

gG 8.5 x 31.5 - 400V



Size	Current (A)	Voltage (V)	Cat. number w/o indicator	Ref. number w/o indicator	Cat. number with indicator	Ref. number with indicator	Voltage (V)	Ref. number with striker	Cat. number with striker	Pckg
8,5 x 31,5	0,5	400	FR8GG40V0.5	P218191J	-					10
8,5 x 31,5	1	400	FR8GG40V1	C218709J	-					10
8,5 x 31,5	2	400	FR8GG40V2	Q219227J	FR8GG40V2I	B222204J				10
8,5 x 31,5	4	400	FR8GG40V4	W222958J	FR8GG40V4I	X222959J				10
8,5 x 31,5	6	400	FR8GG40V6	A211025J	FR8GG40V6I	V201291J				10
8,5 x 31,5	8	400	FR8GG40V8	B213096J	FR8GG40V8I	B211026J				10
8,5 x 31,5	10	400	FR8GG40V10	A214613J	FR8GG40V10I	A212060J				10
8,5 x 31,5	12	400	FR8GG40V12	R216146J	FR8GG40V12I	C213097J				10
8,5 x 31,5	16	400	FR8GG40V16	P216650J	FR8GG40V16I	Y214105J				10
8,5 x 31,5	20	400	FR8GG40V20	F217677J	FR8GG40V20I	J215127J				10
8,5 x 31,5	25	400	FR8GG40V25	D218710J	FR8GG40V25I	S216147J				10
8,5 x 31,5	Neutral		FRN832	X211045J	FRN832	X211045J				10

gG 10.3 x 38 - 400/500V



Size	Current (A)	Voltage (V)	Cat. number w/o indicator	Ref. number w/o indicator	Cat. number with indicator	Ref. number with indicator	Voltage (V)	Cat. number with striker	Ref. number with striker	Pckg
10,3 x 38	0,5	500	FR10GG50V0.5	C211027J						10
10,3 x 38	1	500	FR10GG50V1	B212061J						10
10,3 x 38	2	500	FR10GG50V2	D213098J	FR10GG50V2I	S216653J	400	FR10GG40V2P	G083703J	10
10,3 x 38	4	500	FR10GG50V4	X213598J	FR10GG50V4I	E217170J	400	FR10GG40V4P	D084758J	10
10,3 x 38	6	500	FR10GG50V6	K215128J	FR10GG50V6I	T218195J	400	FR10GG40V6P	Y084799J	10
10,3 x 38	8	500	FR10GG50V10	D217169J	FR10GG50V8I	V219231J	400	FR10GG40V8P	F083955J	10
10,3 x 38	10	500	FR10GG50V10	S218194J	FR10GG50V10I	E222207J	400	FR10GG40V10P	A084801J	10
10,3 x 38	12	500	FR10GG50V12	W219761J	FR10GG50V12I	H200751J	400	FR10GG40V12P	G083956J	10
10,3 x 38	16	500	FR10GG50V16	G200750J	FR10GG50V16I	H201809J	400	FR10GG40V16P	X084798J	10
10,3 x 38	20	500	FR10GG50V20	D211028J	FR10GG50V20I	X211551J	400	FR10GG40V20P	Z084800J	10
10,3 x 38	25	400	FR10GG40V25	E213099J	FR10GG40V25I	W212585J	250	FR10GG25V25P	H083957J	10
10,3 x 38	32	400	FR10GG40V32	A214107J	FR10GG40V32I	Z213600J	250	FR10GG25V32P	E083954J	10
10,3 x 38	Neutral		FRN1038	R211569J	FRN1038	R211569J				10

gG 10.3 x 38 - 690V



Size	Current (A)	Voltage (V)	Cat. number w/o indicator	Ref. number w/o indicator	Cat. number with indicator	Ref. number with indicator	Voltage (V)	Cat. number with striker	Ref. number with striker	Pckg
10,3 x 38	1	690	FR10GG69V1	R302787J						10
10,3 x 38	2	690	FR10GG69V2	S302788J						10
10,3 x 38	4	690	FR10GG69V4	T302789J						10
10,3 x 38	6	690	FR10GG69V6	V302790J						10
10,3 x 38	8	690	FR10GG69V8	W302791J						10
10,3 x 38	10	690	FR10GG69V10	X302792J						10
10,3 x 38	12	690	FR10GG69V12	Y302793J						10
10,3 x 38	16	690	FR10GG69V16	Z302794J						10

gG 14 x 51 - 400 to 690V



Size	Current (A)	Voltage (V)	Cat.number w/o indicator	Ref.number w/o indicator	Voltage (V)	Cat.number with striker	Ref.number with striker	Pckg
14 x 51	1	690	FR14GG69V1	K218716J	500	-	-	10
14 x 51	2	690	FR14GG69V2	Y219234J	500	FR14GG50V2P	J211033J	10
14 x 51	4	690	FR14GG69V4	A219765J	500	FR14GG50V4P	H212067J	10
14 x 51	6	690	FR14GG69V6	H222210J	500	FR14GG50V6P	G214113J	10
14 x 51	8	690	FR14GG69V8	D222965J	500	FR14GG50V8P	R215134J	10
14 x 51	10	690	FR14GG69V10	L200754J	500	FR14GG50V10P	Z216153J	10
14 x 51	12	690	FR14GG69V12	L201812J	500	FR14GG50V12P	L217176J	10
14 x 51	16	690	FR14GG69V16	A211554J	500	FR14GG50V16P	Z218200J	10
14 x 51	20	690	FR14GG69V20	Z212588J	500	FR14GG50V20P	B219237J	10
14 x 51	25	690	FR14GG69V25	C213603J	500	FR14GG50V25P	L222213J	10
14 x 51	32	500	FR14GG50V32	W216656J	500	FR14GG50V32P	P200757J	10
14 x 51	40	500	FR14GG50V40	X218198J	500	FR14GG50V40P	P201815J	10
14 x 51	50	400	FR14GG40V50	Z219235J	400	FR14GG40V50P	D211557J	10
14 x 51	Neutral		FRN1451	M212600J		FRN1451	M212600J	10
Fuse extractor			PMCP 14	M097554A		PMCP 14	M097554A	1

