Other Protistor® Fuses
BS88-4 Fuses
000 BS88 - 500 V to 690 VAC

EXTREMELY HIGH BREAKING CAPACITY FUSES: PROTECTION OF POWER SEMICONDUCTORS AS PER IEC STANDARD 60269.1 AND 4, AND EN 60269-1 AND 4

500- 690 V VOLTAGE RATING (RATING 20 TO 400 A)

gR CLASS (gRB RATINGS 20 TO 125 A) ACCORDING TO VDE 636-23
- CLEARING ALL OVERLOADS
- IMPROVED SAFETY AND PROTECTION
- ENABLING SELECTIVE COORDINATION WITH ALL FUSES

aR CLASS (URB RATINGS 75 TO 400 A) ACCORDING TO VDE 636-23 AND IEC 269.4

TWO MODELS ACCORDING TO BS 88-4 AND EN 60 269 .4 STANDARDS; Z3 DRAWING (74 mm BETWEEN AXES) WITHOUT BLOWN FUSE
INDICATION - WITH SEPARATE TRIP INDICATOR

These fuses are UL Recognized c UL us

Main Characteristics

Voltage rating U_N(V)	Class	Current rating I_N(A)	Pre-arcing I^2t @ 1 ms I^2t_p (A^2s)	Total clearing I^2t (A^2s)	Watts loss 0.8 I_N	Watts loss I_N	Tested Breaking capacity	Estimated Breaking capacity
690 V	gRB	20	12	80 @ 660 V	3.8	7	200k A @ 690 V	300k A @ 690 V
		25	20	150 @ 660 V	5.0	9		
		32	39	270 @ 660 V	5.5	10		
		40	70	460 @ 660 V	6.6	12		
		50	102	730 @ 660 V	7.7	14		
		63	210	1500 @ 660 V	8.8	16		
		80	475	2900 @ 660 V	9.9	18		
		100	970	6000 @ 660 V	11	20		
		125	1900	11800 @ 660 V	11.6	21		
690 V	URB	75	350	2250 @ 660 V	11.2	20.5	200k A @ 690 V	300k A @ 690 V
		80	390	2500 @ 660 V	11.6	21		
		100	690	4200 @ 660 V	12.7	23		
		110	950	6800 @ 660 V	13.5	24.5		
		125	1300	8900 @ 660 V	14.3	26		
		160	2700	16000 @ 660 V	17.0	31		
		200	5250	31500 @ 660 V	19.8	36		
		250	9900	52000 @ 660 V	24.8	45		
		315	15500	82000 @ 660 V	31.9	58		
500 V	URB	350	22400	110000 @ 500 V	31.9	58	120k A @ 500 V	
		400	33200	160000 @ 500 V	36.3	66		

Minimum operating voltage for separate trip indicator = 20 V

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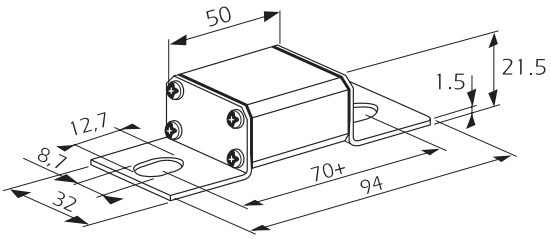
References
British standard without blown fuse indicator

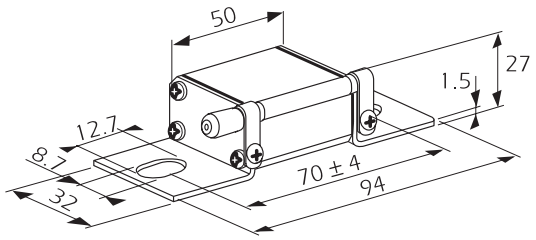
Current rating	Designation	Ref. Number	Catalog Number
20	6,9 gRB 000 BS88/020	T330044	BS000GB69V20
25	6,9 gRB 000 BS88/025	V330045	BS000GB69V25
32	6,9 gRB 000 BS88/032	W330046	BS000GB69V32
40	6,9 gRB 000 BS88/040	X330047	BS000GB69V40
50	6,9 gRB 000 BS88/050	Z330049	BS000GB69V50
63	6,9 gRB 000 BS88/063	A330050	BS000GB69V63
80	6,9 gRB 000 BS88/080	N330108	BS000GB69V80
100	6,9 gRB 000 BS88/100	H330103	BS000GB69V100
125	6,9 gRB 000 BS88/125	P330109	BS000GB69V125
75	6,9 URB 000 BS88/075	B330051	BS000UB69V75
80	6,9 URB 000 BS88/080	C330052	BS000UB69V80
100	6,9 URB 000 BS88/100	D330053	BS000UB69V100
110	6,9 URB 000 BS88/110	E330100	BS000UB69V110
125	6,9 URB 000 BS88/125	E330054	BS000UB69V125
150	6,9 URB 000 BS88/150	F330101	BS000UB69V150
160	6,9 URB 000 BS88/160	F330055	BS000UB69V160
200	6,9 URB 000 BS88/200	G330056	BS000UB69V200
250	6,9 URB 000 BS88/250	H330057	BS000UB69V250
315	6,9 URB 000 BS88/315	J330058	BS000UB69V315
350	5 URB 000 BS88/350	X330116	BS000UB50V350
400	5 URB 000 BS88/400	G330194	BS000UB50V400



