

PSC Square body fuses – Sizes 000 & 00 690V AC, 16A-160A gR class

October 2013 – Issue 1

The IXYS UK range of 700V/690V protistor fuse links provides maximum flexibility in equipment design and ultimate protection for today's power conversion equipment.

These protistors have been designed to provide state-of-the-art protection for all IXYS UK high power semiconductors; diodes, thyristors, GTO's and IGBT devices. These fuses are assembled with pure silver, die-cut elements embedded in solidified sand, which helps control arcing characteristics for a lower I^2t and high interrupting rate level. All contact surfaces are silver plated and all hardware is non-magnetic

Each fuse link can be equipped with a low voltage trip indicator which can operate a field mountable microswitch.



Features and Benefits

- Ultra-fast acting
- Current limiting
- Very low I^2t for improved semiconductor protection
- Superior cycling capability
- gR class according to VDE 636-23 and IEC 60269-4

Applications

Protection of inverters, UPS systems, motor drives and similar equipment rated at 700V/690VAC or less

Approvals

- UL/CSA recognised component
- AC: UL guide no. E76491
- IEC 60269-4 compliance
- RoHS compliant

Nomenclature

The IXYS UK range of 690V/700V protistor fuse links with blade terminals consists of five different body styles and the following nomenclature details the breakdown of each type

1	2	3	4	5	6
070	GG	C	A	0100	N
Rated voltage ÷ 10	Type and standard	Size	Fixing dimension	RMS current rating	Indicator type

Type and Standard Information

GG – DIN 43 653, German standard DIN80, gR characteristics

GS – DIN 43 653, German standard DIN80, gR characteristics, microswitch capable

NR – NH German standard, knife blade contacts, gR characteristics

Body Size

C – 000

D – 00

Fixing Dimension

A – 80mm (DIN80)

K – Knife bladed

Indicator Type

N – None fitted

F – Flap type

Example

070GGCA0400N is – IEC rated 690VAC/UL rated 700VAC (RMS), DIN 43-635 German standard square body, size000, gR characteristic, 80mm fixing, 100A nominal RMS current with no indication

Size 000 fuses – Part numbers

Weight – 130g Max.

GGCA fuses

Rated Voltage (UL/IEC) V	Nominal Current A	Class	Part Number (No indicator)	Part Number (Flap indicator)
700/690	16	gR	070GGCA0016N	070GGCA0016F
700/690	20	gR	070GGCA0020N	070GGCA0020F
700/690	25	gR	070GGCA0025N	070GGCA0025F
700/690	32	gR	070GGCA0032N	070GGCA0032F
700/690	40	gR	070GGCA0040N	070GGCA0040F
700/690	50	gR	070GGCA0050N	070GGCA0050F
700/690	63	gR	070GGCA0063N	070GGCA0063F
700/690	80	gR	070GGCA0080N	070GGCA0080F
700/690	100	gR	070GGCA0100N	070GGCA0100F
700/690	125	gR	070GGCA0125N	070GGCA0125F

GSCA fuses

Rated Voltage (UL/IEC) V	Nominal Current A	Class	Part Number (No indicator)
700/690	16	gR	070GSCA0016F
700/690	20	gR	070GSCA0020F
700/690	25	gR	070GSCA0025F
700/690	32	gR	070GSCA0032F
700/690	40	gR	070GSCA0040F
700/690	50	gR	070GSCA0050F
700/690	63	gR	070GSCA0063F
700/690	80	gR	070GSCA0080F
700/690	100	gR	070GSCA0100F
700/690	125	gR	070GSCA0125F

