

Semiconductor (AC) fuses

Other Protistor® Fuses BS88-4 Fuses 10x28, 17x27 - 250 VAC

BRITISH STANDARD
250 VAC - URE - URGS - URZ
From 5 to 180 A
Sizes 10x28 - 17x27

Extremely high breaking capacity fuses:
protection of power semiconductors as per
IEC standard 60269.1 and 4

250 V voltage rating complying with IEC 33

gr class (ratings from 5 to 32 a)
AS PER VDE 636-23 AND IEC 60269.4

aR CLASS (RATINGS FROM 7 to 180 A) COMPLYING WITH
VDE 636-23 AND IEC 60269.4

TWO MODELS COMPLYING WITH BS 88-4

- WITHOUT INDICATOR
- WITH SEPARATE TRIP-INDICATOR (SIZE 17x27)

17x27 URGS are UL Recognized



Main Characteristics

| Voltage rating U_N (V) | Size | Class | Current rating I_N (A) | Pre-arcing $I^2t @ 1 \text{ ms}$ I^2tp (A ² s) | Total clearing $I^2t @ U_N$ A ² s | | Watts loss | | Tested breaking capacity |
|-----------------------------|--------|-------|-----------------------------|---|---|---------------|------------|-------|-----------------------------|
| | | | | | $I_p \leq 30I_N$ | $I_p > 30I_N$ | $0.8 I_N$ | I_N | |
| 250V | 10 x28 | URE | 5 | 1.3 | 10 | 11 | 0.6 | 1 | 160k A @ 250 V |
| | | | 6 | 1.8 | 13 | 15 | 0.7 | 1.2 | |
| | | | 10 | 2.4 | 18 | 20 | 1.2 | 2.1 | |
| | | | 12 | 4.3 | 28 | 33 | 1.6 | 2.8 | |
| | | | 15 | 6.7 | 41 | 48 | 2.0 | 3.5 | |
| | | | 20 | 15.0 | 85 | 100 | 2.2 | 4.0 | |
| | | | 25 | 27.0 | 135 | 160 | 2.6 | 4.7 | |
| | | | 32 | 53.0 | 240 | 280 | 3.0 | 5.4 | |
| 250V | 17x27 | URGS | 7 | 1.3 | 8,5 | 9,8 | 0.56 | 1 | 160k A @ 250 V |
| | | | 10 | 4.5 | 21 | 23,8 | 0.84 | 1.5 | |
| | | | 12 | 5.9 | 27 | 31 | 1.1 | 2.0 | |
| | | | 16 | 11.2 | 50 | 59 | 1.7 | 3.0 | |
| | | | 20 | 15.6 | 80 | 100 | 2.2 | 3.9 | |
| | | | 25 | 30.0 | 130 | 160 | 2.7 | 4.8 | |
| | | | 30 | 45.0 | 195 | 235 | 3.2 | 5.6 | |
| | | | 35 | 63.0 | 270 | 330 | 3.7 | 6.5 | |
| | | | 50 | 180.0 | 7890 | 940 | 4.9 | 8.8 | |
| | | | 60 | 250.0 | 1100 | 1310 | 5.8 | 10.4 | |
| | 75 | 380.0 | 1670 | 1990 | 7.2 | 13.6 | | | |
| | 80 | 480.0 | 2100 | 2530 | 7.25 | 13.7 | | | |
| | 17x27 | URZ | 100 | 730.0 | 3350 | 4060 | 6.5 | 11.5 | 160k A @ 250 V |
| | | | 125 | 850.0 | 5720 | 6920 | 6.7 | 12.3 | |
| | | | 150 | 1250.0 | 7930 | 9590 | 7.4 | 13.6 | |
| | | | 160 | 1730.0 | 9600 | 11700 | 8.8 | 15.6 | |
| | | | 160 | 2090.0 | 14500 | 17500 | 8.8 | 15.6 | |
| | | | 180 | 2090.0 | 14500 | 17500 | 9.5 | 17 | |