Weight: 125 g
Packaging: 3 pieces

British standard with separate blown fuse trip-indicator

Current rating	Designation	Ref. Number	Catalog Number
20	6,9 gRB 000 BS88P020	Y330117	BS000GB69V20P
25	6,9 gRB 000 BS88P025	Z330118	BS000GB69V25P
32	6,9 gRB 000 BS88P032	A330119	BS000GB69V32P
40	6,9 gRB 000 BS88P040	B330120	BS000GB69V40P
50	6,9 gRB 000 BS88P050	C330121	BS000GB69V50P
63	6,9 gRB 000 BS88P063	D330122	BS000GB69V63P
80	6,9 gRB 000 BS88P080	E330123	BS000GB69V80P
100	6,9 gRB 000 BS88P100	F330124	BS000GB69V100P
125	6,9 gRB 000 BS88P125	G330125	BS000GB69V125P
75	6,9 URB 000 BS88P075	H330126	BS000UB69V75P
80	6,9 URB 000 BS88P080	J330127	BS000UB69V80P
100	6,9 URB 000 BS88P100	K330128	BS000UB69V100P
110	6,9 URB 000 BS88P110	L330129	BS000UB69V110P
125	6,9 URB 000 BS88P125	M330130	BS000UB69V125P
150	6,9 URB 000 BS88P150	N330131	BS000UB69V150P
160	6,9 URB 000 BS88P160	P330132	BS000UB69V160P
200	6,9 URB 000 BS88P200	Q330133	BS000UB69V200P
250	6,9 URB 000 BS88P250	R330134	BS000UB69V250P
315	6,9 URB 000 BS88P315	S330135	BS000UB69V315P
350	5 URB 000 BS88P350	T330136	BS000UB50V350P
400	5 URB 000 BS88P400	H330195	BS000UB50V400P



Weight: 135 g
Packaging: 3 pieces

The use of MC 6.3 GR 2-5N blown fuse remote sensing microswitch is possible.
Ref. Number : Y 310015 mounted on separate trip-indicator.
See Microswitch section