gG 22 x 58 - 400 to 690V

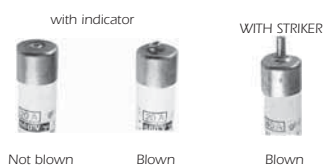
Size	Current (A)	Voltage (V)	Cat.number w/o indicator	Ref.number w/o indicator	Voltage (V)	Cat.number with striker	Ref.number with striker	Pckg
22 x 58	2	690	FR22GG69V2	F219241J	-	-		10
22 x 58	4	690	FR22GG69V4	H219772J	690	FR22GG69V4P	R214628J	10
22 x 58	6	690	FR22GG69V6	P222216J	690	FR22GG69V6P	A215648J	10
22 x 58	8	690	FR22GG69V8	L222972J	690	FR22GG69V8P	F216665J	10
22 x 58	10	690	FR22GG69V10	T200761J	690	FR22GG69V10P	W217691J	10
22 x 58	12	690	FR22GG69V12	J201304J	690	FR22GG69V12P	W218726J	10
22 x 58	16	690	FR22GG69V16	S201818J	690	FR22GG69V16P	L219775J	10
22 x 58	20	690	FR22GG69V20	P211038J	690	FR22GG69V20P	P222975J	10
22 x 58	25	690	FR22GG69V25	N212072J	690	FR22GG69V25P	M201307J	10
22 x 58	32	690	FR22GG69V32	F212594J	690	FR22GG69V32P	S211041J	10
22 x 58	40	690	FR22GG69V40	J213609J	690	FR22GG69V40P	R212075J	10
22 x 58	50	690	FR22GG69V50	P214626J	690	FR22GG69V50P	M213612J	10
22 x 58	63	690	FR22GG69V63	Y215646J	500	FR22GG50V63P	S214629J	10
22 x 58	80	690	FR22GG69V80	O217180J	500	FR22GG50V80P	F216159J	10
22 x 58	100	500	FR22GG50V100	E218205J	500	FR22GG50V100P	T217183J	10
22 x 58	125	400	FR22GG40V125	J219773J	400	FR22GG40V125P	H218208J	10
22 x 58	Neutral		FRN2258	R213616J		FRN2258	R213616J	10
Fuse extractor			PMCP20+22	K100036A		PMCP20+22	K100036A	1

Functions

gG curve industrial fuse (black marking) – NF EN 60269-1 and 2-1 compliant.
Protection for power cables and equipment except motors.
Selective coordination between two fuses two ratings apart (e.g. 160A and 100A).
Breaking capacity: 20 kA for 8.5 x 31.5 fuses - 80 to 120 kA for other sizes at rated voltage.

Applications

Protection from overloads and short circuits at all levels in power distribution.
Mains, branch circuits, service entrance equipment.



for sizes 10, 14 and 22

To select a fuse holder, fuse disconnecter or fuse switch-disconnector for our ferrule-style fuses, turn to pages 14 to 18.

For further information on our ferrule fuse lines, consult our complete technical catalog The Advisor on CD-ROM or on our Web site at

<http://www.ferrazshawmut.com/en/act-e-advisor.php>

**under the heading IEC general purpose fuses
> ferrule fuses**



Modulostar breakthrough
a range for every kind of protection now on the shelves!

- Modulostar fuse holders and fuse disconnectors meet every need for ferrule-style fuses, from 8mm to 27mm in diameter. And they cover applications from low voltage power distribution in residential and office environments to protection of high power electronic devices in enclosures. Only a brand name signed by a global leader in the industry can guarantee an OEM or electrical contractor that his customer is getting top-quality components.
- CMS 8, 10, 14, 22, 27 and USFM models are now available on the shelves.

www.ferrazshawmut.com/Modulostar

Compatible
Standard width for a perfect fit in enclosures

Easy to use
Dual position DIN rail snap for easier mounting and dismounting

Connections
Upstream comb busbar connection

Ergonomic
A new ergonomically designed handle for easier opening

Flexibility
Accessory kit for multi-pole assemblies

Communication
The Ferraz Shawmut indicator eye for instant blown fuse detection



FERRAZ SHAWMUT SAS
1, rue Jean Novel
59626 Vileurbaine Cedex
France
Tel : + 33 (0)4 72 22 66 11
Fax : + 33 (0)4 72 22 67 13
www.ferrazshawmut.com

FERRAZ SHAWMUT Inc
374, Merrimac Street
Newburyport, MA 01950 - 1998
USA
Phone : 978-462-6662
Fax : 978-462-0181
www.ferrazshawmut.com

aM 8.5 x 31,5 - 400V

Size	Current (A)	Voltage (V)	Cat. number w/o indicator	Ref. number w/o indicator	Cat. number with indicator	Ref. number with indicator	Voltage (V)	Cat. number with striker	Ref. number with striker	Pckg
8,5 x 31,5	1	400	FR8AM40V1	C217168J						10
8,5 x 31,5	2	400	FR8AM40V2	R218193J						10
8,5 x 31,5	4	400	FR8AM40V4	S219229J						10
8,5 x 31,5	6	400	FR8AM40V6	C222205J						10
8,5 x 31,5	8	400	FR8AM40V8	F200749J						10
8,5 x 31,5	10	400	FR8AM40V10	W201292J						10
8,5 x 31,5	Neutral		FRN832	X211045J						10

aM 10.3 x 38 - 400 to 690V

10,3 x 38	0,16	500	FR10AM50V0.16	E214617J		-				10
10,3 x 38	0,25	500	FR10AM50V0.25	M215130J		-				10
10,3 x 38	0,5	500	FR10AM50V0.5	W216150J		-				10
10,3 x 38	1	500	FR10AM50V1	F217171J	FR10AM50V11	X219233J				10
10,3 x 38	2	500	FR10AM50V2	H218714J	FR10AM50V21	G222209J	400	FR10AM40V2P	Z084984J	10
10,3 x 38	4	500	FR10AM50V4	W219232J	FR10AM50V41	K200753J	400	FR10AM40V4P	Y085259J	10
10,3 x 38	6	500	FR10AM50V6	F222208J	FR10AM50V61	K201811J	400	FR10AM40V6P	W085257J	10
10,3 x 38	8	500	FR10AM50V8	Z201295J	FR10AM50V81	Z211553J	400	FR10AM40V8P	A084985J	10
10,3 x 38	10	500	FR10AM50V10	Y211552J	FR10AM50V101	H213102J	400	FR10AM40V10P	B084986J	10
10,3 x 38	12	500	FR10AM50V12	A213601J	FR10AM50V121	D214110J	400	FR10AM40V12P	X085258J	10
10,3 x 38	16	500	FR10AM50V16	F214618J	FR10AM50V161	P215132J	400	FR10AM40V16P	C084757J	10
10,3 x 38	20	500	FR10AM50V20	X216151J	FR10AM50V201	V216655J	400	FR10AM40V20P	V085256J	10
10,3 x 38	25	400	FR10AM40V25	G217172J	FR10AM40V251	L217682J	250	FR10AM25V25P	A076038J	10
10,3 x 38	32	400	FR10AM40V32	J218715J		-	250	FR10AM25V32P	B076039J	10

