

# General Purpose Fuses IEC



## Ferrule Fuses aM & gG 400V to 690V with/without Striker aM & gG 8x32, 10x38, 14x51, 22x58

### Residential and Industrial Cylindrical Fuse-links

Ferraz Shawmut gF/gG-gG and aM fuse-links cover a wide range of physical sizes and ampere ratings for 250, 380\*/ 400, 500, and 660\* 690volts AC. gF/gG fuse-links are for residential use. 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/gG) and 660V (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/gG

##### Residential Full Range Protection

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

#### gG

##### Full Range Protection

- 4 physical sizes from 8 x 31mm to 22 x 58 mm
- 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 58 mm
- 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

##### Fuse-links with striker

- 4 physical sizes from 8 x 31 mm to 22 x 58 mm
- 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
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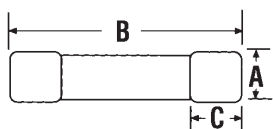
## Ferrule Fuses aM 400V to 690V with/without Striker aM 8x32, 10x38, 14x51, 22x58

### Ratings - aM (Optional Blown-Fuse Indicator)

Size (mm x mm)	Rated In Current (A)	Rated Voltage	Previous Reference		Reference Number		Breaking Capacity	Catalog Number	
			w/o Indicator	w Indicator	w/o Indicator	w Indicator		w/o Indicator	w Indicator
8 x 31	400V	400V	15511	-	C217168	-	20kA - 400V	FR8AM40V1	
			15513	-	R218193	-		FR8AM40V2	
			15519	-	S219229	-		FR8AM40V4	
			15523	-	C222205	-		FR8AM40V6	
			15527	-	F200749	-		FR8AM40V8	
			15531	-	W201292	-		FR8AM40V10	
10 X 38	500V	500V	16503	-	E214617	-	120kA - 500V	FR10AM50V0.16	
			16507	-	M215130	-		FR10AM50V0.25	
			16509	-	W216150	-		FR10AM50V0.5	
			16511	16711	F217171	X219233		FR10AM50V1	FR10AM50V11
			16513	16713	H218714	G222209		FR10AM50V2	FR10AM50V21
			16519	16719	W219232	K200753		FR10AM50V4	FR10AM50V41
	400V	400V	16523	16723	F222208	K201811	FR10AM50V6	FR10AM50V61	
			16527	16727	Z201295	Z211553	FR10AM50V10	FR10AM50V101	
			16531	16731	Y211552	H213102	FR10AM50V10	FR10AM50V101	
			16533	16733	A213601	D214110	FR10AM50V12	FR10AM50V121	
			16535	16735	F214618	P215132	FR10AM50V16	FR10AM50V161	
			16537	16737	X216151	V216655	FR10AM50V20	FR10AM50V201	
14 X 51	690V	690V	16539	16739	G217172	L217682	80kA - 690V	FR10AM50V25	FR10AM50V251
			16543	-	J218715	-		FR10AM50V32	
			17507	-	B212590	-		FR14AM69V0.25	
			17509	-	L213105	-		FR14AM69V0.5	
			17511	17711	E213605	C212591		FR14AM69V1	FR14AM69V11
			17513	17713	H214114	M213106		FR14AM69V2	FR14AM69V21
	500V	500V	17519	17719	K214622	J214115	FR14AM69V4	FR14AM69V41	
			17523	17723	S215135	T215136	FR14AM69V6	FR14AM69V61	
			17527	17727	T215642	A216660	FR14AM69V8	FR14AM69V81	
			17531	17731	Z216659	R217687	FR14AM69V10	FR14AM69V101	
			17533	17733	M217177	Q218721	FR14AM69V12	FR14AM69V121	
			17535	17735	Q217686	F219770	FR14AM69V16	FR14AM69V161	
	400V	400V	17537	17737	P218720	R200759	FR14AM69V20	FR14AM69V201	
			17539	17739	E219769	Q201816	FR14AM69V25	FR14AM69V251	
			17543	17743	M222214	F211559	FR14AM69V32	FR14AM69V321	
			17547	17747	Q200758	D212592	FR14AM69V40	FR14AM69V401	
			17549	17749	L211035	G213607	FR14AM69V45	FR14AM69V451	
			17551	17751	E211558	M214624	FR14AM69V50	FR14AM69V501	
22 x 58	690V	690V	18511	-	M219776	-	80kA - 690V	FR22AM69V1	
			18513	-	T222220	-		FR22AM69V2	
			18519	18719	Q222976	L219246		FR22AM69V4	FR22AM69V41
			18523	18723	Y200765	V222221		FR22AM69V6	FR22AM69V61
			18527	18727	N201308	Y201823		FR22AM69V8	FR22AM69V81
			18531	18731	X201822	N211566		FR22AM69V10	FR22AM69V101
	500V	500V	18533	18731	T211042	K212598	FR22AM69V12	FR22AM69V121	
			18535	18735	M211565	P213614	FR22AM69V16	FR22AM69V161	
			18537	18737	S212076	V214631	FR22AM69V20	FR22AM69V201	
			18539	18739	J212597	D215651	FR22AM69V25	FR22AM69V251	
			18543	18743	V213113	J216668	FR22AM69V32	FR22AM69V321	
			18547	18747	N213613	Z217694	FR22AM69V40	FR22AM69V401	
400V	400V	18551	18751	R214122	P219778	FR22AM69V50	FR22AM69V501		
		18555	18755	C215650	Z200766	FR22AM69V63	FR22AM69V631		
		18559	18759	H216667	P211567	FR22AM69V80	FR22AM69V801		
		18563	18763	Y217693	L212599	FR22AM69V100	FR22AM69V1001		
		18565	18765	J218209	W214632	FR22AM69V125	FR22AM69V1251		