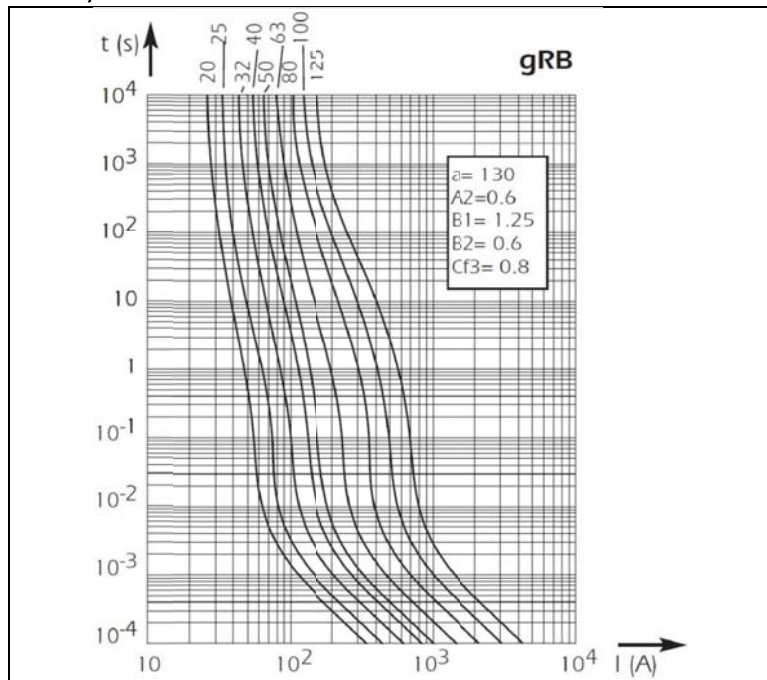
NRCK fuses

Rated Voltage (UL/IEC) V	Nominal Current A	Class	Part Number (No indicator)
700/690	16	gR	066NRCK0016F
700/690	20	gR	066NRCK0020F
700/690	25	gR	066NRCK0025F
700/690	32	gR	066NRCK0032F
700/690	40	gR	066NRCK0040F
700/690	50	gR	066NRCK0050F
700/690	63	gR	066NRCK0063F
700/690	80	gR	066NRCK0080F
700/690	100	gR	066NRCK0100F
700/690	125	gR	066NRCK0125F

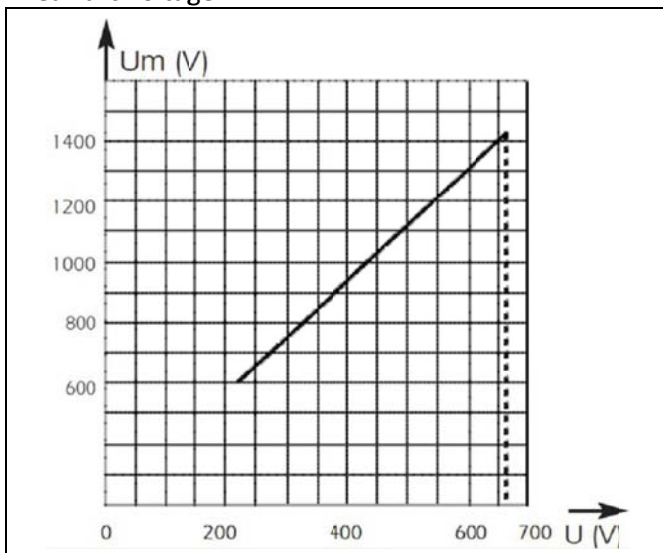
Size 000 fuses – Rating and curves

Rated Voltage (UL/IEC) V	Nominal Current A	Class	Pre-arcing I ² t A ² s	Clearing I ² t @ 660VAC A ² s	Watts loss @ 100% In W	Breaking capacity @ rated voltage kA
700/690	16	gR	8.2	60	5.6	200
700/690	20	gR	12	80	7	
700/690	25	gR	20	150	9	
700/690	32	gR	39	270	10	
700/690	40	gR	70	460	12	
700/690	50	gR	102	730	14	
700/690	63	gR	210	1500	16	
700/690	80	gR	475	2900	18	
700/690	100	gR	970	6000	20	
700/690	125	gR	1900	11800	21	