NEW

10,3 x 38	1	690	FR10AM69V1	H302779J						10
10,3 x 38	2	690	FR10AM69V2	J302780J						10
10,3 x 38	4	690	FR10AM69V4	K302781J						10
10,3 x 38	6	690	FR10AM69V6	L302782J						10
10,3 x 38	8	690	FR10AM69V8	M302783J						10
10,3 x 38	10	690	FR10AM69V10	N302784J						10
10,3 x 38	12	690	FR10AM69V12	P302785J						10
10,3 x 38	Neutral		FRN1038	R211569J	FRN1038	R211569J				10

aM 14 x 51 - 400 to 690V

14 x 51	0,25	690	FR14AM69V0.25	B212590J		-				10
14 x 51	0,5	690	FR14AM69V0.5	L213105J		-				10
14 x 51	1	690	FR14AM69V1	E213605J			500	FR14AM50V1P	W215644J	10
14 x 51	2	690	FR14AM69V2	H214114J			500	FR14AM50V2P	B216661J	10
14 x 51	4	690	FR14AM69V4	K214622J			500	FR14AM50V4P	C218203J	10
14 x 51	6	690	FR14AM69V6	S215135J			500	FR14AM50V6P	E219240J	10
14 x 51	8	690	FR14AM69V8	T215642J			500	FR14AM50V8P	N222215J	10
14 x 51	10	690	FR14AM69V10	Z216659J			500	FR14AM50V10P	S200760J	10
14 x 51	12	690	FR14AM69V12	M217177J			500	FR14AM50V12P	R201817J	10
14 x 51	16	690	FR14AM69V16	Q217686J			500	FR14AM50V16P	G211560J	10
14 x 51	20	690	FR14AM69V20	P218720J			500	FR14AM50V20P	E212593J	10
14 x 51	25	690	FR14AM69V25	E219769J			500	FR14AM50V25P	H213608J	10
14 x 51	32	500	FR14AM50V32	M222214J			500	FR14AM50V32P	N214625J	10
14 x 51	40	500	FR14AM50V40	Q200758J			500	FR14AM50V40P	X215645J	10
14 x 51	45	500	FR14AM50V45	L211035J			500	FR14AM50V45P	C216662J	10
14 x 51	50	400	FR14AM40V50	E211558J			400	FR14AM40V50P	D218204J	10
14 x 51	Neutral		FRN1451	M212600J				FRN1451	M212600J	10
Fuse extractor			PMCP 14	M097554A				PMCP 14	M097554A	1

aM 22 x 58 - 400 to 690V

Size	Current (A)	Voltage (V)	Cat. number w/o indicator	Ref. number w/o indicator	Cat. number with indicator	Ref. number with indicator	Voltage (V)	Cat. number with striker	Ref. number with striker	Pckg
22 x 58	1	690	FR22AM69V1	M219776J			690	FR22AM69V1P	E215652J	10
22 x 58	2	690	FR22AM69V2	T222220J			690	FR22AM69V2P	J216162J	10
22 x 58	4	690	FR22AM69V4	Q222976J			690	FR22AM69V4P	A217695J	10
22 x 58	6	690	FR22AM69V6	Y200765J			690	FR22AM69V6P	Y218728J	10
22 x 58	8	690	FR22AM69V8	N201308J			690	FR22AM69V8P	O219779J	10
22 x 58	10	690	FR22AM69V10	X201822J			690	FR22AM69V10P	S222978J	10
22 x 58	12	690	FR22AM69V12	T211042J			690	FR22AM69V12P	R201311J	10
22 x 58	16	690	FR22AM69V16	M211565J			690	FR22AM69V16P	W211044J	10
22 x 58	20	690	FR22AM69V20	S212076J			690	FR22AM69V20P	W212079J	10
22 x 58	25	690	FR22AM69V25	J212597J			690	FR22AM69V25P	Q213615J	10
22 x 58	32	690	FR22AM69V32	V213113J			690	FR22AM69V32P	X214633J	10
22 x 58	40	690	FR22AM69V40	N213613J			690	FR22AM69V40P	F215653J	10
22 x 58	50	690	FR22AM69V50	R214122J			690	FR22AM69V50P	K216669J	10
22 x 58	63	690	FR22AM69V63	C215650J			500	FR22AM50V63P	B217696J	10
22 x 58	80	690	FR22AM69V80	H216667J			500	FR22AM50V80P	Z218729J	10
22 x 58	100	500	FR22AM50V100	Y217693J			500	FR22AM50V100P	T222979J	10
22 x 58	125	400	FR22AM40V125	J218209J			400	FR22AM40V125P	S201312J	10
22 x 58	Neutral		FRN2258	R213616J				FRN2258	R213616J	10
Fuse extractor			PMCP20+22	K100036A				PMCP20+22	K100036A	1

Functions

aM curve industrial fuse (green marking) – NF EN 60269-1 and 2-1 compliant.

Direct protection for electrical motors, must be used in combination with another protection device (thermal relay).

Easy selective coordination with upstream gG fuses.

Selective coordination between two fuses two ratings apart (i.e. 160A and 100A).

Breaking capacity: 20 kA for 8.3 x 31.5 fuses - 80 to 120 kA for other sizes at rated voltage.

Applications

Protection for all low voltage electrical motors with direct-on-line start.



for sizes 10, 14 and 22

For further information on our ferrule fuse lines, consult our complete technical catalog The Advisor on CD-ROM or on our Web site at

<http://www.ferrazshawmut.com/en/act-e-advisor.php>

**under the heading IEC general purpose fuses
> ferrule fuses**

Modulostar CMS8



Size	CCD configurations	Cat. number w/o indicator light	Ref.number	Cat. number with indicator light	Ref.number	Pckg
8 x 31,5	1	CMS81	X305000K	CMS81I	E305007K	12
8 x 31,5	1+N	CMS81N	Y305001F	CMS81NI	F305008F	6
8 x 31,5	2	CMS82	Z305002F	CMS82I	G305009F	6
8 x 31,5	3	CMS83	A305003D	CMS83I	H305010D	4
8 x 31,5	3+N	CMS83N	B305004C	CMS83NI	J305011C	3
8 x 31,5	4	CMS84	C305005C	CMS84I	K305012C	3
8 x 31,5	N *	CMS810N	D305006K			12

