Low Voltage Fuse Links to BS88 & IEC269

Offset Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	SMD2	2	415	–	–	80 kA @ 415 V AC	20 pcs
	SMD4	4					
	SMD6	6					
	SMD8	8					
	SMD10	10					
	SMD16	16					
	SMD20	20					
	SMD25	25					
	SMD32	32					
	STD2	2	240	–	35	33 kA @ 240 V AC	20 pcs
	STD4	4					
	STD6	6					
	STD10	10					
	STD16	16					
	STD20	20					
	STD25	25					
	STD32	32					
	NITD2	2	550	–	44	80 kA @ 550 V AC	20 pcs
	NITD4	4					
	NITD6	6					
	NITD10	10					
	NITD16	16					
	NITD20	20					
	NITD25	25					
	NITD32	32					
	NITD20M25	20M25	415	–			
	NITD20M32	20M32					
	NITD32M40	32M40					
	NITD32M50	32M50					
	NITD32M63	32M63					
						See page 194 for Fuse Holders	
	AAO2	2	550	–	73	80 kA @ 550 V AC	20 pcs
	AAO4	4					
	AAO6	6					
	AAO10	10					
	AAO16	16					
	AAO20	20					
	AAO25	25					
	AAO32	32					
	AAO32M40	32M40					
	AAO32M50	32M50					
	AAO32M63	32M63					
						See page 194 for Fuse Holders	

Offset Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
BS Ref A3 	BAO35	35	550	–	73	80 kA @ 550 V AC	20 pcs
	BAO40	40					
	BAO50	50					
	BAO63	63					
	BAO63M80	63M80					
	BAO63M100	63M100					
						See page 194 for Fuse Holders	
BS Ref A4 	CEO32	32	550	–	94	80 kA @ 550 V AC	10 pcs
	CEO40	40					
	CEO50	50					
	CEO63	63					
	CEO80	80					
	CEO100	100					
	CEO100M125	100M125	415	–			
	CEO100M160	100M160					
	CEO100M200	100M200					
	OSD80	80	550	–	73	80 kA @ 550 V AC	20 pcs
	OSD100	100					
	OSD100M125	100M125	415	–			
	OSD100M160	100M160					
						See page 194 for Fuse Holders	
	DEO125	125	415	–	94	80 kA @ 415 V AC	5 pcs
	DEO160	160					
	DEO200	200					
	DEO200M250	200M250					
	DEO200M315	200M315					

Offset Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	AC2 AC4 AC6 AC10 AC16 AC20 AC25 AC32	2 4 6 10 16 20 25 32	550	250	97.5	80 kA @ 550 V AC 40 kA @ 250 V DC	20 pcs
	AD2 AD4 AD6 AD10 AD16 AD20 AD25 AD32	2 4 6 10 16 20 25 32	550	250	111	80 kA @ 550 V AC 40 kA @ 250 V DC	20 pcs
	BC40 BC50 BC63 BC63M80 BC63M100	40 50 63 63M80 63M100	550	250 -	97.5	80 kA @ 550 V AC 40 kA @ 250 V DC	20 pcs
	BD40 BD50 BD63	40 50 63	550	250	111	80 kA @ 550 V AC 40 kA @ 250 V DC	20 pcs
BS Ref B1 	CD80 CD100 CD100M125 CD100M160 CD100M200	80 100 100M125 100M160 100M200	415	–	111	80 kA @ 550 V AC	10 pcs
BS Ref B2 	DD125 DD160 DD200 DD200M250 DD200M315	125 160 200 200M250 200M315	415	–	111	80 kA @ 550 V AC	5 pcs

Centre Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
BS Ref B3/B4 	ED250	250	415	–	111	80 kA @ 415 V AC	1 pc
	ED315	315					
	ED355	355					
	ED400	400					
	ED315M400	315M400					
	ED400M500	400M500	550				
	EFS125	125	415	–	133	80 kA @ 415 V AC	1 pc
	EFS160	160					
	EFS200	200					
	EFS250	250					
	EFS315	315			133 / 184		
BS Ref C1 	EF355	355	415	–	133 / 184	80 kA @ 415 V AC	1 pc
	EF400	400					
	EF400M500	400M500	550				
BS Ref C2 	FF450	450	550	400	134 / 184	80 kA @ 550 V AC 40 kA @ 400 V DC	1 pc
	FF500	500					
	FF560	560					
	FF630	630					
	FG450	450	550	400	167 / 231	80 kA @ 550 V AC 40 kA @ 400 V DC	1 pc
	FG500	500					
	FG560	560					
	FG630	630					

Centre Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	GG710	710	550	250	165 / 231.0	80 kA @ 550 V AC 40 kA @ 250 V DC	1 pc
	GG800	800					
	GG1000	1000		-	165 / 228.5		
	GG1250	1250					
BS Ref C3 	GF710	710	550	250	133 / 184	80 kA @ 550 V AC 40 kA @ 250 V DC	1 pc
	GF800	800					
	GH710	710	550	–	149	80 kA @ 550 V AC	1 pc
	GH800	800					
	GH1000	1000					
	GH1250	1250					

