



# Specialist Fuse Guide

# Specialist Fuse Guide

## Welcome

Our branch network has been supplying fuses and fuse products to customers throughout the UK for decades. The Specialist Fuse business continues this fine tradition, supplying all types of unusual fuses and fuse products to our customers.

As an integral part of Hagemeyer UK, a division of one of the world's leading business-to-business (B2B) distribution services companies, Specialist Fuses has an unrivalled relationship with all of the main fuse manufacturers worldwide. This enables us to stock and find a truly vast range of standard and those less popular and 'hard to find' fuses of the kind typically used in more specialist applications – the type of products that your average wholesaler would not have available from stock nor, in many cases, even know from where to source.

To complement our vast stockholding, we have the technical expertise to handle your enquiries via our dedicated team of fuse specialists.

All orders are dispatched the same day from stock and we take particular pride in our ability to deliver even the most delicate of items to our customers when promised and completely intact.

To order any of the products featured in this catalogue contact your local branch or ring us direct for help on **01905 791500**.

- Next day delivery, direct to your site via your local branch
- Our team of experts is on hand to help solve your problems
- Free application advice and technical support
- Dedicated fuses resource with over 2000 products in stock
- If we haven't got it in stock, we will get it for you quickly and reliably

We are pleased to work with the following suppliers:



# Specialist Fuse Guide

## Sourcing a fuse? – Follow these helpful tips

There are 1000s of different fuses from many manufacturers worldwide. When trying to source a fuse the following information will be very useful.

**Manufacturer**

**Part Number**

**Dimensions**

(Length of fuse body, diameter, overall length, width)

**Amperage**

If you have obtained the information above, there is no need to proceed any further, however if you do not have this information you will need to ask:

**Voltage** (AC or DC)?

**Characteristic** (eg: gL, aM, gR)?

**Are approvals required** (eg: UL, IEC)?

**Fixing centres** (how far apart - if relevant)?

**How is the fuse mounted** (If relevant)?

**What is the fuse protecting?**

**Does the fuse have an indicator?**

**Does the fuse have a striker to operate a microswitch?**

## Fuse Identification

### Miniature fuses

FF = Ultra Rapid

F or QA or QB = Fast Blow

M or MD = Medium Blow

T or SB = Slow Blow

TT = Ultra Slow

### Bottle fuses

DIAZED

500V Bottle Fuses D1 (E16), D11 (E27), D111 (E33)

NEOZED

380V Bottle Fuses D01 (E14), D02 (E18)

SILAZED

Ultra Rapid Bottle Fuses D11 (E27), D111 (E33)

### Industrial fuses

aR or gR or uR = Ultra Rapid


gL/gG = General Line

aM = Motor Rated

gF/gTF = Transformer/Cable Protection

gB = Mining Fuses

## Fuses

BS88 HRC fuses standard	4
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# BS88 HRC FUSES

**Industrial, commercial and domestic fuses for use in a wide range of applications.**

High rupturing capacity (HRC) with bolted connections are for use in industrial and commercial installations and may be fitted in fuse-units or fuse gear, two hole fixing. The fuse links comply with the revised standard BS88: part2 :IEC60269 part 2 specifying characteristics for fuse links for use by authorised persons (mainly for industrial applications) and additional requirements for fuse links with bolted connections.

## BS88 INDUSTRIAL FUSE COMPARISON CHART

BS88 REF.	RATING AMPS	SIBA	GE POWER (GEC)	LAWSON	COOPER BUSSMANN	MEM	BRUSH
-	2-32	50-086-01	NS	NS	NSD	SN2	FO6
-	2-20	50-013-01	SS	SS	SSN	SS	DO4
A 1	2-32	50-085-01	NIT	NIT	NITD	SA2	F21
A 2	2-32	50-001-01	TIA	TIA	AAO	SB3	HO7
A 3	32-63	50-002-01	TIS	TIS	BAO	SB4	KO7
-	2-63	50-006-01	TB	TB	BC	SE4	KO8
B 1	2.63	50-007-01	TBC	TBC	AD / BD	SF3	KO9
B 1	80-100	50-008-01	TC	TC	CD	SF5	LO9
B 2	125-200	50-009-01	TF	TF	DD	SF6	MO9
A 4	63-100	50-003-01	TCP	TCP	CEO	SD5	L14
-	125-200	50-004-01	TFP	TFP	DEO	SD6	M14
B 3	250-315	50-010-01	TKF	TKF	ED	SF7	NO9
B 4	355-400	50-110-01	TMF	TMF	ED	SF8	PO9
C 1	250-315	50-011-01	TKM	TKM	EF5	SG7	N11
C 1	255-400	50-039-01	TM	TM	EF	SH8	P11
C 2	450-630	50-040-01	TTM	TTM	FF	SH9	R11
C 3	560-800	50-041-01	TLM	TLM	GF	SH10	S11
-	250-400	50-104-01	TMT	TMT	-	-	P12
-	450-630	50-042-01	TT	TT	FG	SY9	R12

## NIT/ NITD/ SA2



- n 80kA at 550V
- n Total length 55mm
- n Diameter 13.8mm

NITD2	2 A	1050152875
NITD4	4 A	1050152876
NITD6	6 A	1050152877
NITD10	10 A	1050152878
NITD16	16 A	1050152879
NITD20	20 A	1050152880
NITD25	25 A	1050152881
NITD32		

Available at your local Newey & Eyre branch

# BS88 HRC FUSES

## TIA/ AAO/ SB3



- n 80kA at 550V
- n Total length 85mm
- n Diameter 13.7mm

AAO2	2 A	1050152883
AAO4	4 A	1050152884
AAO6	6 A	1050152885
AAO10	10 A	1050152886
AAO16	16 A	1050152887
AAO20	20 A	1050152888
AAO25	25 A	1050152889
AAO32		

Available at your local Newey & Eyre branch

## TIS/ BAO/ SB4



- n 80kA at 550V
- n Total length 87mm
- n Diameter 21mm

BAO40	40 A	1050152891
BAO50	50 A	1050152892
BAO63	63 A	1050152893

Available at your local Newey & Eyre branch

## TCP/ CEO/ SD5



- n 80kA at 550V
- n Total length 110mm
- n Diameter 21mm

CEO80	80 A	1050152894
CEO100	100 A	1050152895

Available at your local Newey & Eyre branch

# BS88 HRC FUSES

TFP/ DEO/ SD6



- n 80kA at 415V AC
- n Total length 110mm
- n Diameter 31mm

DEO125	125 A	1050027739
DEO160	160 A	1050027769
DEO200	200 A	1050027740
125SD6	125 A	1050071726
160SD6	160 A	1050071727
200SD6		

Available at your local Newey & Eyre branch

NS/ NSD/ SN2



- n 80kA at 415V AC
- n Total length 58.5mm
- n Diameter 13.8mm

NSD2	2 A	1050027814
NSD4	4 A	1050027815
NSD6	6 A	1050027816
NSD10	10 A	1050027817
NSD16	16 A	1050027818
NSD10	10 A	1050027817
NSD25	25 A	1050027820
NSD32	32 A	1050027821
2SN2	2 A	1050071644
4SN2	4 A	1050071645
6SN2	6 A	1050071646
10SN2	10 A	1050071647
16SN2	16 A	1050071651
20SN2	20 A	1050071648
25SN2	25 A	1050071650