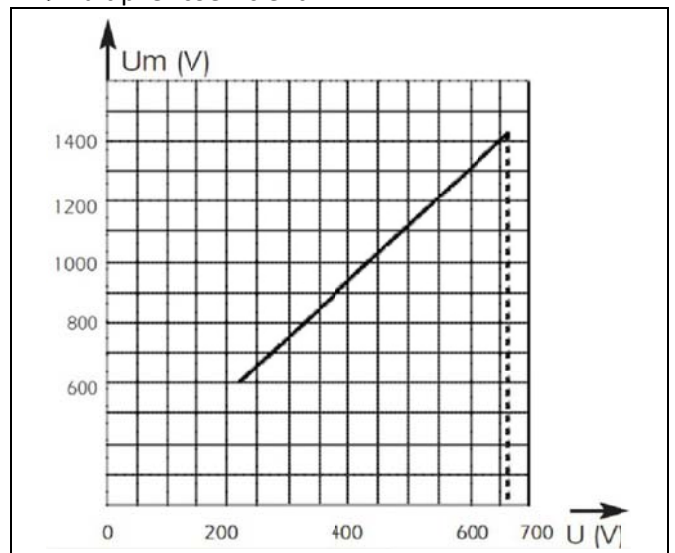
Time/Current characteristics



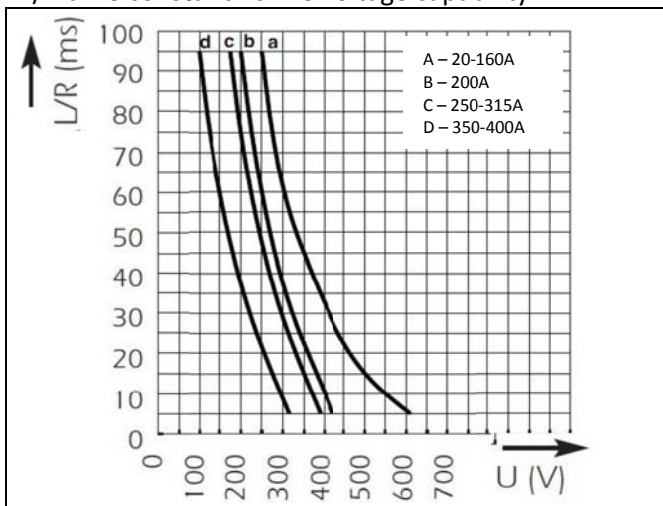
Peak arc voltage



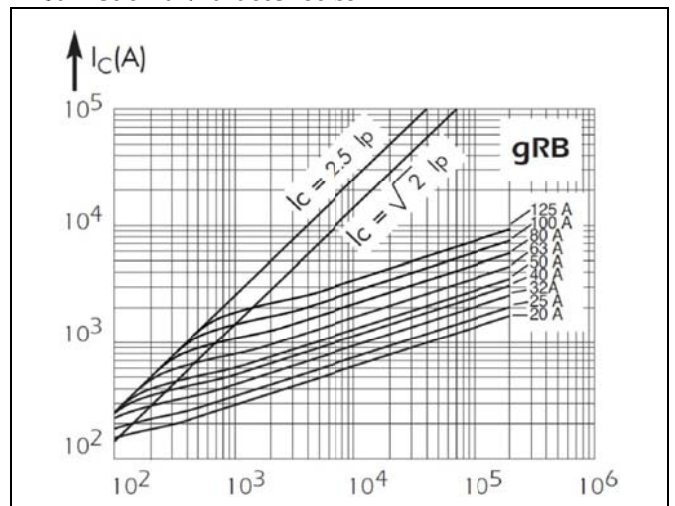
I^2t multiplier coefficient



L/R time constant Vs. DC voltage capability



Peak let thru characteristics



Size 00 fuses – Part numbers

Weight – 140g Max.

GSDA fuses

Rated Voltage (UL/IEC) V	Nominal Current A	Class	Part Number (Flap indicator)
700/690	16	gR	069GSCA0016F
700/690	20	gR	069GSCA0020F
700/690	25	gR	069GSCA0025F
700/690	32	gR	069GSCA0032F
700/690	40	gR	069GSCA0040F
700/690	50	gR	069GSCA0050F
700/690	63	gR	069GSCA0063F
700/690	80	gR	069GSCA0080F
700/690	100	gR	069GSCA0100F
700/690	125	gR	069GSCA0125F
700/690	160	aR	069GSCA0160F

