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# Other Protistor® Fuses
# BS88-4 Fuses
# 36x55, 2x36x55 - 690 VAC

EXTREMELY HIGH BREAKING CAPACITY FUSES:
PROTECTION OF POWER SEMICONDUCTORS AS PER IEC STANDARD 60269.1 AND 4

690 V VOLTAGE RATING COMPLYING WITH IEC 33

AR CLASS (RATINGS FROM 75 TO 800 A) AS PER VDE 636-23 AND IEC 60269.4

THREE MODELS COMPLYING WITH BS 88-4
- WITHOUT INDICATOR
- WITH SEPARATE TRIP-INDICATOR
- WITH BUILT-IN TRIP-INDICATOR

## Main Characteristics

| Voltage rating $U_N$( V ) | Size | Class | Current rating $I_N$( A ) | Pre-arcing $I^2t$ @ 1 ms $I^2tp$ ($A^2s$) | Total clearing $I^2t$ @ 660 V $A^2s$ | | Watts loss | | Tested Breaking capacity |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Ip ≤ 50 $I_N$ | Ip > 50 $I_N$ | 0.8 $I_N$ | $I_N$ | |
| 690V | 36x55 | URR | 75 | 350 | 1800 | 2000 | 9.7 | 19.5 | 200k A @ 690 V |
| | | | 110 | 1180 | 6000 | 67000 | 11.3 | 22.8 | |
| | | | 200 | 3900 | 18500 | 20500 | 21.8 | 41.4 | |
| | | | 250 | 8760 | 41000 | 46000 | 23.6 | 44.1 | |
| | | URGL | 50 | 180 | 860 | 990 | 7.3 | 14.0 | 200k A @ 690 V |
| | | | 65 | 335 | 1600 | 1840 | 8.8 | 17.1 | |
| | | | 85 | 480 | 3450 | 4000 | 12.2 | 23.5 | |
| | | | 90 | 720 | 41000 | 4700 | 13.2 | 25.5 | |
| | | | 150 | 2880 | 12600 | 14500 | 18..9 | 35.3 | |
| | | | 180 | 5350 | 22500 | 25500 | 19.1 | 35.7 | |
| | | | 200 | 9510 | 40000 | 46000 | 17.7 | 33.1 | |
| | | | 250 | 21400 | 97000 | 11000 | 18.7 | 34.5 | |
| | | | 280 | 29100 | 125000 | 145000 | 20.3 | 38.0 | |
| | | | 315 | 38100 | 157000 | 180000 | 222.77 | 42.6 | |
| | | | 355 | 48200 | 190000 | 215000 | 25.9 | 48.5 | |
| | | | 400 | 72000 | 265000 | 305000 | 26.7 | 50.0 | |
| | 2x36x55 | URU | 200 | 4700 | 24000 | 27000 | 18.4 | 33.0 | 200k A @ 690 V |
| | | | 235 | 6920 | 34500 | 39000 | 21.0 | 37.6 | |
| | | | 400 | 21200 | 100000 | 110000 | 34.8 | 62.3 | |
| | | | 500 | 35000 | 164000 | 184000 | 47.2 | 88.2 | |
| | | | 630 | 97300 | 515000 | 575000 | 41.1 | 73.2 | |
| | | URGM | 175 | 2880 | 13800 | 16000 | 24.7 | 47.6 | 200k A @ 690 V |
| | | | 300 | 13700 | 660000 | 68000 | 31.5 | 59.0 | |
| | | | 325 | 21400 | 900000 | 102000 | 30.0 | 54.0 | |
| | | | 355 | 25200 | 106000 | 120000 | 33.1 | 62.0 | |
| | | | 450 | 65600 | 300000 | 340000 | 34.6 | 63.8 | |
| | | | 500 | 85600 | 390000 | 440000 | 37.44 | 69.0 | |
| | | | 630 | 152000 | 630000 | 720000 | 45.4 | 85.2 | |
| | | | 710 | 193000 | 760000 | 860000 | 51.8 | 97.0 | |
| | | | 800 | 282000 | 1.22 $10^6$ | 1.22 $10^6$ | 53.4 | 100.0 | |

Minimum operating voltage for built-in and separate trip indicator = 20 V

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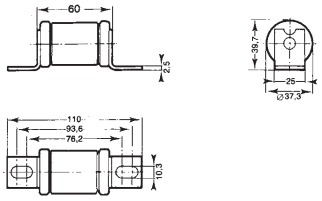
# Other Protistor® Fuses
# BS88-4 Fuses
# 36x55, 2x36x55 - 690 VAC

