

BS88 LV Fuse Links & Fuse Holders

TECHNICAL GUIDE



MERSEN

Powerful presence of the world's leader on the circuit protection market, Mersen Electrical Protection Activity, offer innovative solutions to enhance the safety of low voltage installations and equipments.

Above and beyond the supply of products, the company also provides added value in the form of technical support for OEMs, electrical contractors, panel builders, plant maintenance department and utilities.

As a global player, Mersen has established production facilities on every continent to optimise the offering (France, Tunisia, United States, Canada, Mexico, India, Japan and P.R. of China). All these locations are united around a global quality, safety and environment policy.

The world-class organisation of Mersen offers tried, proven and approved solutions ensuring the integrity of the equipment, their devices protected and the safety of people working around them. To guard customer's electrical equipment and installations over the long term, Mersen markets the widest range of safe, reliable electrical and thermal protection solutions.

Mersen solutions are sold all over the world at over 4500 points of sale through professional distributors of electrical components and equipment.

Mersen provides you high quality products in compliance with ISO 9001 standard all the circuit protection solutions advertised in this catalogue are ASTA 20 certified and comply with the RoHS European Directive except * marked.



	Page No.
Range Mapping	4
Comparison Chart	5
Offset Bolted Tag Fuse Links (A-type)	
Reference Data (415V)	6
Dimensions & Electrical characteristics (415V)	7
Reference Data (550V)	12
Dimensions & Electrical characteristics (550V)	13 & 14
Reference Data (690V)	16
Dimensions & Electrical characteristics (690V)	17
Offset Blade Fuse Links (F-type)	
Reference Data (550V)	12
Dimensions & Electrical characteristics (550V)	13 & 14
Central Bolted Tag Fuse Links (B & C-type)	
Reference Data (415V)	8
Dimensions & Electrical characteristics (415V)	9
Reference Data (690V)	18
Dimensions & Electrical characteristics (690V)	19
Time Vs Current Characteristics (415V) - A, B & C type	10
Time Vs Current Characteristics (415/550V) - A & F type	15
Time Vs Current Characteristics (690V) - A, B & C type	20
Cut-Off Current Characteristics for A, B & C types (415V)	11
Cut-Off Current Characteristics for A, B, C & F Types (550/690V)	21
I ² t characteristics & Power Dissipation chart	22
Application Information	23
BS88 Fuse Holders	24
Mersen Fuse Holder Chart	25
Approval	30
Note	31



RANGE MAPPING



BS Type	Designation	Voltage (V)	Category	Current Ratings	Page No.
F1	BNS	550	gG	2,4,6,10,16,20,25,32	12
			gM	10M16,16M20,20M25,20M32,25M32	
		415	gM	20M36,32M36,32M40,32M50,32M63	
F2	BES	550	gG	10,16,20,25,32	6
		415	gG	36,40,50,63	
A1	BEIT	415	gG	36,40,50,63	6
	BNIT	550	gG	2,4,6,10,16,20,25,32	12
A2	BTIA	550	gM	10M16,16M20,20M25,20M32,25M32	12
			gG	2,4,6,10,16,20,25,32	12
		690	gG	2,4,6,10,16,20,25,32,36,40,50,63	16
			gM	10M16,16M20,20M25,20M32,25M32,32M36,32M40,32M50,32M63	
A3	BTSS	415	gG	36,40,50,63	6
	BTSDS	415	gG	80,100,125	
			gM	63M80,63M100,100M125	
	BTIS	415	gG	36,40,50,63,80,100,125,160	16
			gM	100M125,100M160	
		690	gG	36,40,50,63	
		gM	32M36,32M40,32M50,32M63		
A4	BTSD	415	gG	80,100,125	6
			gM	63M80,63M100,100M125	
	BTCP	415	gG	125,160	16
			gM	100M125,100M160,100M200	
		690	gG	36,40,50,63,80,100	
			gM	32M36,32M40,32M50,32M63,63M80,63M100	
	BTFP	415	gG	125,160,200	6
			gM	200M250,200M315	
B1	BTBC	415	gG	32,40,50,63	8
	BTSDC	415	gG	80,100,125	
			gM	63M80,63M100,100M125	
	BTC	415	gG	125,160	18
			gM	100M125,100M160,100M200	
		690	gG	80,100	
		gM	63M80,63M100		
B2	BTF	415	gG	125,160,200	8
			gM	200M250,200M315	
		690	gG	125,160,200	18
			gM	125M160,125M200	
B3	BTKF	415	gG	250, 315	8
			gM	315M400	18
	BTKF	690	gG	250, 315	18
B3x	BTKM	415	gG	250, 315	8
B4	BTMF	415	gG	355, 400	8
			gG	250,315,355,400	
		690	gM	315M400	18
C1	BTM	415	gG	355, 400	8
		690	gG	250,315,355,400	18
C2	BTTM	415	gG	450,500,560,630	8
		690	gG	450,500,560,630	18
C3	BTLM	415	gG	670,710,750,800	8
		690	gG	670,710,750,800	18

COMPARISON CHART FOR BS88LV FUSE LINKS

Competitors		Mersen	BS Type Ref.	Ratings	Pages
NS-415V	NSD-550V	BNS55Vxx	F1	2-32A	12
ES-415V	-	BES42Vxx	F2	10-36A	12
-	ESD-550V	BES55Vxx	F2	40-63A	12
EIT-415V	-	BEIT42Vxx	A1	36-63A	6
NIT-415V	NITD-550V	BNIT55Vxx	A1	2-32A	12
TSA-415V	AAO-550V	BTIA55Vxx	A2C	2--32A	12
TIA-660V	H07-690V	BTIA69Vxx	A2	2-32A	16
TIS-660V	BAO-550V	BTIS69Vxx	A3	36-63A	16
TSS-415V	-	BTSS42Vxx	A3C	36-63A	6
TSDS-415V	-	BTSDS42Vxx	A3	80-125A	6
TSD-415V	-	BTSD42Vxx	A4C	80-125A	6
TCP-660V	L14-690V	BTCP69Vxxx	A4/A4C	36-100A	16
TSDC-415V	CD-415V	BTSDC42Vxxx	B1C	80-125A	8
TC-660V	L09-690V	BTC69Vxxx	B1	80-100A	18
TSFP-415V	DEO-415V	BTFP42Vxxx	A4xC	125-200A	6
TSF-415V	DD-415V	BTF42Vxxx	B2/B2C	125-200A	8
TFP-660V	M09-690V	BTF69Vxxx	B2	125-200A	18
TF-660V	M09-690V	BTF69Vxxx	B2	125-200A	18
TSK-415V	N09/P09-690V	BTMF69Vxxx	B4	250-400A	18
TKF-660V	N09/P09-690V	BTMF69Vxxx	B4	250-400A	18
TSMS-415V	P11-690V	BTM69Vxxx	C1	250-400A	18
TSM-415V	P11-690V	BTM69Vxxx	C1	250-400A	18
TM-660V	P11-690V	BTM69Vxxx	C1	250-400A	18
TSTS-415V	FF-550V	BTTM42Vxxx	C2	450-630A	18
TST-415V	FF-550V	BTTM42Vxxx	C2	450-630A	18
TTM-660V	FF-550V	BTTM69Vxxx	C2	450-630A	18
TSLS-415V	GF-550V	BTLM42Vxxx	C3	670-800A	18
TSL-415V	GF-550V	BTLM42Vxxx	C3	670-800A	18
TLM-660V	GF-550V	BTLM69Vxxx	C3	670-800A	18



REFERENCE DATA

Offset Bolted Tag Fuse Links (A-type)

Rated Voltage: 415 V ac Breaking Capacity: 80 kA



Voltage (V)	Rating (A)	Reference Number	Catalogue Number	BS Type Ref	Std. Pack
415	36	A1019176J	BEIT42V36*	A1	10
	40	B1019177J	BEIT42V40*	A1	10
	50	C1019178J	BEIT42V50*	A1	10
	63	D1019179J	BEIT42V63*	A1	10
415	36	R1019191J	BTSS42V36*	A3C	10
	40	S1019192J	BTSS42V40*	A3C	10
	50	T1019193J	BTSS42V50*	A3C	10
	63	V1019194J	BTSS42V63*	A3C	10
415	80	E1019180J	BTSDS42V80	A3	10
	100	F1019181J	BTSDS42V100	A3	10
	125	G1019182J	BTSDS42V125	A3	10
	63M80	H1019183J	BTSDS42V63M80	A3	10
	63M100	J1019184J	BTSDS42V63M100	A3	10
	100M125	K1019185J	BTSDS42V100M125	A3	10
415	36	R101919J-UK	BTIS42V36	A3	10
	40	S1019192J-UK	BTIS42V40	A3	10
	50	T1019193J-UK	BTIS42V50	A3	10
	63	V1019194J-UK	BTIS42V63	A3	10
	80	E1019180J-UK	BTIS42V80	A3	10
	100	F1019181J-UK	BTIS42V100	A3	10
415	125	L1019186J	BTIS42V125	A3	10
	160	M1019187J	BTIS42V160	A3	10
	100M125	N1019188J	BTIS42V100M125	A3	10
	100M160	Q1019190J	BTIS42V100M160	A3	10
415	80	Y1019197J	BTSD42V80	A4C	10
	100	Z1019198J	BTSD42V100	A4C	10
	125	A1019199J	BTSD42V125	A4C	10
	63M80	B1019200J	BTSD42V63M80	A4C	10
	63M100	C1019201J	BTSD42V63M100	A4C	10
	100M125	D1019202J	BTSD42V100M125	A4C	10
415	36	H1019275J-UK	BTCP42V36	A4C	10
	40	M1006606J-UK	BTCP42V40	A4C	10
	50	N1006607J-UK	BTCP42V50	A4C	10
	63	J1019276J-UK	BTCP42V63	A4C	10
	80	Y1019197J-UK	BTCP42V80	A4C	10
	100	Z1019198J-UK	BTCP42V100	A4C	10
415	125	W1019195J	BTCP42V125	A4	10
	160	X1019196J	BTCP42V160	A4	10
	100M125	A226297J	BTCP42V100M125	A4C	10
	100M160	B226298J	BTCP42V100M160	A4C	10
	100M200	C226299E	BTCP42V100M200	A4C	5
415	125	D226300E	BTFP42V125	A4XC	5
	160	E226301E	BTFP42V160	A4XC	5
	200	F226302E	BTFP42V200	A4XC	5
	200M250	G226303E	BTFP42V200M250	A4X	5
	200M315	H226304E	BTFP42V200M315	A4X	5

Note:

1. A3C, A4C represents compact dimensions with respect to BS88 / IEC60269 standards specified dimensions

2. A4X represents extended rating with respect to BS88 / IEC 60269 specified ratings

DIMENSIONS

Offset Bolted Tag Fuse Links (A-type)

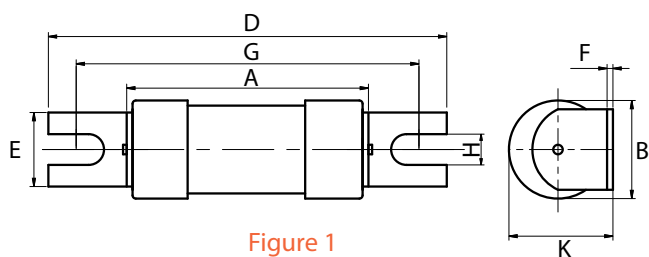


Figure 1

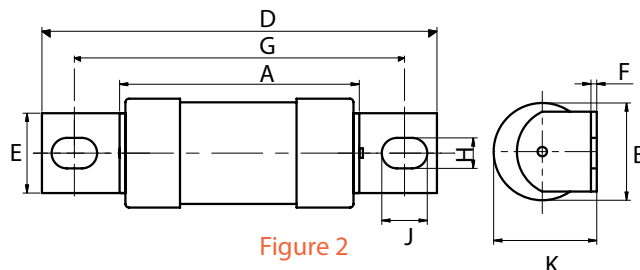


Figure 2

BS Ref	Fuse Type (Fig. 1)	Current Rating (A)	Dimensions (mm)							
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	K Max
A1	BEIT	36, 40, 50, 63	39.5	17.1	65.5	11	1.2	55	5.5	18.2
A3C	BTSS/BTIS	36, 40, 50, 63	38.8	17.1	84	9.2	1.2	73	5.2	18.5
A3	BTIS	125, 160, 100M125, 100M160	57	26.9	88.5	13	1.2	73	5.5	28