Modulostar CMS10



Size	CCD configurations	Cat. number w/o indicator light	Ref.number	Cat. number with indicator light	Ref.number	Pckg
10 x 38	1	CMS101	T305020K	CMS101I	A305026K	12
10 x 38	1+N	CMS101N	V305021F	CMS101NI	B305027F	6
10 x 38	2	CMS102	W305022F	CMS102I	C305028F	6
10 x 38	3	CMS103	X305023D	CMS103I	D305029D	4
10 x 38	3+N	CMS103N	Y305024C	CMS103NI	E305030C	3
10 x 38	4	CMS104	Z305025C	CMS104I	F305031C	3

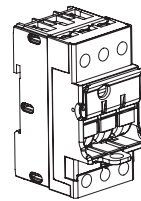
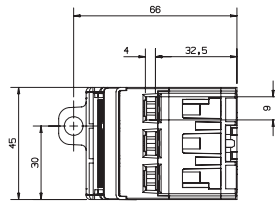
Modulostar CMSFM10



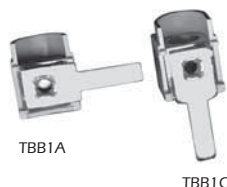
Compact Fusegear for Motor starter 3pole/45mm

Nb of pole	Cat Number	Ref.Number	Fonction		Pack
			Fuse Holder	Fuse Discon.	
3 poles	CMSFM10	S302765A	w/o Indicator		1
system /	CMSFM10M	T302766A		w/o Indicator	1
45 mm	CMSFM10I	W302768A	with Indicator		1
width	CMSFM10MI	V302767A		with Indicator	1

Fuse holder is without Prebreaking Microswitch (see accessories)
Fuse disconnector is with mounted Prebreaking Microswitch

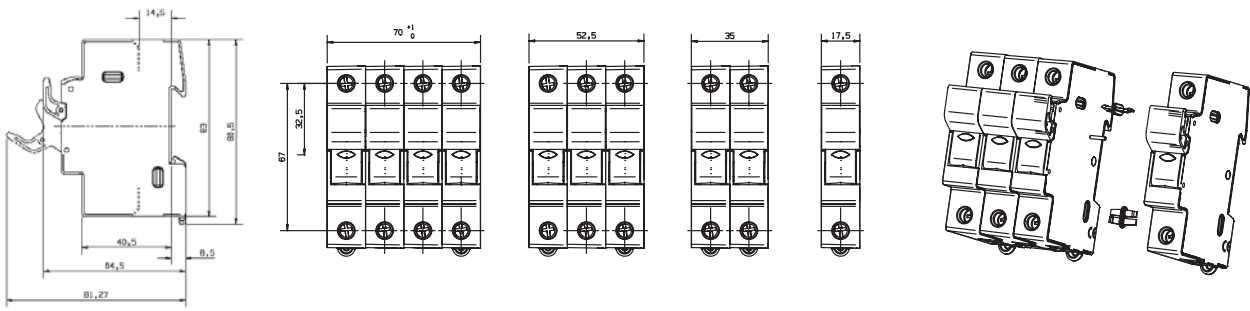


Accessories for CMS8, CMS10

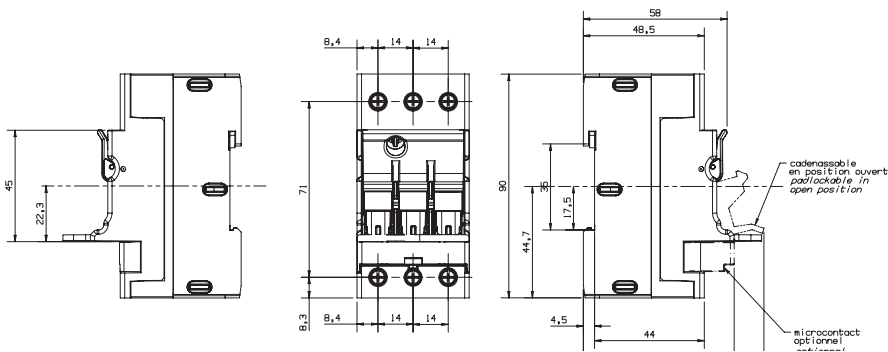


Description	Cat.number	Ref. number	Nb.Modules 17,5 mm	Courant maxi RMS (A)	Nb. of pole	Pckg
Multi-pole assembly kit	CMS810PAK	Z233725K				12
Lock	LOCK	M223525A				1
Locking kit	TAGLOCKCMS810	A235773A				1
Single-phase size 8/10 comb connection	CMS810BB1F13	T210306J	13	63	1	10
2-phase size 8/10 comb connection	CMS810BB2F6	V210307J	6	63	2	10
3-phase size 8/10 comb connection	CMS810BB3F4	W210308J	4	100	3	10
4-phase size 8/10 comb connection	CMS810BB4F3	X210309J	3	100	4	10
Single-pole terminal, side	TBB1C	E210316P		90		50
2/3-pole terminal, side	TBB23C	G210318P		90		50
Single-pole terminal, axial	TBB1A	D210315P		90		50
2/3-pole terminal, axial	TBB23A	F210317P		90		50

Drawings for CMS8-10



Drawings for compact fusegear Motor starter



Accessories

Catalog Number	Reference	Cond.
PLUG3CMSFM	B264041E	5
WBAR2CMSFM	C264042E	5
RDINCCMSFM	D264043A	1
WIRCMSFMC	E264044E	5

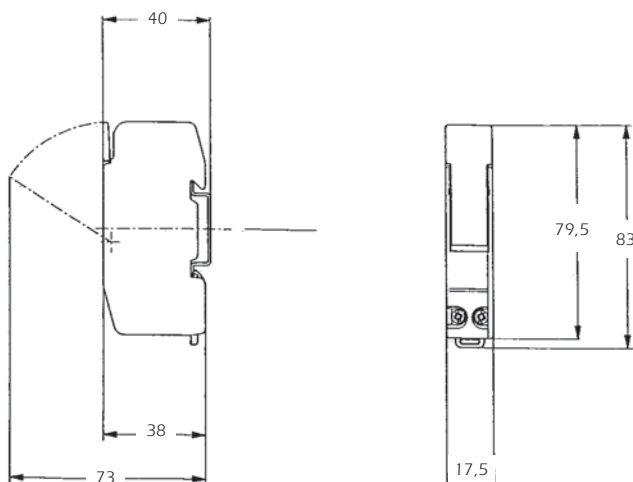
CCR fuse holder

Size	Number of pole	Cat.number	Reference Number	Number of Mod.	Pckg
10x38	N	CCR810N	Z214635K	1	12
10x38	1	CCR101	N218213K	1	12
10x38	1+N	CCR1N1M	H215655K	1	12
10x38	2	CCR102	X233723F	2	6
10x38	3	CCR103	Y233724D	3	4

Assembly accessories	Cat. Number	Ref.Number	Pckg
CCR multi-pole assembly kit	CMS810PAK	Z233725K	12*

* 12 per bag

Compact Fuse Holder



- Direct mounting on symmetrical DIN rail
- Wire cross sections: 1 x 10mm².
- Compact footprint.
- Insulated to IP 20 standard
- Single-pole weight
 - 8x31 ; 58g
 - 10x38 ; 63g
- Neutral tubes are systematically built in

With the indicator light a blown fuse can be quickly located if power is still on

MSC 10 fuse holder Phase + Neutral (1 mod.)

