

Ultra Rapid Semiconductor Protection Fuse

European Square Body Type Fuses – 700V

**German Standard DIN 80
Voltage Rating from 500V to 700V
Current Rating from 80A to 400A
aR Characteristics
Size 000**



Key Features:

- ❖ Extremely high interrupting rating fuses for the protection of power semiconductors according to 60269.1 and 4
- ❖ 690V voltage rating for currents ratings of 20A to 400A
- ❖ Non Magnetic construction
- ❖ aR Characteristics with ratings from 80 to 400A according to VDE 636-23 and IEC 60269.4
- ❖ All models comply with DIN80 standard with blown fuse indication, available with or without trip indicator.
- ❖ Microswitch system reference : MS 4L 2-5 B6+PRES

Main Characteristics:

German Standard DIN 80, aR, Size 000 with indicator, silicated.

Voltage Rating U _N (V)	Ref:	Micro Switch		Current rating I _N (A)	Pre-arcing I ² t @ 1 ms I ² t _p (A ² s)	Total Clearing I ² t @ U _N I ² t _t (A ² s)	Power Losses		Tested Interrupting rating
							0.8I _N	I _N	
690V	070GQCA0080F	N		80	390	2500	11.6	21	200kA @ 690V
	070GQCA0100F	N		100	690	4200	12.7	23	
	070GQCA0125F	N		125	1300	8900	14.3	26	
	070GQCA0160F	N		160	2700	16000	17	31	
	070GQCA0200F	N		200	5250	31500	19.8	36	
	070GQCA0250F	N		250	9900	52000	24.8	45	
690V +6%	070GQCA0315F	N		315	15500	82000	31.9	58	
500V	050GQCA0350F	N		350	22400	110000	31.9	58	120Ka @ 500V
	050GQCA0400F	N		400	33200	160000	36.3	66	

Note: Minimum operating voltage for integrated trip indicator = 20V

German Standard DIN 80, aR, Size 000 without indicator, silicated.

Voltage Rating U _N (V)	Ref:	MC		Current rating I _N (A)	Pre-arcing I ² t @ 1 ms I ² t _p (A ² s)	Total Clearing I ² t @ U _N I ² t _t (A ² s)	Power Losses		Tested Interrupting rating
							0.8I _N	I _N	
690V	070GQCA0080N	N		80	390	2500	11.6	21	200kA @ 690V
	070GQCA0100N	N		100	690	4200	12.7	23	
	070GQCA0125N	N		125	1300	8900	14.3	26	
	070GQCA0160N	N		160	2700	16000	17.0	31	
	070GQCA0200N	N		200	5250	31500	19.8	36	
	070GQCA0250N	N		250	9900	52000	24.8	45	
690V +6%	070GQCA0315N	N		315	15500	82000	31.9	58	
500V	050GQCA0350N	N		350	22400	110000	31.9	58	120Ka @ 500V
	050GQCA0400N	N		400	33200	160000	36.3	66	

German Standard DIN 80, aR, Size 000 Trip (Tag) Indicator, micro switch capable, non-silicated.