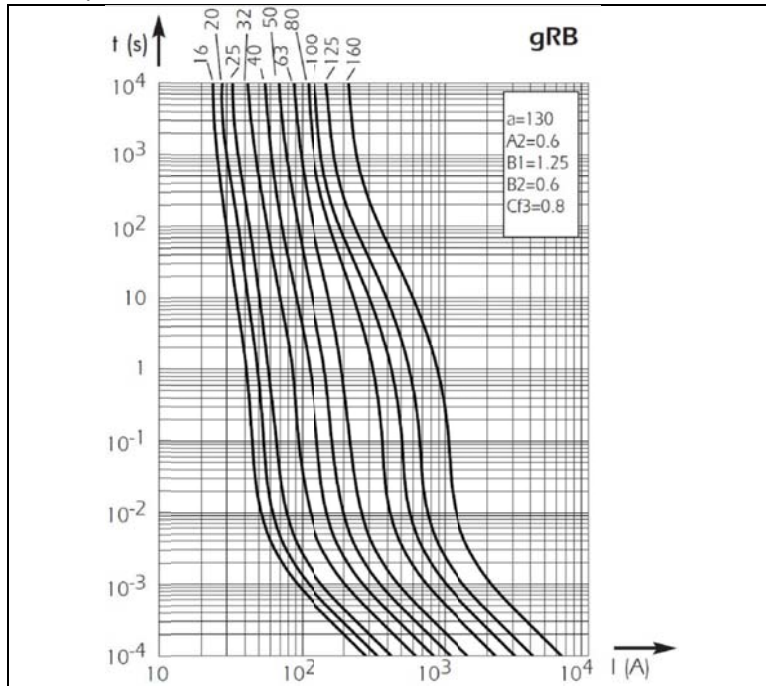
NRDK fuses

Rated Voltage (UL/IEC) V	Nominal Current A	Class	Part Number (Flap indicator)
700/690	16	gR	069NRDK0016F
700/690	20	gR	069NRDK0020F
700/690	25	gR	069NRDK0025F
700/690	32	gR	069NRDK0032F
700/690	40	gR	069NRDK0040F
700/690	50	gR	069NRDK0050F
700/690	63	gR	069NRDK0063F
700/690	80	gR	069NRDK0080F
700/690	100	gR	069NRDK0100F
700/690	125	gR	069NRDK0125F
700/690	160	aR	069NRDK0160F

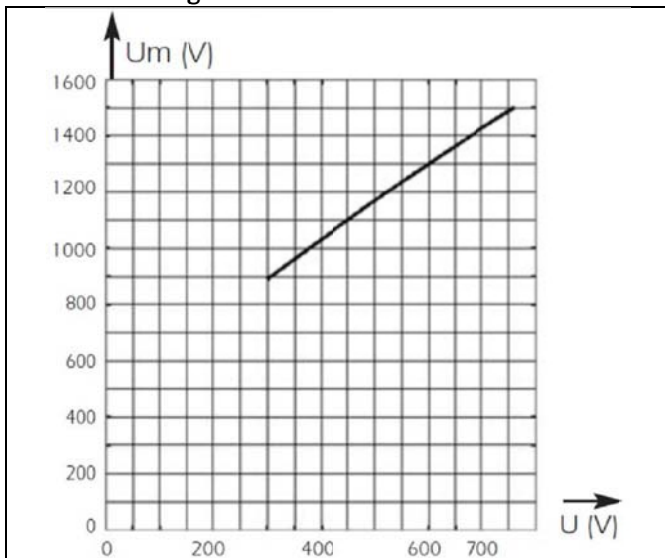
Size 00 fuses – Rating and curves

Rated Voltage (UL/IEC) V	Nominal Current A	Class	Pre-arcing I ² t A ² s	Clearing I ² t @ rated voltage A ² s	Watts loss @ 100% In W	Breaking capacity @ rated voltage kA
700/690	16	gR	8	61	5	200
700/690	20	gR	12	86	6	
700/690	25	gR	18	140	8	
700/690	32	gR	39	250	11	
700/690	40	gR	68	450	13	
700/690	50	gR	116	750	16	
700/690	63	gR	210	1400	18	
700/690	80	gR	525	3000	19	
700/690	100	gR	970	5400	19.5	
700/690	125	gR	1710	9600	24	
700/690	160	aR	4270	22400	25	