Available at your local Newey & Eyre branch



# BS88 HRC FUSES

TC/ CD/ SF5



- n 80kA at 550V AC
- n Total length 126mm
- n Diameter 21mm

CD80	80 A	1050027733
CD100		

Available at your local Newey & Eyre branch

TF/ DD/ SF6



- n 80kA at 550V AC
- n Total length 136mm
- n Diameter 31mm

DD125	125 A	1050027737
DD160	160 A	1050027768

Available at your local Newey & Eyre branch

BS88 HRC FUSES

ESD



- n 80kA at 440V
- n Total length 69mm

ESD16	16 A	1050064036
ESD20	20 A	1050063346
ESD32	32 A	1050063347
ESD40	40 A	1050063348
ESD50	50 A	1050063349

TKF / TMF / ED / SF7 / SF8



- n 80kA at 550V AC
- n Total length 136mm
- n Diameter 38mm

ED250	250 A	1050063933
ED315	315 A	1050063934
ED355	355 A	1050063318

# BS88 HRC FUSES

## SS/ SSD



- n 20kA at 240V
- n Total length 47mm

SSD4	4 A	1050065416
SSD6	6 A	1050063343
SSD10	10 A	1050063344
SSD16	16 A	1050063345
SSD25	25 A	1050064034

## TM/ EF / SH8



- n 80kA at 550V AC
- n Total length 209mm
- n Diameter 38mm
- n Fixing centres 133mm inner holes

355 SH8	355 A	1050063320

# BS88 HRC FUSES

## TTM/ FF / SH9



- n 80kA at 550V AC
- n Total length 210mm
- n Diameter 74mm
- n Fixing centres 133mm inner holes

450SH9	450A	1050063322
500SH9	500A	1050063323
560SH9	560A	1050063324

## TLM/ GF / SH10



- n 80kA at 550V AC
- n Total length 210mm
- n Diameter 83mm
- n Fixing centres 133mm inner holes

50-041-01/630A	630A	1050063326
50-041-01/670A	670A	1050063327
50-041-01/710A	710A	1050063328
710SH10	750A	1050063329

# BS88 HRC MOTOR RATED FUSES

## NIT/ NITD/ SA2 aM



- n 80kA at 415V AC
- n Total length 55mm
- n Diameter 17.5mm

NITD20M25	20M25	1050063385
NITD20M32	20M32	1050063386
NITD32M40	32M40	1050063387
NITD32M50	32M50	1050063388
	32M63	

## TIA/ AAO/ SB3 aM



- n 80kA at 550V AC
- n Total length 85mm
- n Diameter 21mm

50-001- 16/10A	6M10	1050063361
	10M16	1050063362
50-001- 16/16A	20M25	1050063363
	25M32	1050063364
50-001- 16/25A	32M35	1050063365
	32M40	1050063366
50-001- 16/32A	32M50	1050063367
32SB3M35	32M63	1050063368

# BS88 HRC MOTOR RATED FUSES

## TIS/ BAO/ SB4 aM



n 80kA at 550V AC

n Total length 87mm

n Diameter 21mm

50-002-	40M50	1050063369
16/50A	50M63	1050063370
50-002-	63M80	1050063371
16/63A	63M100	1050063372

## TCP/ CEO / SD5 aM



n 80kA at 550V AC

n Total length 110mm

n Diameter 31mm

50-003-	63M80	1050063373
16/80	80M100	1050063375
50-003-	100M125	1050063376
16/100	100M160	1050063377
CEO100M125		

# BS88 HRC MOTOR RATED FUSES

NS/ NSD / SN2 aM



- n 80kA at 415V AC
- n Total length 58.5mm

NSD20M25	20M25	1050063390
NSD20M32	20M32	1050063391

TB/ BC / SE4 aM



- n 40kA at 250V DC
- n 80kA at 550V ac
- n Total length 113.5mm
- n Diameter 21mm

1050065411
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BS88 HRC MOTOR RATED FUSES

TC/ CD/ SF5 aM



- n 80kA at 550V AC
- n Total length 136mm
- n Diameter 31mm

50-008- 16/80	63M80	1050063379
CD100M125	100M125	1050063380
CD100M160	100M160	1050063381
	100M200	1050063932

TF/ DD/ SF6 aM



- n 80kA at 550V AC
- n Total length 136mm
- n Diameter 31mm

DD200M250	200M250	1050063383
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# BS88 HRC MOTOR RATED FUSES

TKF/ ED/ SF7 aM



- n 80kA at 550V AC
- n Total length 136mm
- n Diameter 59mm

## MINIATURE FUSES

A range of fuses for protection of electrical circuits and consumer appliances. Glass fuses are ICN breaking capacity, ceramic are high breaking capacity.

GLASS 20MM X 5MM QUICK BLOW 250V



70-001-34/100mA	100mA	1050063057
70-001-34/125mA	125mA	1050066457
70-001-34/125mA	250mA	1050068363
70-001-34/250mA	315mA	1050068364
70-001-34/250mA	500mA	1050063058
70-001-34/315mA	630mA	1050068365
70-001-34/315mA	800mA	1050068676
70-001-34/500mA	1A	1050063059
70-001-34/500mA	1.25A	1050068366
70-001-34/630mA	1.6A	1050068367
70-001-34/800mA	2A	1050063060
70-001-34/1A	2.5A	1050068368
70-001-34/1.25A	3.15A	1050063061
70-001-34/1.25A	4A	1050068369
70-001-34/1.6A	5A	1050063062
70-001-34/2A	6.3A	1050063063
70-001-34/2.5A	8A	1050063064

# MINIATURE FUSES

GLASS 20MM X 5MM SLOW BLOW 250V



S506-100mA-R	100mA	1050064025
S506-125mA-R	125mA	1050066458
S506-160mA-R	160mA	1050068677
S506-250mA-R	250mA	1050063066
S506-315mA-R	315mA	1050068678
S506-500mA-R	500mA	1050063067
S506-800mA-R	800mA	1050068679
S506-1A	1A	1050063068
S506-1.25A	1.25A	1050068680
S506-1.6A	1.6A	1050068681
S506-2A	2A	1050063069
S506-2.5A	2.5A	1050068682
S506-3.15A	3.15A	1050063070
S506-4A	4A	1050068683
S506-5A	5A	1050063071
S506-6.3A	6.3A	1050063072
S506-8A	8A	1050063073
S506-10A	10A	1050063074
70-001- 35/12.5A	12.5A	1050063075

## MINIATURE FUSES

GLASS 32MM X 6MM QUICK BLOW 250V



AGC100mA	100mA	1050068371
AGC250mA	250mA	1050064026
AGC500mA	500mA	1050063077
AGC800mA	800mA	1050068684
AGC1A	1A	1050063078
AGC1.5A	1.5A	1050063079
AGC2A	2A	1050063080
AGC2.5A	2.5A	1050068685
AGC3A	3A	1050063081
AGC4A	4A	1050068686
AGC5A	5A	1050063082
AGC6.3A	6.3A	1050063083
AGC8A	8A	1050063084
AGC10A	10A	1050063085
AGC15A	15A	1050063086
AGC20A	20A	1050063087

