



600 - 690 V ~
gRC - URD from 20 to 135 A
Size: 22 x 58

- EXTREMELY HIGH INTERRUPTING RATING FUSES:
PROTECTION OF SEMI-CONDUCTORS
ACCORDING TO 269.1 AND 4 IEC STANDARD
- 690 V VOLTAGE RATING (CURRENT RATING 20 TO 100 A)
ACCORDING TO IEC 33
- gR CLASS (CURRENT RATING 20 TO 100 A) ACCORDING TO
VDE 636-23
 - ALL OVERLOADS CLEARING
 - IMPROVING SAFETY AND PROTECTION
 - ENABLING SELECTIVE COORDINATION WITH ALL THE FUSES
OF THE DISTRIBUTION CIRCUITS
- gR CLASS (CURRENT RATING 125 AND 135 A) ACCORDING TO
VDE 636-23 AND IEC 269.4
- TWO MODELS ACCORDING TO NF C 63210 AND 63211
WITH OR WITHOUT TRIP-INDICATOR



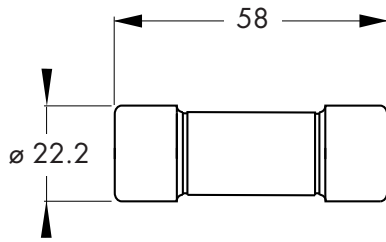
MAIN CHARACTERISTICS

Voltage rating U_N (V)	Class	Current rating I_N (A)	pre-arcing I_{2t}^p @ 1 ms I_{2t}^p (A ² s)	Total clearing I_{2t}^c @ U_N I_{2t}^c (A ² s)	Watt losses		Tested interrupting rating	Estimated interrupting rating
					0.8 I_N	I_N		
690	gRC	20	17	125	4.0	6.5	100k A @ 690 V	300k A @ 690 V
		25	39	280	4.5	7.5		
		32	72	490	5.0	9.0		
		40	118	785	5.5	10		
		50	242	1390	7.0	11.5		
		63	430	2460	8.0	13.5		
		80	970	5565	9.0	15.5		
		100	2080	11950	10	17		
600	URD	125	2900	14000	14	22	100k A @ 600 V	300k A @ 600 V
		135	3360	17700	15	25		

Minimum operating voltage for the trip-indicator: 20 V

REFERENCES

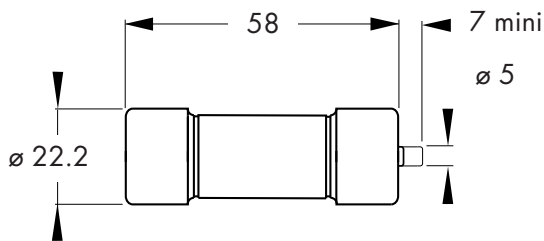
22 X 58 WITHOUT TRIP-INDICATOR



Weight: 57 g
Packaging: 10 pièces

Current rating	Code	Part #
20	6,900 CP gRC 22.58 20	C 220940
25	6,900 CP gRC 22.58 25	B 220916
32	6,900 CP gRC 22.58 32	A 220915
40	6,900 CP gRC 22.58 40	Z 220914
50	6,900 CP gRC 22.58 50	Y 220913
63	6,900 CP gRC 22.58 63	X 220912
80	6,900 CP gRC 22.58 80	Y 220821
100	6,900 CP gRC 22.58 100	W 220911