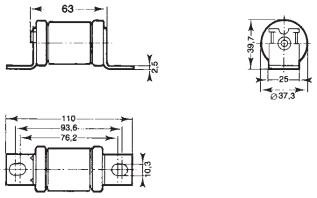
## Ref. Numbers

### CP 36x55
### without trip-indicator




| Size | Designation | Ref. Number | Pack. | Catalog Number |
|---|---|---|---|---|
| | 6,9 URGL 36/50 | X097103 | | BS36UL69V50 |
| | 6,9 URGL 36/65 | H097113 | | BS36UL69V65 |
| | 6,9 URR 36/75 | H097136 | | BS36UR69V75 |
| | 6,9 URGL 36/85 | M097163 | | BS36UL69V85 |
| | 6,9 URGL 36/90 | N097164 | | BS36UL69V90 |
| | 6,9 URR 36/110 | P097165 | 6 | BS36UR69V110 |
| | 6,9 URGL 36/150 | Q097166 | (220g) | BS36UL69V150 |
| 36x55 | 6,9 URGL 36/180 | R097167 | | BS36UL69V180 |
| | 6,9 URR 36/200 | S097168 | | BS36UR69V200 |
| | 6,9 URGL 36/200 | T097169 | | BS36UL69V200 |
| | 6,9 URR 36/250 | V097170 | | BS36UR69V250 |
| | 6,9 URGL 36/250 | W097171 | | BS36UL69V250 |
| | 6,9 URGL 36/280 | A097175 | | BS36UL69V280 |
| | 6,9 URGL 36/315 | B097176 | | BS36UL69V315 |
| | 6,9 URGL 36/355 | C097177 | | BS36UL69V355 |
| | 6,9 URGL 36/400 | D097178 | | BS36UL69V400 |

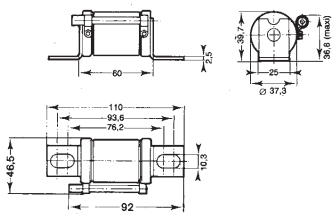
### CP 36x55
### with built-in trip-indicator




| Size | Designation | Ref. Number | Pack. | Catalog Number |
|---|---|---|---|---|
| | 6,6 URGL 36T50 | N097210 | | BS36UL69V50T |
| | 6,9 URGL 36T65 | K097230 | | BS36UL69V65T |
| | 6,9 URR 36T75 | H099965 | | BS36UR69V75T |
| | 6,9 URGL 36T85 | M097255 | | BS36UL69V85T |
| | 6,9 URGL 36T90 | N097256 | | BS36UL69V90T |
| | 6,9 URR 36T110 | R099973 | 6 | BS36UR69V110T |
| | 6,9 URGL 36T150 | Z082178 | (220g) | BS36UL69V150T |
| 36x55 | 6,9 URGL 36T180 | P097257 | | BS36UL69V180T |
| | 6,9 URR 36T200 | A085560 | | BS36UR69V200T |
| | 6,9 URGL 36T200 | R097259 | | BS36UL69V200T |
| | 6,9 URR 36T250 | W097263 | | BS36UR69V250T |
| | 6,9 URGL 36T250 | X097264 | | BS36UL69V250T |
| | 6,9 URGL 36T280 | Y097265 | | BS36UL69V280T |
| | 6,9 URGL 36T315 | Z097266 | | BS36UL69V315T |
| | 6,9 URGL 36T355 | A097267 | | BS36UL69V355T |
| | 6,9 URGL 36T400 | C097269 | | BS36UL69V400T |

Microswitch MC 36 GR 2.5 - Ref. P 092496

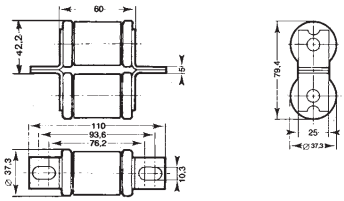
### CP 36x55
### with separated trip-indicator
### BS88-4




| Size | Designation | Ref. Number | Pack. | Catalog Number |
|---|---|---|---|---|
| | 6,9 URGL 36P90 | H097182 | | BS36UL69V90P |
| | 6,9 URR 36P110 | J097183 | | BS36UR69V110P |
| | 6,9 URGL 36P150 | K097184 | | BS36UL69V150P |
| | 6,9 URGL 36P180 | L097185 | | BS36UL69V180P |
| | 6,9 URR 36P200 | M097186 | | BS36UR69V200P |
| | 6,9 URGL 36P200 | N097187 | 6 | BS36UL69V200P |
| | 6,9 URR 36P250 | P097188 | (230g) | BS36UR69V250P |
| 36x55 | 6,9 URGL 36P250 | Q097189 | | BS36UL69V250P |
| | 6,9 URGL 36P280 | R097190 | | BS36UL69V280P |
| | 6,9 URGL 36P315 | V097193 | | BS36UL69V315P |
| | 6,9 URGL 36P355 | Y097196 | | BS36UL69V355P |
| | 6,9 URGL 36P400 | M097209 | | BS36UL69V400P |