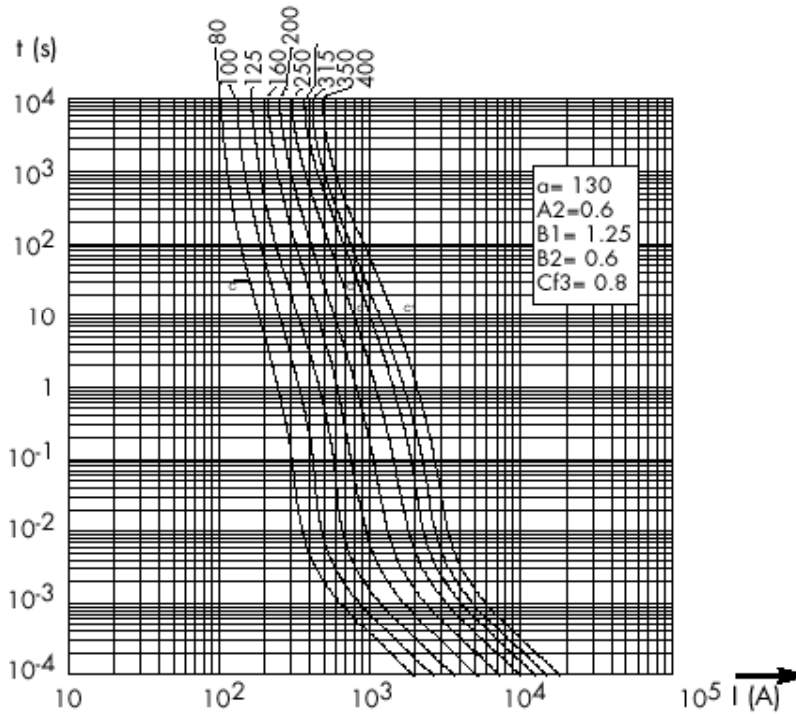
Voltage Rating U _N (V)	Ref:	MC		Current rating I _N (A)	Pre-arcing I ² t @ 1 ms I ² t _p (A ² s)	Total Clearing I ² t @ U _N I ² t _t (A ² s)	Watt Losses		Tested Interrupting rating
							0.8I _N	I _N	
690V	070GTCA0080F	Y		80	390	2500	11.6	21	200kA @ 660V
	070GTCA0100F	Y		100	690	4200	12.7	23	
	070GTCA0125F	Y		125	1300	8900	14.3	26	
	070GTCA0160F	Y		160	2700	16000	17	31	
	070GTCA0200F	Y		200	5250	31500	19.8	36	
	070GTCA0250F	Y		250	9900	52000	24.8	45	
690V +6%	070GTCA0315F	Y		315	15500	82000	31.9	58	
500V	050GTCA0350F	Y		350	22400	110000	31.9	58	120Ka @ 500V
	050GTCA0400F	Y		400	33200	160000	36.3	66	

Notes: Minimum operating voltage for integrated trip indicator = 20V
 DIN80 aR Size 000 - 070GTCAxxxxF with blow fuse trip indicator may be adapted to use Micro switch ref: MS 4L 2-5 B6

Electrical Characteristics:

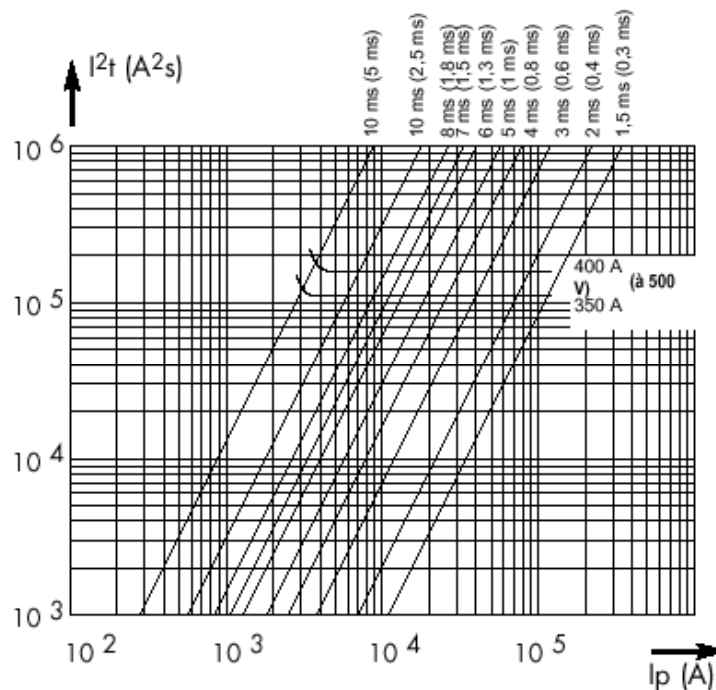
Times vs current characteristics:

The curve below shows, for each rating, value of peak let-through current I_c as a function of available fault current I_p . Tolerance for mean pre-arcing current $\pm 8\%$.