Offset Bladed Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
BS Ref E1 	SSD2	2	240	–	–	33 kA @ 240 V AC	20 pcs
	SSD4	4					
	SSD6	6					
	SSD10	10					
	SSD16	16					
	SSD20	20					
	SSD25	25					
	SSD32	32					
BS Ref F1 	NSD2	2	550	–	–	80 kA @ 550 V AC	20 pcs
	NSD4	4					
	NSD6	6					
	NSD10	10					
	NSD16	16					
	NSD20	20					
	NSD25	25					
	NSD32	32					
	NSD20M25	20M25	415				
	NSD20M32	20M32					
	NSD20M36	20M36					
	NSD32M36	32M36					
	NSD32M40	32M40					
	NSD32M50	32M50					
	NSD32M63	32M63					
						See page 196 for Fuse Holders	
BS Ref F2 	ESD2	2	550	–	–	80 kA @ 550 V AC	20 pcs
	ESD4	4					
	ESD6	6					
	ESD10	10					
	ESD16	16					
	ESD20	20					
	ESD25	25					
	ESD32	32					
	ESD40	40					
	ESD50	50					
	ESD63	63					
	ESD63M80	63M80	415				
	ESD63M100	63M100					
						See page 196 for Fuse Holders	

660/690V Offset Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
BS Ref A2 	2H07-660	2	660 / 690	250	73	80 kA @ 660 V AC 40 kA @ 250 V DC	20 pcs
	4H07-660	4					
	6H07-660	6					
	10H07-660	10					
	16H07-660	16					
	20H07-660	20					
	25H07-660	25					
	32H07-660	32					
BS Ref A3 	40K07-660	40	660 / 690	250	73	80 kA @ 660 V AC 40 kA @ 250 V DC	20 pcs
	50K07-660	50					
	63K07-660	63					
BS Ref A4 	80L14-660	80	660 / 690	400	94	80 kA @ 660 V AC 40 kA @ 250 V DC	10 pcs
	100L14-660	100					
	125M14-660	125	660 / 690	400	94	80 kA @ 660 V AC 40 kA @ 250 V DC	5 pcs
	160M14-660	160					
	200M14-660	200					

660/690V Centre Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	2K08-660	2	660 / 690	250	93	80 kA @ 660 V AC 40 kA @ 250 V DC	20 pcs
	4K08-660	4					
	6K08-660	6					
	10K08-660	10					
	16K08-660	16					
	20K08-660	20					
	32K08-660	32					
	40K08-660	40					
	50K08-660	50					
	63K08-660	63					
	2K09-660	2	660 / 690	250	111	80 kA @ 660 V AC 40 kA @ 250 V DC	20 pcs
	4K09-660	4					
	6K09-660	6					
	10K09-660	10					
	16K09-660	16					
	20K09-660	20					
	32K09-660	32					
	40K09-660	40					
	50K09-660	50					
	63K09-660	63					
BS Ref B1 	80L09-660	80	660 / 690	400	111	80 kA @ 660 V AC 40 kA @ 400 V DC	10 pcs
	100L09-660	100					
BS Ref B2 	125M09-660	125	660 / 690	400	111	80 kA @ 660 V AC 40 kA @ 400 V DC	5 pcs
	160M09-660	160					
	200M09-660	200					
BS Ref B3 	250N09-660	250	660 / 690	400	111	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	315N09-660	315					

660/690V Centre Bolted Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
BS Ref B4 	355P09-660	355	660 / 690	400	111	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	400P09-660	400					
	125N11-660	125	660 / 690	400	133	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	160N11-660	160					
	200N11-660	200					
	250N11-660	250					
	315N11-660	315					
BS Ref C1 	355P11-660	355	660 / 690	400	133 / 184	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	400P11-660	400					
BS Ref C2 	450R11-660	450	660 / 690	400	133 / 184	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	500R11-660	500					
	560R11-660	560					
	630R11-660	630					
	450R12-660	450	660 / 690	400	167/ 231	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	500R12-660	500					
	560R12-660	560					
	630R12-660	630					

660/690V Special Tag Arrangement

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	125M13 160M13 200M13	125 160 200	660 / 690	400	99	80 kA @ 660 V AC 40 kA @ 400 V DC	5 pcs
	125M23 160M23 200M23	125 160 200	660 / 690	400	231	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	250N15 315N15	250 315	660 / 690	400	100	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	250N34 315N34	250 315	660 / 690	400	113	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	355P35 400P35	355 400	660 / 690	400	133 / 184	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc
	450R40 500R40	450 500	660 / 690	400	133 / 184	80 kA @ 660 V AC 40 kA @ 400 V DC	1 pc

660/690V Special Offset Tag

	Part No.	Current Rating	Rated Voltage (AC)	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	125N20	125	660 / 690	400	92.5	80 kA @ 660V AC 40 kA @ 400V DC	1 pc
	160N20	160					
	200N20	200					
	250N20	250					
	315N20	315					
	355P20	355	660 / 690	400	92.5	80 kA @ 660 V AC 40 kA @ 400V DC	1 pc
	400P20	400					
	450R20	450	660 / 690	400	94.0	80 kA @ 660V AC 40 kA @ 400V DC	1 pc
	500R20	500					
	560R20	560					
	630R20	630					
	710S20	710	550	–	94.0	80 kA @ 660V AC	1 pc
	800S20	800					

Special 500V dc Range

	Part No.	Current Rating	Rated Voltage (DC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	10HS07	10	500	73	40 kA @ 500V DC	20 pcs
	16HS07	16				
	20HS07	20				
	25HS07	25				
	32HS07	32				
	40KS07	40	500	73	40 kA @ 500V DC	20 pcs
	50KS07	50				
	63KS07	63				
	40KS08	40	500	98	40 kA @ 500V DC	20 pcs
	50KS08	50				
	63KS08	63				
	10KS09	10	500	111	40 kA @ 500 V DC	20 pcs
	16KS09	16				
	20KS09	20				
	25KS09	25				
	32KS09	32				
	40KS09	40				
	50KS09	50				
	63KS09	63				

House Service Cut out and J Type - Fuse Links to BS1361

	Part No.	Current Rating	Rated Voltage (AC)	Interrupting Rating	Box Quantity
	5KR85	5	415	33 kA @ 415V AC	20 pcs
	10KR85	10			
	15KR85	15			
	20KR85	20			
	25KR85	25			
	30KR85	30			
	40KR85	40			
	45KR85	45			
	50KR85	50			
	60KR85	60			
	70KR85	70			
	80KR85	80			
	*90KR85	90			
	*100KR85	100			
	30LR85	30	415	33 kA @ 415V AC	20 pcs
	40LR85	40			
	50LR85	50			
	60LR85	60			
	70LR85	70			
	80LR85	80			
	100LR85	100			

* Check suitability of fuse holders before inserting these fuse links. Not suitable for UK applications.