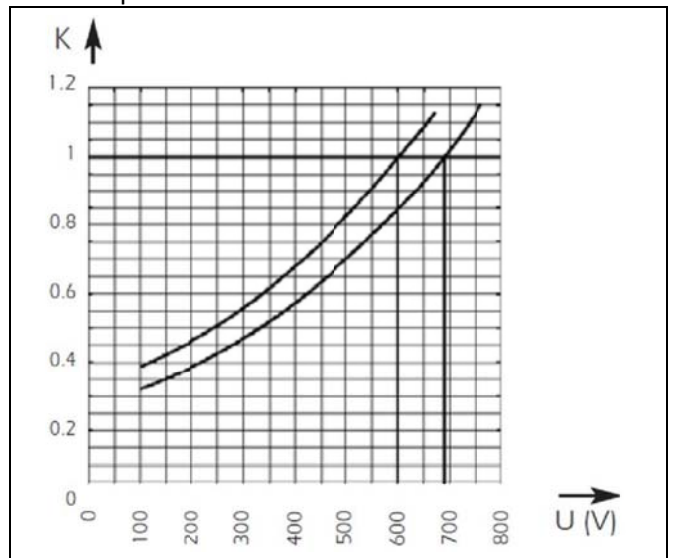
Time/Current characteristics



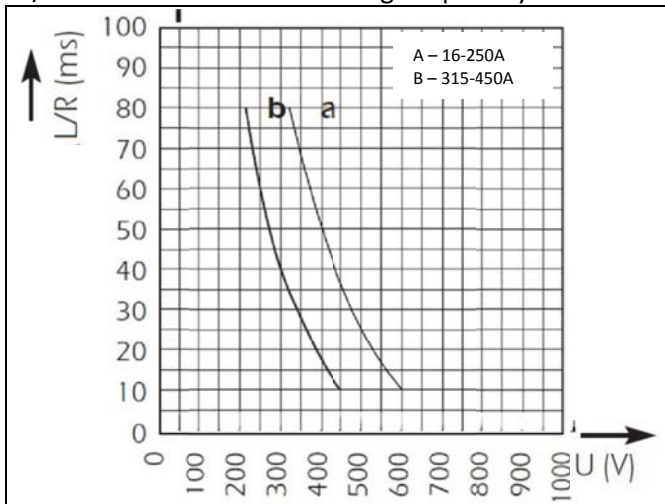
Peak arc voltage



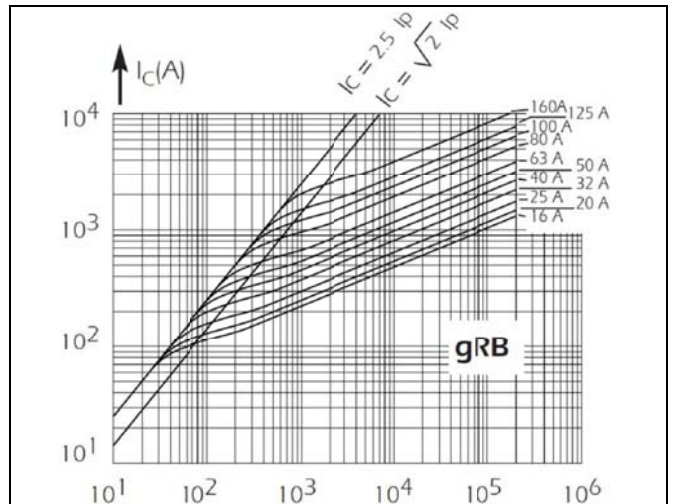
I^2t multiplier coefficient



L/R time constant Vs. DC voltage capability

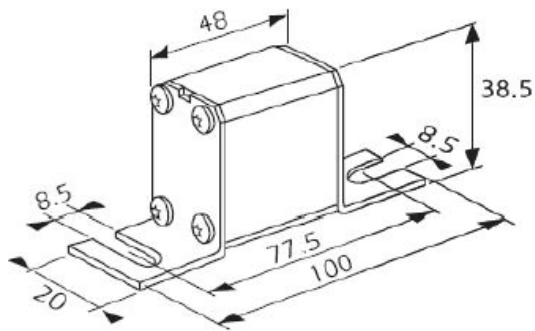


Peak let thru characteristics

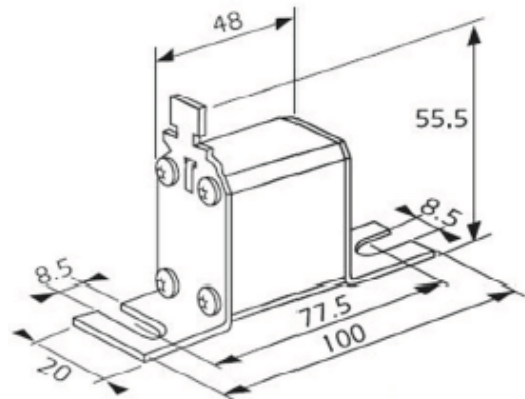


Drawings and Dimensions

