Ferraz Shawmut

BS88 LV Fuse Links
Catalog 2006

Blue Dot

CARBONE LORRAINE

Ferraz Shawmut

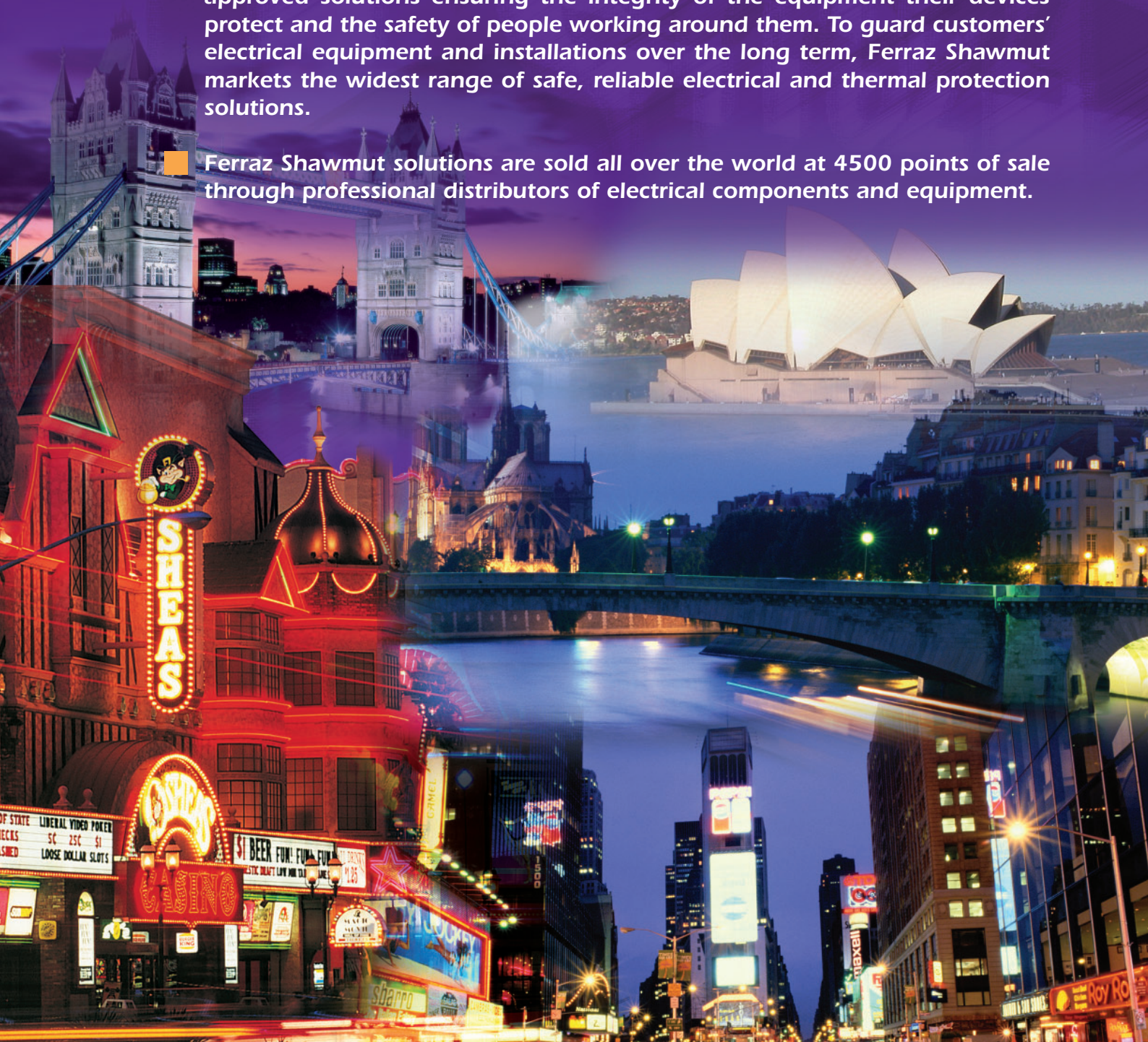
- Powerful presence of the world's leader on the circuit protection market Ferraz Shawmut, Carbone Lorraine's Electrical Protection Division, offer innovative solutions to enhance the safety of low and medium voltage installations and equipment.

- 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, Ferraz Shawmut has established production facilities on every continent to optimize 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 organization of Ferraz Shawmut offers tried, proven and approved solutions ensuring the integrity of the equipment their devices protect and the safety of people working around them. To guard customers' electrical equipment and installations over the long term, Ferraz Shawmut markets the widest range of safe, reliable electrical and thermal protection solutions.

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



Blue Dot is the brand name of the Ferraz Shawmut's BS88 General Purpose Fuse and Fusegear range of products.

Blue Dot brand provides you with high-quality products designed and manufactured by Ferraz Shawmut 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.

Contents

Offset Bolted Tag Fuse Links (A-type)

Offset Bolted Tag Fuses Links (A-type)