# SPECIALIST

## Stockist of Moflash Beacons and Klaxon Sounders

## MINIATURE FUSES

GLASS 32MM X 6MM SLOW BLOW 250V



70-059-61/500mA	500mA	1050068687
70-059-61/1A	1A	1050063088
70-059-61/2A	2A	1050063089
70-059-61/3A	3A	1050063090
70-059-61/5A	5A	1050063091
70-059-61/6.3A	6.3A	1050063092
70-059-61/8A	8A	1050063093
70-059-61/10A	10A	1050063094
70-059-61/12.5A	12.5A	1050066459
70-059-61/16A	16A	1050063095
70-059-61/20A	20A	

# SPECIALIST

Stockist of Heatrae, Santon  
and Zip Water Spares

# MINIATURE FUSES

## CERAMIC 20MM X 5MM QUICK BLOW 250V



S501-100mA	100mA	1050063097
S501-500mA	500mA	1050063098
S501-1A	1A	1050063099
S501-2A	2A	1050063100
S501-3.15mA	3.15A	1050063101
S501-5A	5A	1050063102
S501-6.3A	6.3A	1050063103
S501-8A	8A	1050063104
S501-10A	10A	1050063105
	16A	1050063106

## CERAMIC 20MM X 5MM SLOW BLOW 250V



70-007-65/250mA	250mA	1050063107
70-007-65/500mA	500mA	1050063108
70-007-65/1A	1A	1050063109
70-007-65/2A	2A	1050063110
70-007-65/3.15A	3.15A	1050063111
70-007-65/5A	5A	1050063112
70-007-65/6.3A	6.3A	1050063113
70-007-65/8A	8A	1050063114
70-007-65/10A		

# MINIATURE FUSES

## CERAMIC 25MM X 5MM QUICK BLOW 250V



70-010-04/2A	2 A	1050063146
70-010-04/4A	4 A	1050063147
70-010-04/5A	5 A	1050063148
70-010-04/6.3A	6.3 A	1050063149

## CERAMIC 25MM X 5MM MEDIUM BLOW 250V



70-010-05/0.5A	500 mA	1050063151
70-010-05/1A	1 A	1050063152
70-010-05/2A	2 A	1050063153
70-010-05/3.15A	3.15 A	1050063154
70-010-05/4A	4 A	1050063155
70-010-05/6.3A	6.3 A	1050063156

## MINIATURE FUSES

CERAMIC 32MM X 6MM QUICK BLOW 500V 250mA-16A / 400V 20-



70-065-63/500mA	500mA	1050063116
70-065-63/1A	1A	1050063117
70-065-63/2A	2A	1050063118
70-065-63/3A	3A	1050063119
70-065-63/4A	4A	1050063120
70-065-63/5A	5A	1050063121
70-065-63/7A	7A	1050063122
70-065-63/10A	10A	1050063123

Confused about fuses

Phone your **SPECIALIST**

on: **01905 791500**



## MINIATURE FUSES

CERAMIC 32MM X 6MM SLOW BLOW 500V 500mA-16A / 400V 20-25A /



70-065- 65/500mA	500mA	1050068370
70-065-65/1A	1A	1050063125
70-065-65/2A	2A	1050063126
70-065-65/3.15A	3.15A	1050063127
70-065-65/5A	5A	1050063128
70-065-65/6.3A	6.3A	1050063129
70-065-65/8A	8A	1050063130
70-065-65/10A	10A	1050063131
70-065-65/12.5A	12.5A	1050063132
70-065-65/16A	16A	1050063133
70-065-65/20A	20A	1050063134
70-065-65/25A	25A	1050063135
70-065-65/32A	32A	

# SPECIALIST

## Stockist of Santon Industrial Immersion Heaters

# MINIATURE FUSES

CERAMIC 32MM X 6MM ULTRA RAPID 700V 250mA-2A / 500V / 2.5A -



70-125-40/1A	1 A	1050063137
70-125-40/2A	2 A	1050063138
70-125-40/3.15A	3.15A	1050063139
70-125-40/5A	5 A	1050063140
70-125-40/6.3A	6.3A	1050063141
70-125-40/10A	10 A	1050063142
70-125-40/12.5A	12.5A	1050063143
70-125-40/16A	16 A	1050063144

## SPECIALIST

we are pleased to work with the following suppliers:

**COOPER**

**Bussmann®**

Productivity Through Protection™

**MEM**

**SIBA**  
SICHERUNG-FUSES

**Ferraz**  
**Shawmut**

## FUNCTIONS & APPLICATIONS

### gL / gG

#### FUNCTIONS

Industrial fuse, gG curve (black marking) - standard NF EN 60269-1 and 2-1  
Protection of cables and electrical devices. Discrimination ensured between two fuses for which there is a margin of two current ratings (e.g. 160a and 100a)

#### APPLICATIONS

Protection at all levels of electrical distribution against overloads and short circuits.  
Main switchboard, feeder switchboards, main cubicles.

### aM

#### FUNCTIONS

Industrial fuse, aM curve (green marking) - standard NF EN 60269-1 and 2-1  
Direct protection of motors, must operate in conjunction with an external protection device (thermal relay). Easy discrimination with the gG fuses positioned upstream.  
Discrimination ensured between two fuses where there is a margin of two current ratings (e.g. 160a and 100a)

#### APPLICATIONS

Protection of all low voltage motors.

### gR

#### FUNCTIONS

Ultra fast protection fuse for semi conductors, very current limiting, low  $I^2t$ .  
Full range fuse.

#### APPLICATIONS

Power semi conductor protection of soft starters, static relays, uninterruptible power supplies (UPS), variable speed drives, frequency converters.

# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

8MM X 32MM αL/αG



n 400V 20kA

15013 -	2 A	1050063158
Q219227J	4 A	1050063159
15019 -	6 A	1050063160
W222958J	10 A	1050063161
15023 -	16 A	1050063162
A211025J	20 A	1050068361
15031 -		
A214613J		

8MMX 32MM FUSE HOLDERS



n Din Rail Mounting

24000 -	CMS 8/10 NEUTRAL	1050063189
D305006K		

# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

10MM X 38MM αL/αG



n 500V 120kA up to 25A

n 400V 120kA 32A

16011- B212061J	1 A	1050063750
16013 - D213098J	2 A	1050063164
16019 - X213598J	4 A	1050063165
16023 - K215128J	6 A	1050063166
16027 - D217169J	8 A	1050063167
16031- S218194J	10 A	1050063168
16033 - W219761J	12 A	1050063169
16035 - G200750J	16 A	1050063170
16037 - D211028J	20 A	1050063171
16039 - E213099J	25 A	1050063172

## SPECIALIST

# Stockist of Vent Axia and Xpelair Fan Spares

# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

## 10MM X 38MM aM (MOTOR RATED)



n 500V 120kA up to 20A

n 400V 120kA up to 25A - 32A

16513 - H218714J	2 A	1050063174
16519 - W219232J	4 A	1050063175
16523 - F222208J	6 A	1050063176
16527 - Z201295J	8 A	1050063177
16531 - Y211552J	10 A	1050063178
16533 - A213601J	12 A	1050063179
16535 - F214618J	16 A	1050063180
16537 - X216151J	20 A	1050063181
16539 - G217172J	25 A	1050063182
16543 - J218715J	32 A	1050063183