Minimum Operating voltage for separate trip indicator = 20 V

Semiconductor (AC) fuses



Other Protistor® Fuses

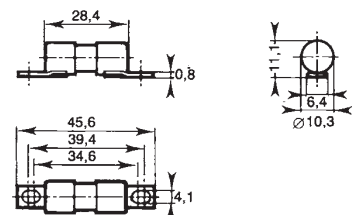
BS88-4 Fuses

10x28, 17x27 - 250 VAC

CP 10x28 - Without trip-indicator

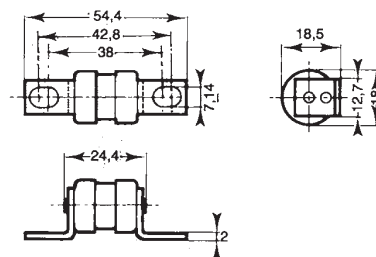
| Size | Designation | Ref. Number | Pack. | Catalog Number |
|-------|---------------|-------------|-------|----------------|
| 10x28 | 2.5 URE 10/5 | M082489 | | BS10UE25V5 |
| | 2.5 URE 10/6 | E097478 | | BS10UE25V6 |
| | 2.5 URE 10/10 | L082488 | | BS10UE25V10 |
| | 2.5 URE 10/12 | P097487 | 10 | BS10UE25V12 |
| | 2.5 URE 10/15 | K082487 | (11g) | BS10UE25V15 |
| | 2.5 URE 10/20 | J082486 | | BS10UE25V20 |
| | 2.5 URE 10/25 | X097494 | | BS10UE25V25 |
| | 2.5 URE 10/32 | N081984 | | BS10UE25V32 |

**BBS 88 part 4 requires respectively Ø8.7 and 8.8



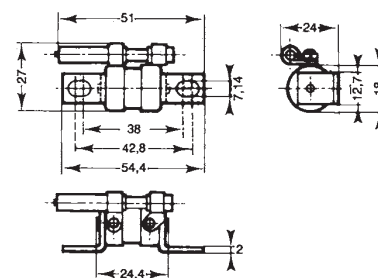
CP 17x27 - Without trip-indicator

| Size | Designation | Ref. Number | Pack. | Catalog Number |
|-------|----------------|-------------|-------|----------------|
| 17x27 | 2.5 URGS 17/7 | M076647 | | BS17US25V7 |
| | 2.5 URGS 17/10 | N076648 | | BS17US25V10 |
| | 2.5 URGS 17/12 | P076649 | | BS17US25V12 |
| | 2.5 URGS 17/16 | Q076650 | | BS17US25V16 |
| | 2.5 URGS 17/20 | L097507 | | BS17US25V20 |
| | 2.5 URGS 17/25 | R076651 | | BS17US25V25 |
| | 2.5 URGS 17/30 | S076652 | 10 | BS17US25V30 |
| | 2.5 URGS 17/35 | T076653 | (30g) | BS17US25V35 |
| | 2.5 URGS 17/50 | V076654 | | BS17US25V50 |
| | 2.5 URGS 17/60 | W076655 | | BS17US25V60 |
| | 2.5 URGS 17/75 | X076656 | | BS17US25V75 |
| | 2.5 URGS 17/80 | Z085559 | | BS17US25V80 |
| | 2.5 URZ 17/100 | Y085558 | | BS17UZ25V100 |
| | 2.5 URZ 17/125 | G097526 | | BS17UZ25V125 |
| | 2.5 URZ 17/150 | W085556 | | BS17UZ25V150 |
| | 2.5 URZ 17/160 | H097527 | | BS17UZ25V160 |
| | 2.5 URZ 17/180 | N097532 | | BS17UZ25V180 |



