

Semiconductor (AC) fuses

Other Protistor® Fuses

BS88-4 Fuses

36x55, 2x36x55 - 690 VAC



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

690 V VOLTAGE RATING COMPLYING WITH IEC 33

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

THREE MODELS COMPLYING WITH BS 88-4

- WITHOUT INDICATOR
- WITH SEPARATE TRIP-INDICATOR
- WITH BUILT-IN TRIP-INDICATOR

Main Characteristics

Voltage rating U_N (V)	Size	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2tp (A ² s)	Total clearing $I^2t @ 660 \text{ V}$ A ² s		Watts loss		Tested Breaking capacity
					$I_p \leq 50 I_N$	$I_p > 50 I_N$	$0.8 I_N$	I_N	
690V	36x55	URR	75	350	1800	2000	9.7	19.5	200k A @ 690 V
			110	1180	6000	67000	11.3	22.8	
			200	3900	18500	20500	21.8	41.4	
			250	8760	41000	46000	23.6	44.1	
		URGL	50	180	860	990	7.3	14.0	200k A @ 690 V
			65	335	1600	1840	8.8	17.1	
			85	480	3450	4000	12.2	23.5	
			90	720	41000	4700	13.2	25.5	
			150	2880	12600	14500	18.9	35.3	
			180	5350	22500	25500	19.1	35.7	
			200	9510	40000	46000	17.7	33.1	
			250	21400	97000	11000	18.7	34.5	
			280	29100	125000	145000	20.3	38.0	
			315	38100	157000	180000	222.77	42.6	
			355	48200	190000	215000	25.9	48.5	
			400	72000	265000	305000	26.7	50.0	
	2x36x55	URU	200	4700	24000	27000	18.4	33.0	200k A @ 690 V
			235	6920	34500	39000	21.0	37.6	
			400	21200	100000	110000	34.8	62.3	
			500	35000	164000	184000	47.2	88.2	
			630	97300	515000	575000	41.1	73.2	
		URGM	175	2880	13800	16000	24.7	47.6	200k A @ 690 V
			300	13700	660000	68000	31.5	59.0	
			325	21400	900000	102000	30.0	54.0	
			355	25200	106000	120000	33.1	62.0	
			450	65600	300000	340000	34.6	63.8	
			500	85600	390000	440000	37.44	69.0	
			630	152000	630000	720000	45.4	85.2	
			710	193000	760000	860000	51.8	97.0	
			800	282000	1.22 10 ⁶	1.22 10 ⁶	53.4	100.0	

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



Other Protistor® Fuses

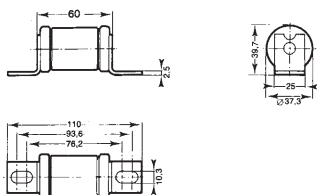
BS88-4 Fuses

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Ref. Numbers

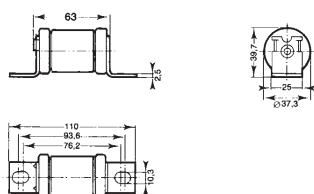
CP 36x55

without trip-indicator



CP 36x55

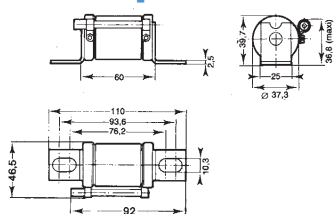
with built-in trip-indicator



Microswitch MC 36 GR 2.5 - Ref. P 092496

CP 36x55

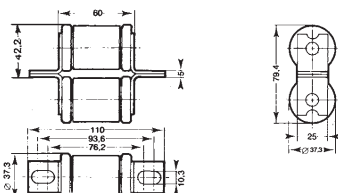
with separated trip-indicator BS88-4



Microswitch MC 36 GR 2.5 - Ref. Y 310015

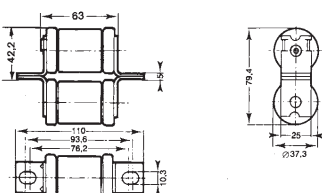
CP 2x36x55

without trip-indicator



CP 2x36x55

with built-in trip-indicator



Microswitch MC 36 GR 2.5 - Ref. P 092496

Size	Designation	Ref. Number	Pack.	Catalog Number
36x55	6,9 URGL 36/50	X097103		BS36UL69V50
	6,9 URGL 36/65	H097113		BS36UL69V65
	6,9 URR 36/75	H097136		BS36UR69V75
	6,9 URGL 36/85	M097163		BS36UL69V85
	6,9 URGL 36/90	N097164		BS36UL69V90
	6,9 URR 36/110	P097165	6 (220g)	BS36UR69V110
	6,9 URGL 36/150	O097166		BS36UL69V150
	6,9 URGL 36/180	R097167		BS36UL69V180
	6,9 URR 36/200	S097168		BS36UR69V200
	6,9 URGL 36/200	T097169		BS36UL69V200
	6,9 URR 36/250	V097170		BS36UR69V250
	6,9 URGL 36/250	W097171		BS36UL69V250
	6,9 URGL 36/280	A097175		BS36UL69V280
	6,9 URGL 36/315	B097176		BS36UL69V315
	6,9 URGL 36/355	C097177		BS36UL69V355
	6,9 URGL 36/400	D097178		BS36UL69V400