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### Blown-Fuse Indicator



### 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

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Ferrule Fuses  
aM 400V to 690V  
with/without Striker  
aM 8x32, 10x38, 14x51, 22x58

## Ratings - aM with Striker



X215645



K216669

Size (mm x mm)	Rated Current In (A)	Rated Voltage	Previous Reference	Reference Number	Breaking Capacity	Catalog Number		
14 X 51	1	500V	17911	W215644	120kA 500V	FR14AM69V1P		
	2		17913	B216661		FR14AM69V2P		
	4		17919	C218203		FR14AM69V4P		
	6		17923	E219240		FR14AM69V6P		
	8		17927	N222215		FR14AM69V8P		
	10		17931	S200760		FR14AM69V10P		
	12		17933	R201817		FR14AM69V12P		
	16		17935	G211560		FR14AM69V16P		
	20		17937	E212593		FR14AM69V20P		
	25		17939	H213608		FR14AM69V25P		
	32		17943	N214625		FR14AM69V32P		
	40		17947	X215645		FR14AM69V40P		
	45		17949	C216662		FR14AM69V45P		
	50	400V	17951	D218204	120kA - 400V	FR14AM69V50P		
22 X 58	1	690V	18911	E215652	80kA - 690V	FR22AM69V1P		
	2		18913	J216162		FR22AM69V2P		
	4		18919	A217695		FR22AM69V4P		
	6		18923	Y218728		FR22AM69V6P		
	8		18927	Q219779		FR22AM69V8P		
	10		18931	S222978		FR22AM69V10P		
	12		18933	R201311		FR22AM69V12P		
	16		18935	W211044		FR22AM69V16P		
	20		18937	W212079		FR22AM69V20P		
	25		18939	Q213615		FR22AM69V25P		
	32		18943	X214633		FR22AM69V32P		
	40		18947	F215653		FR22AM69V40P		
	50		18951	K216669		FR22AM69V50P		
	63		18955	B217696		FR22AM69V63P		
	80		500V	18959		Z218729	120kA - 500V	FR22AM69V80P
	100		18963	T222979		FR22AM69V100P		
	125	400V	18965	S201312	120kA - 400V	FR22AM69V125P		

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## 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

