

# General Purpose Fuses



French Ferrule

## gG, aM



### DOMESTIC AND INDUSTRIAL CYLINDRICAL FUSE-LINKS

Ferraz Shawmut gF, gI-gG and aM fuse-links cover a wide range of physical sizes and ampere ratings for 250, 380\*, 400, 500, and 660\* volts AC. gF fuse-links are for domestic use. gI-gG and aM fuse-links are for industrial applications. Most ratings are available with an optional indicator. All industrial fuse-links have the option of a built-in striker. All cylindrical fuse-links have ceramic bodies and silver-plated ferrules.

\* Fuse-links marked 380V (gF) and 660V (gI-gG-aM) will be re-marked (and safely used at) 400V AC and 690V AC in compliance with changes in IEC Standard 269, but should not be used above 418V AC or 726V AC.

### gF

#### FULL RANGE PROTECTION

- ✓ 7 physical sizes from 6.3 x 23mm to 10.3 x 38mm
- ✓ 250 and 380 Volt ratings - 0.5A through 32A
- ✓ Most ratings available with indicator
- ✓ Meet IEC, NFC, UNE and British standards
- ✓ See residential fuse-links, Special Purpose section

### gG

#### FULL RANGE PROTECTION

- ✓ 4 physical sizes from 8 x 31mm to 22 x 58mm
- ✓ 400, 500 and 690 Volt ratings - 0.5A through 125A
- ✓ Most ratings available with indicator
- ✓ Meet IEC, NFC and UNE standards
- ✓ Approved by Lloyds Register of Shipping and Bureau Veritas

### gG

#### FULL RANGE PROTECTION

- ✓ **Fuse-links with striker**
- ✓ 2 sizes - 14 x 51mm and 22 x 58mm
- ✓ 400, 500 and 690 Volt ratings - 4A through 125A
- ✓ All ratings include striker
- ✓ Meet IEC, NFC and UNE standards
- ✓ Approved by Lloyds Register of Shipping and Bureau Veritas

### aM

#### SHORT CIRCUIT PROTECTION

- ✓ 4 physical sizes from 8 x 31mm to 22 x 58mm
- ✓ 400, 500 and 690 Volt ratings - 0.16A through 125A
- ✓ Most ratings available with indicator
- ✓ Meet IEC, NFC and UNE standards
- ✓ Approved by Lloyds Register of Shipping and Bureau Veritas

### aM

#### SHORT CIRCUIT PROTECTION

- ✓ **Fuse-links with striker**
- ✓ 2 sizes - 14 x 51mm and 22 x 58mm
- ✓ 400, 500 and 690 Volt ratings - 2A through 125A
- ✓ All ratings include striker
- ✓ Meet IEC, NFC and UNE standards
- ✓ Approved by Lloyds Register of Shipping and Bureau Veritas

# General Purpose Fuses

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gl, gG

## Ratings – gl-gG (Optional Blown-Fuse Indicator)

SIZE (mm x mm)	RATED In CURRENT (A)	RATED VOLTAGE	CATALOG NUMBER		REFERENCE NUMBER		INTERRUPTING RATING (A)	STANDARD PACK/CTN.				
			w/o Indicator	w/Indicator	w/o Indicator	w/Indicator						
8 x 31	0.5	400V	15009	-	P218191	-	20kA - 400V	10				
	1		15011	-	C218709	-						
	2		15013	15213	Q219227	B222204						
	4		15019	15219	W222958	X222959						
	6		15023	15223	A211025	V201291						
	8		15027	15227	B213096	B211026						
	10		15031	15231	A214613	A212060						
	12		15033	15233	R216146	C213097						
	16		15035	15235	P216650	Y214105						
	20		15037	15237	F217677	J215127						
	25		15039	15239	D218710	S216147						
	10 X 38		0.5	500V	16009	-			C211027	-	120kA - 500V	10
			1		16011	-			B212061	-		
2		16013	16213		D213098	S216653						
4		16019	16219		X213598	E217170						
6		16023	16223		K215128	T218195						
8		16027	16227		D217169	V219231						
10		16031	16231		S218194	E222207						
12		16033	16233		W219761	H200751						
16		16035	16235		G200750	H201809						
20		16037	16237		D211028	X211551						
25		16039	16239		E213099	W212585						
32		400V	16043		16243	A214107	Z213600	120kA - 400V				
14 X 51		1	690V	17011	-	K218716	-	80kA - 690V	10			
	2	17013		17213	Y219234	C201298						
	4	17019		17219	A219765	H211032						
	6	17023		17223	H222210	G212066						
	8	17027		17227	D222965	K213104						
	10	17031		17231	L200754	H214620						
	12	17033		17233	L201812	R215640						
	16	17035		17235	A211554	X216657						
	20	17037		17237	Z212588	N217684						
	25	17039		17239	C213603	M218718						
	32	500V		17043	17243	W216656	C219767			120kA - 500V		
	40	500V		17047	17247	X218198	F222967			120kA - 500V		
	50	400V	17051	17251	Z219235	D201299	120kA - 400V					
22 x 58	2	690V	18013	-	F219241	-	80kA - 690V	10				
	4		18019	18219	H219772	Q211039						
	6		18023	18223	P222216	P212073						
	8		18027	18227	L222972	R213110						
	10		18031	18231	T200761	N214119						
	12		18033	18233	J201304	Y215140						
	16		18035	18235	S201818	D216157						
	20		18037	18237	P211038	R217181						
	25		18039	18239	N212072	F218206						
	32		18043	18243	F212594	H219243						
	40		18047	18247	J213609	R222218						
	50		18051	18251	P214626	W200763						
	63	18055	18255	Y215646	V201820							
80	18059	18259	Q217180	K211563								
100	500V	18063	18263	E218205	H212596	120kA - 500V						
125	400V	18065	18265	J219773	L213611	120kA - 400V						