BS Ref	Fuse Type (Fig. 2)	Current Rating (A)	Dimensions (mm)								
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	J Nom	K Max
A3	BTSDS/BTIS	80,100,125,63M80, 63M100, 100M125	54.5	21	87	12.7	1.2	73	5.5	8	22.5
A4C	BTSD/BTCP	36, 40, 50, 63, 80,100,125,63M80, 63M100, 100M125	58.5	21	110	14.3	3.2	94	8.7	11	24.5
A4/ A4C	BTCP	125,160,100M125, 100M160	59.5	26.9	111	19.5	2.4	94	8.7	11	28.5
A4XC /A4C	BTFP/BTCP	125, 160, 200, 100M200	47	31	110	19	3.2	94	9	10	32
A4X	BTFP	200M250, 200M315	76	41.9	111	19.5	3.2	94	8.7	11	44

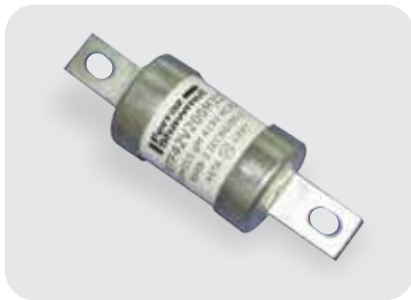
ELECTRICAL CHARACTERISTICS

Fuse Type	Curve Type	Current Rating	I ² t (Ampere ² seconds)		Watts Loss
			Pre Arcing	Total	
BEIT/BTSS/BTCP	gG	36	1000	4000	2.8
BEIT/BTSS/BTIS/BTCP	gG	40	1300	4200	3.0
BEIT/BTSS/BTIS/BTCP	gG	50	2600	8750	3.6
BEIT/BTSS/BTIS/BTCP	gG	63	4000	13900	4.7
BTSDS/BTSD/BTIS/BTCP	gG	80	8500	38250	6.5
BTSDS/BTSD	gM	63M80	8500	38250	4.0
BTSDS/BTSD/BTIS/BTCP	gG	100	14000	65000	7.5
BTSDS/BTSD	gM	63M100	14000	65000	3.0
BTSDS/BTSD	gG	125	16000	70000	11.5
BTIS/BTCP	gG	125	28000	78400	11.3
BTFP	gG	125	17000	70000	9.2
BTSDS/BTSD	gM	100M125	16000	70000	7.4
BTIS/BTCP	gM	100M125	28000	78400	7.2
BTIS/BTCP	gG	160	60000	168000	14.0
BTFP	gG	160	57000	150000	10.7
BTIS/BTCP	gM	100M160	60000	168000	5.5
BTFP	gG	200	105000	293000	16.2
BTCP	gM	100M200	105000	293000	4.1
BTFP	gM	200M250	190000	532000	15.4
BTFP	gM	200M315	270000	756000	2.5

REFERENCE DATA

Central Bolted Tag Fuse Links (B & C-type)

Rated Voltage: 415 V ac Breaking Capacity: 80 kA



Voltage (V)	Rating (A)	Reference Number	Catalogue Number	BS Type Ref	Std. Pack
415	32	J226305J	BTBC42V32	B1C	10
	40	K226306J	BTBC42V40	B1C	10
	50	L226307J	BTBC42V50	B1C	10
	63	M226308J	BTBC42V63	B1C	10
415	80	G1019205J	BTSDC42V80	B1C	10
	100	H1019206J	BTSDC42V100	B1C	10
	125	J1019207J	BTSDC42V125	B1C	10
	63M80	K1019208J	BTSDC42V63M80	B1C	10
	63M100	L1019209J	BTSDC42V63M100	B1C	10
	100M125	M1019210J	BTSDC42V100M125	B1C	10
415	80	G1019205J-UK	BTC42V80	B1C	10
	100	H1019206J-UK	BTC42V100	B1C	10
415	125	E1019203J	BTC42V125	B1	10
	160	F1019204J	BTC42V160	B1	10
	100M125	Q226311J	BTC42V100M125	B1C	10
	100M160	R226312J	BTC42V100M160	B1C	10
	100M200	S226313E	BTC42V100M200	B1C	5
415	125	T226314E	BTF42V125	B2C	5
	160	V226315E	BTF42V160	B2C	5
	200	W226316E	BTF42V200	B2C	5
	200M250	X226317A	BTF42V200M250	B2	1
	200M315	Y226318A	BTF42V200M315	B2	1
415	250	Z226319A	BTKF42V250	B3	1
	315	A226320A	BTKF42V315	B3	1
	315M400	B226321A	BTKF42V315M400	B3	1
415	250	C226322A	BTKM42V250	B3X	1
	315	D226323A	BTKM42V315	B3X	1
415	355	E226324A	BTMF42V355	B4	1
	400	F226325A	BTMF42V400	B4	1
415	355	G226326A	BTM42V355	C1	1
	400	H226327A	BTM42V400	C1	1
415	450	J226328A	BTTM42V450	C2	1
	500	K226329A	BTTM42V500	C2	1
	560	L226330A	BTTM42V560	C2	1
	630	M226331A	BTTM42V630	C2	1
415	670	N226332A	BTLM42V670	C3	1
	710	P226333A	BTLM42V710	C3	1
	750	Q226334A	BTLM42V750	C3	1
	800	R226335A	BTLM42V800	C3	1

Note:

1. B1C, B2C represents compact dimensions with respect to BS88/ IEC60269 standards specified dimensions

2. B3X represents extended rating with respect to BS88 / IEC 60269 specified ratings

DIMENSIONS

Central Bolted Tag Fuse Links (B&C-type)

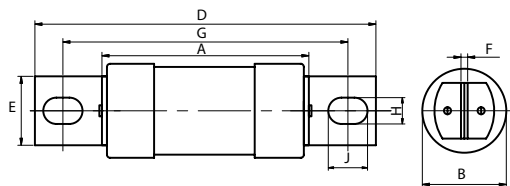


Figure 1

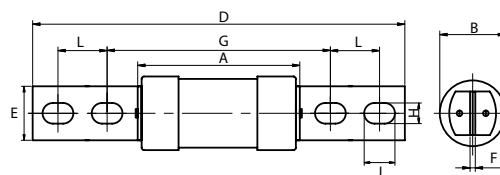


Figure 2

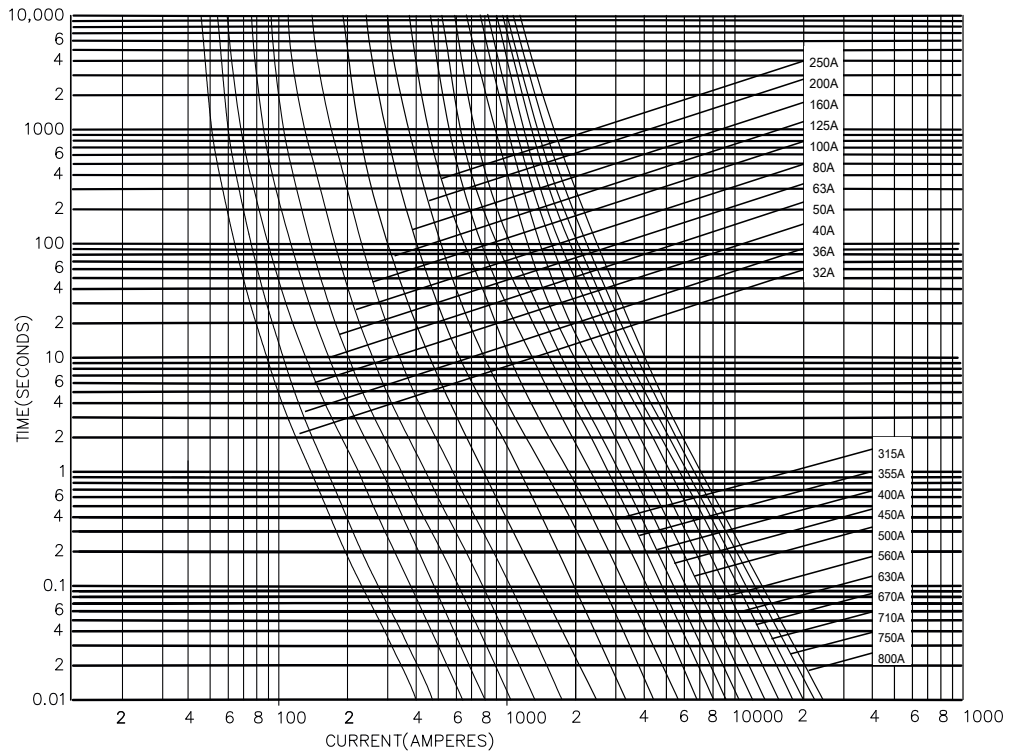
BS Ref	Fuse Type	Current Rating (A)	Dimensions (mm)									
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	J Nom	LNom	
Fig. 1												
B1C	BTBC	32, 40, 50, 63	57	26.9	137	19.5	3.2	111	8.7	14	-	
B1C	BTSDC/BTC	80, 100, 125, 63M80, 63M100, 100M125	58.5	21	127	14.3	3.2	111	8.7	11.1	-	
B1/B1C	BTC	125, 160, 100M125, 100M160	57	26.9	137	19.5	3.2	111	8.7	14	-	
B1C/B2C	BTC/BTF	125, 160, 200, 100M200	47	31	136	19	3.2	111	9	12.5	-	
B2/B3	BTF/ BTKF	200M250, 200M315	73	41.9	138	19.5	3.2	111	8.7	14	-	
B3X	BTKM	250, 315	73	41.9	159	26	3.2	133	10.3	14	-	
B3	BTKF	315M400	75	59.1	138	26	4.8	111	8.7	14	-	
B4	BTMF	355400	75	59.1	138	26	4.8	111	8.1	14	-	
Fig. 2												
C1	BTM	355400	75	59.1	212	26	4.8	133	10.3	16	25.4	
C2	BTTM	450, 500, 560, 630	83	74.4	212	26	6.3	133	10.3	16	25.4	
C3	BTLM	670, 710, 750, 800	86	82.4	212	26	9.5	133	10.3	16	25.4	