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

Size	Designation	Ref. Number	Pack.	Catalog Number
36x55	6,9 URGL 36P90	H097182		BS36UL69V90P
	6,9 URR 36P110	J097183		BS36UR69V110P
	6,9 URGL 36P150	K097184		BS36UL69V150P
	6,9 URGL 36P180	L097185		BS36UL69V180P
	6,9 URR 36P200	M097186		BS36UR69V200P
	6,9 URGL 36P200	N097187	6 (230g)	BS36UL69V200P
	6,9 URR 36P250	P097188		BS36UR69V250P
	6,9 URGL 36P250	O097189		BS36UL69V250P
	6,9 URGL 36P280	R097190		BS36UL69V280P
	6,9 URGL 36P315	V097193		BS36UL69V315P
	6,9 URGL 36P355	Y097196		BS36UL69V355P
	6,9 URGL 36P400	M097209		BS36UL69V400P

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

Size	Designation	Ref. Number	Pack.	Catalog Number
2x36x55	6,9 URGM 236T175	F097456		BS236UM69V175T
	6,9 URU 236T200	G097457		BS236UU69V200T
	6,9 URU 236T235	A082179		BS236UU69V235T
	6,9 URGM 236T300	S085553		BS236UM69V300T
	6,9 URGM 236T325	J097459		BS236UM69V325T
	6,9 URGM 236T355	N097463	3 (400g)	BS236UM69V355T
	6,9 URU 236T400	P097464		BS236UU69V400T
	6,9 URGM 236T450	O097465		BS236UM69V450T
	6,9 URGM 236T500	R097466		BS236UM69V500T
	6,9 URU 236T500	S097467		BS236UU69V500T
	6,9 URGM 236T630	V097469		BS236UM69V630T
	6,9 URU 236T630	W097470		BS236UU69V630T
	6,9 URGM 236T710	C097476		BS236UM69V710T
	6,9 URGM 236T800	D097477		BS236UM69V800T

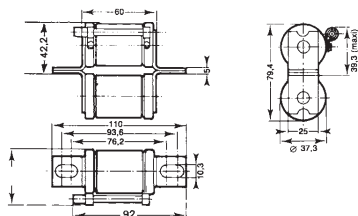
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CP 2x36x55 with separated trip-indicator BS88-4



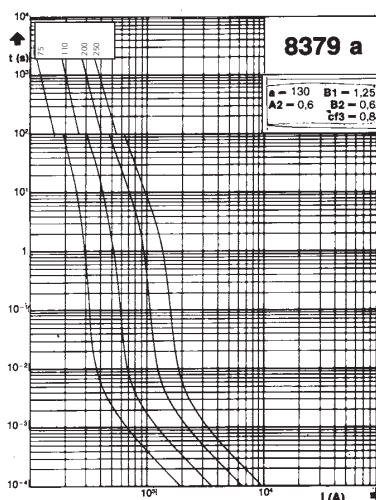
Microswitch MC 6,3 GR 2.5 - Ref. Y 310015