J Type Fuse Links to BS88: Part 5

	Part No.	Current Rating	Rated Voltage (AC)	Interrupting Rating	Box Quantity
	20MJ25-6	20	415	80 kA @ 415V AC	10 pcs
	32MJ25-6	32			
	40MJ25-6	40			
	63MJ25-6	63			
	80MJ25-6	80			
	100MJ25-6	100			
	125MJ25-6	125			
	160MJ25-6	160			
	200MJ25-6	200			
	250MJ25-6	250			

J Type Fuse Links for low Voltage Feeder Piller Protection - Fuse Links to BS88: Part 5 'J' Type

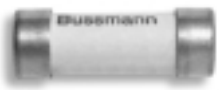
	Part No.	Current Rating	Rated Voltage (AC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	32MJ30-8	32	415	82	80 kA @ 415 V DC	10 pcs
	40MJ30-8	40				
	50MJ30-8	50				
	63MJ30-8	63				
	80MJ30-7	80	415	82	80 kA @ 415V AC	10 pcs
	100MJ30-7	100				
	125MJ30-7	125				
	160MJ30-7	160				
	200MJ30-7	200				
	250MJ30-7	250				
	315MJ30-7	315				
	20MJ31-7	20	415	92	80 kA @ 415V AC	10 pcs
	25MJ31-7	25				
	32MJ31-7	32				
	40MJ31-7	40				
	50MJ31-7	50				
	63MJ31-7	63				
	80MJ31-7	80				
	100MJ31-7	100				
	125MJ31-7	125				
	160MJ31-7	160				
	200MJ31-7	200				
	250PJ31-7	250				
	315PJ31-7	315				
	355PJ30-7	355	415	82	80 kA @ 415V AC	10 pcs
	400PJ30-7	400				

J Type Fuse Links for low Voltage Feeder Piller Protection - Fuse Links to BS88: Part 5 'J' Type

	Part No.	Current Rating	Rated Voltage (AC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	450RJ31-7 500RJ31-7	450 500	415	92	80 kA @ 415V AC	10 pcs
	800SJ28	800	415	92	80 kA @ 415V AC	10 pcs
	560SJ31-6 630SJ31-6	560 630	415	92	80 kA @ 415V AC	10 pcs

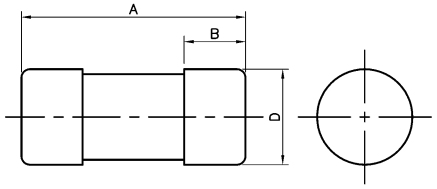
Joint Service and Nato Fuse Links

DEF Standard 59-96 (NATO Reference System)

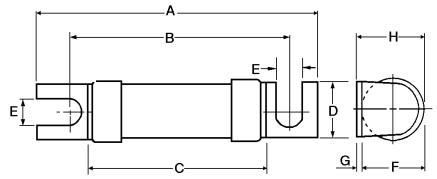
	Part No.	Current Rating	Body Size	Rated Voltage (AC)	Fixing Centres (mm)	Interrupting Rating	Box Quantity
	059-0107	0.25	0	440	–	33 kA @ 440V AC	10 pcs
	059-0108	0.5					
	059-0109	1					
	059-0110	2					
	059-0111	3					
	059-0112	5					
	059-0113	7					
	011-9925	10					
	011-9926	15					
	059-0140	0.5	1	440	–	33 kA @ 440V AC	25 pcs
	059-0141	1					
	059-0142	2					
	059-0143	3					
	059-0144	5					
	059-0145	7					
	059-0146	10					
	059-0147	15					
	011-9483	20					
	059-0114	0.5	1	440	44.65	33 kA @ 440V AC	25 pcs
	059-0115	1					
	059-0116	2					
	059-0117	3					
	059-0118	5					
	059-0119	7					
	059-0120	10					
	059-0121	15					
	011-9679	20					
	012-0140	30					
	059-0148	10	2	440	–	33 kA @ 440V AC	25 pcs
	059-0149	15					
	059-0150	20					
	059-0151	30					
	059-0122	10	2	440	55.84	33 kA @ 440V AC	25 pcs
	059-0123	15					
	059-0124	20					
	059-0125	30					
	012-0067	40					
	011-9127	50					
	012-0141	60					
	059-0152	40	3	440	–	33 kA @ 440V AC	25 pcs
	059-0153	60					
	059-0154	80					
	059-0155	100					
	059-0126	40	3	440	69.77	33 kA @ 440V AC	25 pcs
	059-0127	60					
	059-0128	80					
	059-0129	100					
	011-9128	125					
	011-9129	150					

Low Voltage Fuse Links to BS88 & IEC269

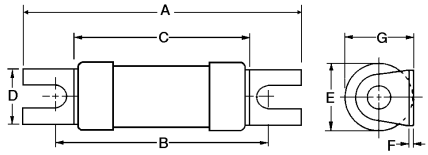
Dimensional Data - Offset Bolted Tag



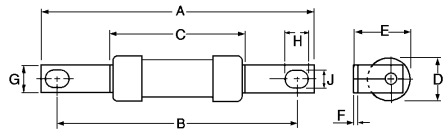
Part No.	Dimensions (mm)			
	A	B	C	D
SMD	29.0	–	–	12.7