ELECTRICAL CHARACTERISTICS

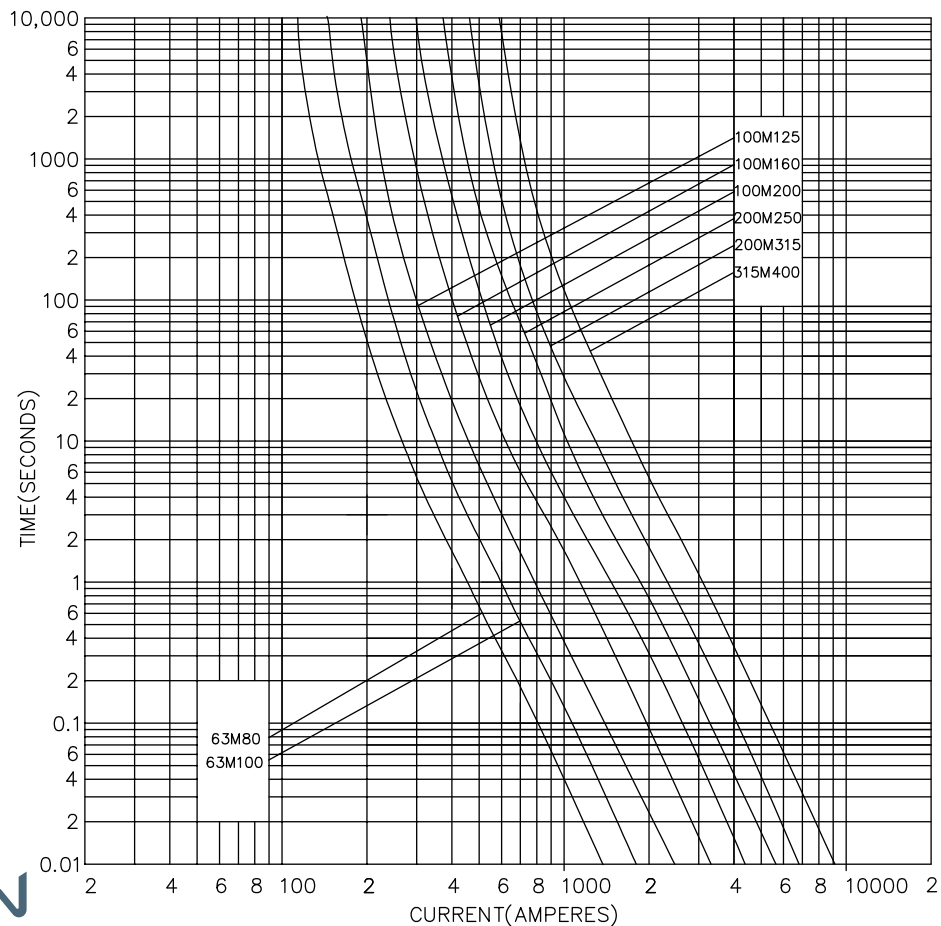
Fuse Type	Curve Type	Current Rating	1 ² t (Ampere ² seconds)		Watts Loss
			Pre Arcing	Total	
BTBC	gG	32	700	3000	3.6
BTBC	gG	40	1300	5850	4.0
BTBC	gG	50	2600	11700	4.8
BTBC	gG	63	4000	17500	5.9
BTSDC/BTIS	gG	80	8500	38250	6.5
BTSDC	gM	63M80	8500	38250	4.0
BTSDC/BTIS	gG	100	14000	65000	7.5
BTSDC	gM	63M100	14000	65000	3.0
BTSDC	gG	125	16000	70000	11.5
BTC	gG	125	28000	78400	11.3
BTF	gG	125	17000	70000	9.2
BTSDC	gM	100M125	16000	70000	7.4
BTC	gM	100M125	28000	78400	7.2
BTC	gG	160	60000	168000	14.0
BTF	gG	160	57000	150000	10.7
BTC	gM	100M160	60000	168000	5.5
BTF	gG	200	105000	293000	16.2
BTC	gM	100M200	105000	293000	4.1
BTKF/BTKM	gG	250	190000	532000	24
BTF	gM	200M250	190000	532000	15.4
BTKF/BTKM	gG	315	270000	756000	31
BTF	gM	200M315	270000	756000	12.5
BTKF	gM	315M400	505000	1414000	23.5
BTMF/BTM	gG	355	395000	1106000	32
BTMF/BTM	gG	400	505000	1414000	38
BTTM	gG	450	650000	1820000	42
BTTM	gG	500	850000	2380000	48
BTTM	gG	560	1200000	3360000	50
BTTM	gG	630	1546000	4437000	54
BTLM	gG	670	1950000	5460000	60
BTLM	gG	710	2400000	6720000	62
BTLM	gG	750	3000000	8400000	65
BTLM	gG	800	3769000	10900000	68

TIME VS. CURRENT CHARACTERISTICS

gG Curves - 32 to 800A - 415 V ac

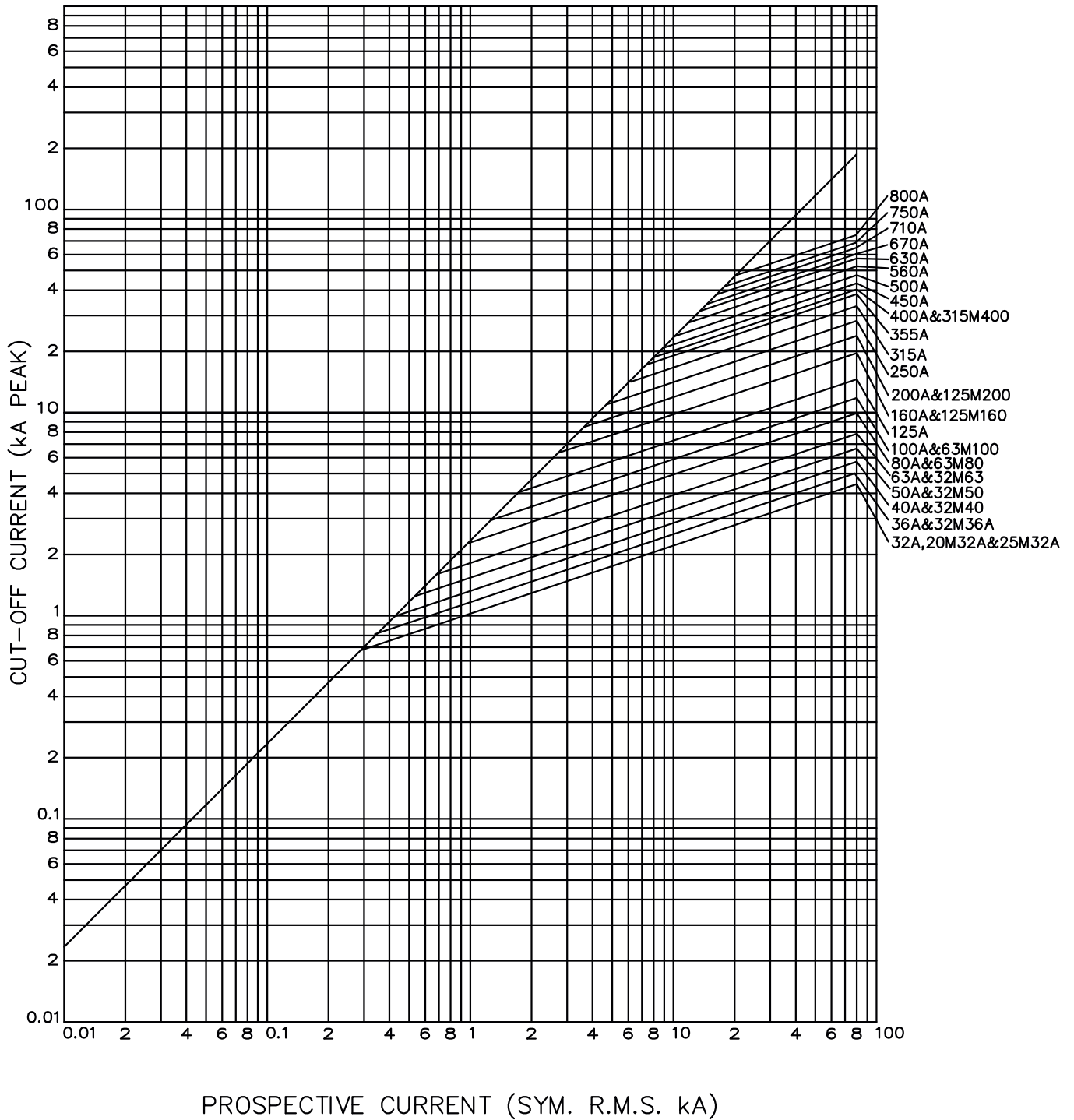


gM Curves - 63M80 to 315M400A - 415V ac



CUT-OFF CURRENT CHARACTERISTICS

A, B & C Type - 415 V ac



REFERENCE DATA

Offset Blade/Offset Tag Fuse Links (F&A-type)

Rated Voltage: 415/550 V ac Breaking Capacity: 80 kA



Voltage (V)	Rating (A)	Reference No.	Catalogue No.	BS Type Ref	Std. Pack	
550	2	C1006643J	BNS55V2	F1	10	
	4	D1006644J	BNS55V4	F1	10	
	6	E1006645J	BNS55V6	F1	10	
	10	N1019211J	BNS55V10	F1	10	
	16	P1019212J	BNS55V16	F1	10	
	20	Q1019213J	BNS55V20	F1	10	
	25	R1019214J	BNS55V25	F1	10	
	32	S1019215J	BNS55V32	F1	10	
	10M16	T1019216J	BS55V10M16	F1	10	
	16M20	V1019217J	BNS55V16M20	F1	10	
	20M25	W1019218J	BNS55V20M25	F1	10	
	20M32	X1019219J	BNS55V20M32	F1	10	
25M32	Z1019221J	BNS55V25M32	F1	10		
415	20M36	D1036981J	BNS42V20M36*	F1	10	
	32M36	E1036982J	BNS42V32M36*	F1	10	
	32M40	F1036983J	BNS42V32M40*	F1	10	
	32M50	G1036984J	BNS42V32M50*	F1	10	
	32M63	H1036985J	BNS42V32M63*	F1	10	
550	10	F1006646J	BES55V10	F2	10	
	16	G1006647J	BES55V16	F2	10	
	20	H1006648J	BES55V20	F2	10	
	25	J1006649J	BES55V25	F2	10	
	32	K1006650J	BES55V32	F2	10	
	36	L1006651J	BES55V36	F2	10	
415	40	J226351J	BES42V40	F2	10	
	50	K226352J	BES42V50	F2	10	
	63	L226353J	BES42V63	F2	10	
550	2	E1006576J	BNIT55V2	A1	10	
	4	F1006577J	BNIT55V4	A1	10	
	6	G1006578J	BNIT55V6	A1	10	
	10	B1019223J	BNIT55V10	A1	10	
	16	C1019224J	BNIT55V16	A1	10	
	20	D1019225J	BNIT55V20	A1	10	
	25	E1019226J	BNIT55V25	A1	10	
	32	F1019227J	BNIT55V32	A1	10	
	10M16	G1019228J	BNIT55V10M16	A1	10	
	16M20	H1019229J	BNIT55V16M20	A1	10	
	20M25	J1019230J	BNIT55V20M25	A1	10	
	20M32	K1019231J	BNIT55V20M32	A1	10	
	25M32	R1019237J	BNIT55V25M32	A1	10	
550	2	S1019238J	BTIA55V2	A2C	10	
	4	T1019239J	BTIA55V4	A2C	10	
	6	V1019240J	BTIA55V6	A2C	10	
	10	W1019241J	BTIA55V10	A2C	10	
	16	X1019242J	BTIA55V16	A2C	10	
	20	Y1019243J	BTIA55V20	A2C	10	
	25	Z1019244J	BTIA55V25	A2C	10	
	32	A1019245J	BTIA55V32	A2C	10	
	10M16	B1019246J	BTIA55V10M16	A2C	10	
	16M20	C1019247J	BTIA55V16M20	A2C	10	
	20M25	D1019248J	BTIA55V20M25	A2C	10	
	20M32	E1019249J	BTIA55V20M32	A2C	10	
	25M32	F1019250J	BTIA55V25M32	A2C	10	
	415	32M40	G226280J	BTIA42V32M40	A2	10
		32M50	H226251J	BTIA42V32M50	A2	10
32M63		K226383J	BTIA42V32M63	A2	10	

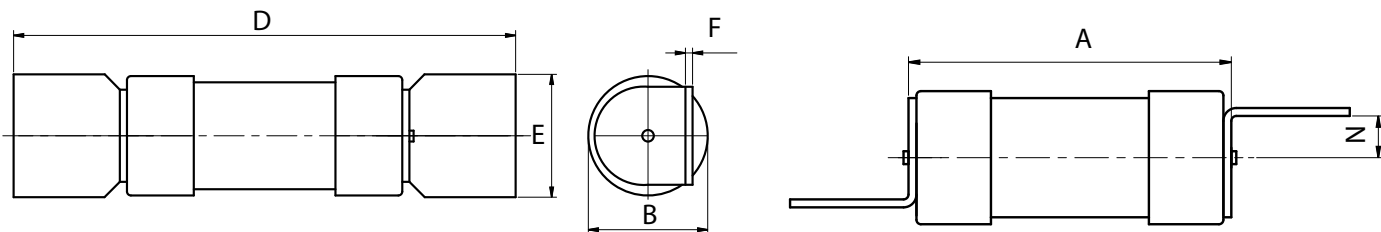
Note:

1. A2C, represents compact dimensions with respect to BS88/ IEC60269 standards specified dimensions

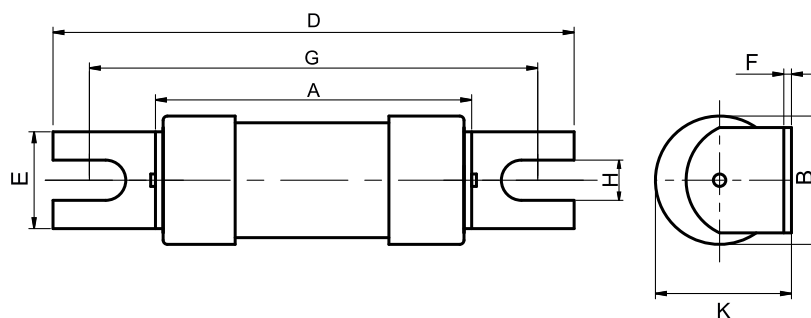
DIMENSIONS

Offset Blade/Offset Tag Fuse Links (F&A-type)