## 10MM X 38MM gR (ULTRA RAPID)



n 600V 200kA

C330006J	4 A	1050063485
E330008J	6 A	1050063486
G330010J	10 A	1050063487
J330012J	16 A	1050063488
K330013J	20 A	1050063489
L330014J	25 A	1050063490

# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

## 10MM X 38MM FUSE HOLDERS



n Din Rail Mounting

24202 -	CMS10 1P	1050063185
T305020K	CMS10 1P + NEUTRAL	1050063186
24206 -	CMS10 2P	1050063187
V305021F		

## 14MM X 51MM αL/αG



n Rated at 80kA at 690V

n Rated at 120kA at 400V - 500V

Y219234J	2 A	1050063190
A219765J	4 A	1050063191
H222210J	6 A	1050063192
L200754J	10 A	1050063193
A211554J	16 A	1050063194
Z212588J	20 A	1050063195
C213603J	25 A	1050063196
W216656J	32 A	1050063197
X218198J	40 A	1050063198

# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

## 14MM X 51MM aM (MOTOR RATED)



n Rated at 80kA at 690V

n Rated at 120kA at 400V - 500V

S215135J	6 A	1050063200
Z216659J	10 A	1050063201
Q217686J	16 A	1050063202
P218720J	20 A	1050063203
E219769J	25 A	1050063204
M222214J	32 A	1050063205
Q200758J	40 A	1050063206
E211558J		

## 14MM X 51MM gR (ULTRA RAPID) NO STRIKER



n Rated at 200kA at 690V

R220907J	10 A	1050063492
P220905J	16 A	1050063493
E220735J	20 A	1050063494
N220904J	25 A	1050063495
W220819J	32 A	1050063496
M220903J		

Care must be taken of de-rating the above fuses where necessary when using accessories



# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

## 14 X 51MM gR (ULTRA RAPID) WITH STRIKER



n Rated at 300kA at 660V

X220935J	16 A	1050063498
W220934J	20 A	1050063499
V220933J	25 A	1050063500
V220818J	32 A	1050063501

Care must be taken of de-rating the above fuses where necessary when using accessories

## 14MM X 51MM FUSE HOLDERS



n Din Rail Mounting

222990 - F222990F	Single Pole CMS14 1P	1050063208
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# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

## 22MM X 58MM αL/αG



n Rated at 80kA at 690V

n Rated at 120kA at 400V - 500V

P214626J	50A	1050063210
Y215646J	63A	1050063211
Q217180J	80A	1050063212
E218205J	100A	1050063213

## 22MM X 58MM αM (MOTOR RATED)



n Rated at 80kA at 690V

n Rated at 120kA at 400V - 500V

V213113J	32A	1050065419
N213613J	40A	1050063215
R214122J	50A	1050063216
C215650J	63A	1050063218
H216667J	80A	1050063219
Y217693J	100A	1050063220

# FRENCH INDUSTRIAL FUSES AND ACCESSORIES

## 22MM X 58MM gR (ULTRA RAPID) NO STRIKER



n Rated at 200kA at 690V

Z220914J	40 A	1050063503
Y220913J	50 A	1050063504
X220912J	63 A	1050063505
Y220821J	80 A	1050063506

Care must be taken of de-rating the above fuses where necessary when using accessories

## 22MM X 58MM gR (ULTRA RAPID) WITH STRIKER



n Rated at 200kA at 690V

E220919J	40 A	1050063508
D220918J	50 A	1050063509
C220733J	63 A	1050063510
X220820J	80 A	1050063511

Care must be taken of de-rating the above fuses where necessary when using accessories

FRENCH INDUSTRIAL FUSES AND ACCESSORIES

22MM X 58MM FUSE HOLDERS



n Din Rail Mounting

29202 - E213628F	CMS 22 1P	1050063222
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**SPECIALIST**

Stockist of Dimplex and  
Creda Heating Spares

## DIAZED BOTTLE FUSES

Diazed fuses, commonly called “bottle” fuses, are available in five sizes, ND to 25amp, D11 to 25amp, D111 to 63amps, D1V\*\* to 100amp and DV\*\* to 200amp. Fuse accessories are sized to match these five sizes.

## NEOZED BOTTLE FUSES

Neozed fuses are more compact than Diazed fuses. Three sizes are available, D01 to 16amp, D02 to 63amp and D03 to 100amp. Fuse accessories are sized to match these three sizes.

On both types, each size fuse body has a different diameter to fit only into the appropriate screw cap and fuse base. Also, the tips have different diameters, depending on their current rating. The diameter of the tip matches the diameter of the hole in the adaptor screw to ensure that no fuse with a higher rating than intended for the circuit can be installed. This prevents damage to the circuit or equipment the fuse protects. Additionally, fuses and adaptor screws are colour coded to avoid mismatching; for example: 10amp bottle fuses have red pop-out indicators in their head, matching the red ring of the 10amp adaptor screw. When a 10amp bottle fuse has blown, the colour coded indicator on the head of the fuse will pop out, giving visible indication through a glass window in the screw cap.

The fuse is held in place by the screw cap, which is screwed into the fuse base. Fuse bases are available in one and three pole designs. Fuse bases can be panel mounted or snapped onto a standard 35mm DIN rail.

\*\* For D1V and DV please contact us.

## OPERATING CLASSES

**gL/gG** - slow blow protects cable and conductors from damage due to overload and short circuits.

Typical markings: gL/gG

**gR** - super fast blow protects semiconductors like diodes, SCRS, etc. Current limiting super fast blow characteristic for short circuit protection.

Typical markings: Ultra rapid, Reticur, gR.

# BOTTLE FUSES

## D01 (E14) αL/αG (NEOZED) 11MM X 36MM



n Rated at 400V AC

2NZ01	2 A	PINK	1050063224
4NZ01	4 A	BROWN	1050063225
6NZ01	6 A	GREEN	1050063226
10NZ01	10 A	RED	1050063227

## D02 (E18) αL/αG (NEOZED) 15.3MM X 36MM



n Rated at 400V AC

20NZ02	20 A	BLUE	1050063229
25NZ02	25 A	YELLOW	1050063230
35NZ02	35 A	BLACK	1050063231
50NZ02	50 A	WHITE	1050063232
63NZ02			

# BOTTLE FUSES

## D02 (E18) αR (NEOZED) 15.3MM X 36MM



- n Ultra Rapid
- n Rated at 400V AC

20NZ02R	20 A	BLUE	1050063513
25NZ02R	25 A	YELLOW	1050063514
35NZ02R	35 A	BLACK	1050063515
50NZ02R	50 A	WHITE	1050063516

## D1 (E16) αL/αG (DIAZED) 12.5MM X 50MM



- n Rated at 500V AC

2D16	2 A	PINK	1050063234
4D16	4 A	BROWN	1050063235
6D16	6 A	GREEN	1050063236
10D16	10 A	RED	1050063237
16D16	16 A	GREY	1050063238
20D16	20 A	BLUE	1050063239