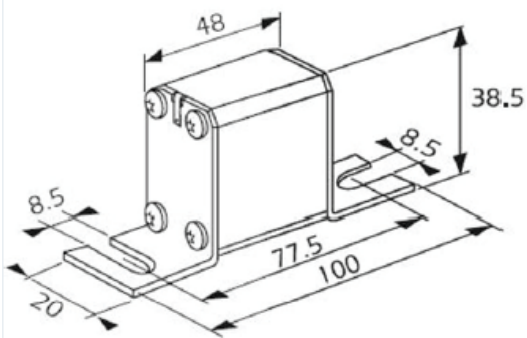
GGCA fuses – no indicator



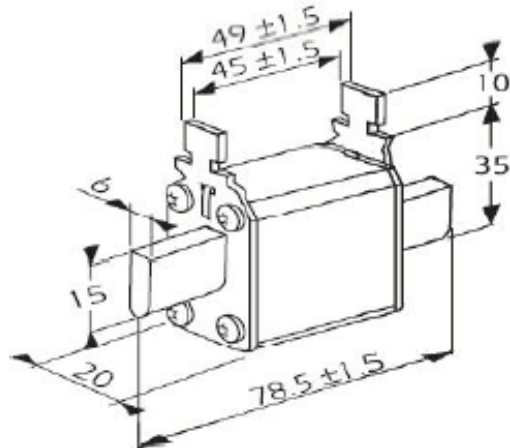
GSDA fuses



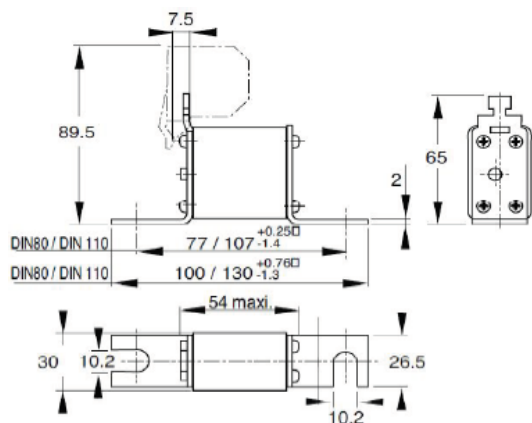
GGCA fuses – with indicator



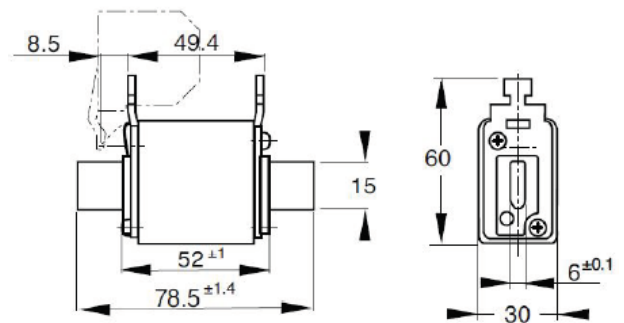
NRCK fuses



GSCA fuses



NRDK fuses



All dimensions in mm

Microswitches

IXYS UK can offer a range of microswitches to suit our size 000 and 00 square body fuse ranges