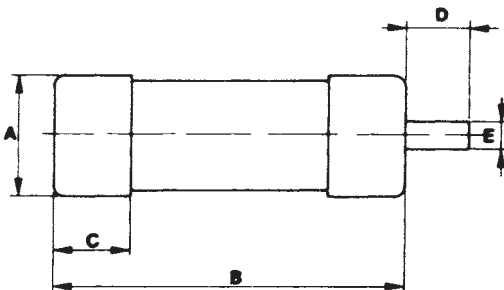
## Striker



BEFORE



AFTER

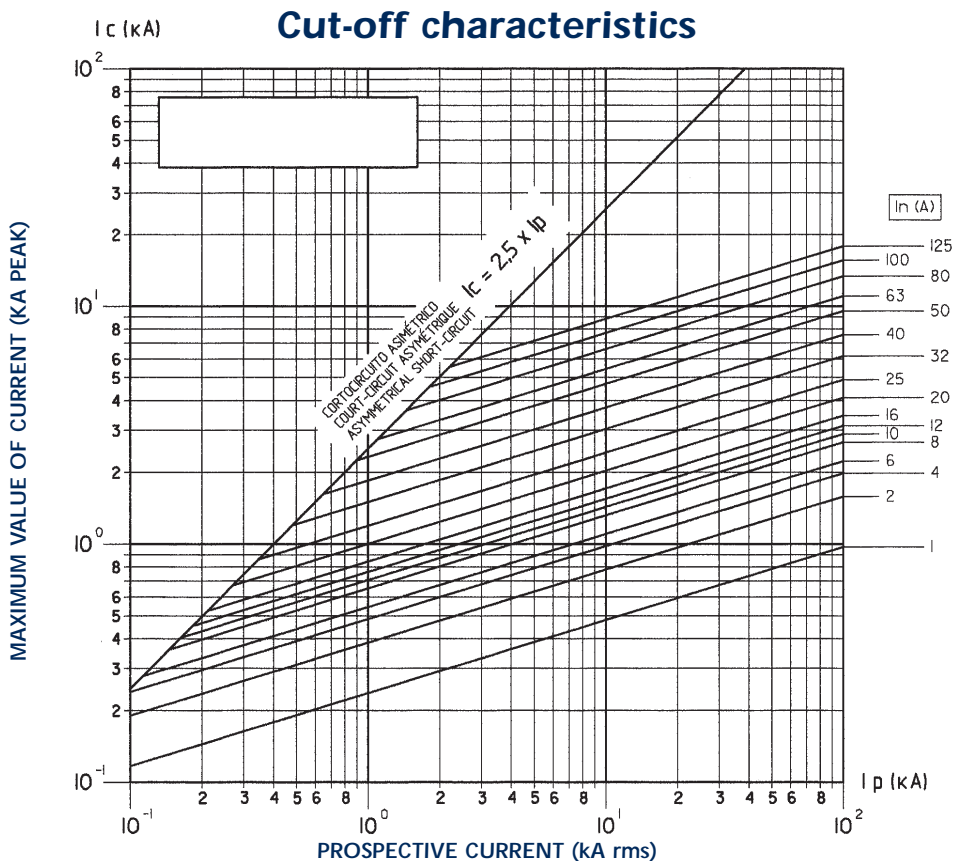
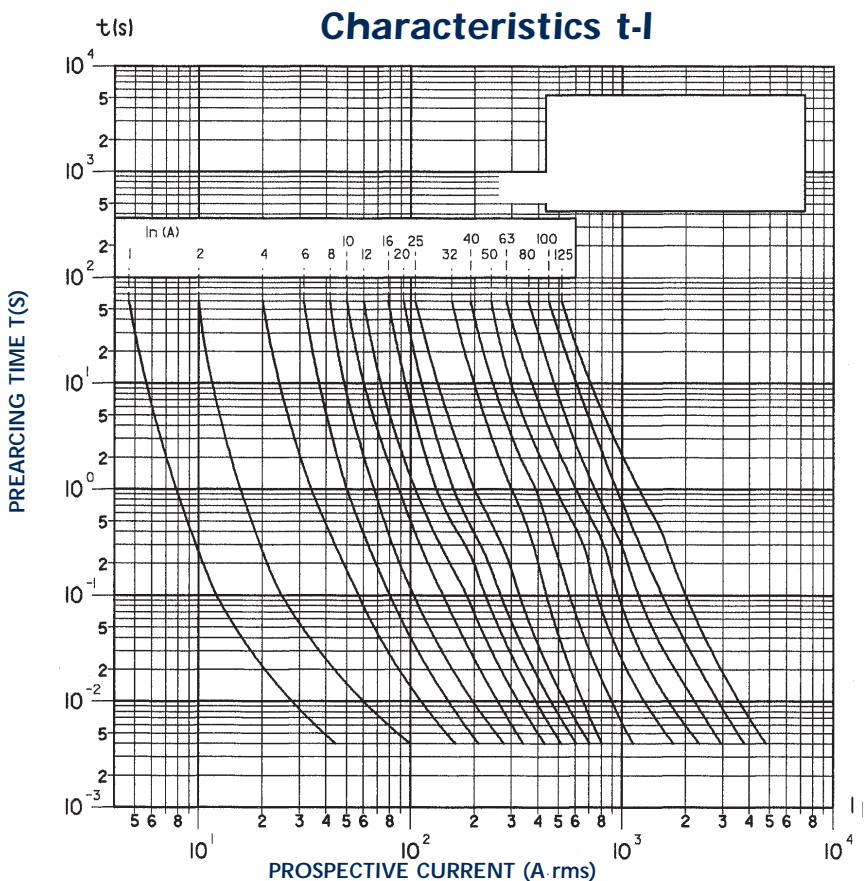