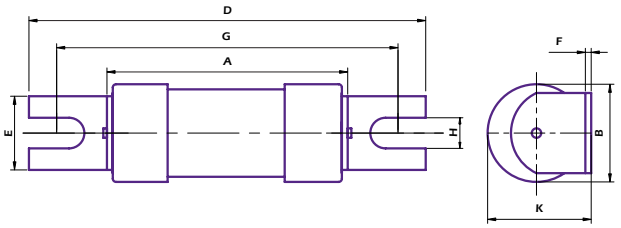
Reference data

Rated Voltage: 415V ac
Breaking Capacity: 80kA

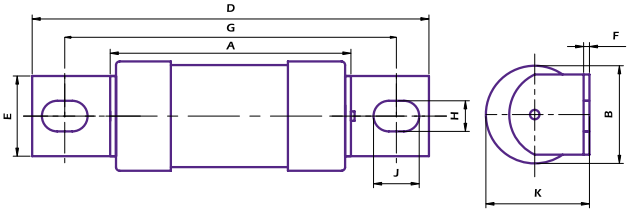
Rating (A)	Catalog Number	Reference Number	BS Standard Reference	IEC Standard Reference	Designation (Fuse Type)	Pack.
2	BNIT42V2	N226263J	BS88-2	IEC60269-2	2A1	10
4	BNIT42V4	P226264J	BS88-2	IEC60269-2	4A1	10
6	BNIT42V6	Q226265J	BS88-2	IEC60269-2	6A1	10
10	BNIT42V10	R226266J	BS88-2	IEC60269-2	10A1	10
16	BNIT42V16	S226267J	BS88-2	IEC60269-2	16A1	10
20	BNIT42V20	T226268J	BS88-2	IEC60269-2	20A1	10
25	BNIT42V25	V226269J	BS88-1	IEC60269-1	25A1	10
32	BNIT42V32	W226270J	BS88-1	IEC60269-1	32A1	10
25	BNIT42V20M25	X226271J	BS88-2	IEC60269-2	20M25A1	10
32	BNIT42V20M32	Y226272J	BS88-2	IEC60269-2	20M32A1	10
2	BTIA42V2	Z226273J	BS88-2	IEC60269-2	2A2	10
4	BTIA42V4	A226274J	BS88-2	IEC60269-2	4A2	10
6	BTIA42V6	B226275J	BS88-2	IEC60269-2	6A2	10
10	BTIA42V10	C226276J	BS88-2	IEC60269-2	10A2	10
16	BTIA42V16	D226277J	BS88-2	IEC60269-2	16A2	10
20	BTIA42V20	V227833J	BS88-2	IEC60269-2	20A2	10
25	BTIA42V25	E226278J	BS88-2	IEC60269-2	25A2	10
32	BTIA42V32	F226279J	BS88-2	IEC60269-2	32A2	10
40	BTIA42V32M40	G226280J	BS88-2	IEC60269-2	32M40A2	10
50	BTIA42V32M50	H226281J	BS88-2	IEC60269-2	32M50A2	10
63	BTIA42V32M63	K226283J	BS88-2	IEC60269-2	32M63A2	10
40	BTIS42V40	L226284J	BS88-2	IEC60269-2	40A3	10
50	BTIS42V50	M226285J	BS88-2	IEC60269-2	50A3	10
63	BTIS42V63	N226286J	BS88-2	IEC60269-2	63A3	10
80	BTIS42V80	P226287J	BS88-1	IEC60269-1	80A3	10
100	BTIS42V100	Q226288J	BS88-1	IEC60269-1	100A3	10
80	BTIS42V63M80	R226289J	BS88-2	IEC60269-2	63M80A3	10
100	BTIS42V63M100	S226290J	BS88-2	IEC60269-2	63M100A3	10
32	BTCP42V32	T226291E	BS88-2	IEC60269-2	32A4	5
40	BTCP42V40	V226292E	BS88-2	IEC60269-2	40A4	5
50	BTCP42V50	W226293E	BS88-2	IEC60269-2	50A4	5
63	BTCP42V63	X226294E	BS88-2	IEC60269-2	63A4	5
80	BTCP42V80	Y226295E	BS88-2	IEC60269-2	80A4	5
100	BTCP42V100	Z226296E	BS88-2	IEC60269-2	100A4	5
125	BTCP42V100M125	A226297E	BS88-2	IEC60269-2	100M125A4	5
160	BTCP42V100M160	B226298E	BS88-2	IEC60269-2	100M160A4	5
200	BTCP42V100M200	C226299E	BS88-2	IEC60269-2	100M200A4	5
125	BTFP42V125	D226300E	BS88-1	IEC60269-1	125A4X	5
160	BTFP42V160	E226301E	BS88-1	IEC60269-1	160A4X	5
200	BTFP42V200	F226302E	BS88-1	IEC60269-1	200A4X	5
250	BTFP42V200M250	G226303E	BS88-1	IEC60269-1	200M250A4X	5
315	BTFP42V200M315	H226304E	BS88-1	IEC60269-1	200M315A4X	5

Offset Bolted Tag Fuses Links (A-type)

Dimensions



Pos. No.	Fuse Type	Current Rating (A)	Dimensions A max	B max	D max	E max	F nom	G nom	H nom	K max
01	BNIT	2,4,6,10,16,20,25,32,20M25,20M32	35.5	13.5	56.0	11.2	0.8	44.5	4.8	14.5
02	BTIS	40,50,63	57.0	21.9	88.5	13.0	1.2	73.0	5.5	23.5
03	BTIS	80,100,63M80,63M100	57.0	26.9	88.5	13.0	1.2	73.0	5.5	28



Pos. No.	Fuse Type	Current Rating (A)	Dimensions A max	B max	D max	E max	F nom	G nom	J nom	H nom	K max
01	BTIA	2,4,6,10,16,20,25,32	35.5	13.5	86.0	9.2	0.8	73.0	8.0	5.5	14.5
02	BTIA	32M40,32M50,32M63	56.5	21.9	86.0	9.2	1.2	73.0	8.0	5.5	23.5
03	BTCP	32,40,50,63,80,100	59.5	26.9	111.0	19.5	2.4	94.0	11.0	8.7	28.5
04	BTCP	100M125,100M160,100M200	67.0	36.1	111.0	19.5	3.2	94.0	11.0	8.7	38.5
05	BTFP	125,160,200	67.0	36.1	111.0	19.5	3.2	94.0	11.0	8.7	38.5
06	BTFP	200M250,200M315	76.0	41.9	111.0	19.5	3.2	94.0	11.0	8.7	44.0

Electrical characteristics

Fuse Type	Rating (A)	Curve	I^2t (Ampere² seconds) Pre Arcing	Total	Watts Loss
BNIT/BTIA	2	gG	1	3.5	0.9
BNIT/BTIA	4	gG	7.6	26	1.5
BNIT/BTIA	6	gG	28	100	1.8
BNIT/BTIA	10	gG	70	315	1.2
BNIT/BTIA	16	gG	120	540	1.6
BNIT/BTIA	20	gG	250	1125	1.7
BNIT/BTIA	25	gG	420	1890	2.0
BNIT	20M25	gM	420	1890	1.3
BNIT/BTIA	32	gG	670	3000	2.9
BNIT	20M32	gM	670	3000	1.1
BTCP	32	gG	700	3000	3.6
BTIS/BTCP	40	gG	1300	5850	4.0
BTIA	32M40	gM	1300	5850	2.6
BTIS/BTCP	50	gG	2600	11700	4.8
BTIA	32M50	gM	2600	11700	2.0
BTIS/BTCP	63	gG	4000	17500	5.9
BTIA	32M63	gM	4000	17500	1.6
BTIS/BTCP	80	gG	8500	38250	6.5
BTIS	63M80	gM	8500	38250	4.0
BTIS/BTCP	100	gG	14000	65000	7.5
BTIS	63M100	gM	14000	65000	3.0
BTFP	125	gG	28000	78400	11.3
BTCP	100M125	gM	28000	78400	7.2
BTFP	160	gG	60000	168000	14.0
BTCP	100M160	gM	60000	168000	5.5
BTFP	200	gG	105000	293000	16.2
BTCP	100M200	gM	105000	293000	4.1
BTFP	200M250	gM	190000	532000	15.4
BTFP	200M315	gM	270000	756000	12.5

