE ATMOSPHERE

### Main Characteristics

| Type                | Designation   | AC or DC<br>Insulation<br>voltage rating<br>Ui [V] | AC voltage<br>withstand<br>test<br>(*) | Impulse<br>voltage test<br>Uimp1,2/50<br>µs<br>(**) | Positive<br>operating<br>min. voltage<br>/min. current | Current<br>rating | Interrupting rating |                          |       |      |                                  |       |       |
|---------------------|---------------|----------------------------------------------------|----------------------------------------|-----------------------------------------------------|--------------------------------------------------------|-------------------|---------------------|--------------------------|-------|------|----------------------------------|-------|-------|
|                     |               |                                                    |                                        |                                                     |                                                        |                   | Current             | Non-inductive<br>circuit |       |      | Inductive circuit;<br>L/R = 25ms |       |       |
|                     |               |                                                    |                                        |                                                     |                                                        |                   |                     | 30V                      | 110V  | 250V | 30V                              | 110V  | 250V  |
| Standard            | MC3E 1-5N     | 1250V                                              | 15 kV                                  | 20 kV                                               | 20 V                                                   | 5 A               | 50/60 Hz            | 10 A                     | 10 A  | 7 A  |                                  |       | 6 A   |
|                     | MCR3E 1-5N    | 2200                                               | 20 kV                                  | 30 kV                                               | 50 mA                                                  |                   | DC                  | 5 A                      | 0.5 A |      |                                  | 1,6 A | 0,3 A |
| Low level           | MC3E 1-5NBS   | 1250 V                                             | 15 kV                                  | 20 kV                                               | 10 V<br>10 mA                                          | 3 A               | 50/60 Hz            | 3 A                      | 3 A   | 3 A  | 2 A                              | 1 A   | 1 A   |
|                     | MC3E 1-9NBS   |                                                    | 2200 V                                 | 20 kV (1)<br>23 kV (2)                              |                                                        |                   |                     | 30 kV                    | DC    | 3 A  | 0.5 A                            | 0,25A | 3 A   |
|                     | MCR3E 1-5NBS  | 6000 V                                             |                                        | 24 kV (1)<br>26 kV (2)<br>32 kV (3)                 |                                                        |                   | 40 kV               |                          |       |      |                                  |       |       |
|                     | MCR3E 1-9NBS  |                                                    |                                        |                                                     |                                                        |                   |                     |                          |       |      |                                  |       |       |
| Watertight<br>IP 50 | MC3E 1-5NET   | 1250 V                                             | 11 kV                                  | 16 kV                                               | 10 V<br>10 mA                                          | 3 A               | 50 Hz               |                          | 3 A   | 3 A  |                                  | 1 A   | 1 A   |
|                     | MCR3E 1-5NET  | 2200 V                                             | 20 kV (1)                              | 30 kV                                               |                                                        |                   | DC                  |                          |       |      |                                  |       |       |
|                     | MC2R3E 1-5NET | 6000 V                                             | 24 kV (2)                              | 40 kV                                               |                                                        |                   |                     |                          | 0.5 A |      |                                  | 0,2 A |       |

Catalog Numbering system: MC3E 1-5 single pole microswitch - MC3E 1-9 double pole microswitch - MCR, MC2R reinforced insulation microswitch.

\* 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 according to IEC 947-1.

\*\*\* Between power circuit and microswitch terminals

(1) fitting sizes 44 - 70 - 71 - 72 - 73 - 83 - 84 fuses.

(2) fitting sizes 91 - 92 - 93 - 94 - 120 - 121 - 122 - 123 - 124 fuses.

(3) fitting sizes 171 - 172 - 173 - 174 - 300 - 302 - 600 - 602 fuses.

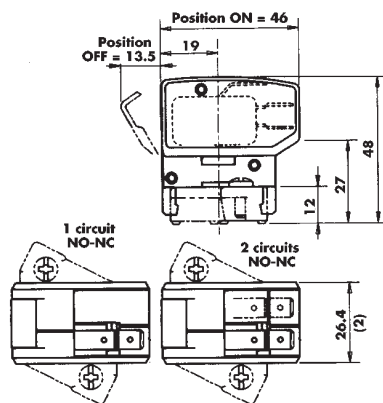
# Semiconductor (AC) fuses

## Protistor® Square-body Fuses

PSC aR sizes 9x - 1500 VAC

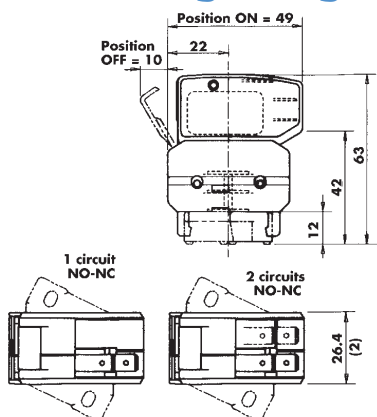
Microswitches for other square-body Protistor®