X211551



M218718



K211563

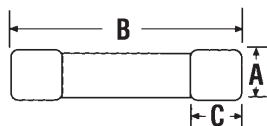
### Blown-Fuse Indicator



BEFORE



AFTER



### Dimensions

FUSE SIZE	A	B	C
8 x 31	8.5	31.5	6.3
10 x 38	10.3	38	10.5
14 x 51	14.3	51	13.8
22 x 58	22.2	58	16.2

# General Purpose Fuses



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## gG with striker

### Ratings – gI-gG with Striker

SIZE (mm x mm)	RATED CURRENT I <sub>n</sub> (A)	RATED VOLTAGE	CATALOG NUMBER	REFERENCE NUMBER	INTERRUPTING RATING (A)	STANDARD PACK/CTN.				
14 X 51	2	500V	17413	J211033	120kA - 500V	10				
	4		17419	H212067						
	6		17423	G214113						
	8		17427	R215134						
	10		17431	Z216153						
	12		17433	L217176						
	16		17435	Z218200						
	20		17437	B219237						
	25		17439	L222213						
	32		17443	P200757						
	40		17447	P201815						
	50		17451	D211557						
	22 X 58		4	690V			18419	R214628	80kA - 690V	10
6		18423	A215648							
8		18427	F216665							
10		18431	W217691							
12		18433	W218726							
16		18435	L219775							
20		18437	P222975							
25		18439	M201307							
32		18443	S211041							
40		18447	R212075							
50		18451	M213612							
63		500V	18455		S214629	120kA - 500V				
80		↓	18459		F216159					
100		↓	18463		T217183					
NEUTRAL		125	400V		18465	H218208	120kA - 400V	10		
		10 x 38			19100	R211569				
		10 x 38			19200	M212600J				
	10 x 38		19300	R213616						



P201815



R212075

### Dimensions

FUSE SIZE	A	B	C	D	E
14 x 51	14.3	51	13.8	7.5	3.8
22 x 58	22.2	58	16.2	7.5	3.8

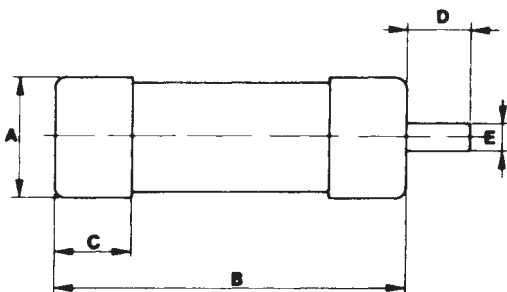
### Striker



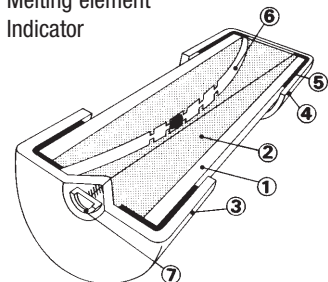
BEFORE



AFTER



- 1 Ceramic body
- 2 Sand
- 3 Indicator contact
- 4 Lower contact
- 5 Contact ring
- 6 Melting element
- 7 Indicator