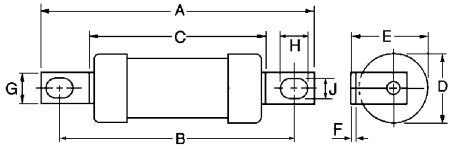
Part No.	Dimensions (mm)							
	A	B	C	D	E	F	G	H
STD	47.0	35	24.0	11.0	4.7	12.0	0.8	13.0



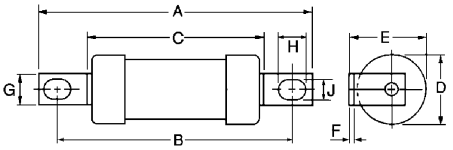
Part No.	Dimensions (mm)						
	A	B	C	D	E	F	G
NITD	55.0	44	34.6	11.2	13.8	0.8	14.0
NITD32M			35.6		17.5	1.2	18.5



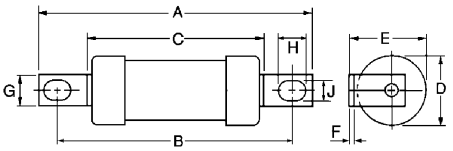
Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
AAO	85	73	35.5	13.7	14	1.2	8.7	8.0	5.5
AAO32M			54.5	21	22.3				



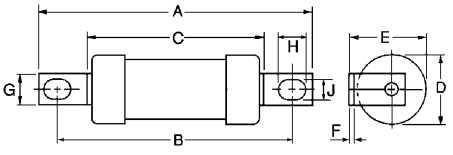
Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
BAO	87	73	54.5	21	22.5	1.2	12.7	8.0	5.5
BAO63M									



Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
CEO	110	94	58.5	21.0	24.5	3.2	14.3	11.0	8.7
CEO100M125 & 160				25.8	26.8				
CEO100M200			47.0	31	29.5		19.0	10.0	9.0

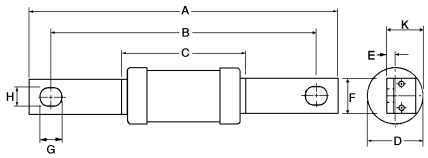


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
OSD	95.0	73	54.5	21.0	22.5	1.2	12.7	8.0	5.5
OSD100M				26.0	25.7				



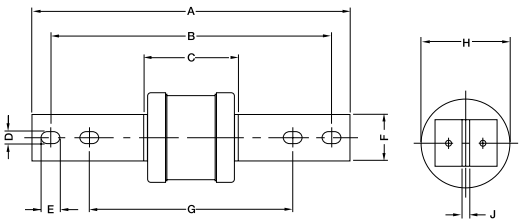
Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
DEO	110	94	47.0	31.0	29.5	3.2	19.0	10.0	9.0
DEO200M									

Dimensional Data - Centre Bolted Tag

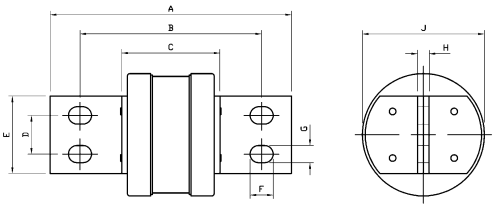


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	K
AC	113.5	97.5	55.5	21.0	1.6	12.7	13.5	7.0	11.2
AD	128.5	111	55.0	21.0	1.4	14.2	11.8	8.7	11.2
BC	113.5	97.5	55.0	21.0	1.6	7.0	13.5	12.7	11.2
BC63M									
BD	128.5	111	55.0	21.0	1.4	14.2	11.8	8.7	11.2
CD	126	111	58.5	21.0	3.2	14.3	11.1	8.7	19.5
CD100M125 & CD100M160				26.0					22.0
CD100M200	136		47.0	31.0		19.0	12.5		22.5
DD	136	111	47.0	31.0	3.2	19.0	12.5	9.0	22.5
DD200M									
ED250	136	111	47.0	31.0	4.7	19.0	12.5	9.0	22.5
ED315			50.0	38.0		25.4			31.0
ED315M400									
ED400M500		111	75.0	59.0					
EFS*	158	133	47.0	31.0	3.2	19.0	12.5	10.5	22.5

* Except 315A

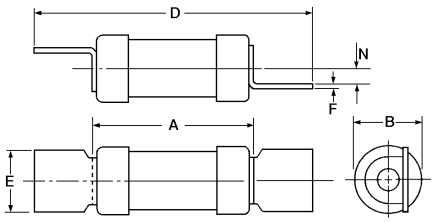


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
EFS315	209	184	50.0	10.5	12.5	25.4	133	38.0	4.7
EF355 & 400									
EF400M500	210	184	75.0		15.5		133	59.0	
FF	210	184	77.5	10.5	15.5	25.4	133	74.0	6.4
GF	210	184	80.5	10.5	15.5	25.4	133	83.0	9.5
GG710 & 800	262	231	77.5	10.5	15.5	38.0	165	83.0	6.4
GG1000 & 1250		228.5	84.0					100	12.7

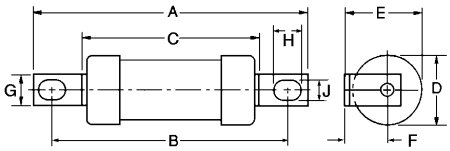


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
GH710	198	149	81.0	32.0	63.5	19.0	14.0	9.5	83.0
GH1000 & 1250									100