Fuse holder phase+neutral in a 17.5 mm - width compact module

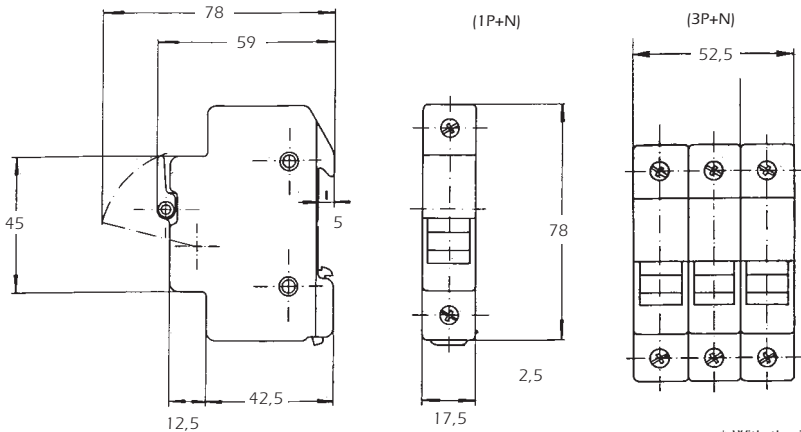
Compact Fuse Holder



Nb. of Poles	Model without blown fuse indicator light		Model with blown fuse indicator light		Nb Mod	Pckg
	Cat. Number	Ref. number	Cat. Number	Ref. Number		
1+N	MSC101N1M	Y201317K	MSC101N1MI	C211050K	1	12
3+N	MSC103N3M	S218217D	MSC103N3MI	S226612D	3	4

Assembly accessories	Cat. Number	Ref. Number	Pckg
2-pole pin	MSCMSDMAASS2	G215125J	10*
3-pole pin	MSCMSDMAASS3	Q216145J	10*
4-pole pin	MSCMSDMAASS4	A217166J	10*

* 10 Pins per bag



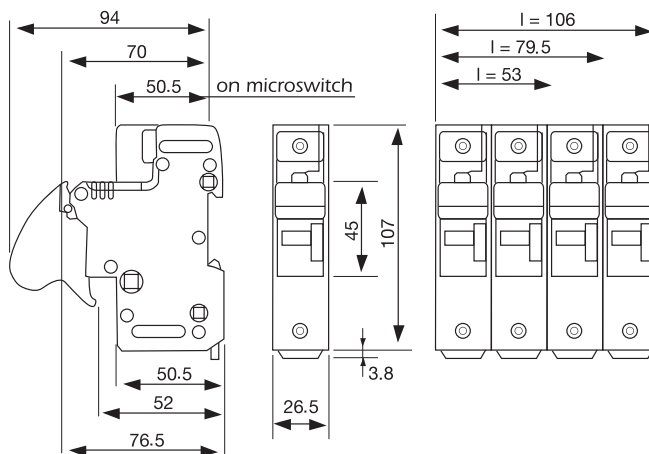
- Direct mounting on symmetrical DIN rail
- Indicator light (120/690V)*
- Wiring cross sections:
 - single-pole: 1 x 16mm²
 - single-pole + neutral: 1 x 10 mm²
- Insulated to IP 20 standard
- Single-pole weight
 - 8x31 ; 63 g
 - 8x31 - Ph + N1M ; 63 g
 - 10x38 ; 63 g
 - 10x38 - Ph + N1M ; 68 g

* With the indicator light a blown fuse can be quickly located if power is still on

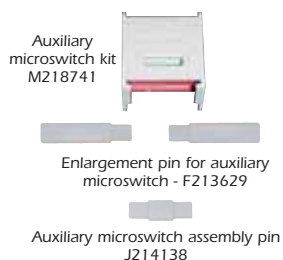
Modulostar CMS14



Size	CCD configurations	Cat. number w/o indicator light	Ref. number	Cat. number with indicator light	Ref. number	Pckg
14 x 51	1	CMS141	A331016F	CMS141I	L331049F	6
14 x 51	1+N	CMS141N	T331010C	CMS141NI	M331050C	3
14 x 51	2	CMS142	R331031C	CMS142I	M331004C	3
14 x 51	3	CMS143	J212091B	CMS143I	K331071B	2
14 x 51	3+N	CMS143N	D331042A	CMS143NI	Q331007A	1
14 x 51	4	CMS144	F331021A			1
14 x 51	N	CMS14N	T331056F			6
14 x 51 for fuses with striker	1			CMS141AC	F331044F	6
14 x 51 with microswitches (+ pre-isolation)	1	CMS141M	Z331038F	CMS141MI	S331055F	6
	2 (2 switches)	CMS142M	A331062C	CMS142MI	X331036C	3
	3	CMS143M	F331067B	CMS143MI	P331006B	2
(for fuses with striker)	3 (2 switches)	CMS143M2	H331069B	CMS143M2I	Y331037B	2
	3+N	CMS143NM	E331043A	CMS143NMI	Y331037A	1



Accessories for CMS14



Description	Cat.number	Ref. number	Nb.Modules 17,5 mm	Pckg
Single-pole CMS14 auxiliary microswitch kit	CMS14W1	M218741	1.5	1
3-pole CMS14 auxiliary microswitch kit	CMS14W2	C219261	4.5	1
3-pole CMS14 2 auxiliary microswitch kit	CMS14W3	D219791	4.5	1
Auxiliary microswitch assembly pin (between 2 auxiliary microswitch kits)	CMS1422PTH	J214138		10
Enlargement pin for auxiliary microswitches	CMS14BP	F213629		10
Multi-pole assembly kit	CMS1422PAK	Z218223		10
Indicator light kit	CMS14LIH	A225653		1
Lock	CMS14LOK	M223525		1