22 X 58 WITH TRIP-INDICATOR

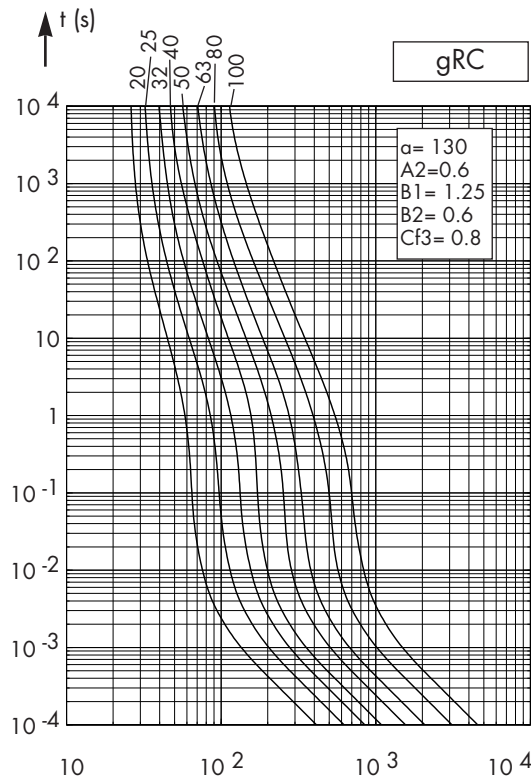


Weight: 57 g
Packaging: 10 pièces

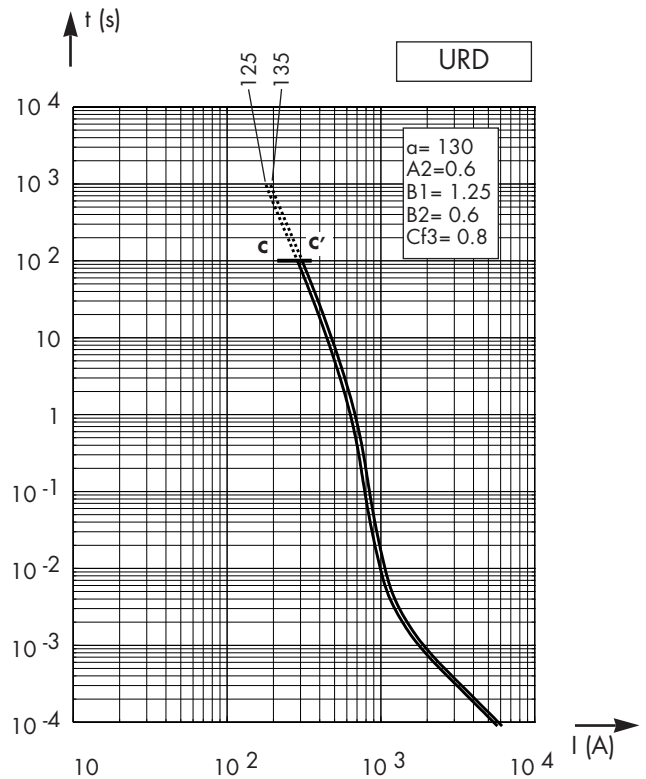
Current rating	Code	Part #
20	6,921 CP gRC 22.58 20	D 220734
25	6,921 CP gRC 22.58 25	G 220921
32	6,921 CP gRC 22.58 32	F 220920
40	6,921 CP gRC 22.58 40	E 220919
50	6,921 CP gRC 22.58 50	D 220918
63	6,921 CP gRC 22.58 63	C 220733
80	6,921 CP gRC 22.58 80	X 220820
100	6,921 CP gRC 22.58 100	C 220917
125	621 CP URD 22.58 125	A 220708
135	621 CP URD 22.58 135	B 220709