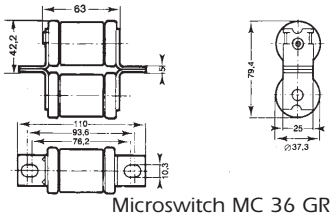
Microswitch MC 36 GR 2.5 - Ref. Y 310015

### CP 2x36x55
### without trip-indicator




| Size | Designation | Ref. Number | Pack. | Catalog Number |
|---|---|---|---|---|
| | 6,9 URGM 236/175 | D097270 | | BS236UM69V175 |
| | 6,9 URU 236/200 | F097272 | | BS236UU69V200 |
| | 6,9 URU 236/235 | J097275 | | BS236UU69V235 |
| | 6,9 URGM 236/300 | K097276 | | BS236UM69V300 |
| | 6,9 URGM 236/325 | R097282 | | BS236UM69V325 |
| | 6,9 URGM 236/355 | S097283 | 3 | BS236UM69V355 |
| | 6,9 URU 236/400 | T097284 | (400g) | BS236UU69V400 |
| 2x36x55 | 6,9 URGM 236/450 | Y097288 | | BS236UM69V450 |
| | 6,9 URGM 236/500 | Z097289 | | BS236UM69V500 |
| | 6,9 URU 236/500 | A097290 | | BS236UU69V500 |
| | 6,9 URGM 236/630 | B097291 | | BS236UM69V630 |
| | 6,9 URU 236/630 | R097351 | | BS236UU69V630 |
| | 6,9 URGM 236/710 | S097352 | | BS236UM69V710 |
| | 6,9 URGM 236/800 | Y097357 | | BS236UM69V800 |

### CP 2x36x55
### with built-in trip-indicator




| Size | Designation | Ref. Number | Pack. | Catalog Number |
|---|---|---|---|---|
| | 6,9 URGM 236T175 | F097456 | | BS236UM69V175T |
| | 6,9 URU 236T200 | G097457 | | BS236UU69V200T |
| | 6,9 URU 236T235 | A082179 | | BS236UU69V235T |
| | 6,9 URGM 236T300 | S085553 | | BS236UM69V300T |
| | 6,9 URGM 236T325 | J097459 | | BS236UM69V325T |
| | 6,9 URGM 236T355 | N097463 | 3 | BS236UM69V355T |
| | 6,9 URU 236T400 | P097464 | (400g) | BS236UU69V400T |
| 2x36x55 | 6,9 URGM 236T450 | Q097465 | | BS236UM69V450T |
| | 6,9 URGM 236T500 | R097466 | | BS236UM69V500T |
| | 6,9 URU 236T500 | S097467 | | BS236UU69V500T |
| | 6,9 URGM 236T630 | V097469 | | BS236UM69V630T |
| | 6,9 URU 236T630 | W097470 | | BS236UU69V630T |
| | 6,9 URGM 236T710 | C097476 | | BS236UM69V710T |
| | 6,9 URGM 236T800 | D097477 | | BS236UM69V800T |

Microswitch MC 36 GR 2.5 - Ref. P 092496



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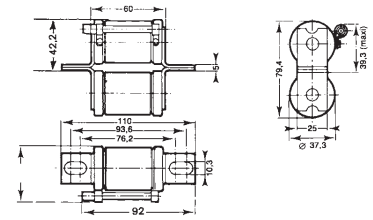
# Other Protistor® Fuses
# BS88-4 Fuses
# 36x55, 2x36x55 - 690 VAC