Modulostar CMS22



Size	CCD configurations	Cat. number w/o indicator light	Ref. number	Cat. number with indicator light	Ref. number	Pckg
22 x 58	1	CMS221	T331079F	CMS221I	B331086F	6
22 x 58	1+N	CMS221N	H331092C	CMS221NI	S215158C	3
22 x 58	2	CMS222	Q331122C	CMS222I	D331134C	3
22 x 58	3	CMS223	E331135B	CMS223I	D331134B	2
22 x 58	3+N	CMS223N	A331108A	CMS223NI	A218224A	1
22 x 58	4	CMS224	Q331099A			1
22 x 58	N	CMS22N	K331094F			6
22 x 58 for fuses with striker	1			CMS22AC	V331103F	6
22 x 58 with microswitches (+ pre-isolation) (for fuses with striker)	1	CMS221M	D219262F	CMS221MI	N331074F	6
	2 (2 switches)	CMS222M	E219792C	CMS222MI	P331098C	3
	3	CMS223M	Q222470B	CMS223MI	E331112B	2
	3 (2 switches)	CMS223M2	H222992B	CMS223M2I	E331112B	2
	3+N	CMS223NM	P200780A	CMS223NMI	W331104A	1



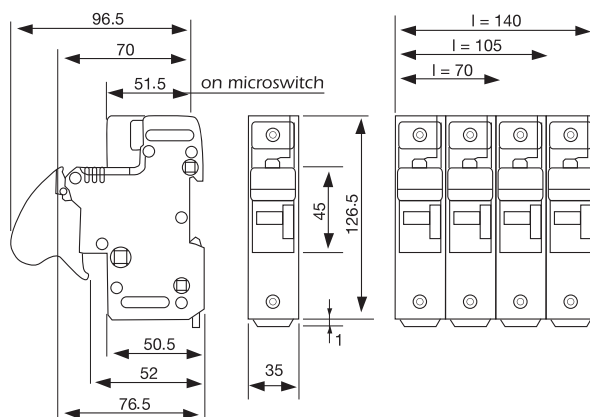
Fuse Holder

Accessories CMS22

Description	Cat.number	Ref. number	Nb.Modules 17,5 mm	Pckg
Single-pole CMS22 auxiliary microswitch kit	CMS22W1	E211581	2	1
3-pole CMS22 auxiliary microswitch kit	CMS22W2	L212093	6	1
3-pole CMS22 2 auxiliary microswitch kit	CMS22W3	B212613	6	1
Auxiliary microswitch assembly pin (between 2 auxiliary microswitch kits)	CMS1422PTH	J214138		10
Enlargement pin for auxiliary microswitches	CMS14BP	F213629		10
Multi-pole assembly kit	CMS1422PAK	Z218223		10
Indicator light kit	CMS14LIH	A225653		1
Lock	CMS14LOK	M223525		1



Drawings for CMS22



Fuse Monitoring for DIN Rail mounting



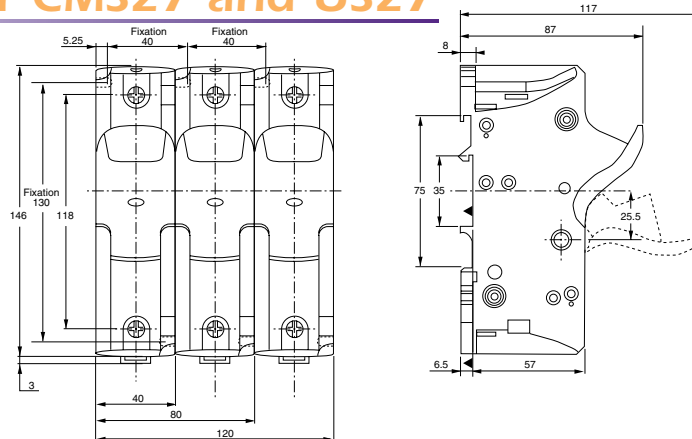
Cat Number	Ref.number	Rated voltage [Vac]	Mounting on	Weight [kg]	Pack [pcs]
FM100/260RD	S236824A	100...260	Rail DIN	0.19	1
FM380/690RD	T236825A	380...690	Rail DIN	0.19	1

Modulostar CMS27



Size	CCD configurations	Cat. number w/o indicator light	Ref.number	Pckg
27 x 60	1	CMS271	R210580C	3
27 x 60	1+N	CMS271N	S210581A	1
27 x 60	N	CMS27N	B210152C	3
27 x 60	2	CMS272	T210582A	1
27 x 60	3	CMS273	V210583A	1

Drawings for CMS27 and US27



For further information on our brand new Modulostar range for ferrule-style fuses, consult our complete technical catalog The Advisor on CD-ROM or on our Web site at

<http://www.ferrazshawmut.com/en/act-e-advisor.php>

under the heading **Gears & Fuse Gears**
 > for IEC general purpose fuses
 > for ferrule-style fuses

General Purpose Fuses



French Ferrule

gG, aM

勝特力材料 886-3-5753170
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 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



DOMESTIC AND INDUSTRIAL CYLINDRICAL FUSE-LINKS

Ferraz Shawmut gF, gl-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. gl-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 (gl-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 38 mm
- ✓ 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 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 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



French Ferrule

gI, gG

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[Http://www.100y.com.tw](http://www.100y.com.tw)

Ratings – gI-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

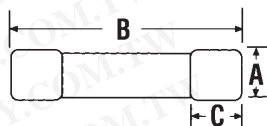
Blown-Fuse Indicator



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

 French Ferrule

gG with striker

Ratings – gl-gG with Striker



P201815



R212075

SIZE (mm x mm)	RATED CURRENT I _n (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		
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		18455	S214629			
80		18459	F216159			
NEUTRAL	100	500V	18463	T217183	120kA - 500V	10
	125	400V	18465	H218208		
	10 x 38		19100	R211569		
	10 x 38		1920J	M212600J		
	10 x 38		1930J	R213616		