## Neutral

Size (mm x mm)	Previous Reference	Reference Number	Standard Pack/CTN	Catalog Number
10 x 38	19100	R211569		FRN1038
14 x 51	19200	M212600	10	FRN1451
22 x 58	19300	R213616		FRN2258

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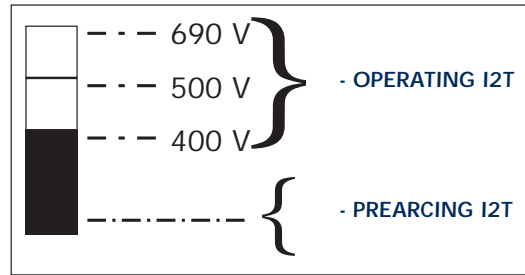
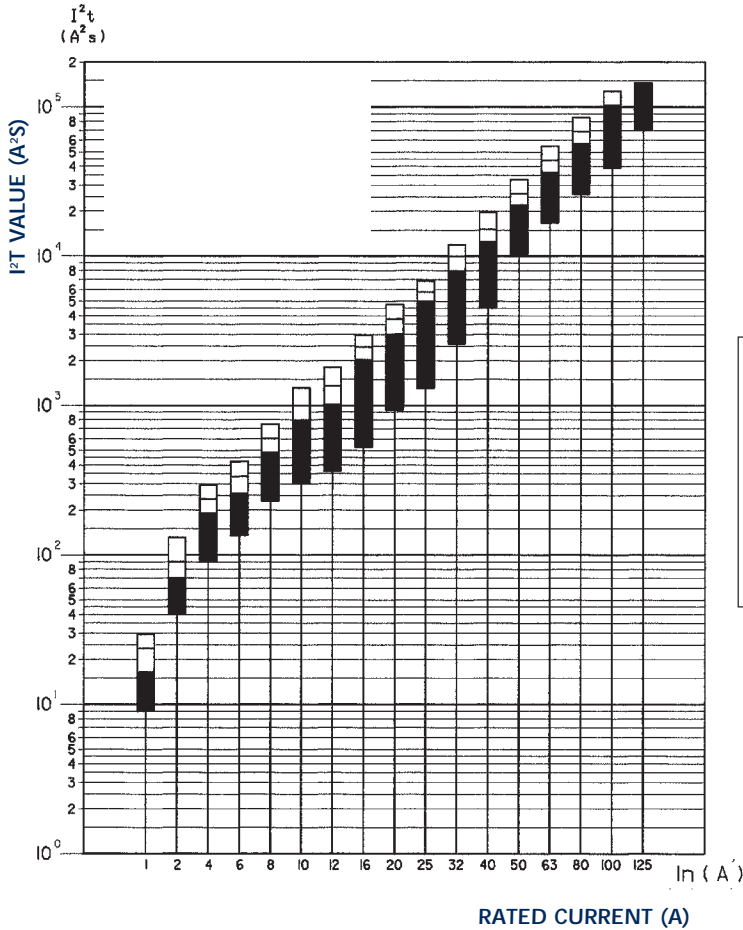
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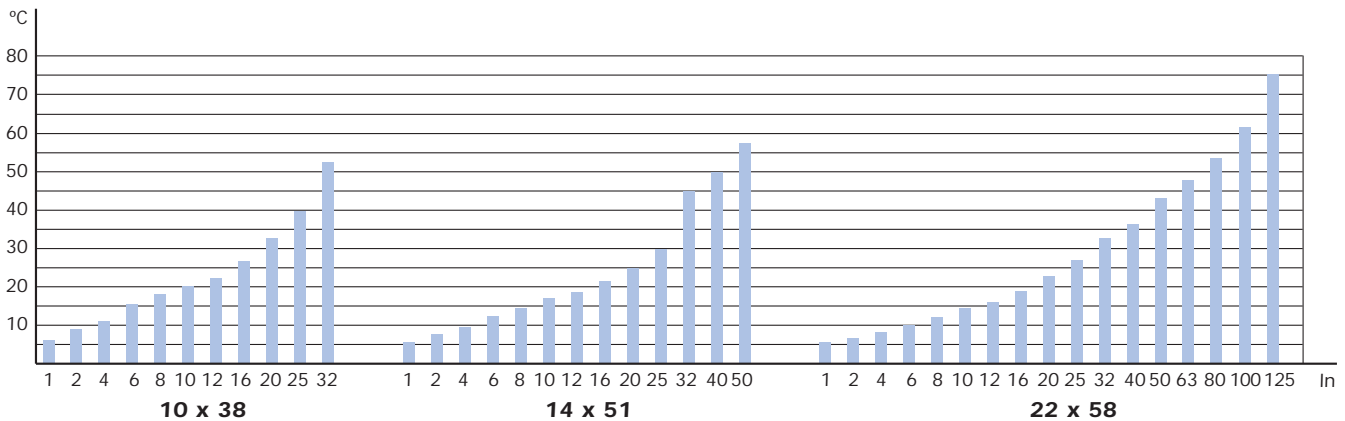
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Ferrule Fuses  
 gG 400V to 690V  
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## Characteristics I<sup>2</sup>t