Dimensional Data - 660V Offset Bladed Tag

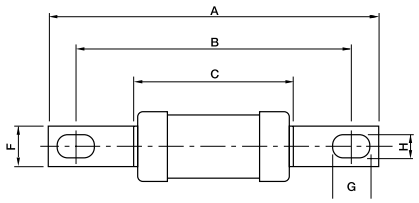


Part No.	Dimensions (mm)					
	A	B	D	E	F	N
SSD	23.0	12.0	47.0	13.0	0.8	3.2
NSD & NSD20M	34.5	13.8	58.5	12.7	0.8	3.5
NSD20M36 & NSD32M		17.5				
ESD - 32A	35.5	13.8	68.0	15.0	1.2	3.5
ESD40 - 63A		17.5				
ESD63M		21.0				

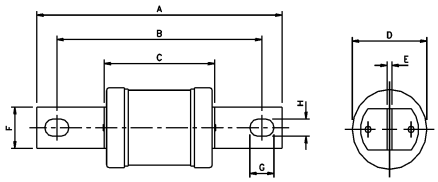


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
H07-660	82.3	73	52.0	22.0	22.4	11.5	8.7	7.7	5.4
K07-660	86.0	73	54.2	25.8	26.9	14.0	12.7	10.5	5.5
L14-660	111.0	94	67.0	35.5	37.0	19.2	19.0	10.3	8.7
M14-660	112.0	94	66.0	38.0	38.0	19.0	19.0	10.0	8.5

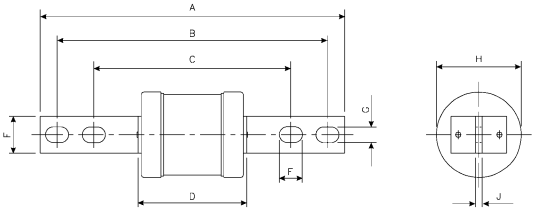
Dimensional Data - 660V Centre Bolted Tag



Part No.	Dimensions (mm)							
	A	B	C	D	E	F	G	H
K08-660 2-32A	111.0	92.5	53.7	22.0	2.4	12.7	13.0	7.5
K08-660 40-63A	111.5	93.0	54.2	25.0				
K09-660 2-32A	127.0	111	53.7	22.0	2.4	14.0	15.2	8.7
K09-660 40-63A	128.0	111	54.2	25.0				

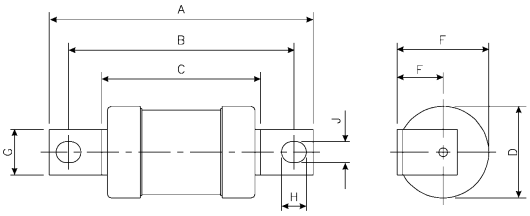


Part No.	Dimensions (mm)							
	A	B	C	D	E	F	G	H
L09-660	136.0	111	65.5	35.5	3.2	19.0	15.1	8.7
M09-660	135.0	111	65.0	37.0	3.2	19.0	15.0	8.7
N09-660	135.0	111	73.0	49.0	3.2	25.4	12.7	9.5
P09-660	135.5	111	75.0	58.5	4.7	25.4	12.7	9.5
N11-660	162.0	133	73.0	49.0	3.2	25.4	15.8	10.5

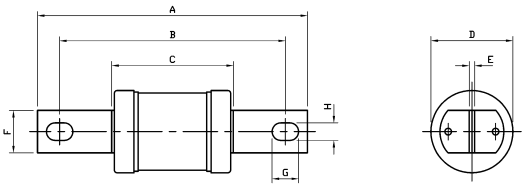


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
P11-660	212.0	184	133	75.0	25.4	16.0	10.0	59.0	5.0
P12-660	262.0	231	167						
R11-660	210.0	184	133	76.0	26.0	16.0	10.0	74.0	6.5
R12-660	262.0	231	167						

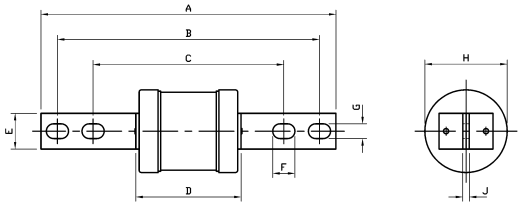
Dimensional Data - 660V Special Tag Range



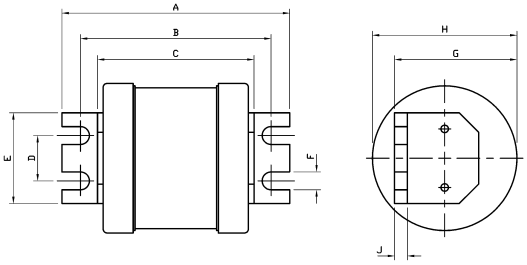
Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
M13	120.0	99.0	70.0	38.0	27.0	8.0	26.0	12.0	8.7
M23	262.0	231.0	167.0		38.5	19.0		14.0	
N15	120.0	100.0	79.0	49.0	41.0	16.5		15.0	9.8



Part No.	Dimensions (mm)							
	A	B	C	D	E	F	G	H
N34	135.0	111	74.5	66.5	5.0	25.4	12.5	9.5

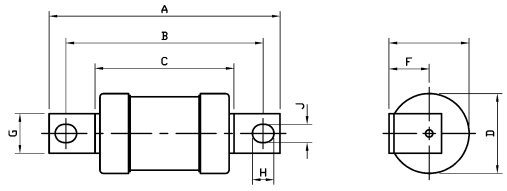


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
P35	210.0	184	133	75.0	19.0	16.0	10.0	59.0	5.0
R40				81.0				74.0	9.5