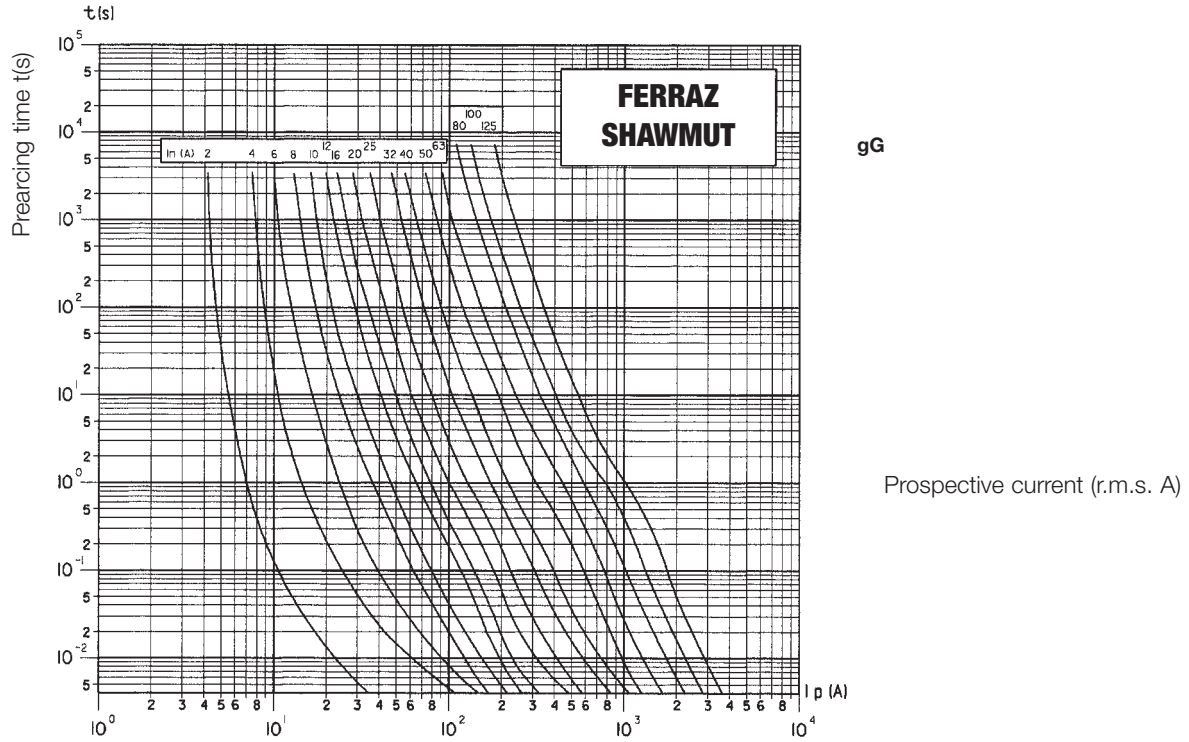
# General Purpose Fuses



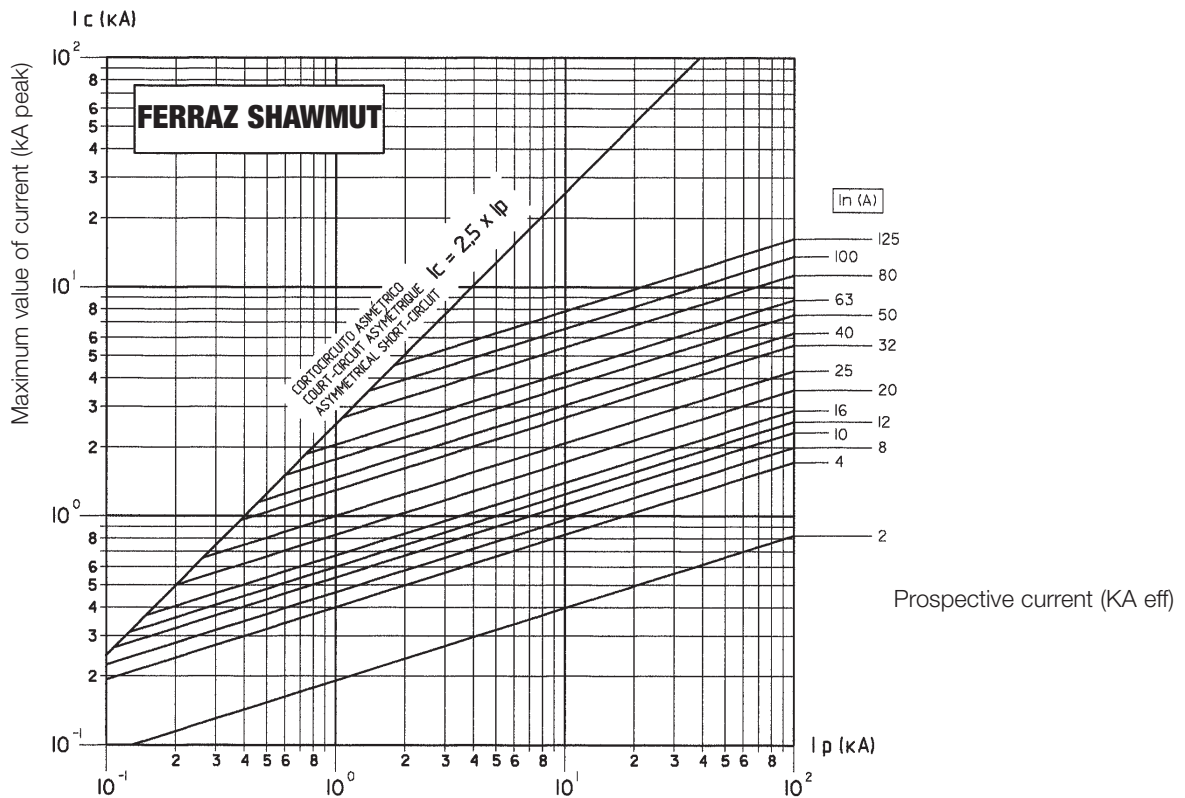
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## Characteristics t-I



## Cut-off characteristics



# General