# BOTTLE FUSES

## D11 (E27) αL/αG (DIAZED) 22MM X 50MM



n Rated at 500V AC

2D27	2 A	PINK	1050063241
4D27	4 A	BROWN	1050063242
6D27	6 A	GREEN	1050063243
10D27	10 A	RED	1050063244
16D27	16 A	GREY	1050063245
20D27	20 A	BLUE	1050063246

## D11 (E27) αR (DIAZED) 22MM X 50MM



n Ultra Rapid

n Rated at 500V AC

2D27R	2 A	PINK	1050063518
4D27R	4 A	BROWN	1050063519
6D27R	6 A	GREEN	1050063520
10D27R	10 A	RED	1050063521
16D27R	16 A	GREY	1050063522
20D27R	20 A	BLUE	1050063523
25D27R	25 A	YELLOW	1050063524
30D27R			



# BOTTLE FUSES

## D111 (E33) αL/αG (DIAZED) 27MM X 50MM



n Rated at 500V AC

35D33	35 A	BLACK	1050063248
50D33	50 A	WHITE	1050063249

## D111 (E33) αR (DIAZED) 27MM X 50MM



n Ultra Rapid

n Rated at 500V AC

35D33R	35 A	BLACK	1050063526
50D33R	50 A	WHITE	1050063527

# ACCESSORIES FOR BOTTLE FUSES

## D11/E27 ACCESSORIES



SFD27	SINGLE POLE FUSE BASE	1050063251
CD27	SCREWCAPS	1050063252
2GD27	GAUGE PIECE 2A	1050063253
4GD27	GAUGE PIECE 4A	1050063254
6GD27	GAUGE PIECE 6A	1050063255
10GD27	GAUGE PIECE 10A	1050063256
16GD27	GAUGE PIECE 16A	1050063257
20GD27	GAUGE PIECE 20A	1050063258
25GD27		

## D111/E33 ACCESSORIES



SFD33	SINGLE POLE FUSE BASE	1050063260
CD33	SCREW CAP	1050063261
35GD33	GAUGE PIECE 35A	1050063262
50GD33	GAUGE PIECE 50A	1050063263

## CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

NH fuses are typically used for distribution applications to large electrical devices such as motors and drives etc. They are available in seven sizes with a current range of 3 to 1600 amps.

NH fuses have knife blades at both ends which mount into one or three pole fuse bases. Fuse bases can be panel or DIN rail mounted.

### OPERATING CLASSES

**gL/gG** - offers protection at every level. Typically used for distribution circuit or resistive loads.

**aM** - offers protection for all low voltage motors. Fast acting short circuit protection but slow acting overload protection.

**aR** - Semi conductor protection partial range, short circuit protection for devices such as diodes, SCRs etc.

**gR** - Semi conductor protection, full range, overload and short circuit protection for devices such as diodes, SCRs etc.

SIZE C00 (000) gL/gG 500V



n Total length 78.5mm

n Body size 49mm x 43mm x 21mm

B211946C	2 A	1050064027
M212462C	4 A	1050064028
D213995C	6 A	1050063265
B219651C	10 A	1050063266
K222097C	16 A	1050063267
A222847C	20 A	1050063268
E201185C	25 A	1050063269
Z211438C	32 A	1050063270
C211947C	35 A	1050063271
N212463C	40 A	1050063272
T212974C	50 A	1050063273
E213996C	63 A	1050063274
Y216543C	80 A	1050063275

## CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

SIZE C00 (000) αR (ULTRA RAPID) 660V 80MM BASE



n Total length 100mm

n Body Size 54mm x 40mm x 20mm

X330277C	16 A	1050063943
K330174C	25 A	1050063944
L330175C	32 A	1050063945
M330176C	40 A	1050063946
N330177C	50 A	1050063947
P330178C	63 A	1050063948
T330182C	80 A	1050063949
V330183C	100 A	1050063950
W330184C	125 A	1050063951
X330185C	160 A	1050063952

SIZE C00 (000) αR (ULTRA RAPID) 660V SOLID TAG



n Total length 78.5mm

n Body Size 49mm x 43mm x 21mm

170M1558	10 A	1050063954
Y210609C	16 A	1050063955
Z210610C	20 A	1050063956
A210611C	25 A	1050063529
B210612C	35 A	1050063530
C210613C	40 A	1050063531
D210614C	50 A	1050063532
E210615C	63 A	1050063533

## CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

### SIZE C00 (000) URB (ULTRA RAPID) 690V SOLID TAG



- n Total length 78.5mm
- n Body Size 49mm x 43mm x 21mm

Q320059C	80 A	1050063546
V320063C	100 A	1050063547
B320069C	160 A	1050063548
D320071C	200 A	1050063957
H320075C	250 A	1050063958
M320079C	315 A	1050063959

### SIZE 00 αL/αG 500V



- n Total length 78.5mm
- n Body Size 49mm x 38mm x 30mm

R201863C	125 A	1050063277
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### SIZE 00 αM (MOTOR RATED) 690V



- n Total length 78.5mm
- n Body Size 49mm x 38mm x 30mm

A227861C	50 A	1050063279
F227866C	80 A	1050063280
G227867C	100 A	1050063281
H227868C	125 A	1050063282

## CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

SIZE 00 gR, aR (ULTRA RAPID) 690V 80MM BASE



n Total length 100mm

n Body Size 54mm x 51mm x 28mm

L330175 (gR) with indicator	32 A	1050063960
M330176 (gR) with indicator	40 A	1050063961
N330177 (gR) with indicator	50 A	1050063535
P330178 (gR) with indicator	63 A	1050063536
Q330179 (gR) with indicator	80 A	1050063537
D320163 (aR)	100 A	1050063538
F320165 (aR)	125 A	1050063539
K320169 (aR)	160 A	1050063540
M320171 (aR)	200 A	1050063541
R320175 (aR)	250 A	1050063542
W320179 (aR)	315 A	1050063962
B330189 (aR) 500V max with indicator	350 A	1050064029

# SPECIALIST

## Stockist of Moflash Beacons and Klaxon Sounders

# CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

## SIZE 00 FUSE HOLDERS AND ACCESSORIES



Z217211K (ceramic 40002)	SINGLE POLE CERAMIC	1050063284
F215170C (polyester 41002)	SINGLE POLE POLYESTER	1050063285
R216192C	SINGLE POLE RAIL FIXING	1050063286
W212654B	PB00 SEPARATING PLATE	1050063287
M222513F	COVER SHIELDS	1050063288
G213170C	FUSE COVER	1050063289
P215592A	FUSE PULLER	1050063290
	MICRO SWITCH	1050063291
	LOAD SWITCH 3 POLE	1050063622

NB. 2 pole and 3 pole can be made up from using single pole holders plus a separating plate.  
The polyester bases clip together.