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

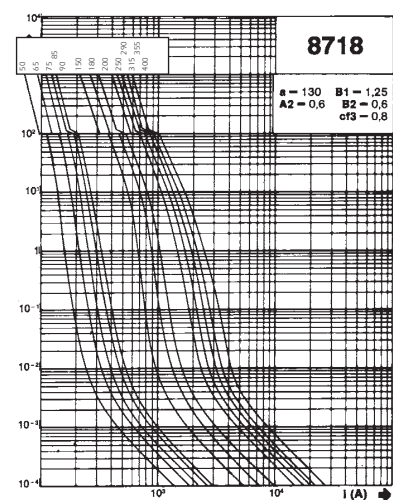
Electrical characteristics

Times vs current characteristics

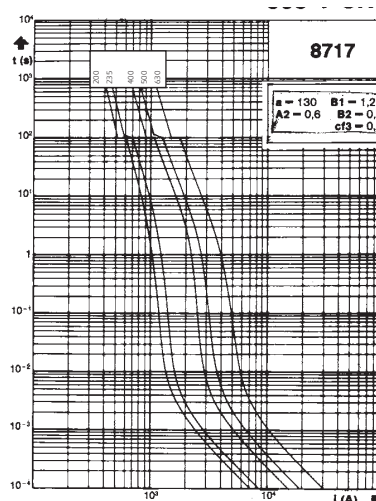
690 V URR



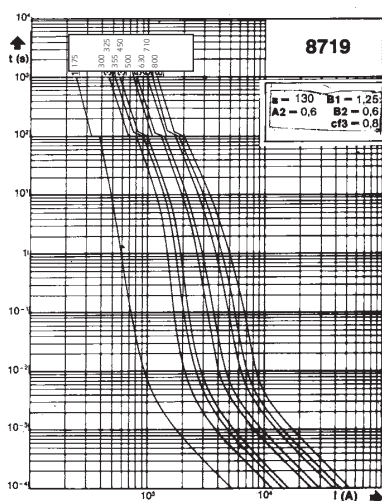
690 V URGL



690 V URU



690 V URGM

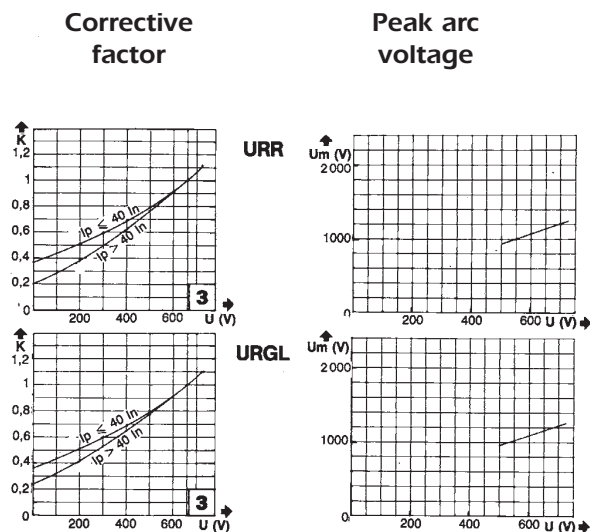
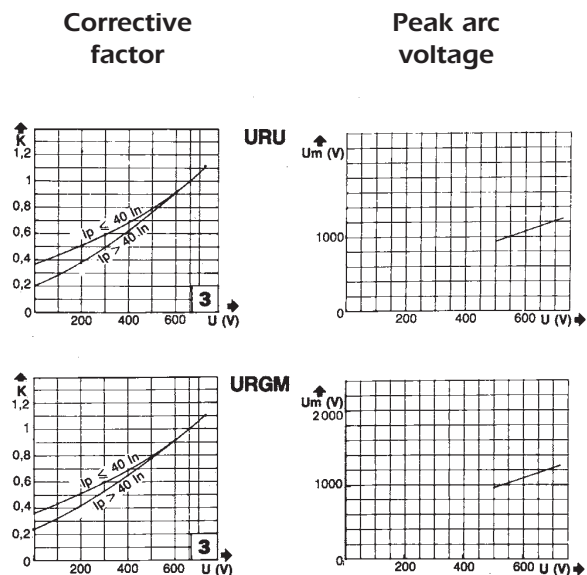


- These curves indicate, for each rated current, the pre-arcing time vs. the R/M.S. pre-arcing current.
- Tolerance for the mean pre-arcing current $\pm 10\%$



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Corrective factor - Peak arc voltage



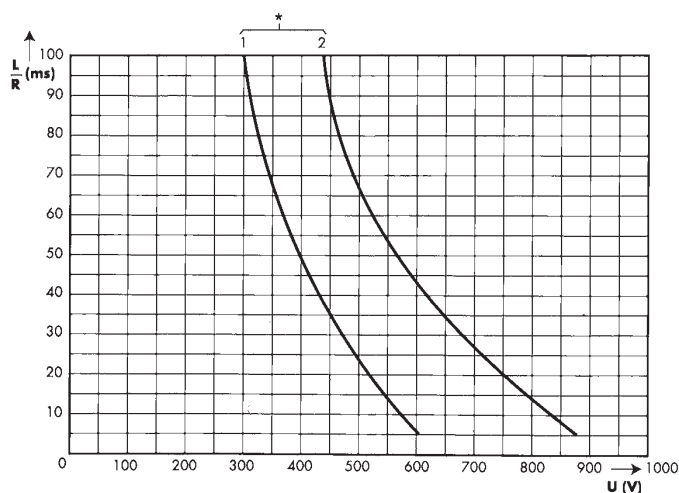
Corrective factor

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

Peak arc voltage

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

DC Application data



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

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

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Microswitches for BS88-4 Protistor®

MICROSWITCH SYSTEMS ADAPTED
TO THE FOLLOWING FUSES:

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

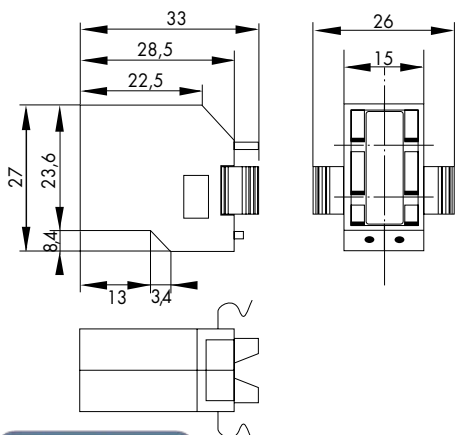
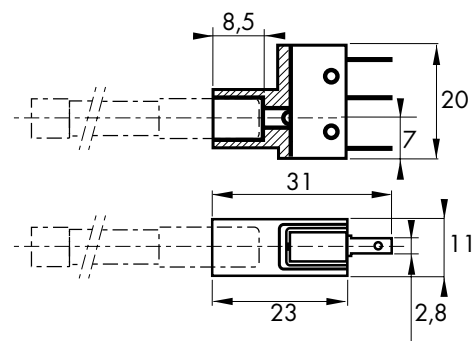
Main Characteristics

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



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