Offset Bolted Tag Fuses Links (A-type)

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

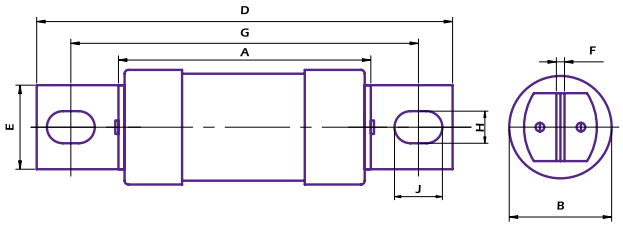
Central Bolted Tag Fuse Links (B & C-Type)

Reference data

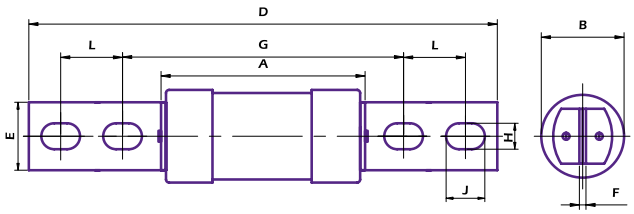
Rated Voltage: 415V ac
Breaking Capacity: 80kA

Rating (A)	Catalog Number	Reference Number	BS Standard Reference	IEC Standard Reference	Designation (Fuse Type)	Pack.
32	BTBC42V32	J226305J	BS88-2	IEC60269-2	32B1X	10
40	BTBC42V40	K226306J	BS88-2	IEC60269-2	40B1X	10
50	BTBC42V50	L226307J	BS88-2	IEC60269-2	50B1X	10
63	BTBC42V63	M226308J	BS88-2	IEC60269-2	63B1X	10
80	BTC42V80	N226309E	BS88-2	IEC60269-2	80B1	5
100	BTC42V100	P226310E	BS88-2	IEC60269-2	100B1	5
125	BTC42V100M125	Q226311E	BS88-2	IEC60269-2	100M125B1	5
160	BTC42V100M160	R226312E	BS88-2	IEC60269-2	100M160B1	5
200	BTC42V100M200	S226313E	BS88-2	IEC60269-2	100M200B1	5
125	BTF42V125	T226314E	BS88-2	IEC60269-2	125B2	5
160	BTF42V160	V226315E	BS88-2	IEC60269-2	160B2	5
200	BTF42V200	W226316E	BS88-2	IEC60269-2	200B2	5
250	BTF42V200M250	X226317A	BS88-2	IEC60269-2	200M250B2	1
315	BTF42V200M315	Y226318A	BS88-2	IEC60269-2	200M315B2	1
250	BTKF42V250	Z226319A	BS88-2	IEC60269-2	250B3	1
315	BTKF42V315	A226320A	BS88-2	IEC60269-2	315B3	1
400	BTKF42V315M400	B226321A	BS88-1	IEC60269-1	315M400B3	1
250	BTKM42V250	C226322A	BS88-1	IEC60269-1	250B3X	1
315	BTKM42V315	D226323A	BS88-1	IEC60269-1	315B3X	1
355	BTMF42V355	E226324A	BS88-2	IEC60269-2	355B4	1
400	BTMF42V400	F226325A	BS88-2	IEC60269-2	400B4	1
355	BTM42V355	G226326A	BS88-2	IEC60269-2	355C1	1
400	BTM42V400	H226327A	BS88-2	IEC60269-2	400C1	1
450	BTTM42V450	J226328A	BS88-2	IEC60269-2	450C2	1
500	BTTM42V500	K226329A	BS88-2	IEC60269-2	500C2	1
560	BTTM42V560	L226330A	BS88-2	IEC60269-2	560C2	1
630	BTTM42V630	M226331A	BS88-2	IEC60269-2	630C2	1
670	BTLM42V670	N226332A	BS88-2	IEC60269-2	670C3	1
710	BTLM42V710	P226333A	BS88-2	IEC60269-2	710C3	1
750	BTLM42V750	Q226334A	BS88-2	IEC60269-2	750C3	1
800	BTLM42V800	R226335A	BS88-2	IEC60269-2	800C3	1

Dimensions



Pos. No.	Fuse Type	Current Rating (A)	Dimensions A max	B max	D max	E max	F nom	G nom	H nom	J nom
01	BTC/BTBC	32,40,50,63,80,100	57.0	26.9	137.0	19.5	3.2	111.0	8.7	14.0
02	BTC	100M125,100M160,100M200	63.0	36.1	137.0	19.5	3.2	111.0	8.7	14.0
03	BTF	125A,160A,200A	63.0	36.1	137.0	19.5	3.2	111.0	8.7	14.0
04	BTF	200M250,200M315	73.0	41.9	138.0	19.5	3.2	111.0	8.7	14.0
05	BTKF	250,315	73.0	41.9	138.0	19.5	3.2	111.0	8.7	14.0
06	BTKF	315M400	75.0	59.1	138.0	26.0	4.8	111.0	8.7	14.0
07	BTKM	250,315	73.0	41.9	159.0	26.0	3.2	133.0	10.3	14.0
08	BTMF	355,400	75.0	59.1	138.0	26.0	4.8	111.0	8.7	14.0



Pos. No.	Fuse Type	Current Rating (A)	Dimensions A max	B max	D max	E max	F nom	G nom	H nom	J nom	L nom
01	BTM	355,400	75.0	59.1	212.0	26.0	4.8	133.0	10.3	16.0	25.4
02	BTTM	450,500,560,630	83.0	74.4	212.0	26.0	6.3	133.0	10.3	16.0	25.4
03	BTLM	670,710,750,800	86.0	82.4	212.0	26.0	9.5	133.0	10.3	16.0	25.4