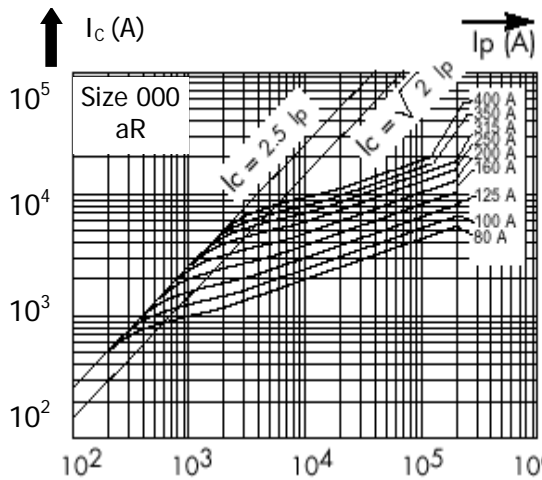


Total Clearing I^2t

The horizontal curves show, for each rated current, values of total clearing $I^2t(I^2t_c)$ as a function of prospective current I_p @ U_N with $\cos\phi = 0.15$. Oblique lines indicate total clearing duration T_t , with associated pre-arcing duration in brackets.

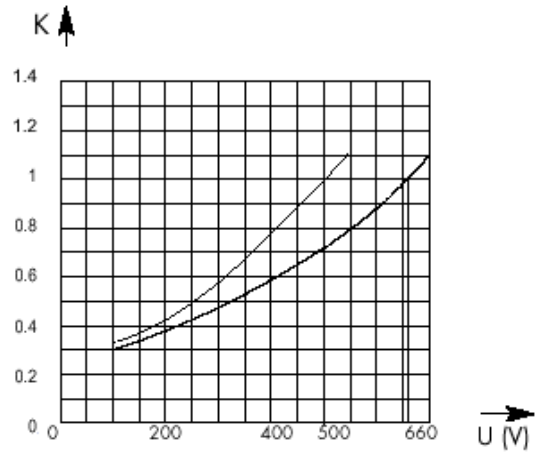


Current Limitation Curve



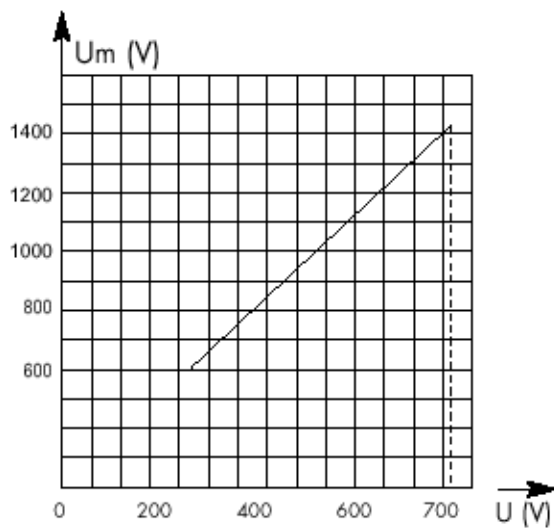
Curves show for each current rating value of peak let-through current I_c as a function of available fault current I_p

I^2t Corrective Factor



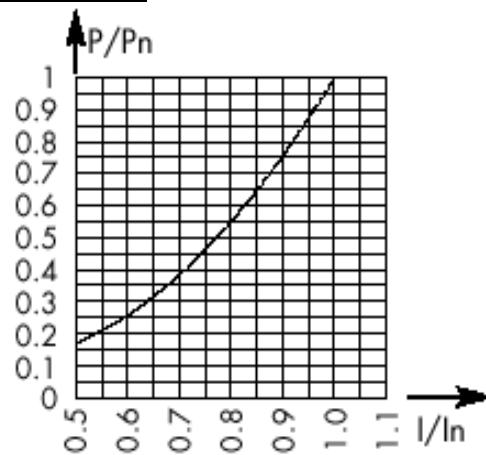
Mean curves show variation of total clearing time (I^2t_t) and total clearing duration T_t as a function of operating voltage U .