CP 17x27 - With separated trip-indicator BS88-4

| Size | Designation | Ref. Number | Pack. | Catalog Number |
|-------|----------------|-------------|-------|----------------|
| 17x27 | 2.5 URGS 17P7 | P097533 | | BS17US25V7P |
| | 2.5 URGS 17P10 | Q097534 | | BS17US25V10P |
| | 2.5 URGS 17P12 | S097536 | | BS17US25V12P |
| | 2.5 URGS 17P16 | X097540 | | BS17US25V16P |
| | 2.5 URGS 17P20 | B097544 | | BS17US25V20P |
| | 2.5 URGS 17P25 | D097546 | | BS17US25V25P |
| | 2.5 URGS 17P30 | E097547 | 10 | BS17US25V30P |
| | 2.5 URGS 17P35 | F097548 | (40g) | BS17US25V35P |
| | 2.5 URGS 17P50 | J097551 | | BS17US25V50P |
| | 2.5 URGS 17P60 | H081082 | | BS17US25V60P |
| | 2.5 URGS 17P75 | K097552 | | BS17US25V75P |
| | 2.5 URGS 17P80 | L097553 | | BS17US25V80P |
| | 2.5 URZ 17P100 | P097556 | | BS17UZ25V100P |
| | 2.5 URZ 17P125 | Q097557 | | BS17UZ25V125P |
| | 2.5 URZ 17P150 | R097558 | | BS17UZ25V150P |
| | 2.5 URZ 17P160 | S097559 | | BS17UZ25V160P |
| | 2.5 URZ 17P180 | T097560 | | BS17UZ25V180P |

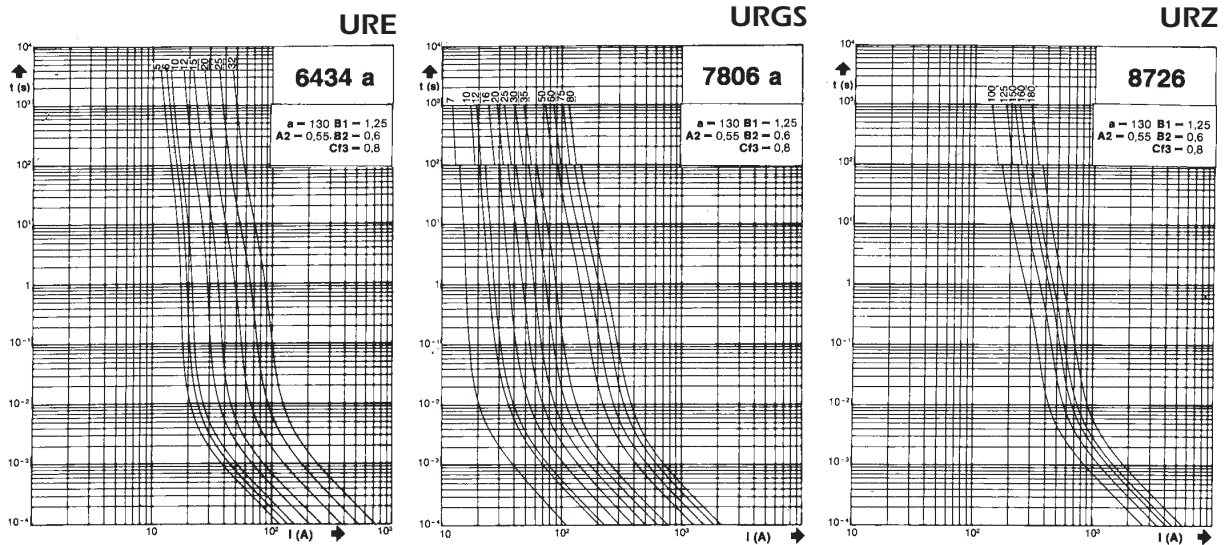


Microswitch MC6.3 GR 2-5N Ref: Y301015

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Electrical characteristics

Times vs current characteristics

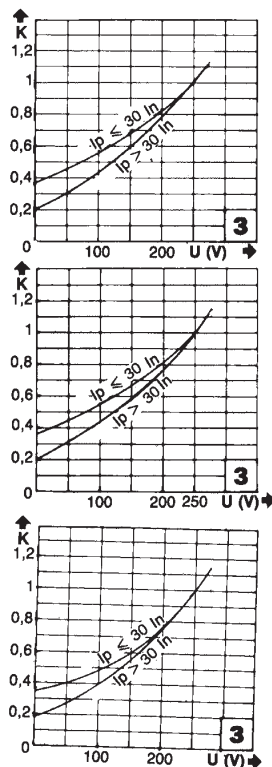


* These curves indicate, for each rated current, the peering time vs. the R.M.S. pre-arcing current.