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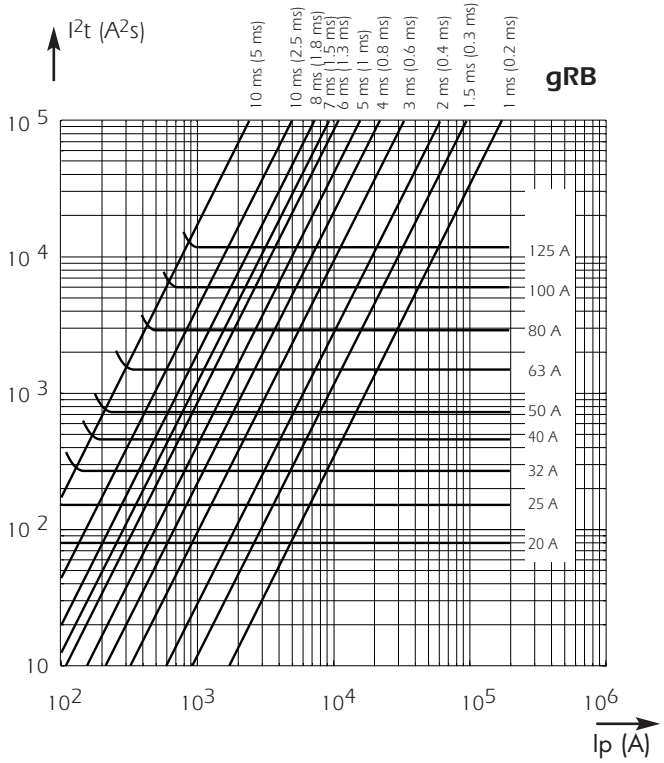
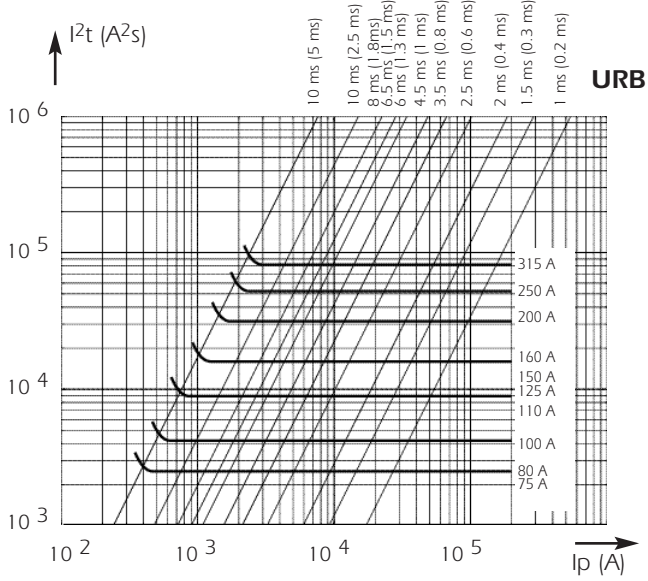
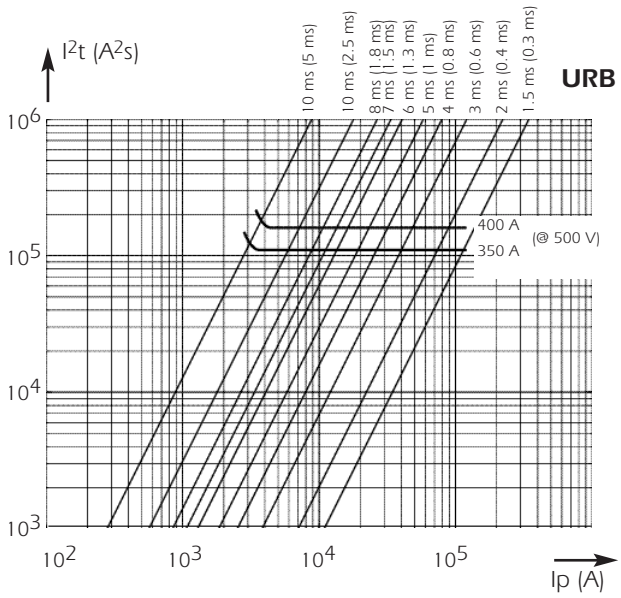
Total clearing I²t

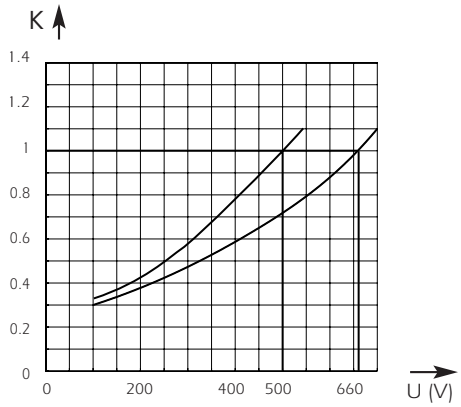


Above: Horizontal curves show, for each rated current, maximum values of total clearing I^2t (I^2t_t) as a function of prospective current Ip. @ UN with cos φ = 0.15.
Oblique lines indicate total clearing duration Tt, with associated pre-arcing duration in brackets.



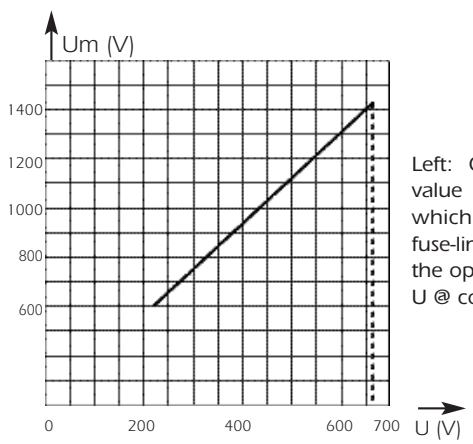


I²t corrective factor



Above: Mean curves show variation of total clearing time (I²tt) and total clearing duration Tt as a function of operating voltage U.