Electrical characteristics

Fuse Type	Rating (A)	Curve	I²t (Ampere² seconds) Pre Arcing	Total	Watts Loss
BTBC	32	gG	700	3000	3.6
BTBC	40	gG	1300	5850	4.0
BTBC	50	gG	2600	11700	4.8
BTBC	63	gG	4000	17500	5.9
BTC	80	gG	8500	38250	6.5
BTC	100	gG	14000	65000	7.5
BTF	125	gG	28000	78400	11.3
BTC	100M125	gM	28000	78400	7.2
BTF	160	gG	60000	168000	14.0
BTC	100M160	gM	60000	168000	5.5
BTF	200	gG	105000	293000	16.2
BTC	100M200	gM	105000	293000	4.1
BTKF/BTKM	250	gG	190000	532000	24.0
BTF	200M250	gM	190000	532000	15.4
BTKF/BTKM	315	gG	270000	756000	31.0
BTF	200M315	gM	270000	756000	12.5
BTMF/BTM	355	gG	395000	1106000	32.0
BTMF/BTM	400	gG	505000	1414000	38.0
BTKF	315M400	gM	505000	1414000	23.5
BTTM	450	gG	650000	1820000	42.0
BTTM	500	gG	850000	2380000	48.0
BTTM	560	gG	1200000	3360000	50.0
BTTM	630	gG	1546000	4437000	54.0
BTLM	670	gG	1950000	5460000	60.0
BTLM	710	gG	2400000	6720000	62.0
BTLM	750	gG	3000000	8400000	65.0
BTLM	800	gG	3769000	10900000	68.0

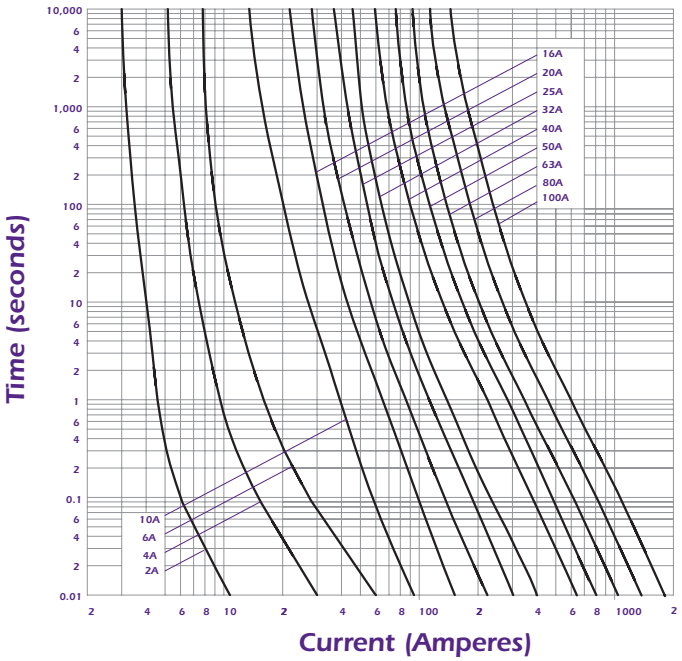
Central Bolted Tag Fuse Links (B & C-Type)