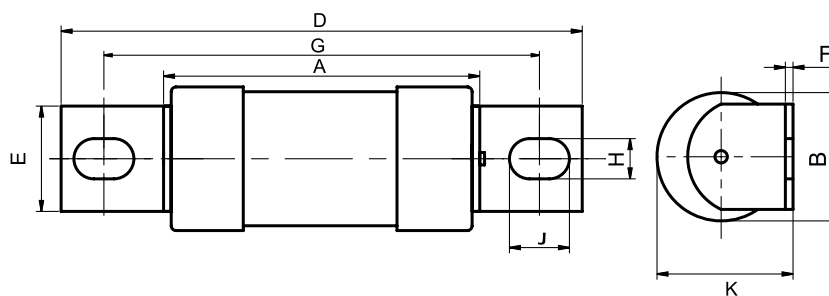
Rated Voltage: 415/550 V ac Breaking Capacity: 80 kA



BS Ref	Fuse Type	Current Rating (A)	Dimensions (mm)					
			A Max	B Max	D Max	E Max	F Nom	N Nom
F1	BNS	2, 4, 6, 10, 16, 20, 25, 32, 10M16, 16M20, 20M25, 20 M32, 25M32	35.5	13.5	61	12.7	0.8	3.5
F1	BNS	20M36, 32M36, 32M40, 32M50, 32M63	35.5	17.1	61	12.7	0.8	3.5
F2	BES	10, 16, 20, 25, 32, 36, 40, 50, 63	39.5	17.1	69	15.2	1.2	3.5



BS Ref	Fuse Type	Current Rating (A)	Dimensions (mm)							
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	K Max
A1	BNIT	2, 4, 6, 10, 16, 20, 25, 32, 10M16, 16M20, 20M25, 20M32, 25M32	35.5	13.5	56	11.2	0.8	44.5	4.8	14.5



BS Ref	Fuse Type	Current Rating (A)	Dimensions (mm)								
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	K Max	N Nom
A2C	BTIA	2, 4, 6, 10, 16, 20, 25, 32, 10M16, 16M20, 20M25, 20M32, 25M32	35.5	13.5	86	9.2	0.8	73	8	5.5	14.5
A2	BTIA	32M40, 32M50, 32M63	56.5	21.9	86	9.2	1.2	73	8	5.5	23.5



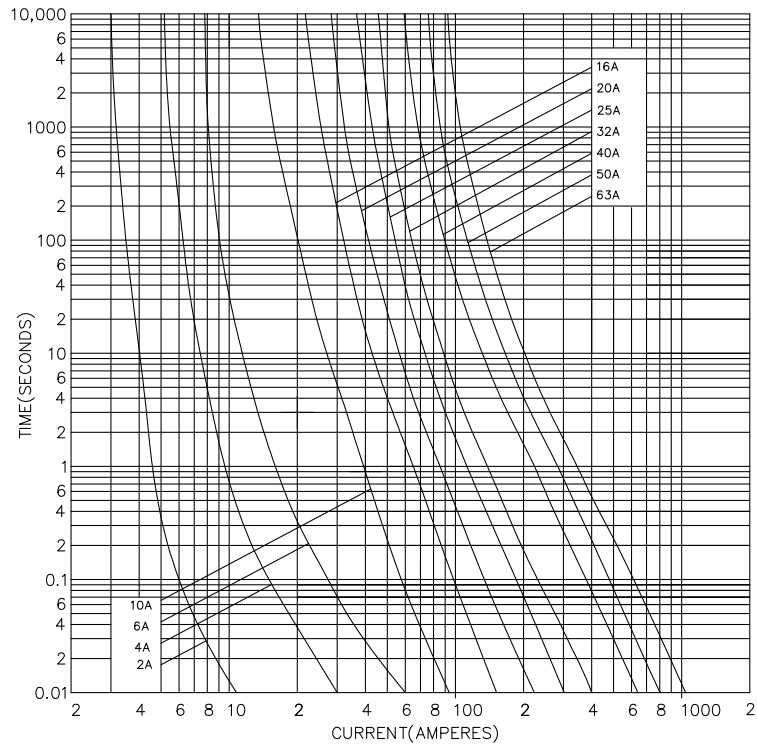
ELECTRICAL CHARACTERISTICS



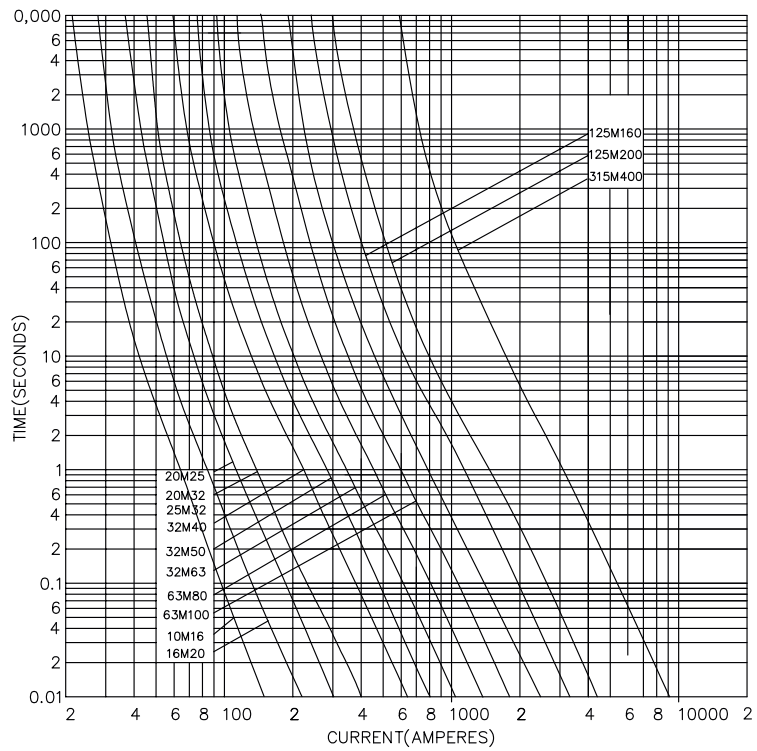
Fuse Type	Curve Type	Current Rating	I ² t (Ampere ² seconds)		Watts Loss
			Pre Arcing	Total	
BNS/BNIT/BTIA	gG	2A	1	5	0.9
BNS/BNIT/BTIA	gG	4A	7.6	38	1.5
BNS/BNIT/BTIA	gG	6A	28	40	1.5
BNS/BNIT/BTIA/BES	gG	10A	70	350	1.2
BNS/BNIT/BTIA/BES	gG	16A	120	550	1.6
BNS/BNIT/BTIA	gM	10M16A	120	550	0.6
BNS/BNIT/BTIA/BES	gG	20A	250	1250	1.7
BNS/BNIT/BTIA	gM	16M20A	250	1250	1.1
BNS/BNIT/BTIA/BES	gG	25A	420	2100	2
BNS/BNIT/BTIA	gM	20M25	420	2100	1.3
BNS/BNIT/BTIA/BES	gG	32A	670	3350	2.9
BNS/BNIT/BTIA	gM	20M32A	670	3350	1.1
BNS/BNIT/BTIA	gM	25M32A	670	3350	1.8
BNS/BES	gG	36A	700	4000	2.8
BNS	gM	20M36	700	4000	1.6
BNS/BES	gG	40A	1300	4200	3
BNS	gM	32M40	1300	4200	2.4
BNS/BES	gG	50A	2600	8750	3.6
BNS	gM	32M50	2600	8750	2.3
BNS/BES	gG	63A	4000	13900	4.7
BNS	gM	32M63	4000	13900	2.4

TIME VS. CURRENT CHARACTERISTICS

gG Curve-2 to 63A - 415/550 V ac



gM Curve-10M16 to 32M63-415/550 V ac



REFERENCE DATA

Offset Bolted Tag Fuse Links (A-type)

Rated Voltage: 690 V ac Breaking Capacity: 80 kA



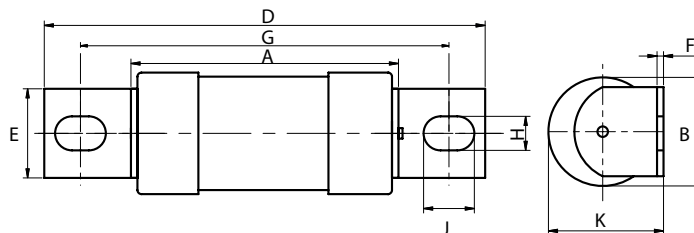
Voltage (V)	Rating (A)	Reference Number	Catalogue Number	BS Type Ref	Std. Pack
690	2	G1019251J	BTIA69V2	A2	10
	4	H1019252J	BTIA69V4	A2	10
	6	J1019253J	BTIA69V6	A2	10
	10	K1019254J	BTIA69V10	A2	10
	16	L1019255J	BTIA69V16	A2	10
	20	M1019256J	BTIA69V20	A2	10
	25	N1019257J	BTIA69V25	A2	10
	32	P1019258J	BTIA69V32	A2	10
	10M16	A1019751J	BTIA69V10M16	A2	10
	16M20	B1019752J	BTIA69V16M20	A2	10
	20M25	Q1019259J	BTIA69V20M25	A2	10
	20M32	R1019260J	BTIA69V20M32	A2	10
	25M32	C1019753J	BTIA69V25M32	A2	10
	36	S1019261J	BTIA69V36	A2	10
	40	T1019262J	BTIA69V40	A2	10
	50	V1019263J	BTIA69V50	A2	10
	63	W1019264J	BTIA69V63	A2	10
	32M36	A1019268J	BTIA69V32M36	A2	10
	32M40	X1019265J	BTIA69V32M40	A2	10
32M50	Y1019266J	BTIA69V32M50	A2	10	
32M63	Z1019267J	BTIA69V32M63	A2	10	
690	36	N1006584J	BTIS69V36	A3	10
	40	P1006585J	BTIS69V40	A3	10
	50	Q1006586J	BTIS69V50	A3	10
	63	R1006587J	BTIS69V63	A3	10
	32M36	C1019270J	BTIS69V32M36	A3	10
	32M40	D1006598J	BTIS69V32M40	A3	10
	32M50	E1006599J	BTIS69V32M50	A3	10
	32M63	F1006600J	BTIS69V32M63	A3	10
690	36	H1019275J	BTCP69V36	A4C	10
	40	M1006606J	BTCP69V40	A4C	10
	50	N1006607J	BTCP69V50	A4C	10
	63	J1019276J	BTCP69V63	A4C	10
	32M36	K1019277J	BTCP69V32M36	A4C	10
	32M40	L1019278J	BTCP69V32M40	A4C	10
	32M50	M1019279J	BTCP69V32M50	A4C	10
	32M63	N1019280J	BTCP69V32M63	A4C	10
	80	S1006611J	BTCP69V80	A4C	10
	100	T1006612J	BTCP69V100	A4	10
	63M80	V1006613J	BTCP69V63M80	A4	10
	63M100	W1006614J	BTCP69V63M100	A4	10

Note:

1. A4C represents compact dimensions with respect to BS88/ IEC60269 standards specified dimensions

DIMENSIONS

Offset Bolted Tag Fuse Links (A-type)



BS Ref	Fuse Type	Current Rating (A)	Dimensions (mm)								
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	J Nom	K Max
A2	BTIA	2, 4, 6, 10, 16, 20, 25, 32, 10M16, 16M20, 20M25, 20M32, 25M32	56.5	21.9	86	9.2	1.2	73	8	5.5	23.5
A2	BTIA	36, 40, 50, 63, 32M36, 32M40, 32M50, 32M63	54.5	21	86	8.7	1.2	73	5.5	8	22.3
A3	BTIS	36, 40, 50, 63, 32M36, 32M40, 32M50, 32M63	54.5	21	87	12.7	1.2	73	5.5	8	22.5
A4C	BTCP	36, 40, 50, 63, 32M36, 32M40, 32M50, 32M63	57.5	21	109	14.3	3.2	94	8.7	11	22.3
A4	BTCP	80, 100, 63M80, 63M100	59.5	26.9	111	19.5	2.4	94	8.7	11	28.5