* Tolerance for the mean pre-arcing current $\pm 10\%$

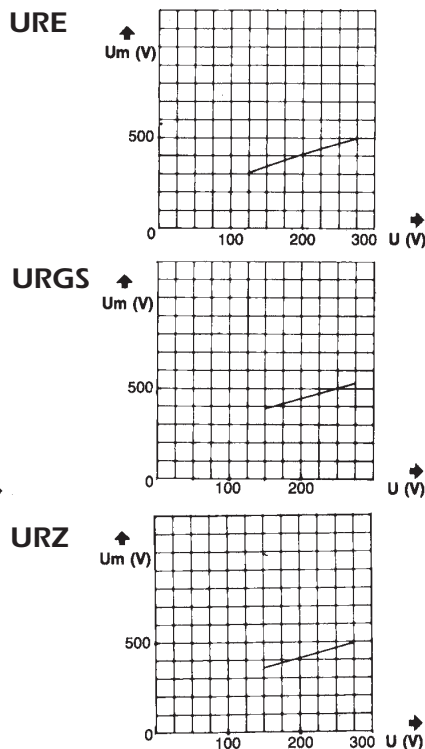
Corrective factor - Peak arc voltage

Corrective factor



* The mean curves show the variation of the total clearing time (I^2t_t) and the total clearing duration t_t as a function of operating voltage U

Peak arc voltage



This curve show the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U @ $\cos \phi = 0.15$.

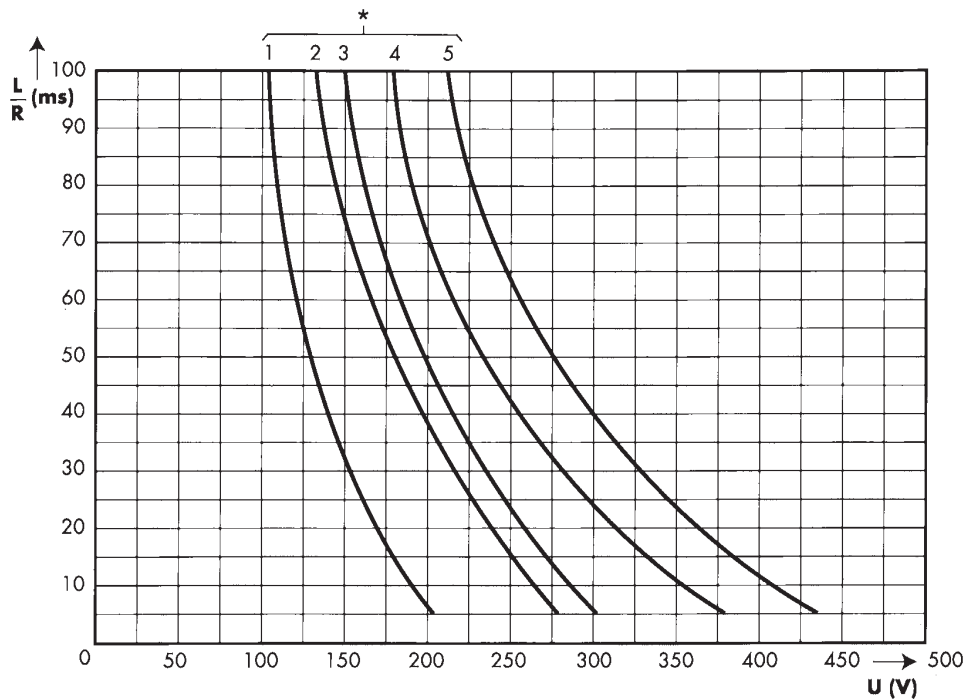


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D.C Applications data



▪ These curve indicate the permissible value of time constant L/R as a function of the D.C. working voltage.