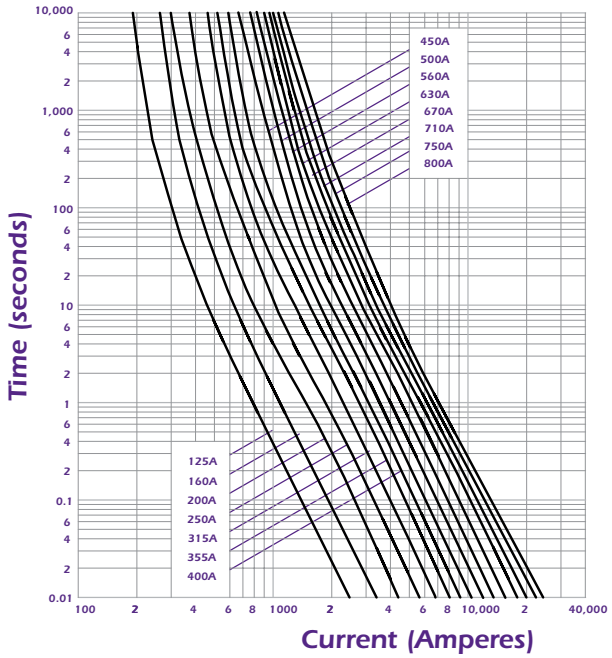
Curves Set for A, B & C Type

Curves Set for A, B & C Type

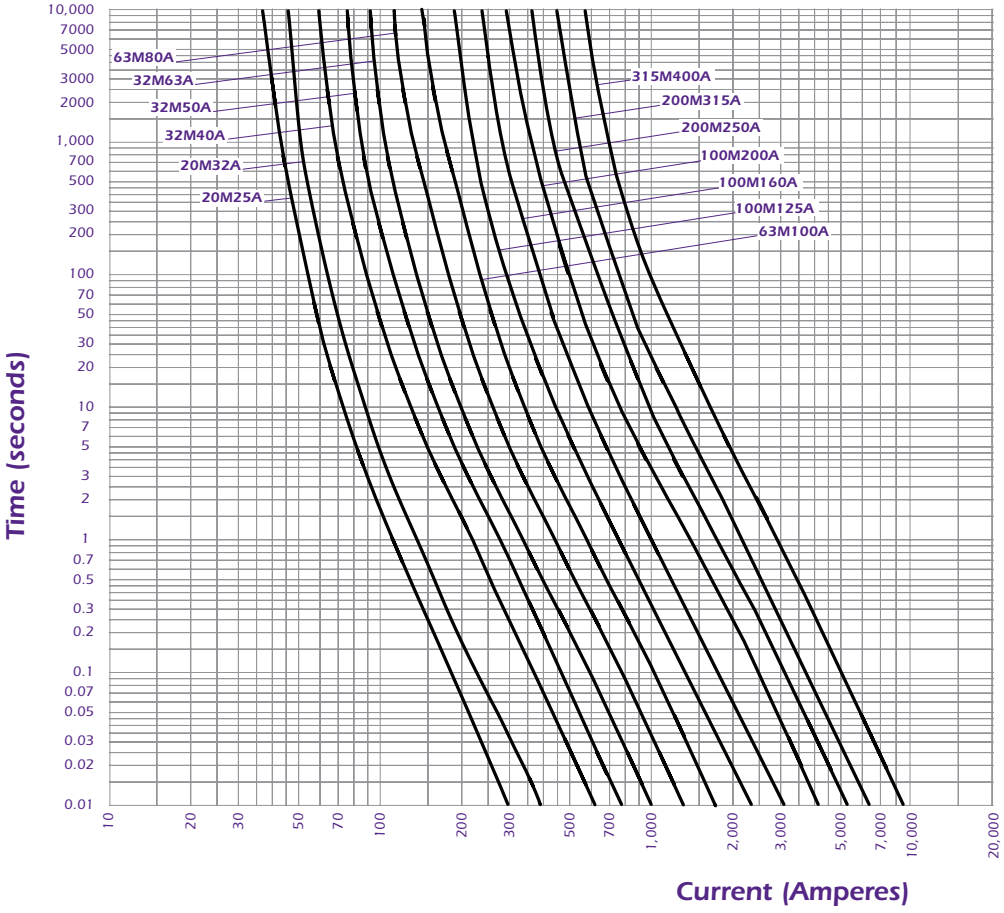
Time vs. Current characteristics

gG curves - 2 to 800A - 415VAC