ELECTRICAL CHARACTERISTICS

Time vs current characteristics

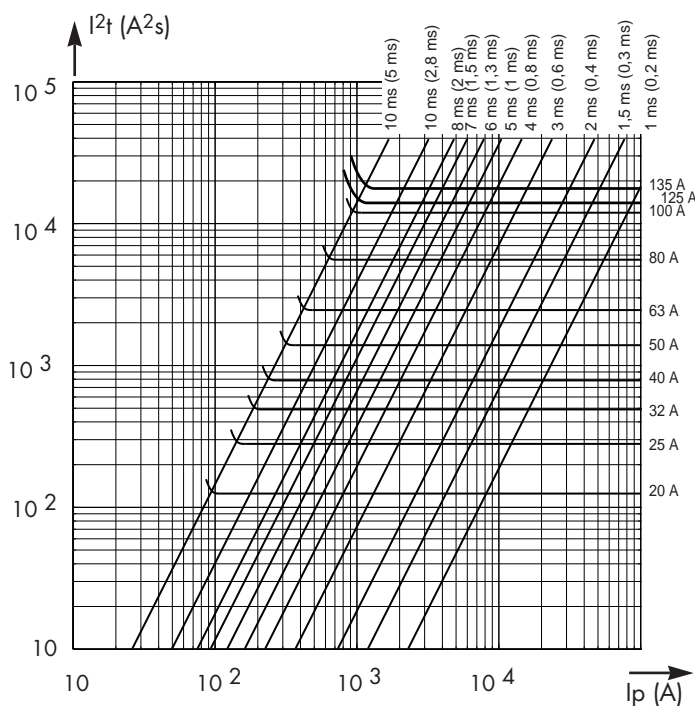


These curves indicate, for each rated current, the pre-arcing time vs. the R.M.S. pre-arcing current



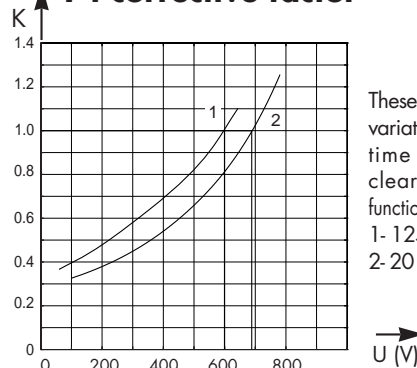
Tolerance for the mean pre-arcing current
± 9% for all current rating

Total clearing I^2t



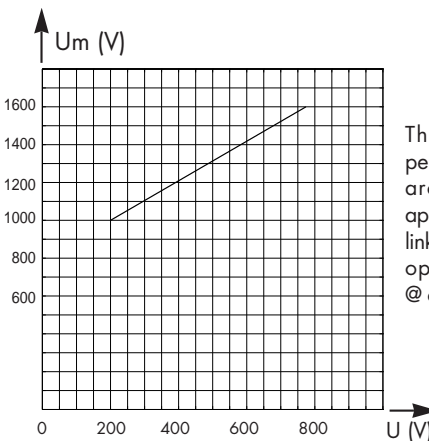
The flat curves show for each rated current the maximum values of total clearing I^2t (I^2t_i) as a function of a prospective current I_p . @ 690 V. $\cos\phi = 0.15$ (125-135 A @ 600 V. $\cos\phi = 0.15$)
The crosswise lines indicate the total clearing duration T_t and the associated pre-arcing duration in brackets.

I^2t corrective factor



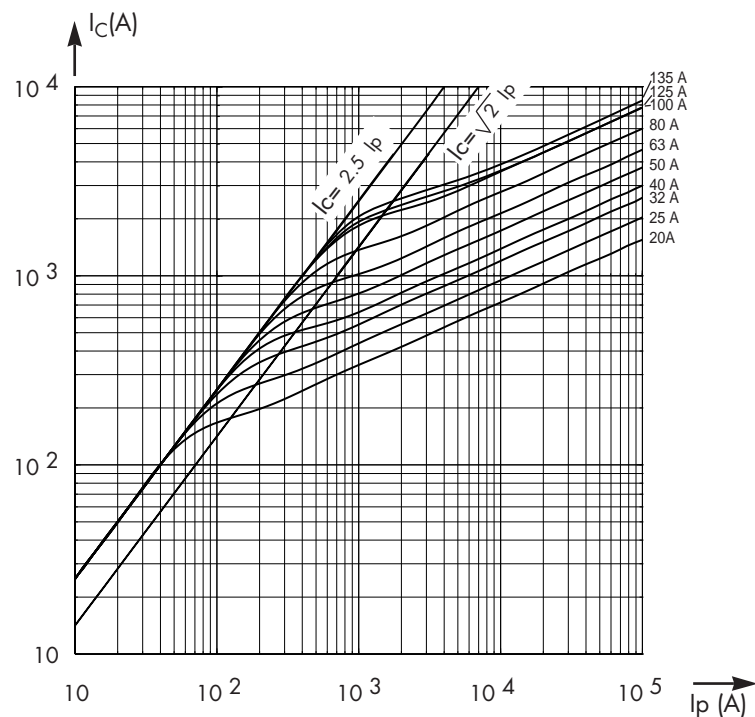
These mean curves show the variation of the total clearing time (I^2t_i) and the total clearing duration T_t as a function of operating voltage U .
1- 125 and 135 A rating
2- 20 to 100 A rating