## CP 2x36x55
## with separated trip-indicator
## BS88-4

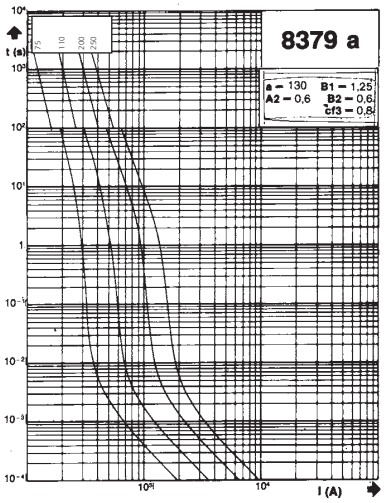



Microswitch MC 6,3 GR 2.5 - Ref. Y 310015

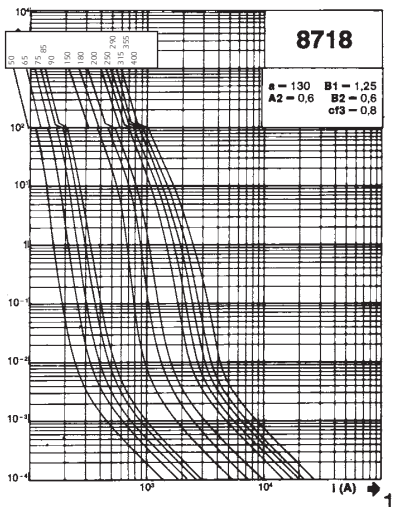
| Size | Designation | Ref. Number | Pack. | Catalog Number |
|---|---|---|---|---|
| | 6,9 URGM 236P175 | A097359 | | BS236UM69V175P |
| | 6,9 URU 236P200 | E097363 | | BS236UU69V200P |
| | 6,9 URU 236P235 | F097364 | | BS236UU69V235P |
| | 6,9 URGM 236P300 | G097365 | | BS236UM69V300P |
| | 6,9 URGM 236P325 | Q097373 | | BS236UM69V325P |
| | 6,9 URGM 236P355 | R097374 | 3 | BS236UM69V355P |
| | 6,9 URU 236P400 | S097375 | (410g) | BS236UU69V400P |
| 2x36x55 | 6,9 URGM 236P450 | T097376 | | BS236UM69V450P |
| | 6,9 URU 236P500 | V097377 | | BS236UU69V500P |
| | 6,9 URGM 236P500 | E097386 | | BS236UM69V500P |
| | 6,9 URU 236P630 | J097390 | | BS236UU69V630P |
| | 6,9 URGM 236P630 | P097395 | | BS236UM69V630P |
| | 6,9 URGM 236P710 | B097452 | | BS236UM69V710P |
| | 6,9 URGM 236P800 | E097455 | | BS236UM69V800P |

## Electrical characteristics
## Times vs current characteristics

### 690 V URR

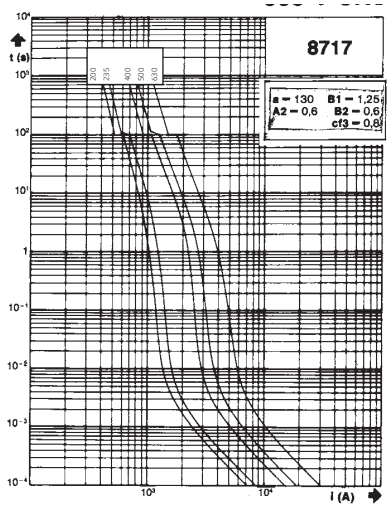



### 690 V URGL

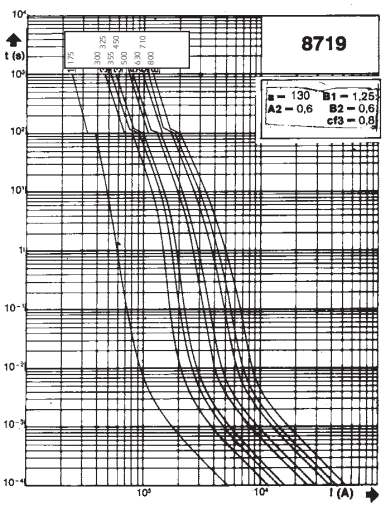



13

### 690 V URU




### 690 V URGM




- These curves indicate, for each rated current, the pre-arcing time vs. the R/M.S. pre-arcing current.
- Tolerance for the mean pre-arcing current ± 10%

