

Semiconductor (AC) fuses

800 VAC
gRB from 8 to 110 A
Size: 27 x 60

EXTREMELY HIGH BREAKING CAPACITY FUSES: PROTECTION OF POWER SEMICONDUCTORS
 COMPLYING WITH IEC STANDARDS 60269-1 AND 4

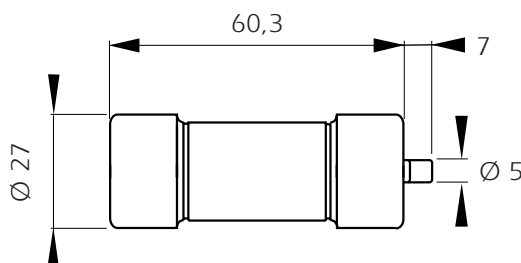
800 V VOLTAGE RATING ACCORDING TO IEC 33



- gR CLASS AS PER IEC 60269-4
- CLEARING ALL OVERLOADS
 - IMPROVED SAFETY AND PROTECTION
 - ENABLING SELECTIVE COORDINATION WITH OTHER FUSES

WITH TRIP INDICATOR

Dimensions



Unit weight
78 g

Trip indicator force: 4.5N at 0mm - 2.5N at 7mm

Main Characteristics

Voltage rating U_N (V)	Class	Current rating I_N (A)	Pre-arcing $I^2t @ 1 \text{ ms}$ I^2tp (A ² s)	Total clearing $I^2t @ U_N$ I^2tt (A ² s)	Watts loss		Tested Breaking capacity	Designation	Ref. Number	Pack	Catalog Number
					0.8 I_N	I_N					
800	gRB	8	4.25	70	1.2	2.0	175 kA @ 700V	821 CP GRB27.60 8	R221436	10	FR27GB80V 8T
		10	8.0	100	1.3	2.3		821 CP GRB27.60 10	S221437	10	FR27GB80V 10T
		12	17.0	180	1.4	2.5		821 CP GRB27.60 12	T221438	10	FR27GB80V 12T
		16	26.5	250	1.9	3.5		821 CP GRB27.60 16	V221439	10	FR27GB80V 16T
		20	38.5	350	2.4	4.0		821 CP GRB27.60 20	W221440	10	FR27GB80V 20T
		25	73.0	600	2.8	5.0	90 kA @ 800V	821 CP GRB27.60 25	X221441	10	FR27GB80V 25T
		32	130	1000	3.5	6.0		821 CP GRB27.60 32	Y221442	10	FR27GB80V 32T
		40	195	1400	4.7	8.0		821 CP GRB27.60 40	Z221443	10	FR27GB80V 40T
		50	430	2700	4.8	8.5		821 CP GRB27.60 50	A221444	10	FR27GB80V 50T
		63	965	5500	5.6	10		821 CP GRB27.60 63	B221445	10	FR27GB80V 63T
		80	1890	11000	6.4	11.5		821 CP GRB27.60 80	C221446	10	FR27GB80V 80T
		100	3480	19000	7.4	13		821 CP GRB27.60 100	D221447	10	FR27GB80V 100T
		110	4670	27000	7.7	14		821 CP GRB27.60 110	E221448	10	FR27GB80V 110T

Minimum operating voltage for trip-indicator: 20 V

See Gears and Fuse gears

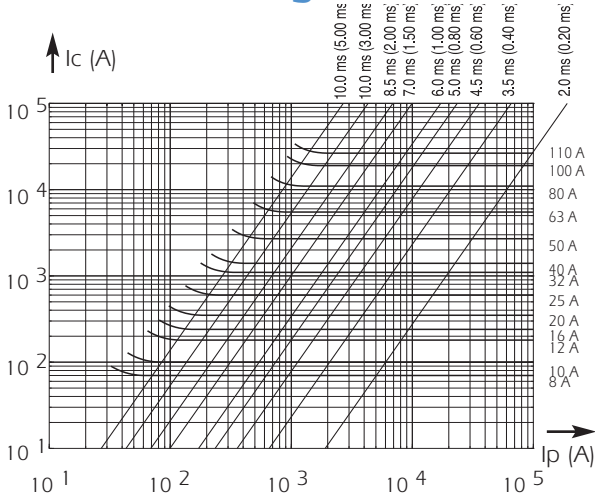


Shah & Shah Enterprise

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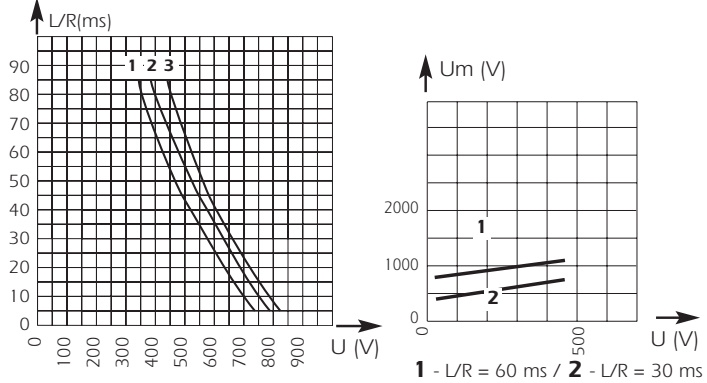


Total clearing I²t



Above: Horizontal curves show maximum values of total clearing I^2t (I^2t_t) as function of prospective current I_p . @ U_N with $\cos\phi = 0.15$. Oblique lines indicate total clearing duration T_t and associated pre-arcing duration in brackets.