ELECTRICAL CHARACTERISTICS

Fuse Type	Curve Type	Current Rating	1 ² t (Ampere ² seconds)		Watts Loss
			Pre Arcing	Total	
BTIA	gG	2A	1	6.5	0.8
BTIA	gG	4A	7.6	50	1.4
BTIA	gG	6A	28	180	1.7
BTIA	gG	10A	70	380	1.2
BTIA	gG	16A	120	580	1.6
BTIA	gM	10M16A	120	580	0.6
BTIA	gG	20A	250	1450	1.7
BTIA	gM	16M20A	250	1450	1.1
BTIA	gG	25A	420	2500	2.0
BTIA	gM	20M25A	420	2500	1.3
BTIA	gG	32A	670	3900	2.9
BTIA	gM	20M32A	670	3900	1.1
BTIA	gM	25M32A	670	3900	1.8
BTIA/BTIS/BTCP	gG	36A	700	4500	3.8
BTIA/BTIS/BTCP	gM	32M36A	700	4500	2.9
BTIA/BTIS/BTCP	gG	40A	1300	7400	4.0
BTIA/BTIS/BTCP	gM	32M40A	1300	7400	2.9
BTIA/BTIS/BTCP	gG	50A	2600	15000	4.8
BTIA/BTIS/BTCP	gM	32M50A	2600	15000	2.0
BTIA/BTIS/BTCP	gG	63A	4000	23000	5.9
BTIA/BTIS/BTCP	gM	32M63A	4000	23000	1.6
BTCP	gG	80A	8500	48500	6.5
BTCP	gM	63M80A	8500	48500	4.0
BTCP	gG	100A	14000	80000	7.5
BTCP	gM	63M100A	14000	80000	3.0

REFERENCE DATA

Central Bolted Tag Fuse Links (B&C-type)

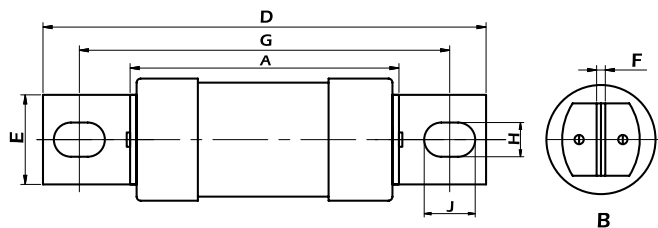
Rated Voltage: 690 V ac Breaking Capacity: 80 kA



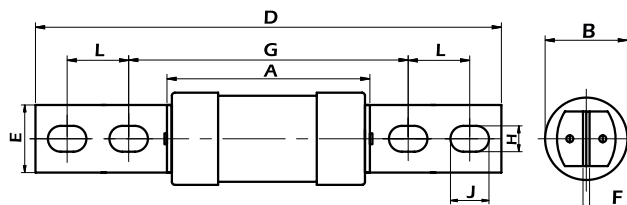
Voltage (V)	Rating (A)	Reference Number	Catalogue Number	BS Type Ref	Std. Pack
690	80	B1019775J	BTC69V80	B1	10
	100	A1006618J	BTC69V100	B1	10
	63M80	B1006619J	BTC69V63M80	B1	10
	63M100	C1006620J	BTC69V63M100	B1	10
690	125	D1006621E	BTF69V125	B2	5
	160	E1006622E	BTF69V160	B2	5
	200	F1006623E	BTF69V200	B2	5
	125M160	G1006624E	BTF69V125M160	B2	5
	125M200	H1006625E	BTF69V125M200	B2	5
690	250	P1036991A	BTKF69V250	B3	1
	315	Q1036992A	BTKF69V315	B3	1
690	250	J1006626A	BTMF69V250	B4	1
	315	K1006627A	BTMF69V315	B4	1
	355	L1006628A	BTMF69V355	B4	1
	400	M1006629A	BTMF69V400	B4	1
	315M400	N1006630A	BTMF69V315M400	B4	1
690	250	P1006631A	BTM69V250	C1	1
	315	R1006633A	BTM69V315	C1	1
	355	S1006634A	BTM69V355	C1	1
	400	W1006637A	BTM69V400	C1	1
690	450	Y1006639A	BTTM69V450	C2	1
	500	Z1006640A	BTTM69V500	C2	1
	560	A1006641A	BTTM69V560	C2	1
	630	B1006642A	BTTM69V630	C2	1
690	670	D1019271A	BTLM69V670	C3	1
	710	E1019272A	BTLM69V710	C3	1
	750	F1019273A	BTLM69V750	C3	1
	800	G1019274A	BTLM69V800	C3	1

DIMENSIONS

Central Bolted Tag Fuse Links (B&C-type)



BS Ref	Fuse Type	Current Rating (A)	Dimensions (mm)							
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	J Nom
B1	BTC	80, 100, 63M80, 63M100	57	26.9	137	19.5	3.2	111	8.7	14
B2	BTF	125, 160, 200, 125M160, 125M200	73	41.9	138	19.5	3.2	111	8.7	14
B3	BTKF	250, 315	73	41.9	138	19.5	3.2	111	8.7	14
B4	BTMF	250, 315, 355, 400, 315M400	75	59.1	138	26	4.8	111	8.7	14



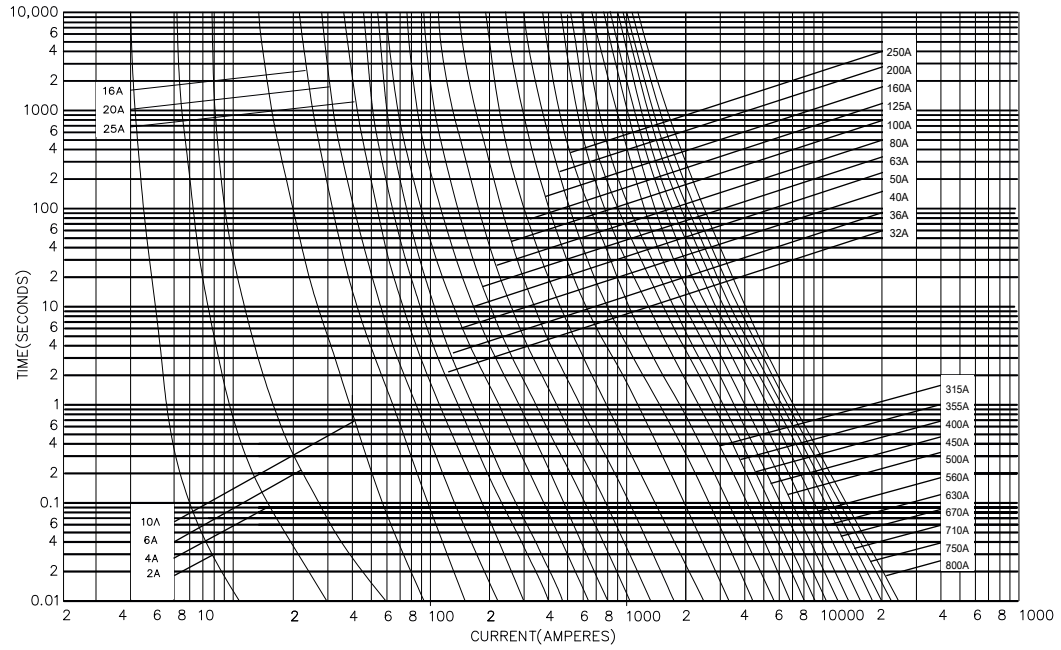
BS Ref	Fuse Type	Current Rating (A)	Dimensions (mm)									
			A Max	B Max	D Max	E Max	F Nom	G Nom	H Nom	J Nom	L Nom	
C1	BTM	250, 315, 355, 400	75	59.1	212	26	4.8	133	10.3	16	25.4	
C2	BTTM	450, 500, 560, 630	83	74.4	212	26	6.3	133	10.3	16	25.4	
C3	BTLM	670, 710, 750, 800	86	82.4	212	26	9.5	133	10.3	16	25.4	

ELECTRICAL CHARACTERISTICS

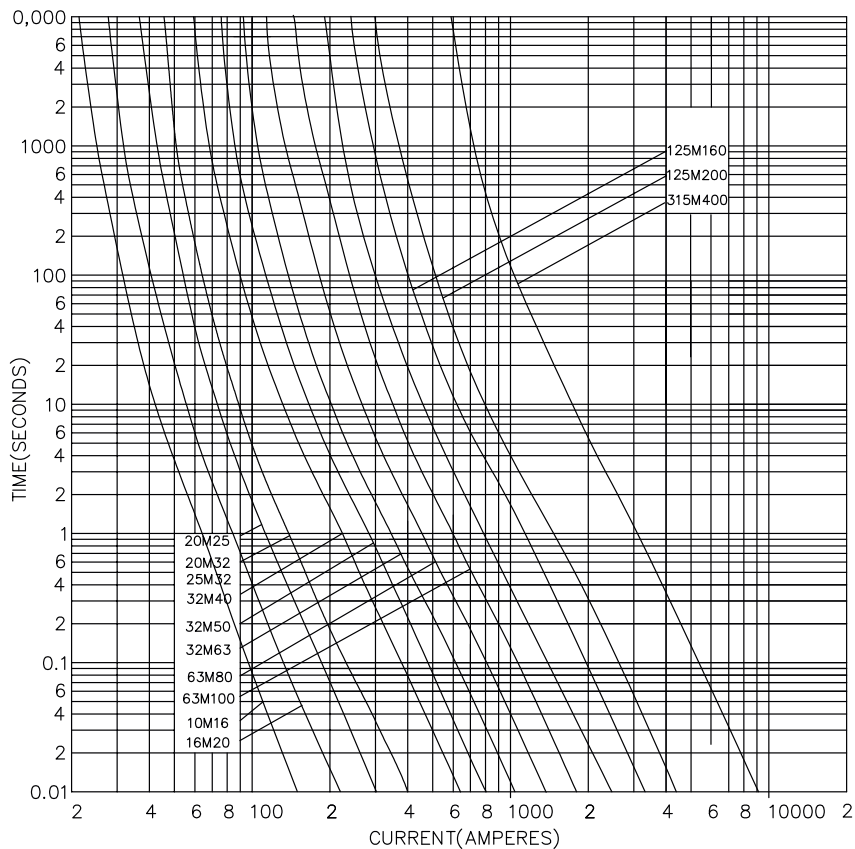
Fuse Type	Curve Type	Current Rating	1 ² t (Ampere ² seconds)		Watts Loss
			Pre Arcing	Total	
BTC	gG	80A	8500	48500	6.5
BTC	gM	63M80A	8500	48500	4.0
BTC	gG	100A	14000	80000	7.5
BTC	gM	63M100A	14000	80000	3.0
BTF	gG	125A	28000	140000	11.3
BTF	gG	160A	60000	300000	14.5
BTF	gM	125M160A	60000	300000	8.5
BTF	gG	200A	105000	350000	16.2
BTF	gM	125M200A	105000	350000	6.3
BTMF/BTM/BTKF	gG	250A	190000	700000	24
BTMF/BTM/BTKF	gG	315A	270000	1350000	31
BTMF/BTM	gG	355A	395000	1975000	32
BTMF/BTM	gG	400A	505000	2525000	38
BTMF	gM	315M400A	505000	2525000	23.5
BTTM	gG	450A	650000	3300000	42
BTTM	gG	500A	850000	4250000	48
BTTM	gG	560A	1200000	5800000	50
BTTM	gG	630A	1546000	9800000	54
BTLM	gG	670A	1950000	10100000	60
BTLM	gG	710A	2400000	12000000	62
BTLM	gG	750A	3000000	14200000	65
BTLM	gG	800A	3769000	15000000	68