## SIZE 0 αL/αG 500V



n Total length 125mm

n Body Size 68mm x 48mm x 30mm

N218765C	63 A	1050063292
C219284C	80 A	1050063293
D219814C	100 A	1050063294
P222492C	125 A	1050063295

## CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

### SIZE 1 αL/αG 500V



n Total length 135mm

n Body Size 68mm x 50mm x 44mm

L214669C	63A	1050063297
S215687C	80A	1050063298
X216703C	100A	1050063299
Q217732C	125A	1050063300
A218247C	160A	1050063301
P218766C	200A	1050063302

### SIZE 1 αM (MOTOR RATED) 690V



n Total length 135mm

n Body Size 68mm x 50mm x 44mm

100NH1M	100A	1050063304
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# CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

## SIZE 1 aR (ULTRA RAPID)



- n 63 -100A 690V
- n 125 - 400A 500V
- n Total length 135mm

M320355C	63 A	1050063963
(aR)	80 A	1050063964
K320399C (aR)	100 A	1050063965
W320363C	125 A	1050063966
(aR)	160 A	1050063967
Y301252C	200 A	1050063549
Z301253C	250 A	1050063550
A301254C	315 A	1050063968
B301255C	350 A	1050063969
R301177C		

## SIZE 1 FUSE HOLDERS AND ACCESSORIES



R219274C	SINGLE POLE CERAMIC	1050063306
A223008C	SINGLE POLE POLYESTER	1050063307
L201881F	COVER SHIELD	1050063308
K214691C	FUSE COVER	1050063309
K235828A	LOAD SWITCH 3 POLE	1050063623

NB. 2 pole and 3 pole can be made up from using single pole holders plus a separating plate.  
The polyester bases clip together.

CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

SIZE 2 αR/αR (ULTRA RAPID) 690V



- n Total length 150mm
- n Body Size 68mm x 61mm x 51mm

F320487C	500A	1050063971
G320488C	550A	1050063972
H320489C	630A	1050063973

SIZE 3 αL/αG 500V



- n Total length 150mm
- n Body Size 73mm x 73mm x 72mm

M217223A	500A	1050063316
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# CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

SIZE 3 gR/uR (ULTRA RAPID) 690V



n Total length 150mm

n Body Size 73mm x 73mm x 72mm

R320589A	630A	1050063975
S320590A	700A	1050063976
T320591A	800A	1050063977
V320592A	900A	1050063978

Confused about fuses

Phone your **SPECIALIST**

on: **01905 791500**

## CONTINENTAL NH BLADE TYPE FUSES (DIN FUSES)

### SIZE 2 αL/αG 500V



n Total length 150mm

n Body Size 68mm x 61mm x 51mm

M214670C	100A	1050063310
R217733C	200A	1050063311
R222494C	250A	1050063312
E201346C	315A	1050063313
Q201862C	355A	1050063314

### SIZE 2 FUSE HOLDERS AND ACCESSORIES

NB. 2 pole and 3 pole can be made up from using single pole holders plus a separating plate.  
The Polyester bases clip together.

# SPECIALIST

## Stockist of Santon Industrial Immersion Heaters

## JTYPE (WEDGE FUSES)

Fuses available in 82mm and 92mm fixing centre sizes up to 400A and 800A respectively for wedge tightening contacts. For use by the electricity supply industry in distribution systems.

### 82MM FIXING CENTRES 415V



20MJ30-8	20A	1050063919
32MJ30-8	32A	1050063920
40MJ30-7	40A	1050063921
63MJ30-7	63A	1050063331
80MJ30-7	80A	1050063922
100MJ30-7	100A	1050063332
125MJ30-7	125A	1050065421
160MJ30-7	160A	1050063333
200MJ30-7	200A	1050063334
250MJ30-7	250A	1050063335
315MJ30-7	315A	1050063336

# J TYPE (WEDGE FUSES)

92MM FIXING CENTRES 415V



20MJ31-8	20A	1050328980
32MJ31-8	32A	1050063923
40MJ31-8	40A	1050065413
50MJ31-8	50A	1050063924
63MJ31-8	63A	1050063925
80MJ31-7	80A	1050063926
100MJ31-7	100A	1050063927
125MJ31-7	125A	1050065410
160MJ31-7	160A	1050063928
200MJ31-7	200A	1050063929
250MJ31-7	250A	1050063930
315MJ31-7	315A	1050065420
400MJ31-7	400A	1050063338
500RJ31-7	500A	1050063339
630SJ31-6	630A	1050063340

## SPECIALIST

we are pleased to work with the following suppliers:

**COOPER**

**Bussmann®**

Productivity Through Protection™

**MEM**

**SIBA**  
SICHERUNGEN/FUSES

**Ferraz Shawmut**

# STREET LIGHTING TYPES

For street lighting applications.

## STD 33kA 240V



- n Total length 47mm
- n Diameter 11mm
- n Fixing centres 35mm

STD2	2 A	1050064030
STD4	4 A	1050064031
STD6	6 A	1050063374
STD10	10 A	1050063341
STD16	16 A	1050063342
STD25	25 A	1050064032
STD32		

## XS



- n Total length 80mm
- n Body Size 38mm x 26.4mm

XS63	63 A	1050064037
XS80	80 A	1050064038
XS100	100 A	1050064039

## STREET LIGHTING TYPES CROSS REFERENCE

STD*	LS*	LST*	LST*	D19L
ESD*	*SP	MES*	ES*	*G05

# HOUSE SERVICE CUT-OUTS

## KR85/4R 415V



- n Length 57mm
- n Diameter 22.2mm
- n For use in domestic and commercial installations

154R	15A	1050063916
204R	20A	1050063917
304R	30A	1050063351
404R	40A	1050063352
454R	45A	1050063918
504R	50A	1050063353
604R	60A	1050063354
804R	80A	1050063355

## LR85/4RL 415V



- n Length 57mm
- n Diameter 30.2mm
- n For use in domestic and commercial installations

60LR85	60A	1050063688
80LR85	80A	1050063689
	100A	



# HOUSE SERVICE CUT-OUTS

## LC TYPE 240V



- n 5A 23mm x 5.35mm
- n 10A - 20A 26mm x 10.32mm
- n 30A 29mm x 12.7mm
- n For use in domestic and commercial installations

5LC	5 A	1050063356
1510LC	10 A	1050063357
15LC	15 A	1050063358
20LC	20 A	1050063359

## SMD



- n Length 29mm
- n Diameter 12.5mm
- n For general purpose use in industrial

SMD 2	2 A	1050063690
SMD 4	4 A	1050063691
SMD 6	6 A	1050063692
SMD 8	8 A	1050063693
SMD 10	10 A	1050063694
SMD 16	16 A	1050063695
SMD 20	20 A	1050063696
SMD 25	25 A	1050063697
SMD 32		

# AMERICAN FUSES

## ATMR CLASS CC – FAST ACTING 600V



- n 10.3mm x 38.1mm
- n 200kA 1R
- n Current limiting
- n The smallest dimension fuse suitable

ATMR1 (L216256J)	1 A	1050063393
ATMR1-1/2 (K216761J)	1.5A	1050063394
	2 A	1050063395
ATMR2 (A200859J)	3 A	1050063396
ATMR3 (N212693J)	5 A	1050063397
ATMR5 (M216257J)	8 A	1050063398
ATMR8 (D217780J)	10 A	1050063399
ATMR10 (P219870J)	12 A	1050063400
ATMR12 (D222551J)	15 A	1050063401
	20 A	1050063402
ATMR15 (V223072J)	25 A	1050063403