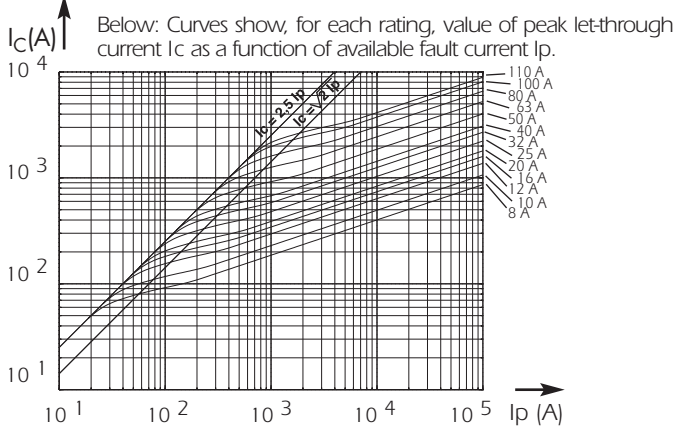
DC Application data



Above: Curves indicate permissible value of time constant L/R as a function of DC working voltage.
1 - I_N from 80 to 110 A / **2** - I_N from 25 to 63 A
3 - I_N from 8 to 12 A

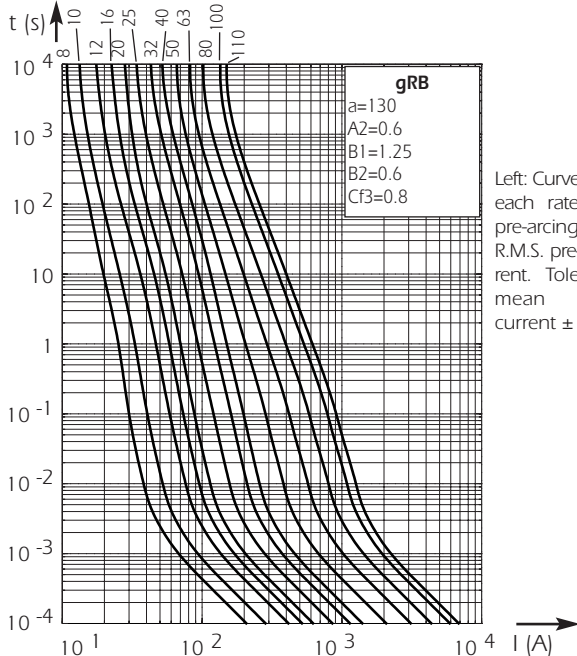
Above: Curve indicates peak arc voltage U_m which may appear across fuse terminals at working voltage U , for different values of time constant L/R of the fault circuit.

Current limitation curves



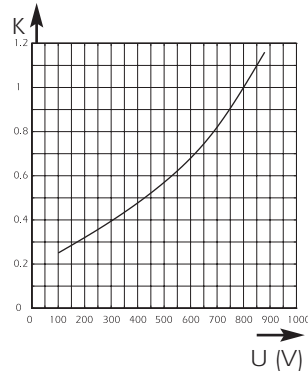
Below: Curves show, for each rating, value of peak let-through current I_c as a function of available fault current I_p .

Time vs current characteristics



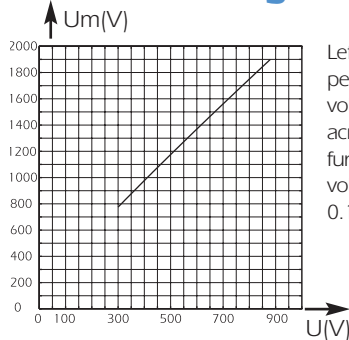
Left: Curves show, for each rated current, pre-arcing time vs. R.M.S. pre-arcing current. Tolerance for mean pre-arcing current $\pm 8\%$.

I²t corrective factor



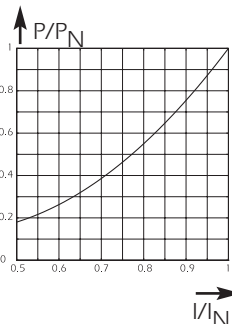
Left: Mean curve shows variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .

Peak arc voltage



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

Watts loss



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