System: MS 4L 2
 Fuse sizes: 000, 00
 Indication style: MS 4L 2-5 B2 = Standard NO-NC
 MS 4L 2-5 B6 = Low Level NO-NC

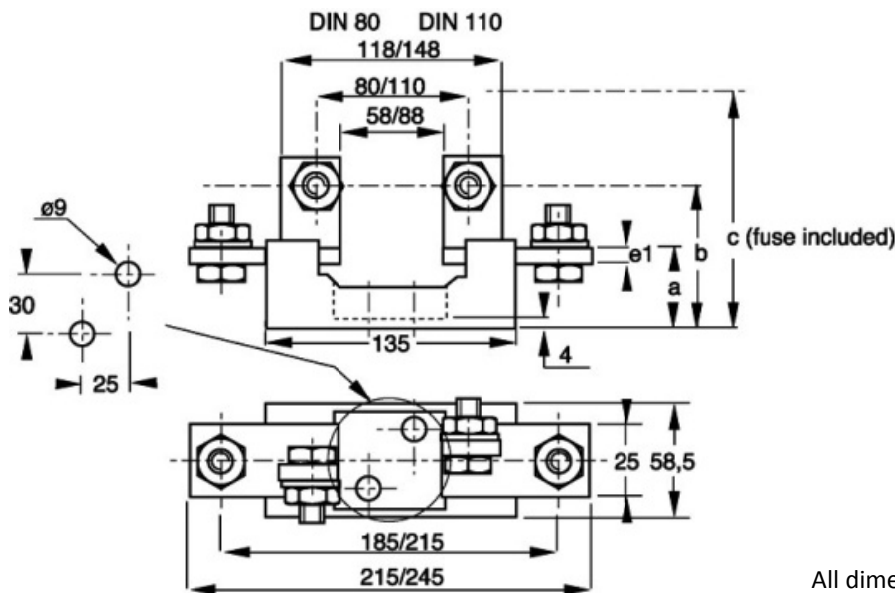


Part number	AC Insulation Voltage Rating *** (V)	Positive Operating Voltage/Current (V/mA)	Current Rating (A)	Interrupting Rating (A)						AC Voltage Withstand * (kV)	Impulse Voltage test Vimp 1.2/50µs ** (kV)	Fire Class according to UL 94	
				Current (A)	Non inductive circuit			Inductive Circuit: L/R = 25ms					
					30V	110V	250V	30V	110V				250V
MS 4L 2-5 B2 + PRES	1000	20/100	5	AC 50/60Hz	4	4	5	-	5	0.4	12	16	V0
				DC	-	-	-	-	2	0.4	8	13	
MS 4L 2-5 B6 + PRES	1000	20/50	10	AC 50/60Hz	10	10	10	10	10	10	8	10	
				DC	8	0.4	0.2	4	0.2	0.1	8	10	

Fuse Holder (GGCA, GSCA & GSDA only)

Part Number	Fuse size	Fuse Type	Insulation Voltage (V) AC, 50/60Hz & DC	Rated Current (A)	Connection
SI DIN80 630A	000 & 00	DIN80	1500	2500	Blade
SI DIN80 1250A					

Part Number	a	e1	b	c
SI DIN80 630A	40	5	68	98.5
				99.0
				103.5
				110.3
SI DIN80 1250A	45	10	73	98.5
				104.0
				108.5
				115.3



Certificate FM26085

IXYS UK Westcode Ltd's BS EN ISO9001 quality system is registered by BSI



Langley Park Way
 Chippenham, SN15 1GE
 United Kingdom
 Tel: +44 (0)1249 444524
 Fax: +44 (0)1249 659448
 E-mail: sales@ixysuk.net



Edisonstr. 15
 D-68623 Lampertheim
 Germany
 Tel: +49 (0) 6206 503-0
 Fax: +44 (0) 6206 503627
 E-mail: marcom@ixys.de

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