TIME VS. CURRENT CHARACTERISTICS

gG Curves - 2 to 800A - 690 V ac

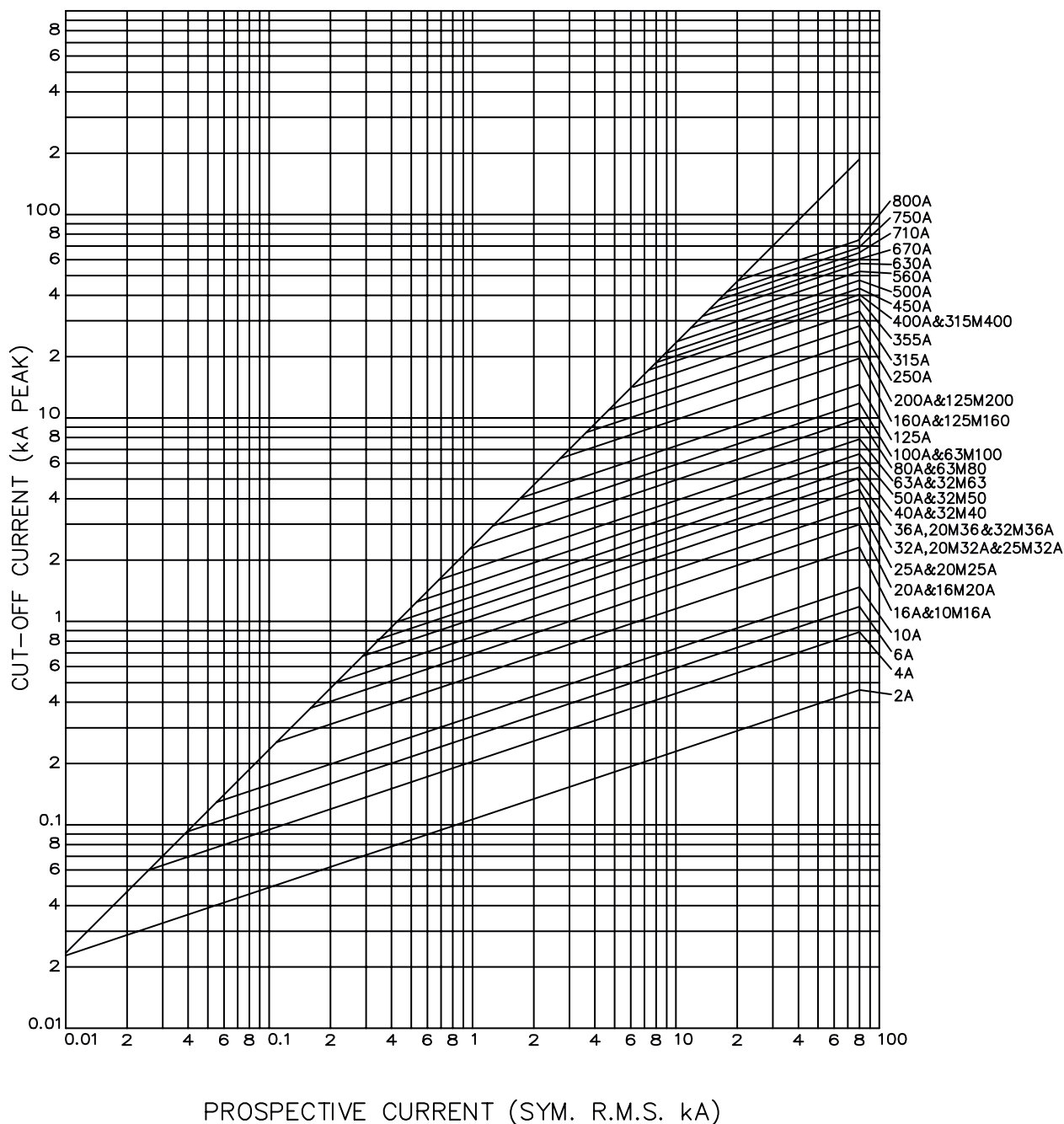


gM Curves - 10M16 to 315M400A - 690 V ac

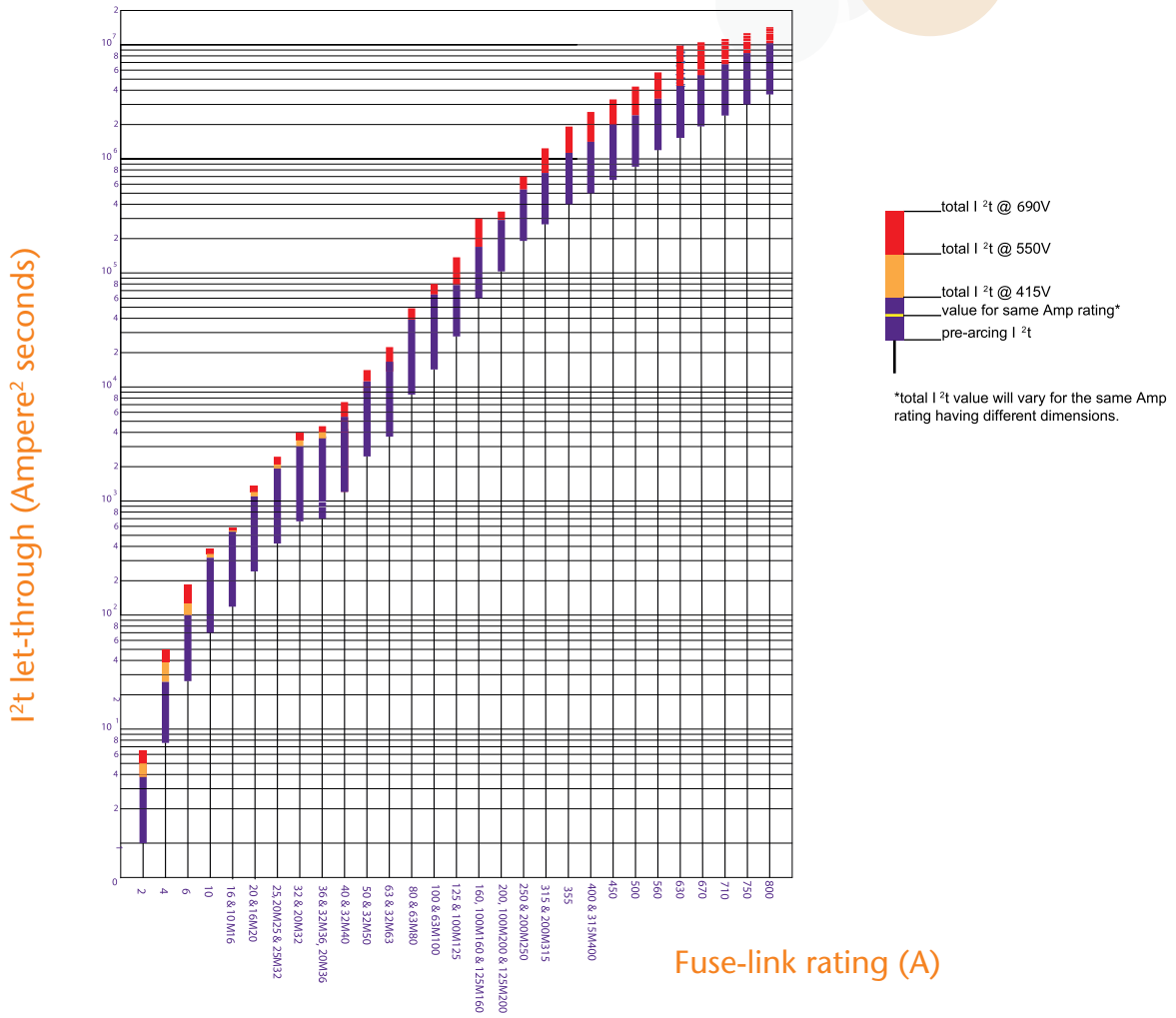


CUT-OFF CURRENT CHARACTERISTICS

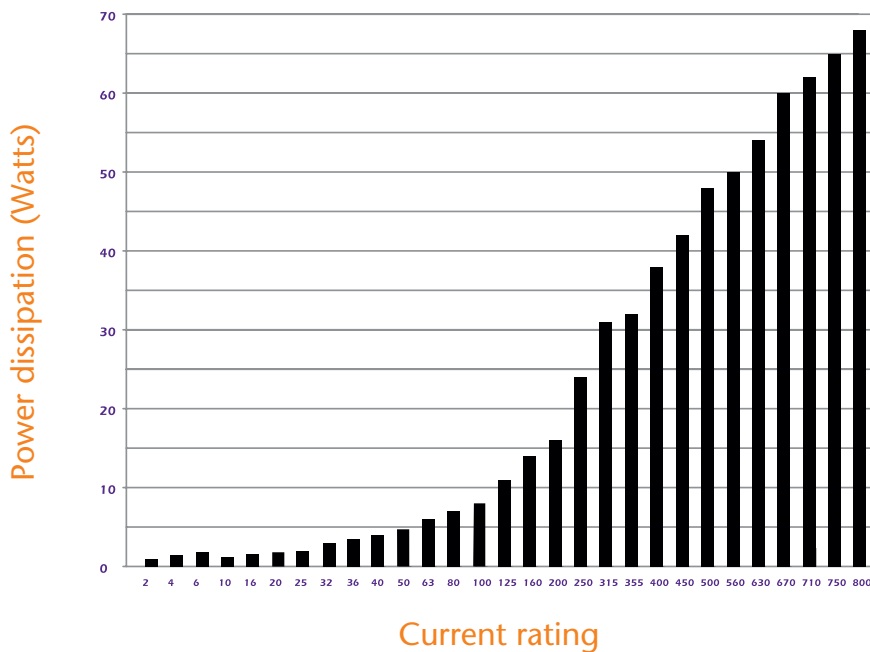
A, B, C, & F - Type 550/690 V ac



I²t CHARACTERISTICS



POWER DISSIPATION CHART



APPLICATION INFORMATION

Voltage rating selection

BS88 fuses comply with IEC 60269 standards. They are tested under a voltage at least 10% higher than the fuse rated voltage.

Ambient temperature

Above an ambient of 40°C a general de-rating of 0.5% of the fuse-link rated current per excess degree centigrade is recommended.

Cable protection

gG fuses protect cables against both overload and short circuit. The cable is protected when the following conditions are fulfilled.

$$I_B \leq I_N \leq I_Z$$
$$I_F \leq 1.45 I_Z$$

I_B : Operating Current Of The Cable
 I_Z : Maximum current carrying capacity of the cable
 I_N : Rated current of the fuse
 I_F : Conventional Fusing current of the fuse

Capacitor circuit protection

The fuse selection must take into account:

- The inrush current occurring when the capacitor is switched on
- The harmonic currents during the normal operation of the network
- Capacitor tolerances

The fuse link should be chosen with a current rating greater than 1.7 times the rated capacitor current. Correction for ambient temperature higher than 40°C must be added.

Transformer protection

Fuses must be fitted both in the primary and the secondary of the transformer. The fuse selection must take into account the high transient inrush current in the primary of the transformer. Consequently the normal current rating of the fuse links on the primary side of transformers should be at least twice the nominal transformer primary current. The normal I_N value of the fuse links on the secondary side of transformers is at least equal to the nominal transformer secondary current when the temperature does not exceed 40°C.

Motor circuit protection

The motor starter manufacturers generally recommend the fuse link rating to be used in conjunction with the motor starter. Type 2 co-ordination is easily obtained with mersen fuses in view of having the pre-arcing I_{2t} values closer to the lower limit of the specified limits of the standard. The gM fuse selection as for an aM fuse requires the melt current at 5s is 7 times the fuse rating

Protection against electrical shock

The rule is to disconnect within a time specified by local standards. Generally wiring regulations require a disconnecting time not exceeding 5 seconds for a distribution circuit. It will be less than 1 second in many other cases. The maximum value of each fault loop impedance (Z_s) for gG fuse link to BS** : part 2 & 6 are as shown

Rating (A)	Z_s (Ohms)
6	14
10	7.7
16	4.3
20	3.0
25	2.4
32	1.9
40	1.4
50	1.1
63	0.86
80	0.60

Rating (A)	Z_s (Ohms)
100	0.44
125	0.35
160	0.27
200	0.20
250	0.16
315	0.13
400	0.092
500	0.067
630	0.056
800	0.035

BS88 FUSE HOLDERS

For Offset Blade & Bolted Tag Fuse Links

Fuse holders from Mersen comply with BS88-1 and BS88-6: 1988. The fuse holders are designed to prevent direct contact with live parts when being inserted or removed, preventing any likelihood of inadvertent contact with live metal. Also, cable terminals within the fuse base are fully shrouded when holder is removed (product is IP2X Classified).