Peak Arc Voltage



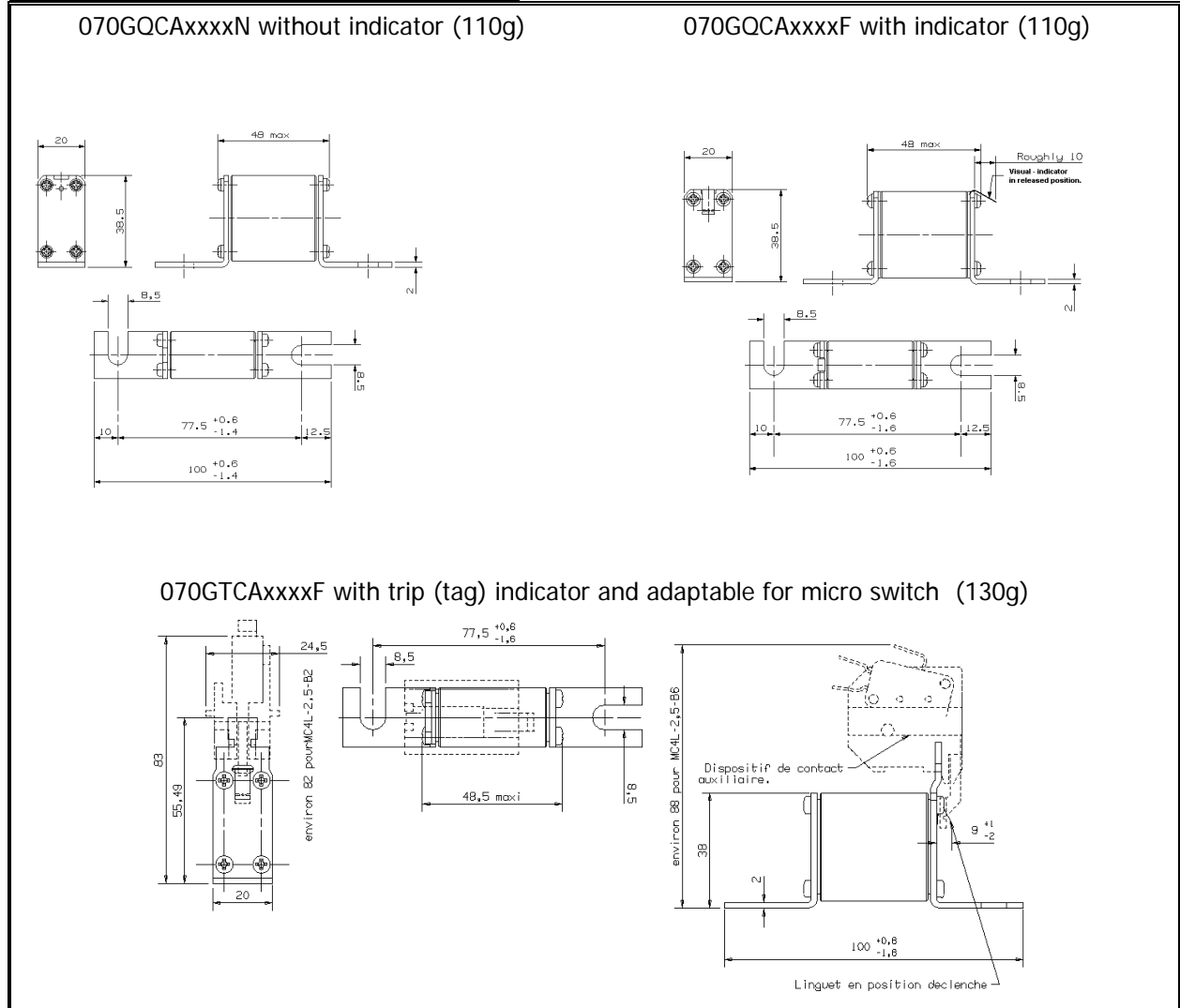
Curve shows peak value U_m of arc voltage which appears across fuse link as a function of the operating voltage U @ $\cos \varphi = 0.15$

Power Loss



Curve enables computation of power losses P for a I_N -rated fuse as a function of RMS current I (as a multiple of I_N for steady state operation).

Outline Drawing & Ordering Information:



ORDERING INFORMATION

(Please quote code as below)

Voltage Rating (V)	Type	Size	80mm Fixing	Current Rating (A)	Indicator
500 – 700	GQ / GT	C	A	0080 - 0400	F / N

Order code: e.g. 070GTCA0080F = 700V, German Standard, DIN 80, 80A with trip (tag) indicator.

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