Purpose Fuses



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Characteristics  $I^2t$

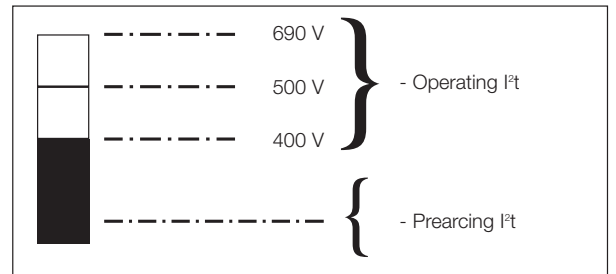
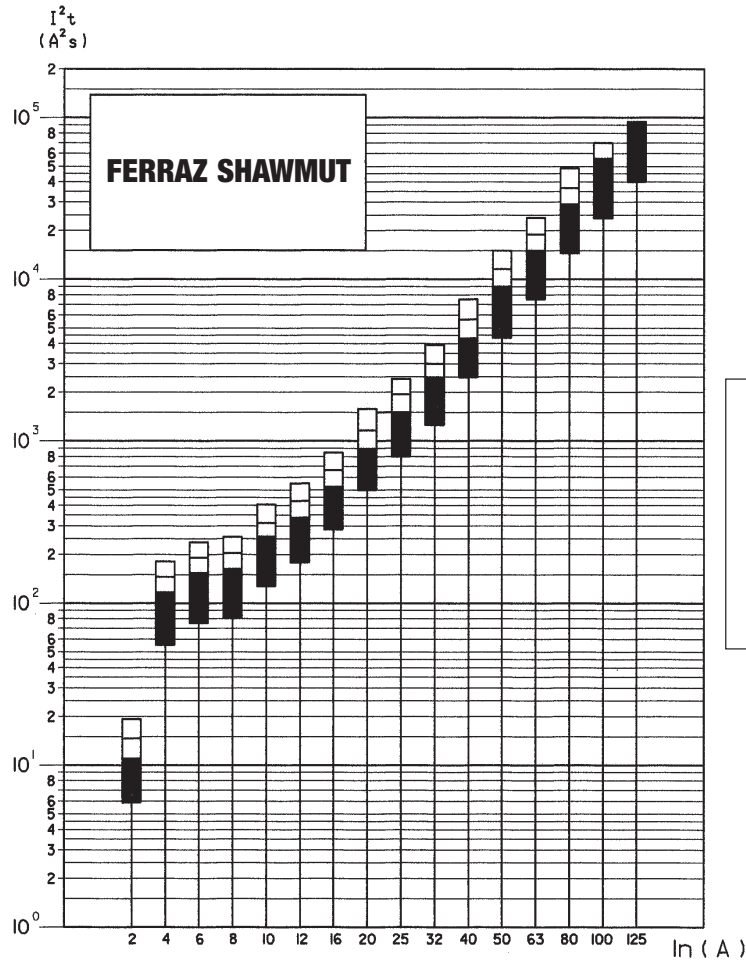
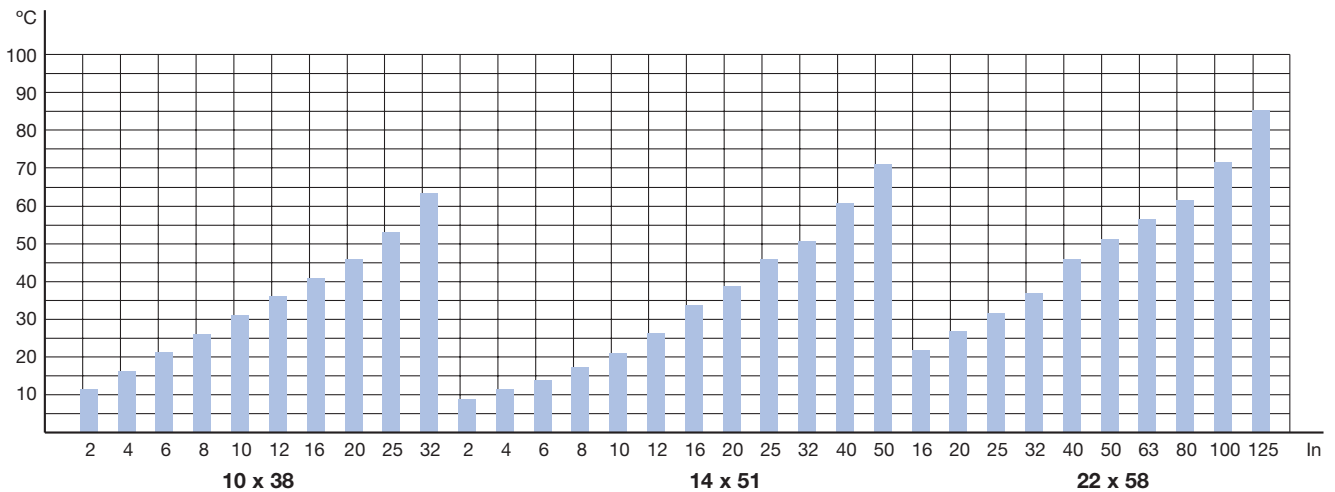