Peak arc voltage



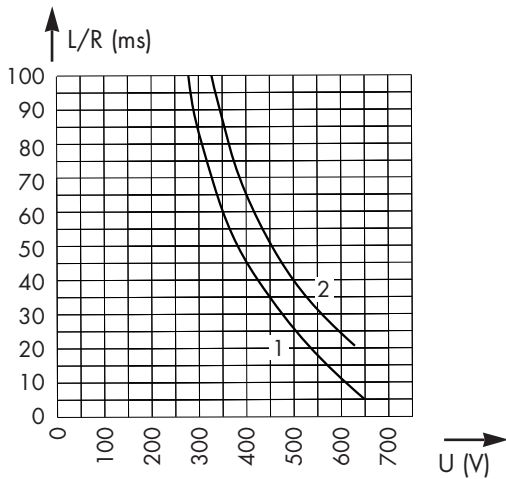
This curve show the peak value U_m of the arc voltage which appears across the fuse link as a function of the operating voltage U @ $\cos\phi = 0.15$

Current limitation curves



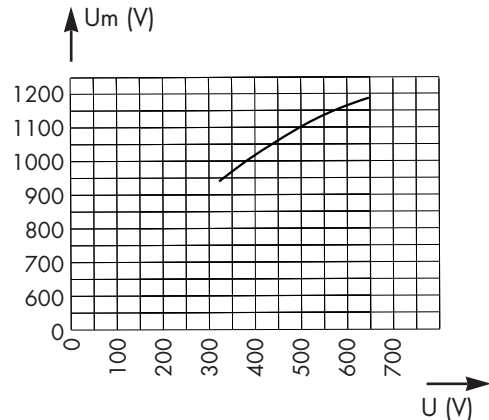
These curves show for each rating the value of the peak let-through current I_C as a function of the available fault current I_p .

D.C. Applications data



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

Curve 1: $I_p \geq 1,6 I_N$ only for fuses gRC (current rating from 12 to 100 A)
Curve 2: $I_p \geq 2,5 I_N$ for fuses gRC and URD

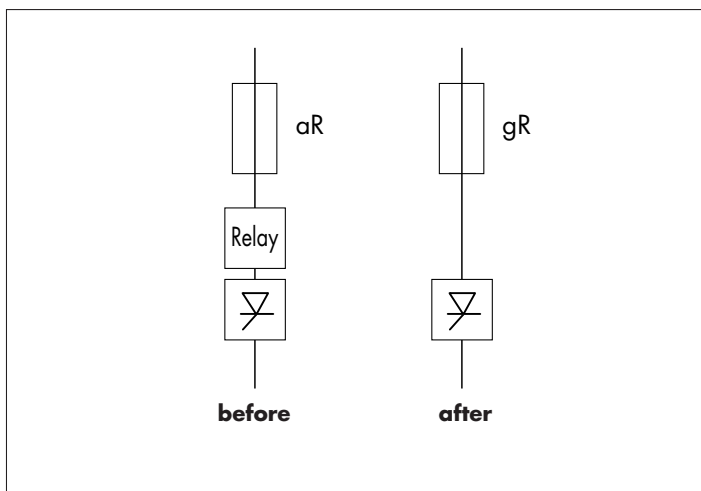


This curve indicates the peak arcing voltage U_m which may appear across the fuse terminals at working voltage U .