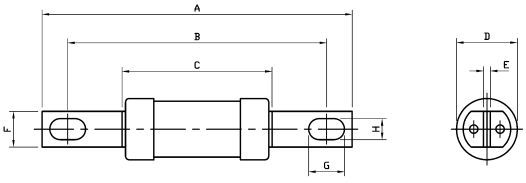


Part No.	Dimensions (mm)								
	A	B	C	D	E	F	G	H	J
N20	110.0	92.5	75.0	22.0	44.5	8.8	49.0	49.0	6.4
P20	111.0		76.0				47.0	59.0	
R20	112.0	94.0	77.0				62.0	74.0	
S20	112.0		77.0				66.0	83.0	

Dimensional Data - Special 500V DC Range



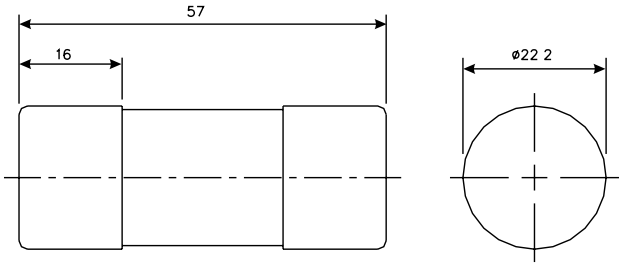
Part No.	Dimensions (mm)							
	A	B	C	D	F	G	H	J
HS07	86.0	73	54.0	22.0	0.8	9.2	8.0	5.0
KS07	91.0			27.0	1.2	13.0	10.5	



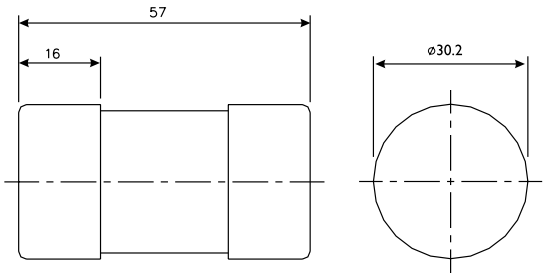
Part No.	Dimensions (mm)							
	A	B	C	D	E	F	G	H
KS08	113.0	98	56.0	27.0	2.5	13.0	13.0	5.0
KS09	138.0	111				14.5	15.0	8.0

Dimensional Data - House Service & Feeder Piller Fuse Links

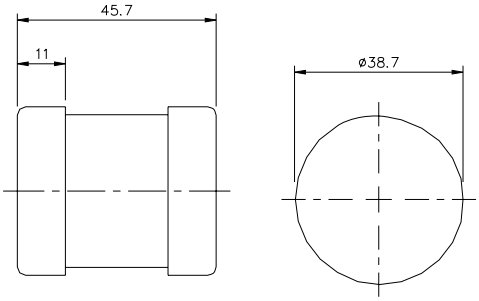
Dimensions for KR85



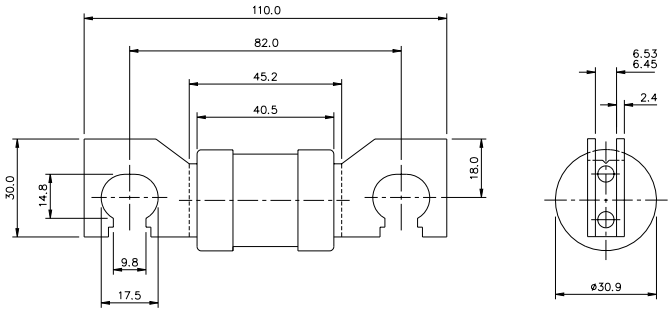
Dimensions for LR85



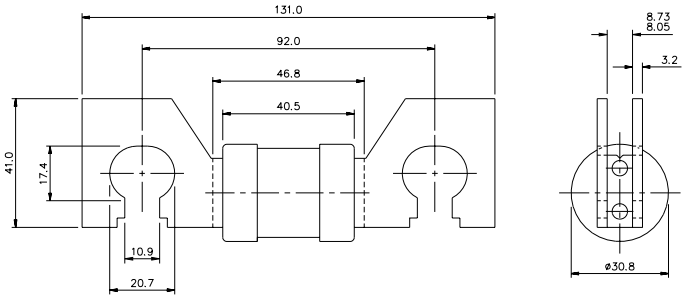
Dimensions for MJ25-6



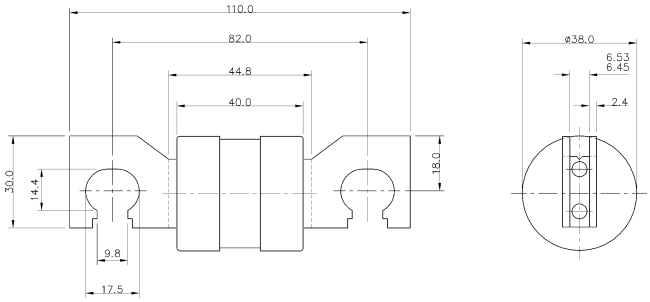
Dimensions for MJ30-7&-8 up to 200A



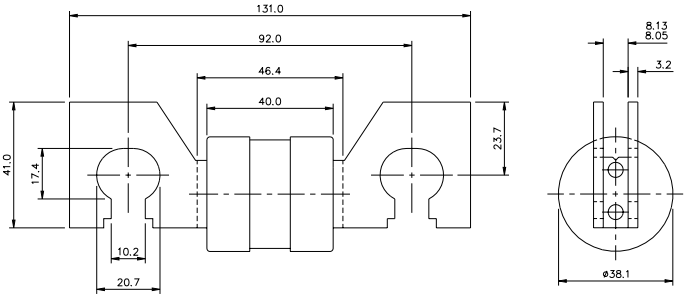
Dimensions for MJ31-7 up to 200A



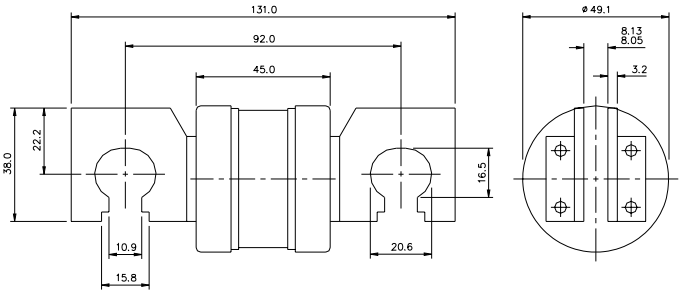
Dimensions for PJ30-7 & MJ30-7 (250 & 315A)