Peak arc voltage



Left: Curve shows peak value Um of arc voltage which appears across fuse-link as a function of the operating voltage U @ cos φ = 0.15

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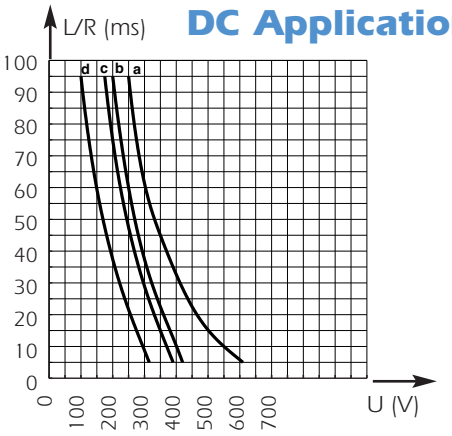
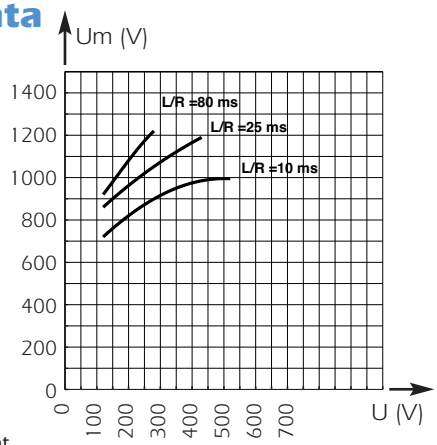
DC Application data



Above: curves indicate permissible value of time constant L/R as a function of DC working voltage.
Curve a: for ratings from 20 to 160 A
Curve b : for ratings from 180 to 200 A
Curve c : for ratings from 250 to 315 A
Curve d : for ratings from 350 to 400 A

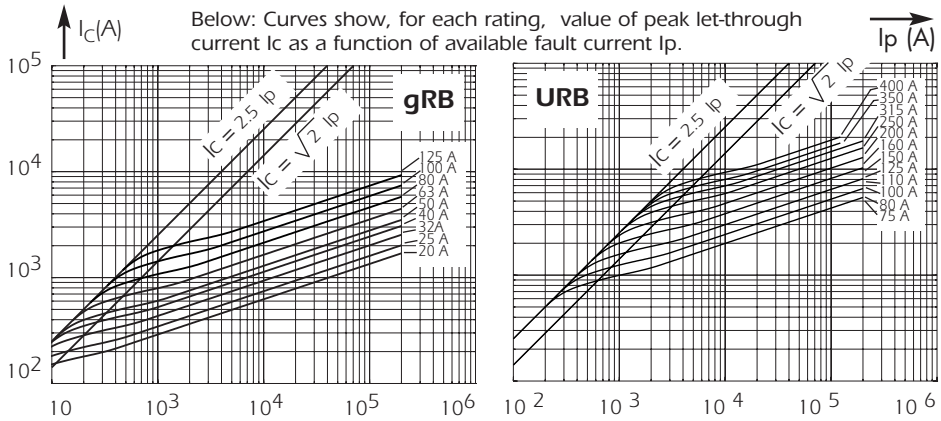


Above: Curves indicate peak arc voltage Um which may appear across the fuse terminals at working voltage U.

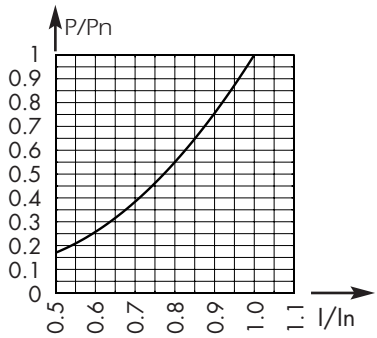
Rated current	Curve	Ipm (A)
20	a	60
25	a	65
32	a	90
40	a	120
50	a	150
63	a	200
80	a	270
100	a	370
125	a	500
160	a	700
200	b	1200
250	c	1800
315	c	2200
350	d	2600
400	d	3100

Ipm values give minimum DC interrupting current in amps.