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

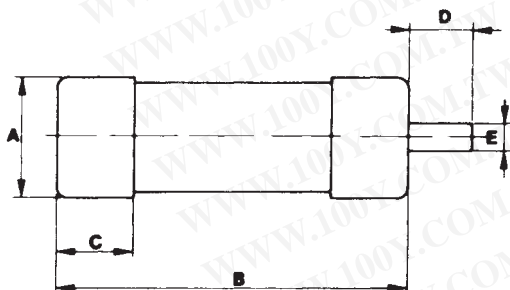
Striker



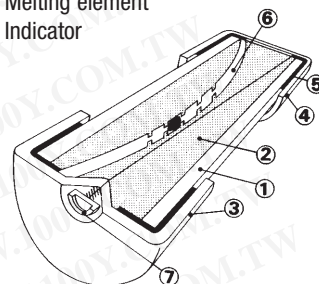
BEFORE



AFTER



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



General Purpose Fuses

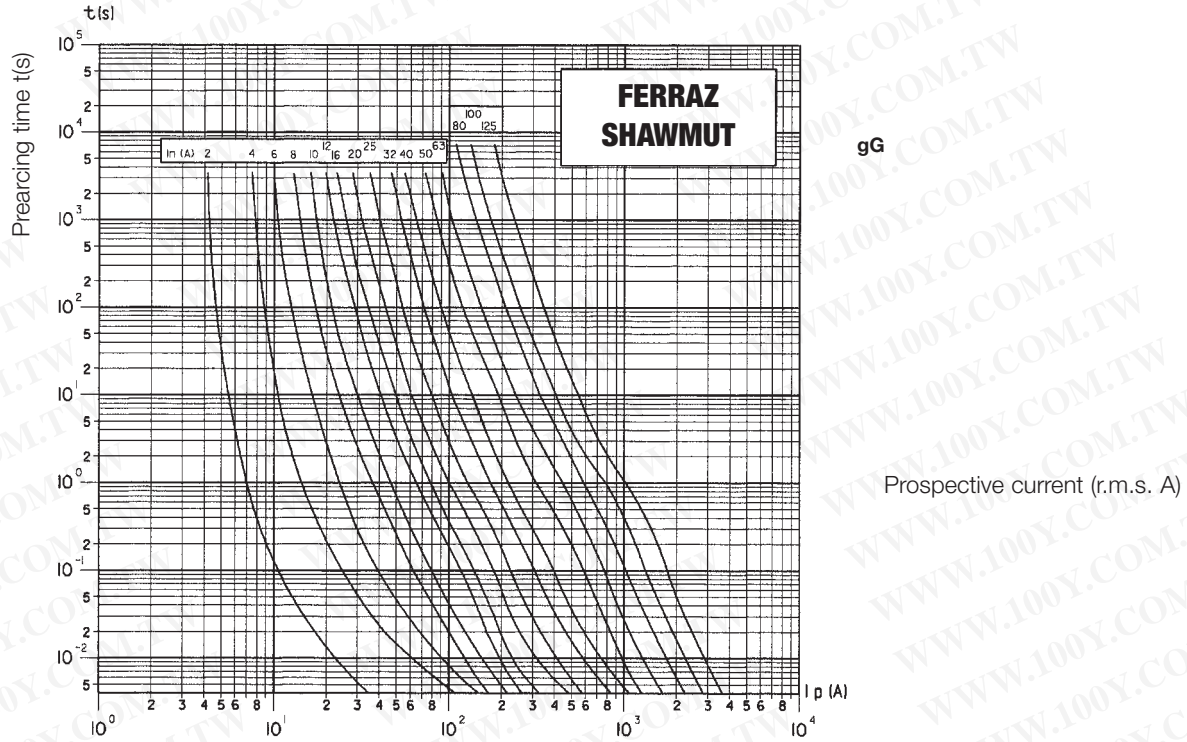


French Ferrule

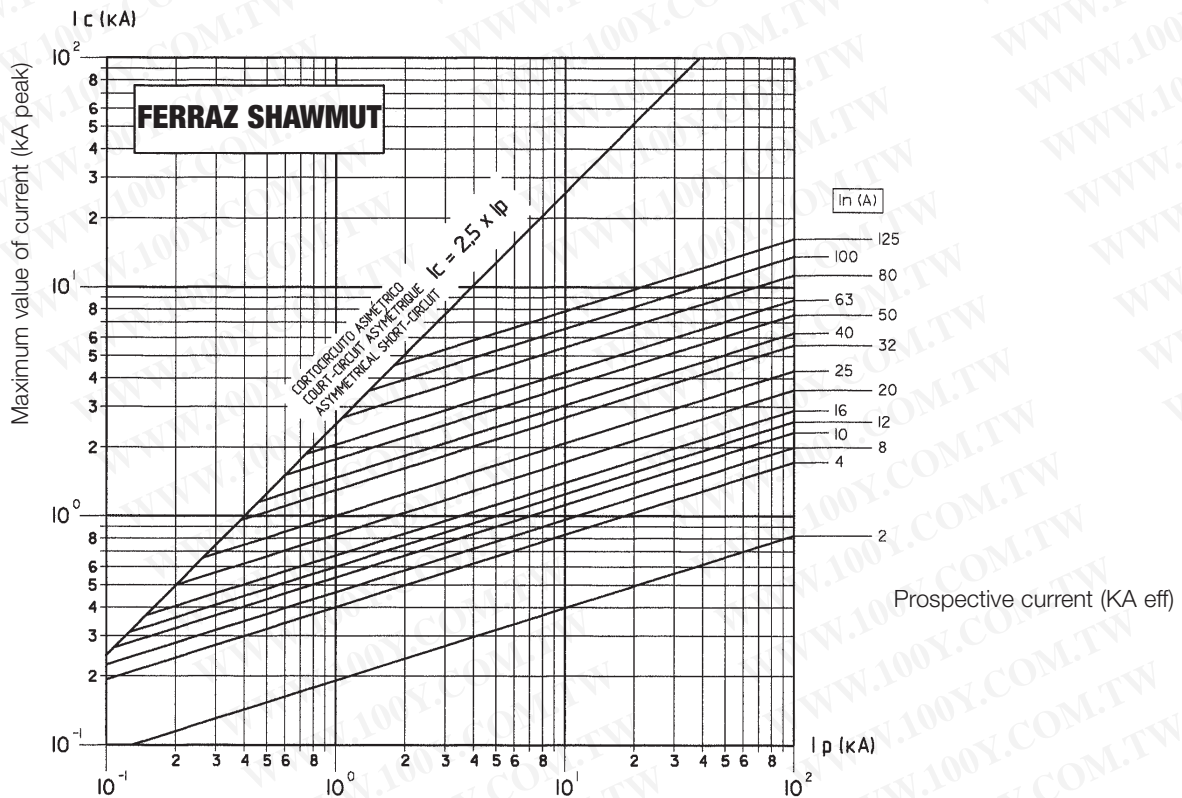
gG

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Characteristics t-I



Cut-off characteristics



General Purpose Fuses



French Ferrule

gG

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Characteristics I²t