Table temperature increase (testing in superior contact)



# General Purpose Fuses



## gG

Power loss table

In	Size		
	10 x 38	14 x 51	22 x 58
0,5 A	2 W		
1 A	2,5 W	3,4 W	
2 A	0,70 W	1 W	1,20 W
4 A	0,80 W	1,10 W	1,30 W
6 A	0,90 W	1,20 W	1,40 W
8 A	1,10 W	1,50 W	1,65 W
10 A	1,35 W	1,80 W	2 W
12 A	1,55 W	2,10 W	2,40 W
16 A	1,90 W	2,55 W	3 W
20 A	2,30 W	3 W	3,40 W
25 A	2,80 W	3,50 W	3,80 W
32 A	3 W	3,80 W	4,30 W
40 A		4,40 W	5,10 W
50 A		4,7 W	5,50 W
63 A			6,70 W
80 A			8 W
100 A			9 W
125 A			12,5 W

IEC 269-2-1 NFC 63.213 UNE 21.103-2-1	10 x 38	14 x 51	22 x 58
	25 A	40 A	100 A
	3 W	5 W	9,5 W

Table of maximum longitudes of network in function of In and conductor section

### gG CLASS FUSES

Copper conductor section (mm <sup>2</sup> )	RATED CURRENT (In) OF gG FUSES (in A)									
	16	20	25	32	40	50	63	80	100	125
1,5	99/113	86/87	40/59	21/29	13/16	7/9				
2,5		134	110/122	67/84	41/51	25/33	13/20	8/11		
4			183	139	108/119	67/84	46/58	24/32	14/17	7,3/10
6				214	165	139	94/113	55/70	33/41	20/27
10					275	226	172	130	90/108	57/70
16							283	217	168	128
25								336	257	197
35									367	283
50										379

\* 99/118: Fusible cylindrique gG 1A 10x38mm 500V sans voyant  
- 99; Cond. PVC / 118; Cond. PRC