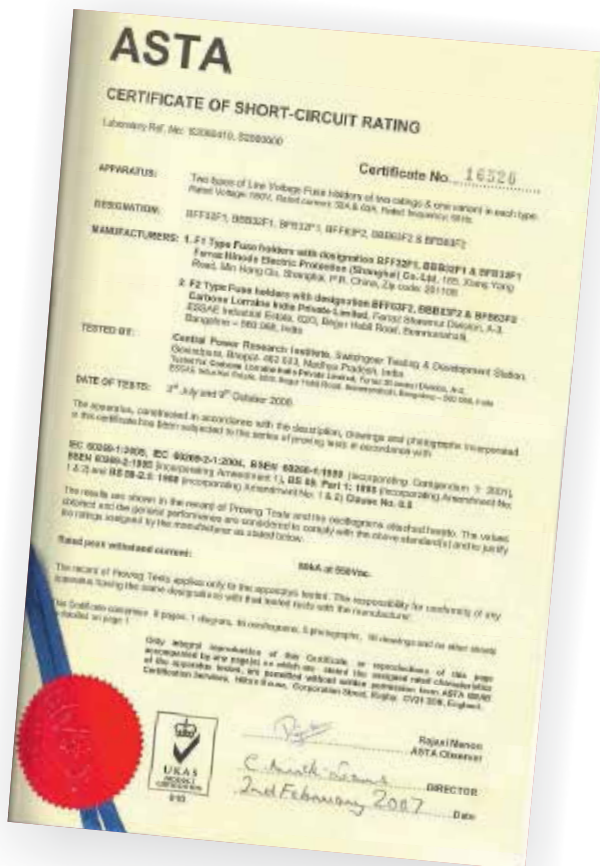
Type Of Connection



BFF Front wire connected (front-front) 3 connection styles possible: Mounting on board with cable upstream and downstream

BBB Back stud connected (back-back) Mounting on board with two cables on the back (connection via lug. see table)

BFB front back (busbar) stud connected Mounting on board with up-stream or downstream cable and back cable



Advantage

1. DIN Rail Mounting for ease of assembly
2. Safety Shrouds
3. Options for colour and terminations
4. RoHs compliance



BS88 FUSE HOLDERS

For Offset Blade & Bolted Tag Fuse Links

Type	Voltage Rating (V)	Nominal Current (A)	Color	Connection	Reference Number	Catalogue Number	Standard Pack	Mersen use/Neutral Link Type
F1	550	32	Black	Front-Front	A230138F	BFF32F1	6	
F1	550	32	Black	Back-Back	N239120F	BBB32F1	6	
F1	550	32	Black	Front-Back	B230139F	BFB32F1	6	
F1	550	32	Green	Front-Front	B1012553F	BFF32F1G	6	BNS55Vxx
F1	550	32	Green	Back-Back	V1012547F	BBB32F1G	6	
F1	550	32	Green	Front-Back	Y1012550F	BFB32F1G	6	
F1	550	32	White	Front-Front	P239121F	BFF32F1W	6	
F1	550	32	White	Back-Back	Q239122F	BBB32F1W	6	BNEUTRALF1
F1	550	32	White	Front-Back	R239123F	BFB32F1W	6	
F1	550	32	-	-	D239134J	BNEUTRALF1	10	-
F2	550	63	Black	Front-Front	S239124F	BFF63F2	6	
F2	550	63	Black	Back-Back	T239125F	BBB63F2	6	
F2	550	63	Black	Front-Back	V239126F	BFB63F2	6	BES55Vxx
F2	550	63	Green	Front-Front	Z239130F	BFF63F2G	6	BES42Vxx
F2	550	63	Green	Back-Back	A239131F	BBB63F2G	6	
F2	550	63	Green	Front-Back	B239132F	BFB63F2G	6	
F2	550	63	White	Front-Front	W239127F	BFF63F2W	6	
F2	550	63	White	Back-Back	X239128F	BBB63F2W	6	BNEUTRALF2
F2	550	63	White	Front-Back	Y239129F	BFB63F2W	6	
F2	550	63	-	-	E239135J	BNEUTRALF2	10	-
A1	550	32	Black	Front-Front	D239088F	BFF32A1	6	
A1	550	32	Black	Back-Back	E239089F	BBB32A1	6	
A1	550	32	Black	Front-Back	F239090F	BFB32A1	6	
A1	550	32	Green	Front-Front	K239094F	BFF32A1G	6	BNIT55Vxx
A1	550	32	Green	Back-Back	L239095F	BBB32A1G	6	
A1	550	32	Green	Front-Back	M239096F	BFB32A1G	6	
A1	550	32	White	Front-Front	G239091F	BFF32A1W	6	
A1	550	32	White	Back-Back	H239092F	BBB32A1W	6	BNEUTRALA1
A1	550	32	White	Front-Back	J239093F	BFB32A1W	6	
A1	550	32	-	-	F239136J	BNEUTRALA1	10	-
A2	690	32	Black	Front-Front	C230140F	BFF32A2	6	
A2	690	32	Black	Back-Back	P1012542F	BBB32A2B	6	
A2	690	32	Black	Front-Back	D230141F	BFB32A2	6	
A2	690	32	Green	Front-Front	Z1012551F	BFF32A2G	6	BTIA55Vxx
A2	690	32	Green	Back-Back	S1012545F	BBB32A2G	6	BTIA69Vxx
A2	690	32	Green	Front-Back	W1012548F	BFB32A2G	6	
A2	690	32	White	Front-Front	A1012552F	BFF32A2W	6	
A2	690	32	White	Back-Back	T1012546F	BBB32A2W	6	BNEUTRALA2
A2	690	32	White	Front-Back	X1012549F	BFB32A2W	6	
A2	690	32	-	-	G239137J	BNEUTRALA2	10	-
A3	690	63	Black	Front-Front	F230143F	BFF63A3	6	
A3	690	63	Black	Back-Back	V239103F	BBB63A3	6	
A3	690	63	Black	Front-Back	G230144F	BFB63A3	6	BTSS42Vxx
A3	690	63	Green	Front-Front	Z239107F	BFF63A3G	6	BTSDS42Vxxx
A3	690	63	Green	Back-Back	A239108F	BBB63A3G	6	BTIS69Vxx
A3	690	63	Green	Front-Back	B239109F	BFB63A3G	6	
A3	690	63	White	Front-Front	W239104F	BFF63A3W	6	
A3	690	63	White	Back-Back	X239105F	BBB63A3W	6	BNEUTRALA3
A3	690	63	White	Front-Back	Y239106F	BFB63A3W	6	
A3	690	63	-	-	H239138J	BNEUTRALA3	10	-
A4	690	125	Black	Front-Front	H230145A	BFF125A4	1	
A4	690	125	Black	Back-Back	C239110A	BBB125A4	1	
A4	690	125	Black	Front-Back	J230146A	BFB125A4	1	
A4	690	125	Green	Front-Front	K239117A	BFF125A4G	1	BTSD42Vxxx
A4	690	125	Green	Back-Back	L239118A	BBB125A4G	1	BTCP42Vxxx
A4	690	125	Green	Front-Back	M239119A	BFB125A4G	1	BTCP69Vxxx
A4	690	125	White	Front-Front	D239111A	BFF125A4W	1	
A4	690	125	White	Back-Back	E239112A	BBB125A4W	1	BNEUTRALA4
A4	690	125	White	Front-Back	F239113A	BFB125A4W	1	
A4	690	125	-	-	J239139J	BNEUTRALA4	10	-



Technical Characteristics

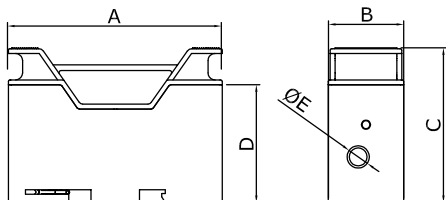


Specifications	F1	F2	A1	A2	A3	A4
3 kinds of electrical connections in Black White & Green						
Front connected	BFF32F1	BFF63F2	BFF32A1	BFF32A2	BFF63A3	BFF125A4
Back connected	BBB32F1	BBB63F2	BBB32A1	BBB32A2	BBB63A3	BBB125A4
Front Back connected	BFB32F1	BFB63F2	BFB32A1	BFB32A2	BFB63A3	BFB125A4
Cable cross-section for font connection						
Min: 1 or 2 cables	1 mm ²	1 mm ²	1 mm ²	1 mm ²	1 mm ²	1 mm ²
Max: 1 cable	16 mm ²	25 mm ²	16 mm ²	16 mm ²	50 mm ²	70 mm ²
Max: 2 cables	10 mm ²	16 mm ²	10 mm ²	10 mm ²	25 mm ²	35 mm ²
Type of wire to be used: Copper multi strand or single strand Note: Multistrand cable with maximum 17 strands. For more than 17 strands a circular sleeve at the end of the cable is compulsory						
Lug diameter of the cable for Back & Busbar connection terminal diameter (refer Note)	M6	M8	M6	M6	M8	M8
DIN Rail Mounting 35 mm DIN Rail						
Whether the plastic material complies with RoHS	Thermoplastic Polyamid, RoHS compliant & Fire Retardant					
Diameter of the screw to be used for panel mounting Deep base = 4mm	M5 screw (Pan head/Cheese head)					
Max torque for the mounting screw on the panel	3.5 Nm	4 Nm	3.5 Nm	4 Nm	3.5 Nm	4 Nm
Max torque for the grub screw (back & bus bar connections)	3.5 Nm	4 Nm	3.5 Nm	3.5 Nm	3.5 Nm	4 Nm
Certification ASTA						
Rated Voltage	550 V AC	550 V AC	550 V AC	690 V AC	690 V AC	690 V AC
Rated Current	32 A	63 A	32 A	32 A	63 A	125 A
Rated peak withstand current @ rated voltage	80 kA					
Tool specification for tightening Electric Screw driver / Manual crew driver - Max Torque setting	3.5 Nm	4 Nm	3.5 Nm	4 Nm	4 Nm	4 Nm
Screwdriver bit Diameter 6 x 100mm						
with working edge thickness of 1mm and width of 7mm	0.8 x 4.8 mm	1 x 6 mm	0.8 x 4.8 mm	1 x 6 mm	1 x 6 mm	1 x 6 mm
U imp according to IEC 60269-1 8 kA						

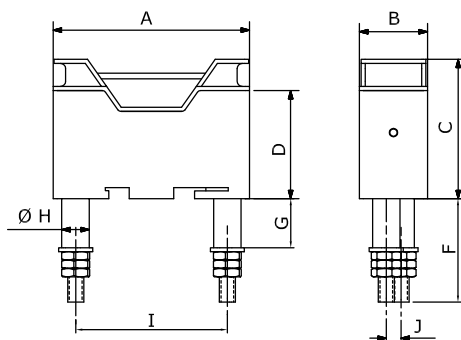
BS88 FUSE HOLDERS

Dimensions for F type

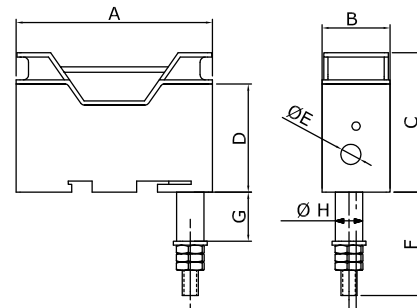
Front Front Connection (BFF)



Back Back Connection (BBB)

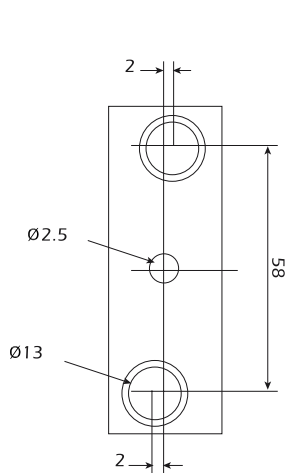


Front Back (Busbar) Connection (BFB)

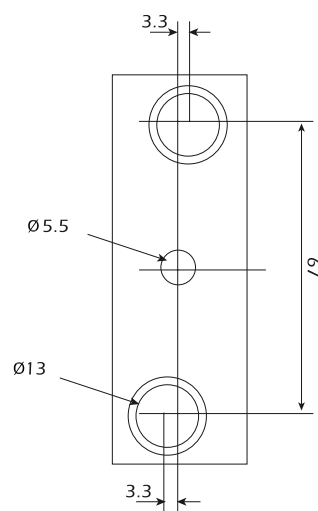


Fuse Holder Type	A	B	C	D	E	F	G	H	I	J	K
BFF32F1	75.5	26.5	54	41.5	7.8	-	-	-	-	-	-
BBB32F1	75.5	26.5	54	41.5	-	40	17	9.7	58	5.6	-
BFB32F1	75.5	26.5	54	41.5	7.8	40	17	9.7	-	-	2.7
BFF63F2	89	28.5	64	48.6	9	-	-	-	-	-	-
BBB63F2	89	28.5	64	48.6	-	39	18.3	12	67	7	-
BFB63F2	89	28.5	64	48.6	9	39	18.3	12	-	-	3.3