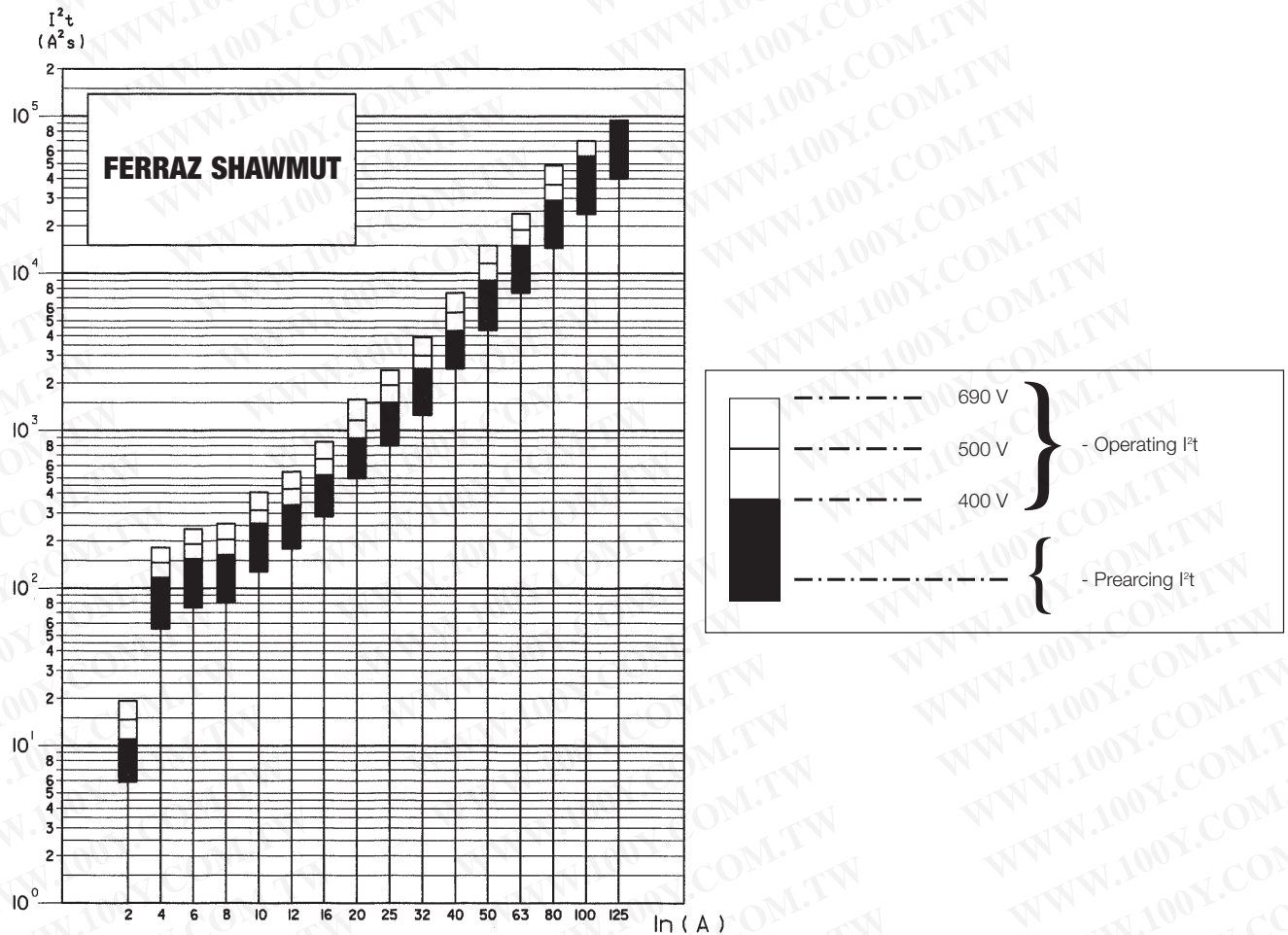
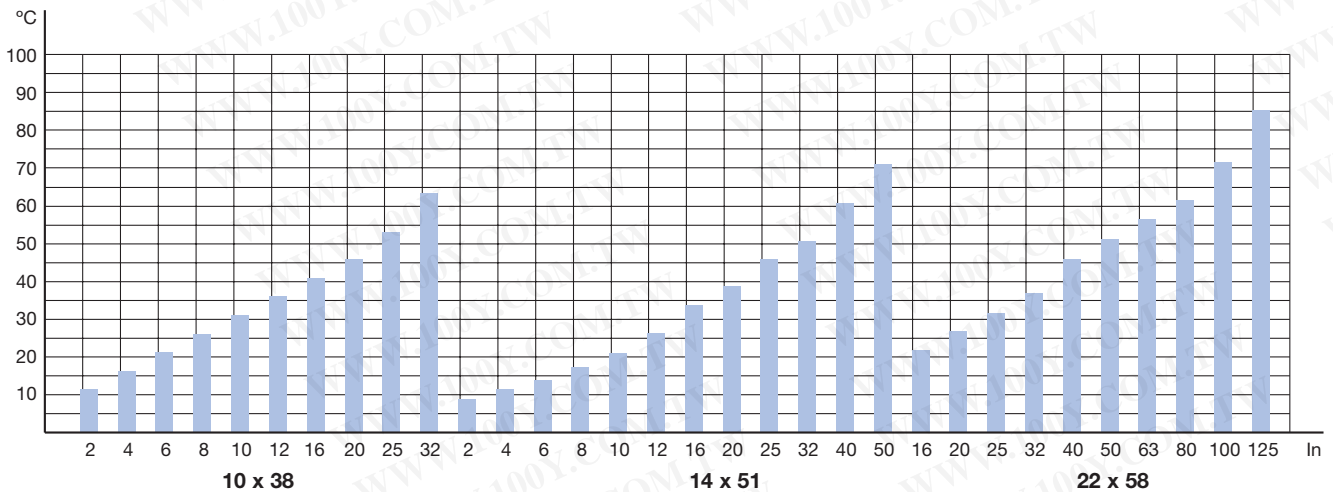


Table temperature increase (testing in superior contact)



General Purpose Fuses



French Ferrule

gG

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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	10 x 38	14 x 51	22 x 58
NFC 63.213	25 A	40 A	100 A
UNE 21.103-2-1	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 ²)	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:

- 99; Cond. PVC / 118; Cond. PRC