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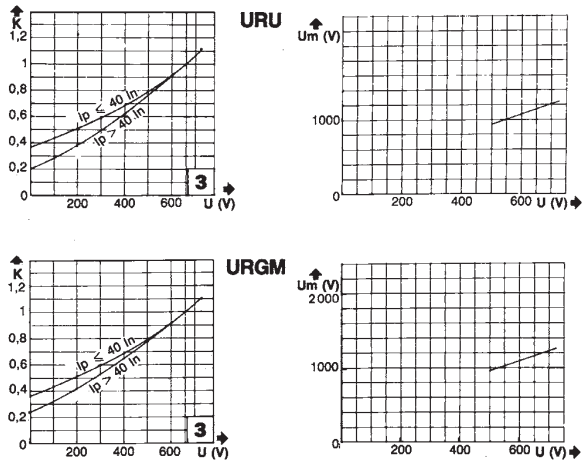
# Other Protistor® Fuses
# BS88-4 Fuses
# 36x55, 2x36x55 - 690 VAC

## Corrective factor - Peak arc voltage

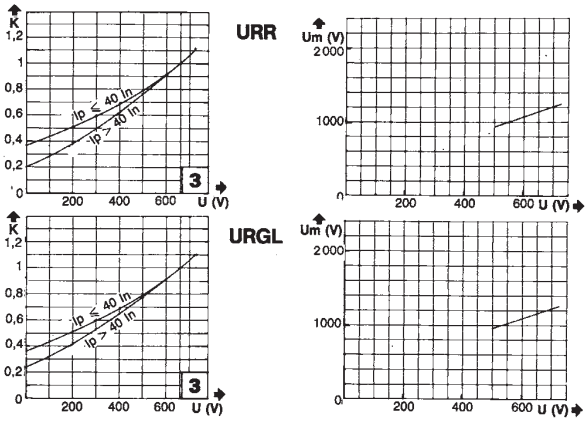
Corrective factor

Peak arc voltage




Corrective factor

Peak arc voltage



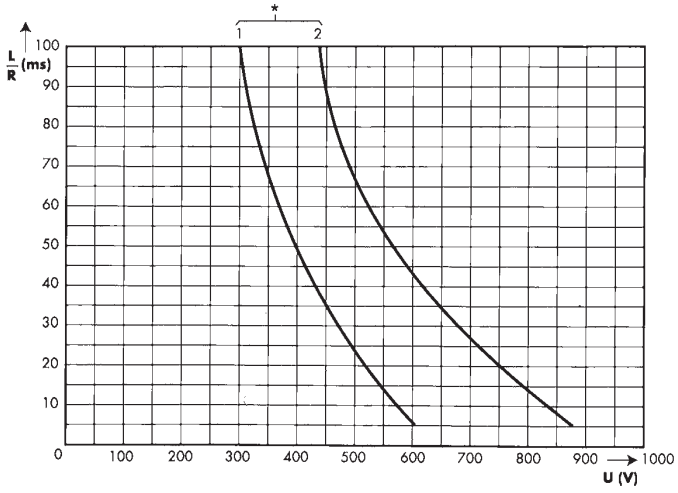

## Corrective factor

The mean curves shows the variation of total clearing time ($I^2t_t$) and total clearing duration $T_t$ as a function of operating voltage U.

## Peak arc voltage

This curve shows peak value Um of the arc voltage which appears across the fuse-link as a function of the operating voltage U @ cos j = 0.15

## DC Application data




| Curves and Ipm for each rating | | | |
|---|---|---|---|
| Class | Rated current | Curve* | $I_{pm}$ (A) |
| URR | 75 | 2 | 225 |
| | 110 | 2 | 330 |
| | 200 | 2 | 600 |
| | 250 | 2 | 750 |
| URU | 200 | 2 | 600 |
| | 235 | 2 | 700 |
| | 400 | 2 | 1200 |
| | 500 | 2 | 1500 |
| | 630 | 1 | 1890 |

- This curves indicate the permissible value of time constant L/R as a function of DC working voltage
- Ipm values give the minimum DC interrupting current in amps.



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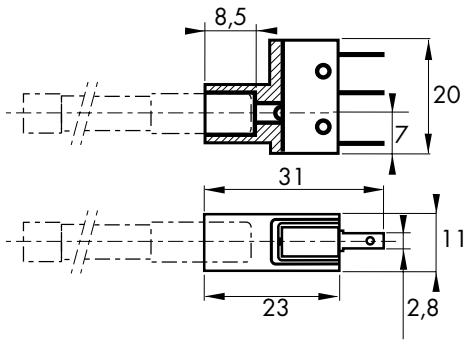
# Other Protistor® Fuses
# BS88-4 Fuses
# Microswitches for BS88-4 Protistor®