THE NEW gR-CLASS

THE OPTIMAL WAY TO PROTECT POWER EQUIPMENT

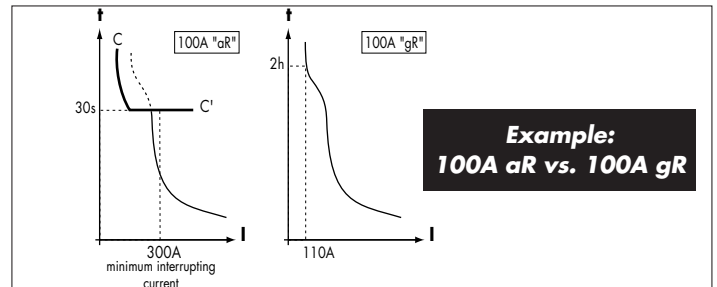
The recent development of technics enables today FERRAZ to market gR-class PROTISTOR® fuses capable of clearing themselves all types of overloads from some multiples of current rating up to very high short-circuit currents. Thanks to their improved features they solve many problems remained unsolved in power electronics equipment : how to protect cables if it's not by associating another protection device with fuse, how to protect equipment against fire hazards, how to get in power distribution a perfect selective coordination of fuses ?



aR-class vs. gR-class

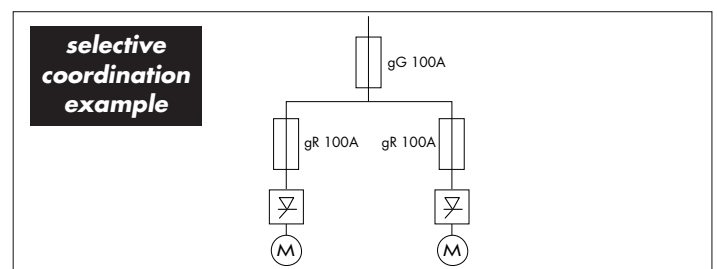
A minimum let-through current high compared with current rating is a major characteristic of aR-class fuses. aR-class fuses are supplied as UR series PROTISTOR®.

The main part of the aR-class time vs. current characteristics is CC' curve, above which using aR-class fuse is prohibited. The user must associate it with a coordinated protection device operating below CC' .



SELECTIVE COORDINATION

gR-class semiconductor fuses can be used associated with upstream gl and gG-classes low voltage power distribution fuses with the same current rating. In a "selectively coordinated" distribution installation, the fuse of the faulted branch is the only one to clear. Upstream fuses remain unaffected. Down time due to power blackouts in non-faulted branches are avoided thanks to the selective coordination



FERRAZ EXPERTISE

Design of low voltage equipment and protection of power electronics equipment should be developed with gR-class fuses. Designers can substitute very often a gR-class fuse for a aR-class one (10x38, 14x51, 22x58, PSC 000 and 17x49 DIN80 or BS 88-4). But in all cases, one must not substitute a aR-class fuse for a gR-class fuse.

Begin today with the protection of your new equipment with gR-class fuses. The application and substitution of gR-class fuses, with current ratings lower than 100 Amps. for aR-class fuses will give you right away:

- improvement in protection, improvement in safety and reliability, elimination of risks in replacement errors, reduction of mounting costs.

FERRAZ

28, rue Saint Philippe
B.P. 3025 - 69391 Lyon Cedex 03-France
Tél. 33 (0)4 72 22 66 11
Fax. 33 (0)4 72 22 67 13

Rue de Vaucanson
69720 Saint-Bonnet de Mure - France
Tél. 33 (0)4 72 22 66 11
Fax. 33 (0)4 72 22 66 12

N° Identification CEE : FR 429 555 11 217

Publication: E600074-07/96
CP3P1 / 3P1 31004 GB
RA 0124 B