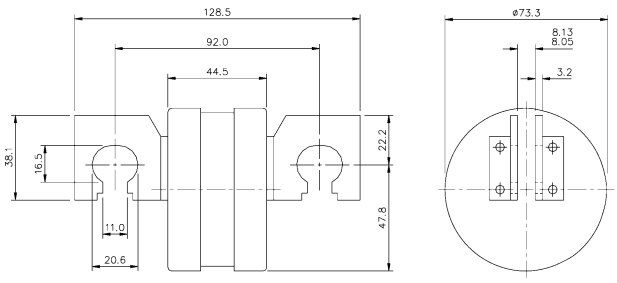
Dimensions for PJ31-7 & MJ31-7 (250 & 315A)



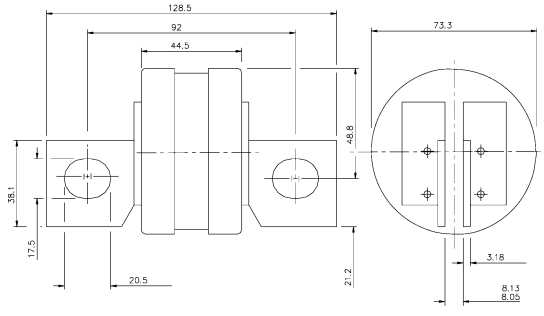
Dimensions for RJ31-7



Dimensions for SJ31-6

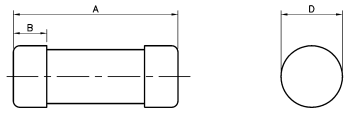


Dimensions for SJ28

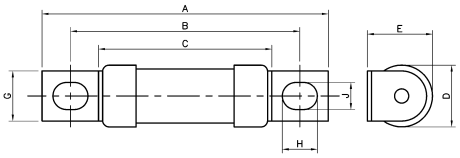


Dimensional Data for Joint Service Fuse Links

Cylindrical (Cyl)



Offset Bolted Tag (O.B.T.)



Part No	Current Rating	Body Size	Tag Type	A	B	C	D	E
059-0107	0.25	0	Cyl.	32.05	–	–	6.37	5.55
059-0108	0.5							
059-0109	1							
059-0110	2							
059-0111	3							
059-0112	5							
059-0113	7							
011-9925	10							
011-9926	15							
059-0140	0.5	1	Cyl.	33.6	–	–	11.86	7.14
059-0141	1							
059-0142	2							
059-0143	3							
059-0144	5							
059-0145	7							
059-0146	10							
059-0147	15							
011-9483	20							
059-0114	0.5	1	Offset Bolted Tag	56.03	44.65	33.9	11.96	–
059-0115	1							
059-0116	2							
059-0117	3							
059-0118	5							
059-0119	7							
059-0120	10							
059-0121	15							
011-9679	20							
012-0140	30							
059-0148	10	2	Cyl.	37.6	–	–	16.7	8.71
059-0149	15							
059-0150	20							
059-0151	30							
059-0122	10	2	Offset Bolted Tag	70.7	55.84	37.4	16.7	–
059-0123	15							
059-0124	20							
059-0125	30							
012-0067	40							
011-9127	50							
012-0141	60							
059-0152	40	3	Cyl.	47.9	–	–	33.3	11.9
059-0153	60							
059-0154	80							
059-0155	100							
059-0126	40	3	Offset Bolted Tag	88.6	69.77	47.4	33.3	–
059-0127	60							
059-0128	80							
059-0129	100							
011-9128	125							
011-9129	150							

BRITISH STANDARD LOW VOLTAGE INDUSTRIAL FUSE LINK - APPLICATION INFORMATION

The Bussmann standard range of high breaking capacity fuse links for low voltage industrial and general purpose applications meet the requirements of BS88 and IEC60269. By using advanced fuse technology the current ratngs up to 400A have compact dimensions but still within the standardised dimensional and performance requirements. These designs have been optimised for 415/240V systems. The standard range of fuse links are available from 2-1250A in the following tag forms: OFFSET BLADED - OFFSET BOLTED - CENTRE BOLTED.

Supplementary ranges cover applications up to 690V a.c. and 500V d.c. including those with non-standard tag fixings.

Bussmann fuse links are manufactured under Quality Systems independently assessed to ISO 9001 and appropriate ratings carry the ASTA 20 endorsement.

APPLICATION DATA

One of the long standing advantages of fuse protection is that fuse selection is relatively simple and effective.

The following notes cover the majority of applications. For further information contact Bussmann technical services on 01509 882699.

Reference should also be made to the appropriate Wiring Installation rules, in the UK the 16th Edition of the IEE Wiring Regualtions for Electrical Installations which aligns with IEC 60364.

CIRCUIT LOADING

The current rating of the fuse link should not be less than the full load current of the circuit. The circuit should be so designed that small overloads of long duration will not be of frequent occurence.