### Remote signaling with 1250 V AC/DC insulation voltage



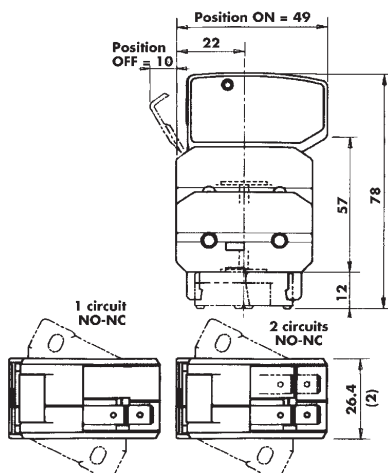
| Quantity of NO-NC separated circuits | Contact    | Designation | Ref. Number | Weight (g) | Pack. (1) | Catalog Number   |
|--------------------------------------|------------|-------------|-------------|------------|-----------|------------------|
| 1                                    | standard   | MC3E 1-5N   | D310020     | 39.5       | 3         | MC3E1-5N         |
| 1                                    | low level  | MC3E 1-5NBS | E310021     | 39.5       | 3         | MC3E1-5NBS       |
| 2                                    | low level  | MC3E 1-9NBS | F310022     | 45.7       | 3         | MC3E1-9NBS       |
| 1                                    | watertight | MC3E 1-5NET | L310027     | 40.2       | 3         | MC3E1-5N ETANCHE |

### Remote signaling with insulation voltage up to 2200 V AC/DC



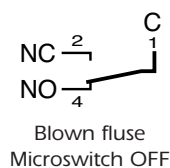
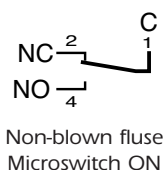
| Quantity of NO-NC separated circuits | Contact    | Designation  | Ref. Number | Weight (g) | Pack. (1) | Catalog Number    |
|--------------------------------------|------------|--------------|-------------|------------|-----------|-------------------|
| 1                                    | standard   | MCR3E 1-5N   | G310023     | 51.7       | 1         | MCR3E1-5N         |
| 1                                    | low level  | MCR3E 1-5NBS | P310030     | 51.7       | 1         | MCR3E1-5NBS       |
| 2                                    | low level  | MCR3E 1-9NBS | H310024     | 58.0       | 1         | MCR3E1-9NBS       |
| 1                                    | watertight | MCR3E 1-5NET | Q310031     | 52.5       | 1         | MCR3E1-5N ETANCHE |

### Remote signaling with insulation voltage up to 6000 V AC/DC



| Quantity of NO-NC separated circuits | Contact    | Designation   | Ref. Number | Weight (g) | Pack. (1) | Catalog Number |
|--------------------------------------|------------|---------------|-------------|------------|-----------|----------------|
| 1                                    | low level  | MC2R3E 1-5NBS | J310025     | 64.0       | 1         | MC2R3E1-5NBS   |
| 1                                    | watertight | MC2R3E 1-5NET | N310029     | 64.8       | 1         | MC2R3E1-5NET   |
| 2                                    | low level  | MC2R3E 1-9NBS | K310026     | 70.3       | 1         | MC2R3E1-9NBS   |

### Electrical diagram of each microswitch circuit



All of these signalling systems are hand resettable and fitted with silver-plated 3-terminal microswitch C, NO and NC.

The C terminal is on the top and connection is made via 6.35 mm clips except for watertight models whose clips are 4.8 mm wide.

NOTE (2): The 26.4 dimension is the same with 1 or 2 separated circuits NO-NC.

Tests with sine vibrations carried out at ambient with scanning of the three main holder axes.

Spectrum: 1st segment (2 to 16 Hz) constant trip  $x = 5$  mm peak.

2nd segment (16 to 250 Hz) constant acceleration  $g = 5$  g peak.

Exponential scanning speed : 1 octave per minute.

Duration: 2 hours per axis.

## Protistor® Square-body Fuses PSC aR sizes 9x - 1500 VAC Metric-studs

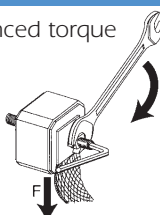
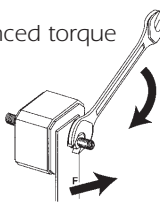
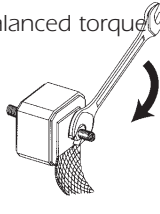
### Metric studs for threaded terminal fuses



| Type and fuse size                                                                                                     | Designation                     | Ref. Number | Unit weight (g) | Pack.   | Catalog Number    |
|------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|-----------------|---------|-------------------|
| <br>Sizes 0 and 1<br>Size 2<br>Size 3 | HC stud pair<br>M8x30 & M8x35   | S098801     | 23              | 6 pairs | STU M8x30 M8x35   |
|                                                                                                                        | HC stud pair<br>M10x30 & M10x50 | T098802     | 40              | 6 pairs | STU M10x30 M10x50 |
|                                                                                                                        | HC stud pair<br>M12x35 & M12x50 | V098803     | 60              | 6 pairs | STU M12x35 M12x50 |
| <br>Size 2<br>Size 3                 | HC stud pair<br>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 tightening torque (Nm) (1) | Maximum nut tightening torque (Nm) (1) |
|----------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------|----------------------------------------|
| Balanced torque<br>   | M8x30 & M8x35   | 10                                      | 13.5                                   |
|                                                                                                          | M10x30 & M10x50 | 15                                      | 26                                     |
|                                                                                                          | M12x35 & M12x50 | 15                                      | 46                                     |
| Balanced torque<br>   | M8x30 & M8x35   | 10                                      | 13.5                                   |
|                                                                                                          | M10x30 & M10x50 | 15                                      | 26                                     |
|                                                                                                          | M12x35 & M12x50 | 15                                      | 46                                     |
| Unbalanced torque<br> | M8x30 & M8x35   | 10                                      | 13.5                                   |
|                                                                                                          | M10x30 & M10x50 | 15                                      | 26                                     |
|                                                                                                          | M12x35 & M12x50 | 15                                      | 46                                     |

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