gM curves - 20M25 to 315M400A - 415VAC



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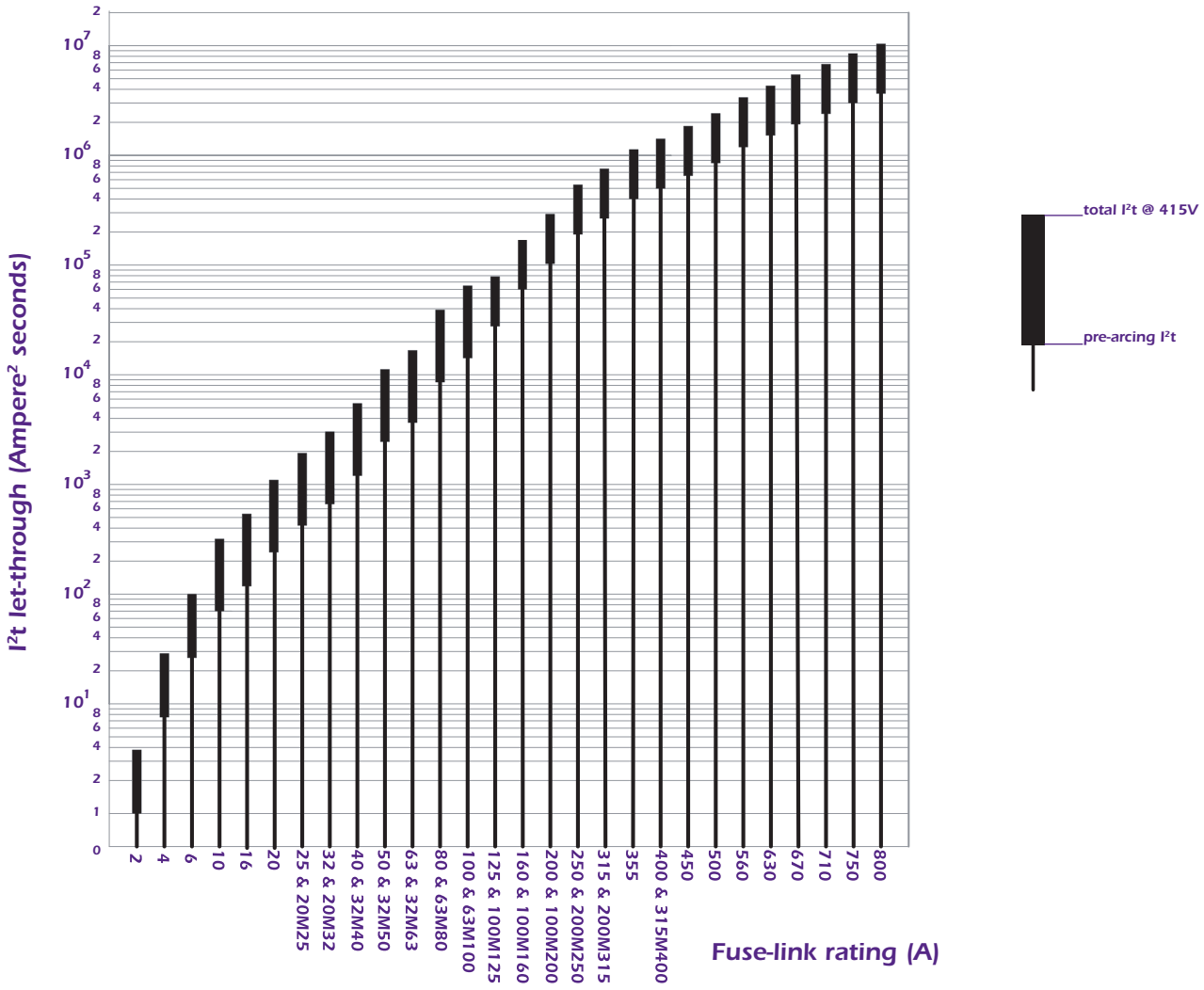
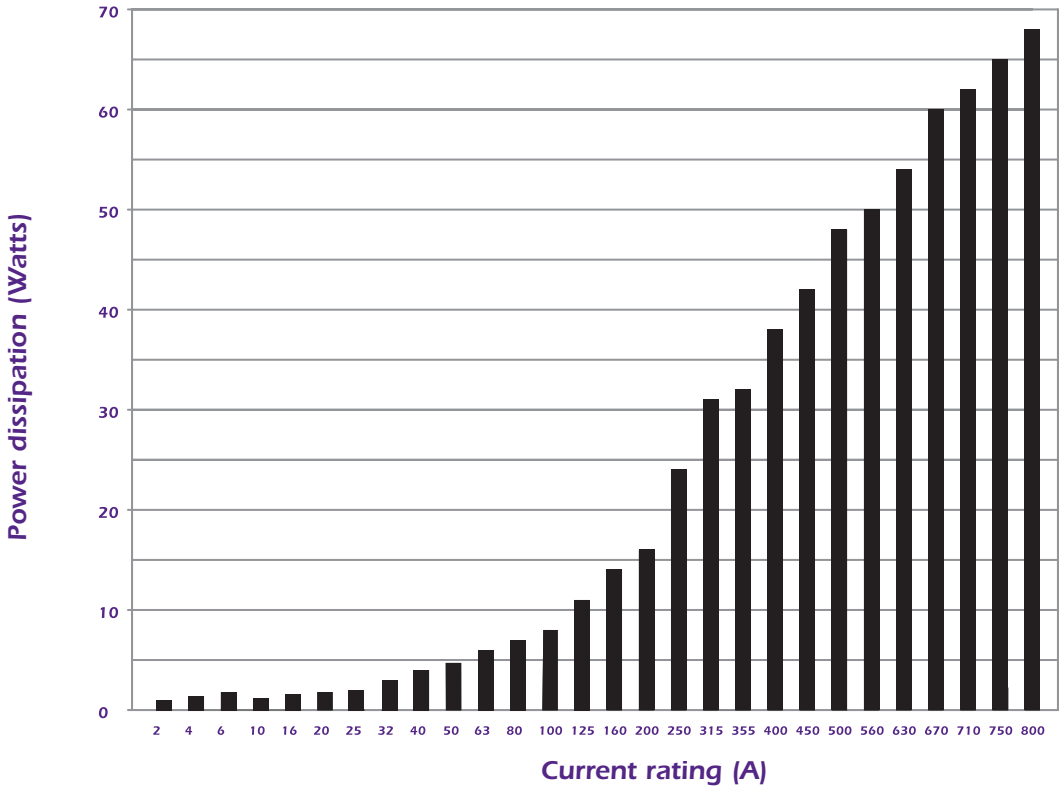
I^2t characteristics