CABLE RATINGS

There is an increasing move away from 70°C P.V.C. insulation to materials which are more environmentally friendly, for example 90°C XLPE. The ratings of fusegear, switches, accessories etc. are generally based upon the equipment being connected to conductors intended to be operated at a temperature not exceeding 70°C in normal service.

In view of the above it is recommended that the practice of designs based upon conductor temperatures of 70°C be regarded as the norm. In accordance with clause 512-02-01 of the Wiring Regulations the equipment manufacturer should be consulted to ascertain the reduction of nominal current rating of the equipment if conductor temperatures exceeding 70°C are used. In addition an overriding factor is often voltage drop consideration.

CABLE PROTECTION

Bussmann fuse links with gG characteristics protect associated cables against both overload and short circuit current, provided that the current rating of the fuse link I_N is equal or less than the current carrying capacity of the cable I_Z.

In motor circuits, the motor starter will provide the overload protection and the fuse links will provide the short circuit protection. The maximum size of fuse link that can be used depends upon the type of cable used and is determined in accordance with the Wiring Regulations using the appropriate K factor. The following table gives maximum sizes of fuse links that are recommended for two popular cables with copper conductors, 70°C P.V.C. (K=115) and 90°C thermosetting (K=143).

Cable Size mm²	Max. Fuse Rating	
	K = 115 A	K = 143 A
1	16	16
1,5	20	25*
2,5	32*	32*
4	50*	50*
6	63*	63*
10	100*	125*
16	125*	160*
25	200*	250*
35	315*	355*
50	400*	500
70	560	630
95	710	800
120	800	1000

*Extended motor circuit dual ratings can be used

Zs OHMS IMPEDANCE VALUES

The rules for protection against indirect contact are given in Chapter 413 of the Wiring Regulations.

For a TN System a disconnecting time not exceeding 5s is permitted for a distribution circuit. The maximum values of earth fault loop impedance (Zs) corresponding to a disconnecting tme of 5s for nominal voltage to earth (Uo) of 240V for Bussmann gG fuse links.

Rating (A)	Zs Ohms Ω	Rating (A)	Zs Ohms Ω
2	60		
4	27		
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	0.096
50	1.1	500	0.073
63	0.86	630	0.054
80	0.60	800	0.044

AMBIENT TEMPERATURE

A de-rating in terms of current of 0.5% per °C above an ambient of 35°C is recommended.

BREAKING CAPACITY

The standardised values of Breaking Capacity are 80kA for voltages of 415V a.c. and above, and 40kA for d.c. applications.

DISCRIMINATION

All fuse links will give a discrimination ratio of 2:1 and for most practical situations a ratio of 1.6:1 (two steps in the R10 series). Example: an upstream fuse rated at 160A will discriminate with a downstream fuse rated at 100A.

CURRENT AND ENERGY LIMITATION

The Bussmann range of fuse links have pre-arcing I^2t values towards the bottom limits of the standards. This ensures excellent current and energy limitation. They also have lower power losses at rated current. This assists in the appropriate interchangeability with other makes of fuse links.

TRANSFORMERS

When fuse links are used on the primary side of transformers the normal current rating of the fuse links should be at least twice the nominal transformer primary current.

FLUORESCENT LIGHTING

The normal current rating of the fuse link should be at least twice the normal full load current of the maximum number of lights to be switched simultaneously.

CAPACITOR CIRCUITS

In capacitor circuits, for example power factor correction, the fuse link should be chosen with a current rating greater than 1.5 times the rated capacitor current. This takes account of the high transient inrush current, circuit harmonics and capacitor tolerances.

MOTOR CIRCUITS

In motor circuits the fuse link has to withstand the starting current of the motor and often requires a higher rating than the full load current of the motor.

Co-ordination recommendations are made by the manufacturers of motor starters in accordance with IEC 60947-4-1. To give the desirable type 2 co-ordination with fuse links, tests are performed with the latest gG or gM fuse links, to BS88 or IEC60269 which have pre-arcing I^2t values toward the bottom specified limits. This means that Bussmann fuse links are suitable to give type 2 co-ordination.

Extended dual ratings of motor circuit protection fuse links with gM characterstics are available in most popular sizes of fuse links to extend the use of associated equipment with appropriate economies. In the majority of applications, gG fuse links are used. It is not essential for gM fuse links to be used for motor circuit protection, they simply extend the utilisation of standard equipment.

The attached table shows the recommended fuse links at 415V. In most applications the run-up time is less than five seconds and duty is infrequent - no more than twice per house. The next larger rating should be used for more arduous conditions.

Motor Rating		Direct On-line		Asst Start Standard (gG)
		Standard (gG)	Motor Circuit (gM)	
kW	A	A	A	A
0.25	0.8	4	-	2
0.37	1.1	4	-	2
0.55	1.5	6	-	4
0.75	2.0	6	-	4
1.1	3.0	10	-	6
1.5	3.6	16	-	10
2.2	5.0	16	-	10
3.0	6.5	20	-	16
4.0	8.4	20	-	16
5.5	11	25	20M25	20
7.5	15	40	32M40	25
11.0	20	50	32M50	32
15.0	27	63	32M63	40
18.5	33	80	63M80	50
22.0	38	80	63M80	50
30.0	54	100	63M100	80
37.0	66	125	100M125	80
45.0	79	160	100M160	100
55.0	98	160	100M160	100
75.0	135	250	200M250	160
90.0	155	250	200M250	160
110.0	185	315	200M315	200
132.0	220	355	315M400	250
150.0	250	355	315M400	315
185.0	310	450	400M500	355
200.0	335	500	400M500	400
225.0	375	560	-	400
250.0	415	560	-	450
280.0	460	630	-	500
335.0	562	710	-	630
355.0	596	800	-	710