# SPECIALIST

## Stockist of Santon Industrial Immersion Heaters

## ATOR CLASS CC TIME DELAY 600V



n 10.3mm x 38.1mm

n 200kA 1R

ATOR1/2 (C211142J)	0.5A	1050063935
	1A	1050063936
ATOR1 (F218827J)	3A	1050063938
ATOR3 (T218310J)	3.5A	1050063939
ATOR3-1/2 (G218828J)	5A	1050063940
ATOR5 (W211665J)	7.5A	1050063941

# SPECIALIST

## Stockist of Moflash Beacons and Klaxon Sounders

# AMERICAN FUSES

## ATDR CLASS CC – DUAL ELEMENT TIME DELAY 600V



n 10.3mm x 38.1mm

n 200kA 1R

ATDR1 (T217275J)	1 A	1050063405
ATDR2 (S212168J)	2 A	1050063406
ATDR3 (Y215232J)	3 A	1050063407
ATDR4 (V217276J)	4 A	1050063408
ATDR5 (K218302J)	5 A	1050063409
ATDR6 (L219338J)	6 A	1050063410
ATDR7 (A222548J)	7 A	1050063411
ATDR8 (X200856J)	8 A	1050063412
ATDR10 (J201396J)	10 A	1050063413
ATDR12 (X201914J)	12 A	1050063414
ATDR15 (V211135J)	15 A	1050063415
ATDR20 (R214214J)	20 A	1050063416
ATDR25 (V214723J)	25 A	1050063417
ATDR30 (G216758J)	30 A	1050063418

# AMERICAN FUSES

## MIDGET FUSES FAST ACTING 600VAC



n For supplementary over current protection.

SBS1/2 (T216769J)	0.5 A	1050063451
SBS1 (G214734J)	1 A	1050063452
SBS2 (K218831J)	2 A	1050063453
SBS3 (D223080J)	3 A	1050063454
SBS10 (G217287J)		1050064042

## MIDGET FUSES FAST ACTING 600V



n 10.3mm x 38.1mm

n For lighting, heating, and control circuits. Suitable for circuits where time delay is not required.

ATM1 (W217277J)	1 A	1050063439
ATM2 (Z201916J)	2 A	1050063440
ATM3 (L212691J)	3 A	1050063441
ATM4 (E215744J)	4 A	1050063442
ATM5 (K216255J)	5 A	1050063443
ATM8 (B217788J)	8 A	1050063444
ATM10 (B222549J)	10 A	1050063445
	12 A	1050063446
	15 A	1050063447
	20 A	1050063448
	25 A	1050063449

# AMERICAN FUSES

## TRM MIDGET FUSES TIME DELAY 250V



- n 10.3mm x 38.1mm
- n Used for lighting, solenoid, motors, transformers and control circuits.

TRM1/2 (V217782J)	0.5A	1050063455
TRM1 (M214210J)	1 A	1050063456
TRM1-4/10 (Y215738J)	1.4A	1050063457
TRM2 (S200852J)	2 A	1050063458
TRM2-1/2 (T201911J)	2.5A	1050063459
TRM3 (H213700J)	3 A	1050063460
TRM5 (G218299J)	5 A	1050063461
TRM8 (T200853J)	8 A	1050063462
TRM10 (V218817J)	10A	1050063463
TRM15 (W222544J)	15A	1050063465
TRM20 (F212686J)	20A	1050063466
TRM25 (Q213201J)	25A	1050063467

# AMERICAN FUSES

## ATO MIDGET FUSES TIME DELAY 500V



n 10.3mm x 38.1mm

n Used for lighting, solenoid, motors, transformers and control circuits.

ATQ1/4 (Q212695J)	0.25A	1050063419
ATQ1/2 (Y212173J)	0.5A	1050063420
ATQ6/10 (F215239J)	0.6A	1050063421
ATQ1 (E217791J)	1A	1050063422
ATQ1-1/2 (Q218307J)	1.5A	1050063423
ATQ1.6/10 (X223074J)	1.6A	1050063424
	2A	1050063425
ATQ2 (P216259J)	2.5A	1050063426
ATQ2-1/2 (N216764J)	3A	1050063427
ATQ3 (G222554J)	4A	1050063428
ATQ4 (T211663J)	5A	1050063429
ATQ5 (B213211J)	6A	1050063430
ATQ6 (Z214221J)	7A	1050063431
ATQ7 (P216765J)	8A	1050063432
ATQ8 (C217283J)	10A	1050063433
ATQ10 (R213708J)	12A	1050063464
ATQ12 (Y214220J)	15A	1050063435
ATQ15 (E215238J)	20A	1050063436
ATQ20 (S219344J)	25A	1050063437
ATQ25 (S219873J)		

# AMERICAN FUSES

## CLASS RK5 DUAL ELEMENT TIME DELAY 250V



- n 50.8mm x 14.3mm
- n 200kA IR
- n Motor overcurrent, motor controller

TR5R (E214709J)	5 A	1050063597
TR10R (D200839J)	10 A	1050063598
TR15R (D211120J)	15 A	1050063599

## CLASS RK5 DUAL ELEMENT TIME DELAY 600V



- n 10-30A 127mm x 20.6mm
- n 35-40A 139.7mm x 27mm
- n 200kA IR
- n Motor overcurrent, motor controller

TRS10R (N218811J)	10 A	1050063601
TRS15R (B201389J)	15 A	1050063602
TRS20R (P217777J)	20 A	1050063603
TRS25R (B219329J)	25 A	1050063604
TRS30R (K213196J)	30 A	1050063605
TRS35R (J214207J)	35 A	1050063606
TRS40R (Q217778J)	40 A	



## AMERICAN FUSES

### CLASS K5 DUAL ELEMENT TIME DELAY 600V



- n Energy limiting
- n Lower cost protection for circuits
- n Serving heating, lighting and other non

T212146J	6 A	1050063627
K216232J	10 A	1050063628
X217255J	15 A	1050063629
Z218798J	20 A	1050063630
L219315J	25 A	1050063631
B222526J		

## SPECIALIST

# Stockist of Dimplex and Creda Heating Spares

# AMERICAN FUSES

## AMERICAN FUSES

KTKR	ATMR	KLKR
FNQR	ATQR	KLDR
LPCC	ATDR	CCMR
BBS	SBS	BLS
KTK	ATM	KLK
FNM	TRM	FLM
FNQ	ATQ	FLQ
BAN	OTM	BLN
BAF	OTMF	BLF
FNA	GFN	FLA
SC	AG	SLC

## AMERICAN POWER FUSES

FRN/FRNR	TR-R	FLNR
FRS/FRSR	TRS-R	FLSR
NOS	OTS	NLS
NON	OT	NLN
KTN-F	A2K-R	KLNR
KS	A6K-R	KLSR
REN	RF	RLN
KBC	RES	RLS
JKS/JS	A4J	JLS

# FORK LIFT TRUCK FUSES

OPEN TYPE 22MM X 82MM



90-030-05/50A	50A	1050063481
90-030-05/100A	100A	1050063482
90-030-05/100A	200A	1050063483

Confused about fuses

Phone your **SPECIALIST**

on: **01905 791500**

## FORK LIFT TRUCK FUSES

ENCLOSED TYPE 22MM X 82MM



A218385E	50A	1050063469
Y219947E	80A	1050063470
K201995E	100A	1050063471
K211218E	125A	1050063472
W212769E	160A	1050063473
J213287E	200A	1050063474
J214299E	250A	1050063475
J214805E	275A	1050063476
L215313E	300A	1050063477
X216841E	355A	1050063478
T217873E	400A	1050063479
Q218905E		1050063480

# SPECIALIST

## Stockist of Santon Industrial Immersion Heaters

## BS88 RECTIFIER FUSES

Used for the protection of semi conductor devices requiring high speed protection from faults.