Current limitation curves

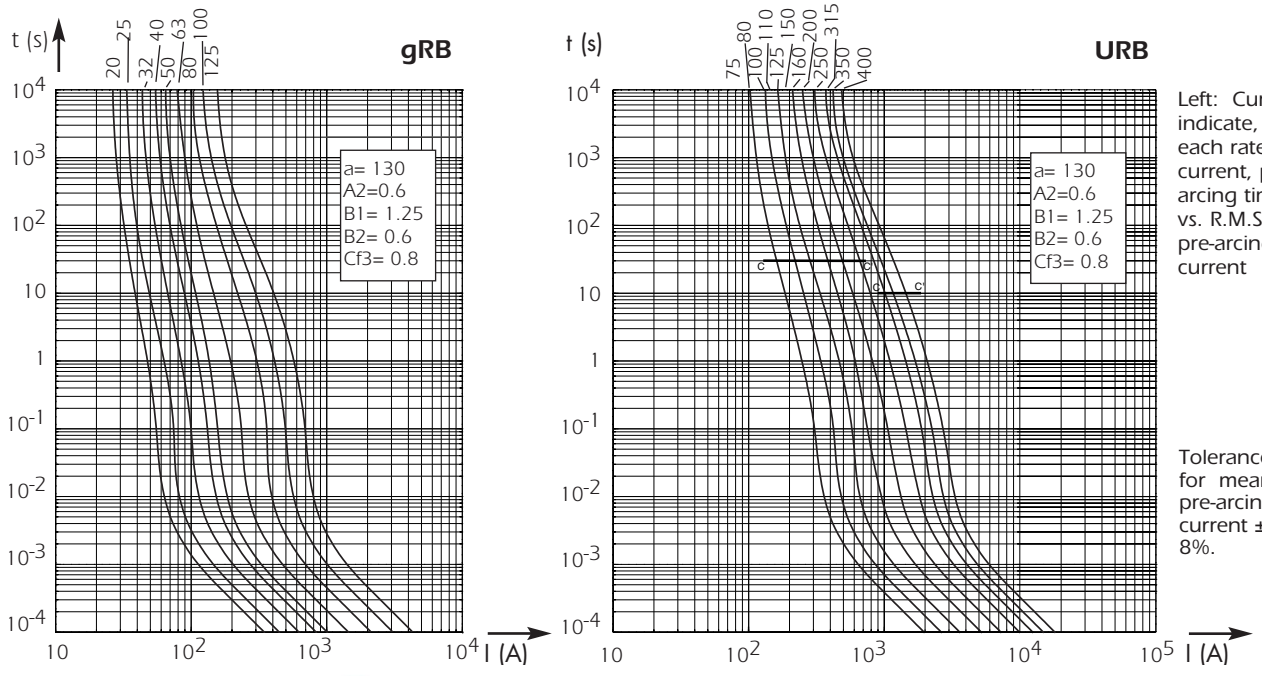


Watts loss



Above: Curve enables computation of power losses P for a IN-rated fuse as a function of the R.M.S. current I (as a multiple of IN for steady state operation)

Time vs current characteristics



Left: Curves indicate, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current

Tolerance for mean pre-arcing current ± 8%.

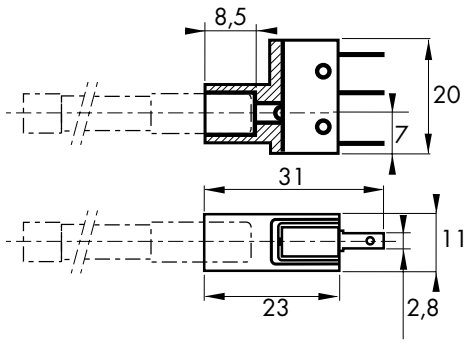
Other Protistor® Fuses
BS88-4 Fuses
Microswitches for BS88-4 Protistor®

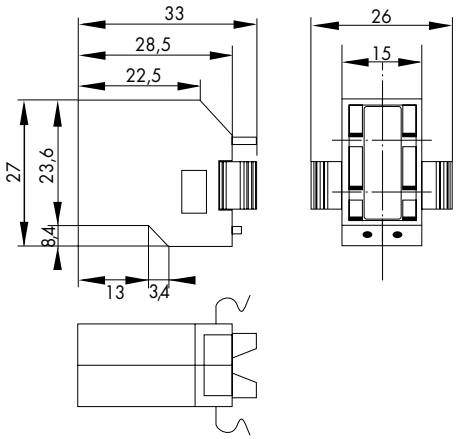
MICROSWITCH SYSTEMS ADAPTED
TO THE FOLLOWING FUSES:
- BS88 - 4 separated trip-indicator
- BS88 - 4 built-in trip-indicator

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