Panel Drilling Dimensions



for F1

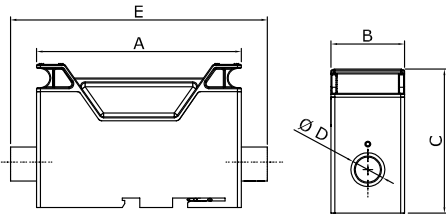


for F2

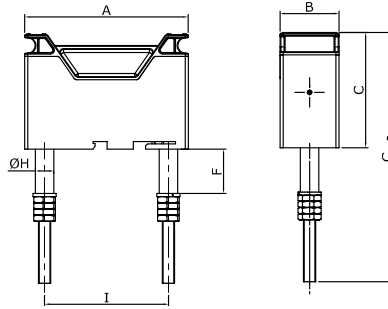
BS88 FUSE HOLDERS

Dimensions for A type

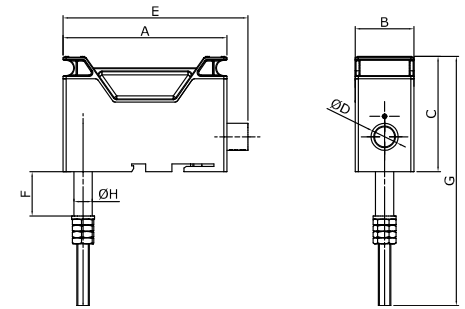
Front Front Connection (BFF)



Back Back Connection (BBB)

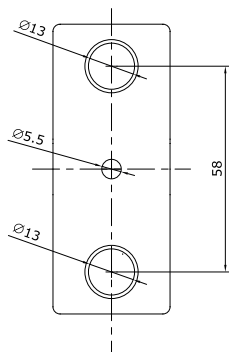


Front Back (Busbar) Connection (BFB)

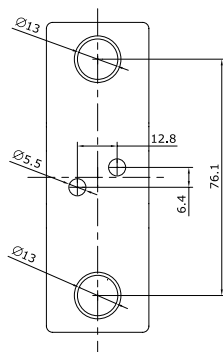


Fuse Holder Type	A	B	C	D	E	F	G	H	I
BFF32A1	77.2	97.2	56	9	97.2	-	-	-	-
BBB32A1	77.2	97.2	56	-	-	28.6	122	11.9	58
BFB32A1	77.2	97.2	56	9	87.2	28.6	122	11.9	-
BFF32A2	99.8	31.6	56	9	119.8	-	-	-	-
BBB32A2	99.8	31.6	56	-	-	28.6	84.6	11.9	76.1
BFB32A2	99.8	31.6	56	9	109.8	28.6	84.6	11.9	-
BFF63A3	105.8	38	74.5	17.5	132.8	-	-	-	-
BBB63A3	105.8	38	74.5	-	-	28.6	161	11.9	64
BFB63A3	105.8	38	74.5	17.5	95.4	28.6	161	11.9	-
BFF125A4	134	48.9	97.8	17.5	165.7	-	-	-	-
BBB125A4	134	48.9	97.8	-	-	28.6	184.4	11.9	94.1
BFB125A4	134	48.9	97.8	17.5	149.9	28.6	184.4	11.9	-

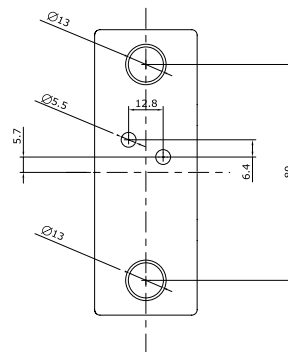
Panel Drilling Dimensions



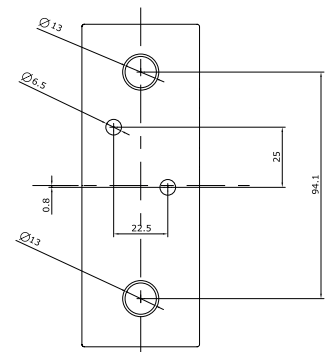
for A1



for A2



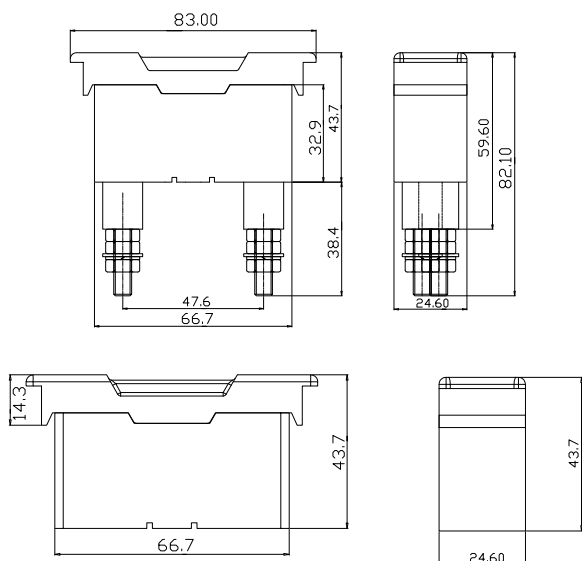
for A3



for A4

BS88 FUSE HOLDERS

For Offset Blade - Phenolic Type



Type	Voltage rating (V)	Nominal Current (A)	Color	Connection	Reference Number	Catalogue Number	Standard Pack	Mersen fuse type
F1	550	32	Black	Front-Front	T1036995F	BNSH32F1	6	BNS55Vxx
F1	550	32	Black	Back-Back	W1036297F	BNSP32F1	6	

Type	Voltage rating (V)
3 kinds of electrical connections in Black White & Green	
Front connected	BFF32F1
Back connected	BBB32F1
Cable cross-section for font connection	
Min: 1 or 2 cables	1 mm ²
Max: 1 cable	16 mm ²
Max: 2 cables	10 mm ²
Type of wire to be used: Copper multi strand or single strand	
Note: Multistrand cable with maximum 17 strands. For more than 17 strands a circular sleeve at the end of the cable is compulsory	
Lug diameter of the cable for Back & Busbar connection terminal diameter (refer Note)	M6
Diameter of the screw to be used for panel mounting Deep base = 4mm	M5 screw (Pan head/Cheese head)
Max torque for the mounting screw on the panel	3.5 Nm
Max torque for the grub screw (back & bus bar connections)	3.5 Nm
Rated Voltage	550 V AC
Rated Current	32 A
Rated peak withstand current @ rated voltage	80 kA
Tool specification for tightening Electric Screw driver / Manual crew driver - Max Torque setting	3.5 Nm
Screwdriver bit	Diameter 6 x 100mm
with working edge thickness of 1mm and width of 7mm	0.8 x 4.8 mm
U imp according to IEC 60269-1	8 kV

ASTA

CERTIFICATE OF SHORT-CIRCUIT RATING

Laboratory Ref. No: 52060288

Certificate No. 16525

APPARATUS: Low Voltage HRC Fuses, which represented the minimum and maximum ratings of a homogeneous series.
Rated Voltage: 330V, Rated currents: 25 & 63A¹⁾, Rated frequency: 50Hz

DESIGNATION: 2F1-6F1 and 2A1-6A1

MANUFACTURER: Carbone Lorraine India Private Limited, Ferrar Shikhar Division, A-3, ESSAI Industrial Estate, G2/3, Begur Haldi Road, Bommarahalli, Bangalore - 560 060, India

TESTED BY: Central Power Research Institute, Switchgear Testing & Development Station, Bhopal-462 023, Madhya Pradesh, India

DATE OF TESTS: 8th & 16th October 2006

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

IEC 60269-1:2003, IEC 60269-2-1:2004, BSEN 60269-1:1999 (incorporating Corrigendum 1: 2001), BSEN 60269-2:1995 (incorporating Amendment 1), BS 88: Part 1: 1988 (incorporating Amendment No: 1 & 2), BS 88-2: 1988 (incorporating Amendment No: 1 & 2) and BS 88-2: 1988 (incorporating Amendment No: 1, 2 & 3) Clause No. 8.5

The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard(s) and to justify the ratings assigned by the manufacturer as stated below.

Breaking Range and Utilization Category: gG

Rated Breaking Capacity: 80kA at 550Vac.

gG

80kA at 550Vac.

¹⁾ The above tests have reference to minimum (25A) and maximum (63A) ratings of a homogeneous series with a 100% safety factor. Fuse links having an intermediate rating (40A) have been established and comply with clause 8.1.3.2 of the standard as part of the series.

The record of Proving Tests applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the manufacturer.

This Certificate comprises 11 pages, 1 diagram, 22 oscillograms, 3 photographs, 3 drawings and 6 other sheets as detailed on page 1.

Only integral reproduction of this Certificate, or reproduction of this page accompanied by any page(s) on which are stated the assigned rated characteristics of the apparatus tested, are permitted without written permission from ASTA BEAD Certification Services, Hillier House, Corporation Street, Rugby, CV21 3DN, England.



Rajni Menon
ASTA Observer

C. Anilkumar
26th January 2007
DIRECTOR
Date

ASTA

CERTIFICATE OF SHORT-CIRCUIT RATING

Laboratory Ref. No: 52060592

Certificate No. 16521

APPARATUS: Low Voltage HRC Fuses, which represented the minimum and maximum ratings of a homogeneous series.
Rated Voltage: 690V, Rated currents: 10A & 63A¹⁾, Rated frequency: 50Hz

DESIGNATIONS: 10A2 to 63A1, 32M6A3, 32M6A3 & 32M6A3, 16A4(C)-63A4(C)

MANUFACTURER: Carbone Lorraine India Private Limited, Ferrar Shikhar Division, A-3, ESSAI Industrial Estate, G2/3, Begur Haldi Road, Bommarahalli, Bangalore - 560 060, India

TESTED BY: Central Power Research Institute, Switchgear Testing & Development Station, Bhopal-462 023, Madhya Pradesh, India

DATE OF TESTS: 5th, 11th, 12th & 13th October 2006

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

IEC 60269-1:2003, IEC 60269-2-1:2004, BSEN 60269-1:1999 (incorporating Corrigendum 1: 2001), BSEN 60269-2:1995 (incorporating Amendment 1), BS 88: Part 1: 1988 (incorporating Amendment No: 1 & 2), BS 88-2: 1988 (incorporating Amendment No: 1 & 2) and BS 88-2: 1988 (incorporating Amendment No: 1, 2 & 3) Clause No. 8.5

The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard(s) and to justify the ratings assigned by the manufacturer as stated below.

Breaking Range and Utilization Category: gG & gM

Rated Breaking Capacity: 60kA at 690Vac.

gG & gM

60kA at 690Vac.

¹⁾ The above tests have reference to minimum (10A) and maximum (63A) ratings of a homogeneous series, with a 100% safety factor. Fuse links having intermediate ratings (25A, 32A, 50A, 63A, 80A & 100A) have been established and comply with clause 8.1.3.2 of the standard as part of the series.

The record of Proving Tests applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the manufacturer.

This Certificate comprises 12 pages, 2 diagrams, 22 oscillograms, 3 photographs, 3 drawings and no other sheets as detailed on page 1.

Only integral reproduction of this Certificate, or reproduction of this page accompanied by any page(s) on which are stated the assigned rated characteristics of the apparatus tested, are permitted without written permission from ASTA BEAD Certification Services, Hillier House, Corporation Street, Rugby, CV21 3DN, England.



Rajni Menon
ASTA Observer

C. Anilkumar
26th January 2007
DIRECTOR
Date



A WORLD LEADER
in safety and reliability for
electrical power

A GLOBAL PLAYER

Global expert in materials and equipment for extreme environments and in the safety and reliability of electrical equipment.

Mersen designs innovative solutions to address its clients' specific needs to enable them to optimize their manufacturing process in sectors such as Energy, Transportation, Electronics, Chemical, Pharmaceutical and Process Industries.

Mersen France SB
 S.A.S.
 Rue Jacques de Vaucanson
 F-69720 saint-Bonnet-de-Mure
 Tel: +33 4 72 22 66 11
 www.mersen.com

MERSEN India Pvt. Ltd.
 # 19, 4th Cross,
 Bommasandra Industrial Area,
 Bangalore – 560099, INDIA.
 Tel: +91 80 25730502/3
 E-mail: sales.ep.india@mersen.com
 www.mersen.com

Mersen USA
 Newburyport-MA L.L.C.
 374 Merrimac Street
 Newburyport, MA 01950
 phone: 978-462-6662
 www.mersen.com