▪ These I_{pm} values give the minimum DC interrupting current in amps.

| Curves # and I_{pm} for each rating | | | |
|---------------------------------------|---------------|---|-------------|
| Class | Rated current | * | $I_{pm}(A)$ |
| URE | 5 | 5 | 40 |
| | 6 | 5 | 50 |
| | 10 | 5 | 55 |
| | 12 | 5 | 80 |
| | 15 | 5 | 100 |
| | 20 | 5 | 130 |
| | 25 | 5 | 175 |
| | 32 | 5 | 255 |
| URGS | 7 | 5 | 40 |
| URZ | 100 | 4 | 190 |
| | 125 | 3 | 250 |
| | 150 | 2 | 300 |
| | 160 | 2 | 330 |
| | 180 | 1 | 400 |

for URGS class fuses, consult us.



Other Protistor® Fuses BS88-4 Fuses Microswitches for BS88-4 Protistor®

MICROSWITCH SYSTEMS ADAPTED
TO THE FOLLOWING FUSES:

- BS88 - 4 separated trip-indicator
- BS88 - 4 built-in trip-indicator

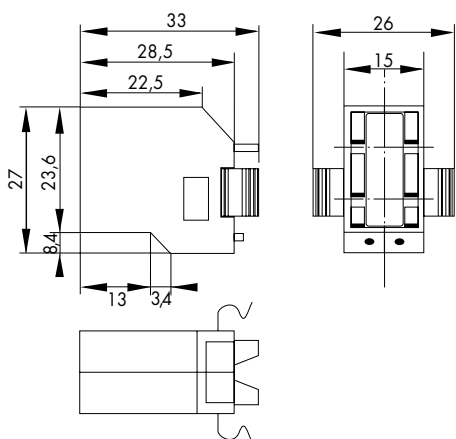
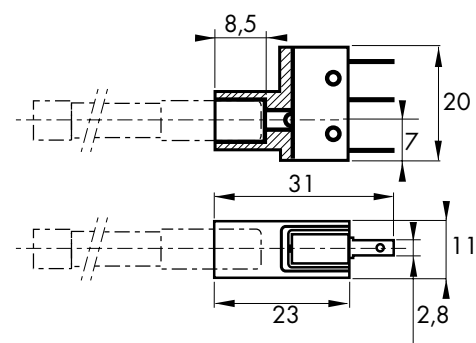
Main Characteristics

| Code | AC Insulation voltage rating (***) | Positive operating voltage/current | Current rating | Current | Interrupting rating | | | | | | AC voltage withstand test (*) | Impulse voltage test Uimp1.2/50 μs (**) | Fire class according to UL 94 |
|-----------------|------------------------------------|------------------------------------|----------------|----------|-----------------------|-------|-------|--------------------------------|-------|------|-------------------------------|---|-------------------------------|
| | | | | | Non inductive circuit | | | Inductive circuit : L/R = 25ms | | | | | |
| | | | | | 30V | 110V | 250V | 30V | 110V | 250V | | | |
| MC 6,3 GR 2-5 N | 1000 V | 20 V 100 mA | 5 A | 50/60 Hz | - | 5 A | 0,3 A | - | 3 A | 2 A | 3.5 kV | - | H.B. |
| | | | | DC | 4 A | 0.4 A | - | 3 A | 0.4 A | - | | | |
| MC 36 GR 2-5 | 1000 V | 20 V 100 mA | 5 A | 50/60 Hz | - | 5 A | 5 A | - | 5 A | 5 A | 7.5 kV | - | |
| | | | | DC | 4 A | 0.4 A | - | 2 A | 0.4 A | - | | | |

* Between power circuit and microswitch terminals as per IEC 60 and 694 (50/60 Hz 1 min duration in dry air)

** Between power circuit and microswitch terminals Uimp: impulse voltage as per IEC 947-1

*** Between power circuit and microswitch terminals



| Catalog Number | Ref. Number | Weight (g) | Pack. |
|--|-------------|------------|-------|
| MC 6,3 GR 2-5 N (for separate trip-indicator) | Y 310015 | 10 | 3 |

| Catalog Number | Ref. Number | Weight (g) | Pack. |
|---|-------------|------------|-------|
| MC 36 GR 2-5 (for built-in trip-indicator) | P 092496 | 10 | 3 |