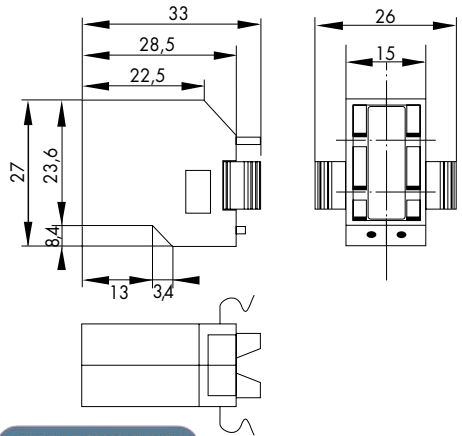
MICROSWITCH SYSTEMS ADAPTED
TO THE FOLLOWING FUSES:
- BS88 - 4 separated trip-indicator
- BS88 - 4 built-in trip-indicator

## Main Characteristics

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

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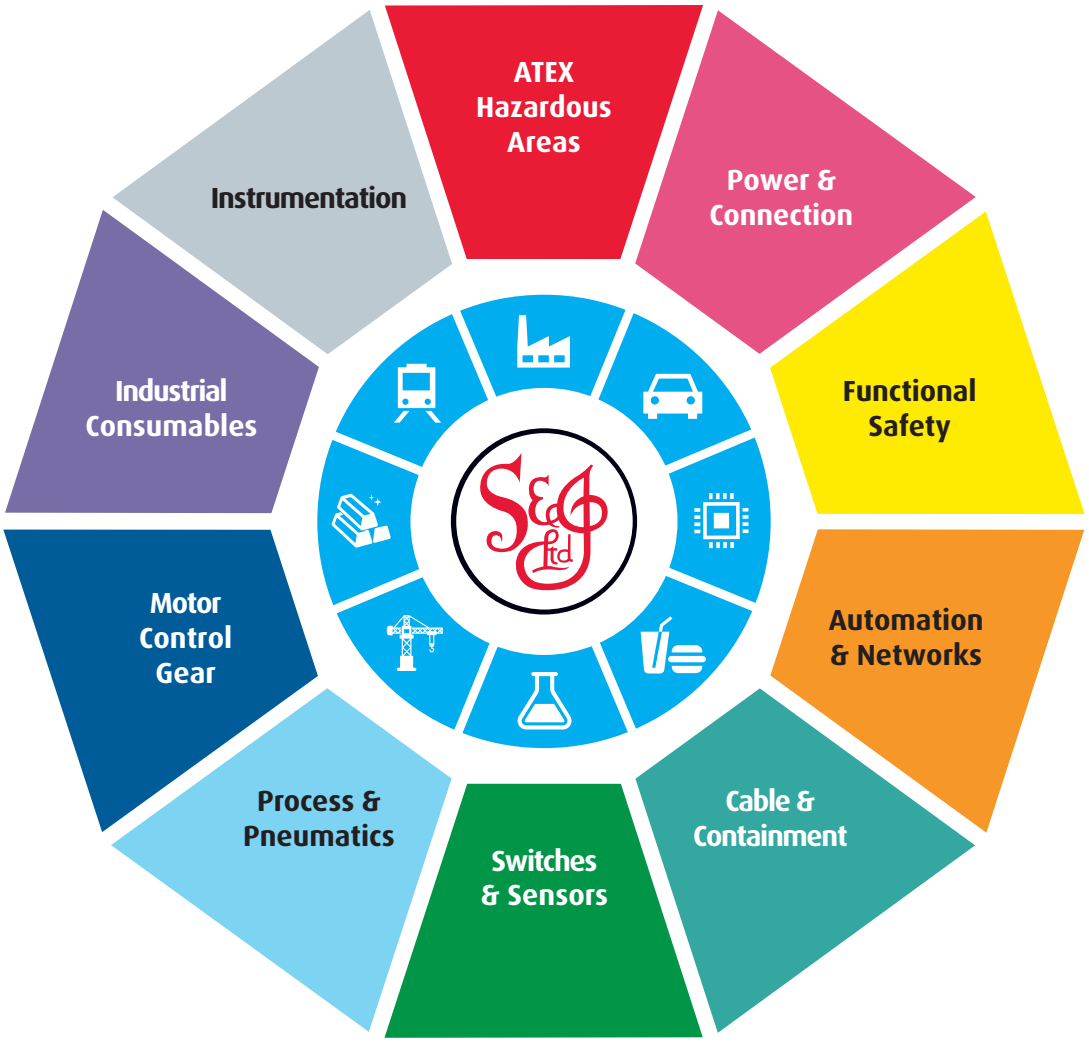


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