Power dissipation chart



Curves Set for A, B & C Type

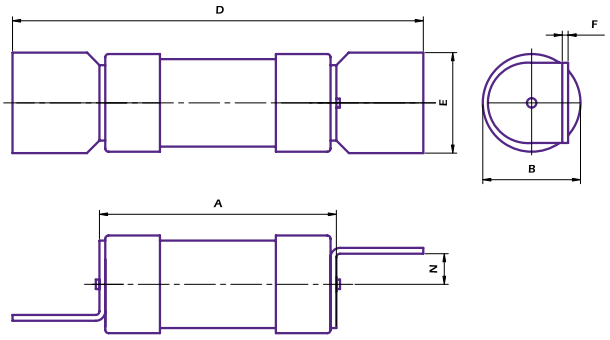
Offset Blade Tag Fuse Links (F-Type)

Reference data

Rated Voltage: 415V ac - Breaking Capacity: 80kA

Rating (A)	Catalog Number	Reference Number	BS Standard Reference	IEC Standard Reference	Designation (Fuse Type)	Pack.
2	BNS42V2	S226336J	BS88-6	IEC60269-2	2F1	10
4	BNS42V4	T226337J	BS88-6	IEC60269-2	4F1	10
6	BNS42V6	V226338J	BS88-6	IEC60269-2	6F1	10
10	BNS42V10	W226339J	BS88-6	IEC60269-2	10F1	10
16	BNS42V16	X226340J	BS88-6	IEC60269-2	16F1	10
20	BNS42V20	Y226341J	BS88-6	IEC60269-2	20F1	10
25	BNS42V25	Z226342J	BS88-6	IEC60269-2	25F1	10
32	BNS42V32	A226343J	BS88-6	IEC60269-2	32F1	10
25	BNS42V20M25	B226344J	BS88-6	IEC60269-2	20M25F1	10
32	BNS42V20M32	C226345J	BS88-6	IEC60269-2	20M32F1	10
10	BES42V10	D226346J	BS88-6	IEC60269-2	10F2	10
16	BES42V16	E226347J	BS88-6	IEC60269-2	16F2	10
20	BES42V20	F226348J	BS88-6	IEC60269-2	20F2	10
25	BES42V25	G226349J	BS88-6	IEC60269-2	25F2	10
32	BES42V32	H226350J	BS88-6	IEC60269-2	32F2	10
40	BES42V40	J226351J	BS88-6	IEC60269-2	40F2	10
50	BES42V50	K226352J	BS88-6	IEC60269-2	50F2	10
63	BES42V63	L226353J	BS88-6	IEC60269-2	63F2	10

Dimensions



Pos. No.	Fuse Type	Current Rating (A)	Dimensions A max	B max	D max	E max	F nom	N nom
01	BNS	2,4,6,10,16,20,25,32,20M25,20M32	35.5	13.5	61.0	12.7	0.8	3.5
02	BES	10,16,20,25,32,40,50,63	39.5	17.1	69.0	15.2	1.2	3.5

Electrical characteristics

Fuse Type	Rating (A)	Curve	I^2t (Ampere^2 seconds) Pre Arcing	Total	Watts Loss
BNS	2	gG	1	3.5	0.9
BNS	4	gG	7.6	26	1.5
BNS	6	gG	28	100	1.8
BNS/BES	10	gG	70	315	1.2
BNS/BES	16	gG	120	540	1.6
BNS/BES	20	gG	250	1125	1.7
BNS/BES	25	gG	420	1890	2.0
BNS	20M25	gM	420	1890	1.3
BNS/BES	32	gG	670	3000	2.9
BNS	20M32	gM	670	3000	1.1
BES	40	gG	1300	4200	3.0
BES	50	gG	2600	8750	3.6
BES	63	gG	4000	13900	4.7

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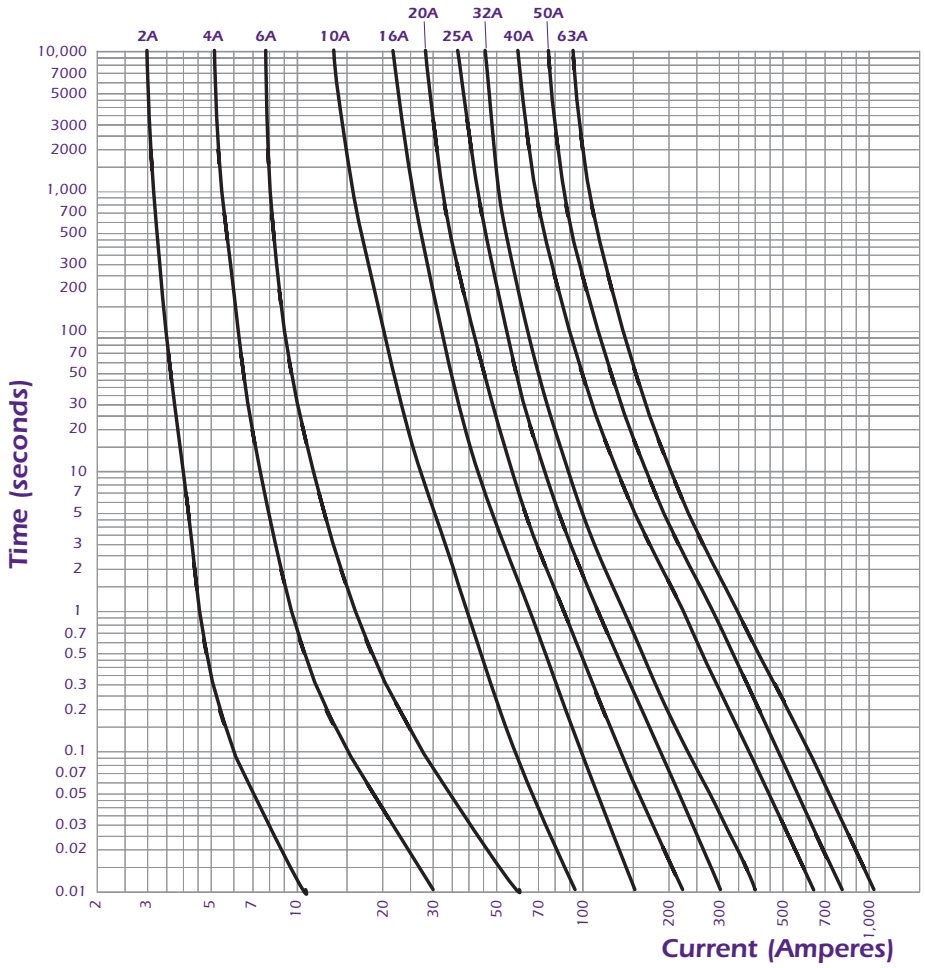
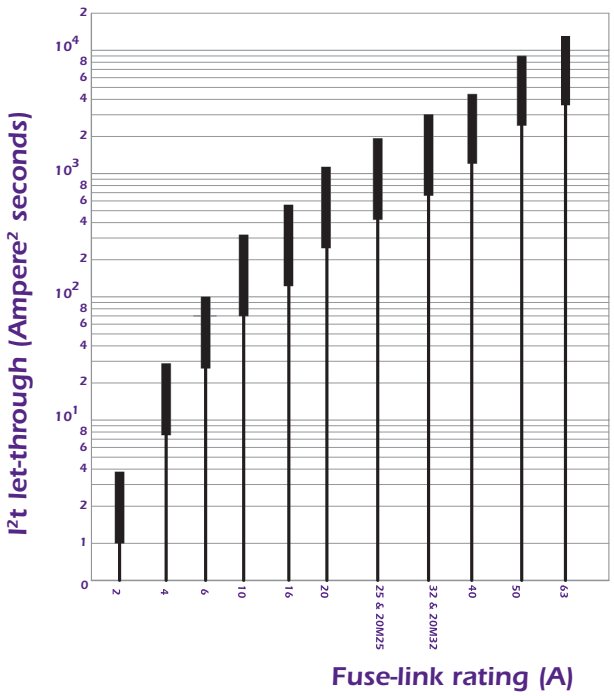
Curves Set F Type