## Temperature increase table (testing in superior contact)



# General Purpose Fuses IEC

Ferrule Fuses  
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aM 8x32, 10x38, 14x51, 22x58

## Power loss table

In	Size			
	10 x 38	14 x 51	22 x 58	
0,16 A	0,35 W			
0,25 A	0,50 W	0,70 W		
0,5 A	0,50 W	0,75 W		
1 A	0,13 W	0,18 W	0,20 W	
2 A	0,20 W	0,25 W	0,30 W	
4 A	0,30 W	0,40 W	0,50 W	
6 A	0,45 W	0,55 W	0,65 W	
8 A	0,55 W	0,65 W	0,75 W	
10 A	0,65 W	0,75 W	0,85 W	
12 A	0,75 W	0,85 W	1 W	
16 A	0,90 W	1,20 W	1,40 W	
20 A	1,10 W	1,50 W	1,70 W	
25 A	1,40 W	1,80 W	2 W	
32 A	2 W	2,10 W	2,60 W	
40 A		2,60 W	3,20 W	
45 A		2,80 W		
50 A		2,90 W	3,90 W	
63 A			4,60 W	
80 A			5,60 W	
100 A			6,50 W	
125 A			9,50 W	
Maximum standardized power low.	IEC 269-2-1 NFC 63.213 UNE 21.103-2-1	10 x 38 16 A 1,2 W	14 x 51 50 A 3 W	22 x 58 100 A 7 W

Table of maximum length of network in function of In and conductor section.  
Maximum standardized power low.

## aM Class Fuses

Copper conductor section (mm <sup>2</sup> )	Rated Current (In) OF aM Fuses (in A)									
	16	20	25	32	40	50	63	80	100	125
1,5	55/64	37/45	25/30	15/20						
2,5	116	84/94	58/68	40/49	26/32	17/20				
4	181	147	118	84/95	58/68	42/48	28/33	18/23		
6	273	223	178	139	105/117	79/89	55/64	37/42	26/31	14/20
10				227	181	147	113/125	80/94	57/69	40/47
16						236	189	151	120	83/97
25								231	185	147
35									262	210