Time vs. Current characteristics

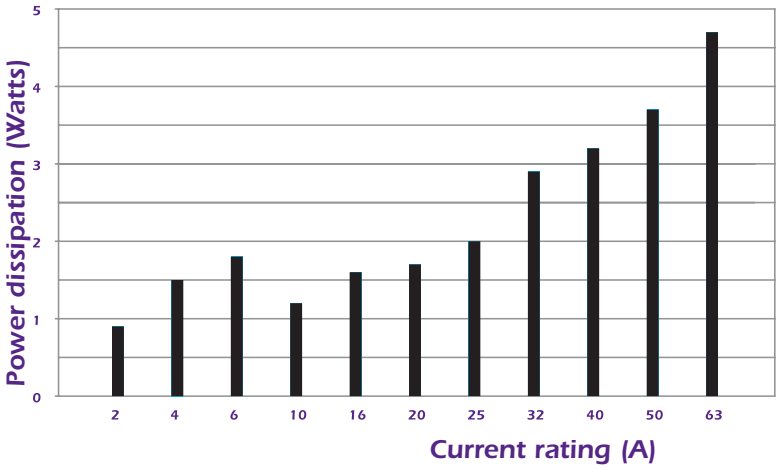
gG curves - 2 to 63A - 415VAC



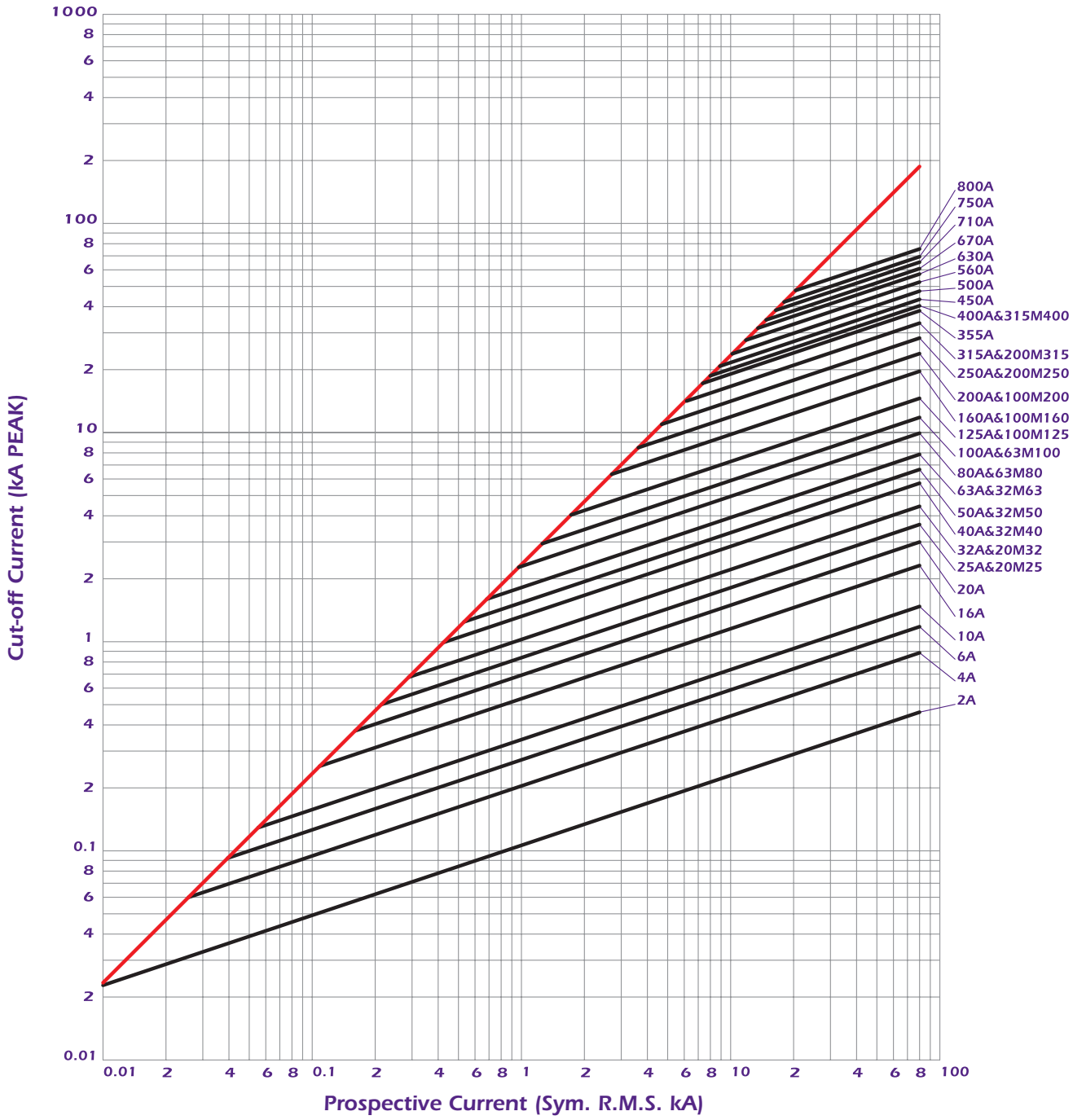
I^2t characteristics



Power dissipation chart



Cut-off Current Characteristics A,B,C & F Type



ASTA

CERTIFICATE OF SHORT-CIRCUIT RATING

Laboratory Ref. No: S2050596

Certificate No. 16264

APPARATUS: Low Voltage HRC Fuses, which represented the minimum and maximum ratings of a homogeneous series.
Rated Voltage: 415V, Rated currents: 450A & 650A[1]. Rated frequency: 50Hz

DESIGNATION : 450C2-630C2

MANUFACTURER: **Carbone Lorraine India Private Limited**, Ferraz Shawmut Division, A-3, ESSAE Industrial Estate, 62/3, Begur Hobli Road, Bommanahalli, Bangalore – 560 068, India

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

DATE OF TESTS: 17th to 27th October 2005

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 60269-1:2005, 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 88-2.1: 1988** (incorporating Amendment No: 1 & 2) **and BS 88-2.2: 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 415Vac.

1) The above fuse-links represent the minimum (450A) and maximum (630A) ratings of a homogeneous series. Fuse links intermediate ratings (500A & 560A) have been examined and comply with clause 8.1.5.2 of the standard as part of this series.

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

This Certificate comprises 11 pages, 2 diagrams, 22 oscillograms, 4 photographs, 1 drawing and no other sheets as detailed on page 1

Only integral reproduction of this Certificate, or reproductions 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 BEAB Certification Services, Hilton House, Corporation Street, Rugby. CV21 2DN, England.

UKAS PRODUCT CERTIFICATION 010

Rajani Menon
ASTA Observer

C. Nick-Evans
DIRECTOR

16th March 2006
Date

ASTA

CERTIFICATE OF SHORT-CIRCUIT RATING

Laboratory Ref. No: S2050597

Certificate No. 16265

APPARATUS: Low Voltage HRC Fuses, which represented the minimum and maximum ratings of a homogeneous series.
Rated Voltage: 415V, Rated currents: 670A & 800A[1]. Rated frequency: 50Hz

DESIGNATION : 670C3-800C3

MANUFACTURER: **Carbone Lorraine India Private Limited**, Ferraz Shawmut Division, A-3, ESSAE Industrial Estate, 62/3, Begur Hobli Road, Bommanahalli, Bangalore – 560 068, India

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

DATE OF TESTS: 17th to 27th October 2005

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 60269-1:2005, 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 88-2.1: 1988** (incorporating Amendment No: 1 & 2) **and BS 88-2.2: 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 415Vac.

1) The above fuse-links represent the minimum (670A) and maximum (800A) ratings of a homogeneous series. Fuse links having intermediate ratings (710A & 750A) have been examined and comply with clause 8.1.5.2 of the standard as part of this 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, 2 diagrams, 22 oscillograms, 4 photographs, 1 drawing and no other sheets as detailed on page 1

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UKAS PRODUCT CERTIFICATION 010

Rajani Menon
ASTA Observer

C. Nick-Evans
DIRECTOR

16th March 2006
Date

Voltage rating selection

BS 88 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 ratied current per excess degree centigrade is recommended

Cable protection

gG fuses protect cables against both overload and short circuit current. 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 IN 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 starters manufacturer generally recommend the fuse link rating to be used in conjunction with the motor starter. Type 2 co-ordination is easily obtained with FERRAZ SHAWMUT fuses in view of having the pre arcing I2t 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.

Rating (A)	Z_s (Ohms)	Rating (A)	Z_s (Ohms)
6	14	100	0.44
10	7.7	125	0.35
16	4.3	160	0.27
20	3.0	200	0.20
25	2.4	250	0.16
32	1.9	315	0.13
40	1.4	400	0.092
50	1.1	500	0.067
63	0.86	630	0.056
80	0.60	800	0.035

for more information, please contact our Technical Support :
ts@fr.ferrazshawmut.com

Comparison Chart

Comparison chart for BS88 LV Fuse links

Competitors		FERRAZ SHAWMUT
NIT	NITD	BNIT42Vx
TIA	AAO	BTIA42Vx
TIS	BAO	BTIS42Vxx
TCP	CEO	BTCP42Vxx
TFP	DEO	BTFP42Vxxx
TBC	BD	BTBC42Vxx
TC	CD	BTC42Vxx
TF	DD	BTF42Vxxx
TKF	ED	BTKF42Vxxx
TKM	EFS	BTKM42Vxxx
TMF	ED	BTMF42Vxxx
TM	EF	BTM42Vxxx
TTM	FF	BTTM42Vxxx
TLM	GF	BTLM42Vxxx
NS	NSD	BNS42Vx
MES	ESD	BES42Vxx

This list is intended for guidance only. Ferraz Shawmut do not guarantee identical performance for the comparative types.
It is essential that the performance characteristics are checked to ensure compatibility

Ferraz Shawmut Numbering System

BS88 LV Industrial fuse links

B	NIT	42V	xxx
BS88	Part Number	Rated Voltage (415V AC)	Current Rating

BS88 LV Industrial fuse links Motor Rated

B	NIT	42V	xxMxx
BS88	Part Number	Rated Voltage (415V AC)	Current Rating

DISTRIBUTOR:

Ferraz Shawmut

1, rue Jean Novel
69626 VILLEURBANNE Cedex - FRANCE
Tél. 33 (0)4 72 22 66 11 - Fax 33 (0)4 72 22 67 13

374 Merrimac Street
Newburyport, MA 01950 - USA
Tél. (978) 462-6662 - Fax (978) 462-0181

A-3, Essae Industrial Estate,
62/3 Begur Hobli Road,
Bommanahalli, Bangalore - 560068
Tel: 0091-80-25730502 / 03 - Fax: 0091-80-25734727

www.ferrazshawmut.com

Amalgame - 04/2006