### LCT $\alpha$ R/uR ULTRA RAPID 250V



- n Total length 47mm
- n Diameter 8mm
- n Fixing centres 38mm

LCT5 (M082489J)	5 A	1050063551
LCT10 (L082488J)	10 A	1050063552
LCT16 (K082487J)	16 A	1050063553

### LET $\alpha$ R/uR ULTRA RAPID 250V



- n Total length 56mm
- n Diameter 17.7mm
- n Fixing centres 41.8mm

M076647J	7 A	1050064043
N076648J	10 A	1050063555
Q076650J	16 A	1050063556
L097507J	20 A	1050063557
R076651J	25 A	1050063558
S076652J	32 A	1050063559
T076653J	35 A	1050063560
V076654J	50 A	1050063561
Z085559J	80 A	1050063562
Y08558J	100 A	1050063563
G097526J	125 A	1050063564
W085556J	150 A	1050063565
H097527J	160 A	1050064044

## BS88 RECTIFIER FUSES

### LMT FPA $\alpha$ R/uR (ULTRA RAPID) 250V



- n Total length 84mm
- n Diameter 34.6mm
- n Fixing centres 59mm

150FPA (Q082469C)	160 A	1050063565
200FPA (P082468C)	200 A	1050063566
250FPA (N082467C)	250 A	1050063567
315FPA (M082466C)	315 A	1050063568
355FPA (L082465C)	355 A	

### CT/ GSB $\alpha$ R/uR (ULTRA RAPID) 660V



- n Total length 74.6mm
- n Diameter 8mm
- n Fixing centres 64.3mm

6CT (X097057J)	6 A	1050063570
10CT (C082457J)	10 A	1050063571
16CT (B082456J)	16 A	1050063572
		1050063573

# BS88 RECTIFIER FUSES

GSGB/ FRB  $\alpha$ R/uR (ULTRA RAPID) 660V



- n Total length 77mm
- n Diameter 17.5mm
- n Fixing centres 63mm

10FRB	10 A	1050063574
16FRB (G075883C)	16 A	1050063575
20FRB (H075884C)	20 A	1050063576
25FRB (J075885C)	25 A	1050063577
32FRB (K075887C)	32 A	1050063578
35FRB (L075887C)	35 A	1050063579
40FRB (M075888C)	40 A	1050063580
45FRB (N075889C)	45 A	1050063581
50FRB (P075890C)	50 A	1050063582
55FRB (Q075891C)	55 A	1050063583
63FRB (R075892C)	63 A	1050063584
75FRB (S075893C)	75 A	1050063585
80FRB (T075894C)	80 A	1050063586

## SPECIALIST

we are pleased to work with the following suppliers:

**COOPER**

**Bussmann®**

Productivity Through Protection™

**MEM**

**SIBA**  
SICHERUNG-FUSES

**Ferraz Shawmut**

# BS88 RECTIFIER FUSES

GSGB/ FUB  $\alpha$ R/uR (ULTRA RAPID) 660V



- n Total length 113mm
- n Diameter 35mm
- n Fixing centres 85mm

P097165C	100A	1050063587
Q097166C	160A	1050063588
T097169C	200A	1050063589
W097171C		

GSGB/ FUB2  $\alpha$ R/uR (ULTRA RAPID) 660V



- n Twin bodied fuse
- n Fixing centres 81.7mm
- n 2 x 34.6mm x 113M

F097272C	200A	1050063591
J097275C	225A	1050063592
50-075- 06/250	250A	1050063593
R097282C	315A	1050063594
S097283C	355A	1050063595
	450A	1050063931
Y097288C	500A	1050063596



## BS88 RECTIFIER FUSES

### AMERICAN $\alpha$ R RECTIFIER (SEMICONDUCTOR) FUSES 500V



- n 250A - 400A
  - n Total length 110mm
  - n Diameter 38mm
  - n Fixing centres 86.5mm
- n 500A - 600A
  - n Total length 113.5mm
  - n Diameter 50.8mm
  - n Fixing centres 89.7mm
- n 800A
  - n Total length 164.3mm

A50QS250-4 (W211251A)	250A	1050063608
A50QS300-4 (D212799A)	300A	1050063609
A50QS350-4 (T215343A)	350A	1050063610
A50QS400-4 (B216362A)	400A	1050063611
	500A	1050063612
	600A	1050063613
	800A	1050063614

# SPECIALIST

## Stockist of Moflash Beacons and Klaxon Sounders

# BS88 RECTIFIER FUSES

## AMERICAN gR RECTIFIER (SEMI CONDUCTOR) FUSES 700V



- n 25-30A
- n Total length 50.8mm
- n Diameter 14.3mm
  
- n 50A
- n Total length 111mm
- n Diameter 25.4mm
- n Fixing centres 96mm
  
- n 100A
- n Total length 111mm
- n Diameter 31mm
- n Fixing centres 93.7mm
  
- n 200A
- n Total length 129.4mm
- n Diameter 38.1mm
- n Fixing centres 105.6mm
  
- n 300-400A

A70P25.1 (N216373J)	25 A	1050063615
A70P30.1 (B230024J)	30 A	1050063616
A70P50.4 (W202695E)	50 A	1050063617
A70P100.4 (J218945E)	100 A	1050063618
A70P200.4 (K218946E)	200 A	1050063619
A70P300.4 (P212809E)	300 A	1050063620
A70P400.4 (L218947E)	400 A	

## PLUG TOP FUSES

### BS1362 PLUG TOP FUSE



F1	1 A	1050152901
F2	2 A	1000015794
F3	3 A	1000015795
F5	5 A	1000015796
F7	7 A	1050152902
F10	10 A	1000015797
F13	13 A	1000015822

 Available at your local Newey & Eyre branch

# SPECIALIST

## Stockist of Heatrae, Santon and Zip Water Spares

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	fuse 57mm x 22.2mm. . . . .	54	**LET	BS88 rectifier fuse gR/uR ultra rapid 250v . . 67
**4RL	house service cut out fuse		**LMT	BS88 rectifier fuse gR/uR ultra rapid 250v . . 68
	57mm x 30.2mm. . . . .	54	**LO9	BS88 HRC fuse 111mm fixing centres . . . . . 7
**CT	BS88 rectifier fuse gR/uR		**LO9M**	BS88 HRC motor rated fuse
	ultra rapid 660v. . . . .	68		111mm fixing centres . . . . . 14
**DO4	BS88 HRC fuse . . . . .	9	**LR	house service cut out fuse 57mm x 30.2mm . 54
**D16	d1/e16 gL/gG bottle fuse		**LR71	house service cut out fuse 57mm x 30.2mm . 54
	12.5mm x 50mm. . . . .	37	**LR85	house service cut out fuse 57mm x 30.2mm . 54
**D19L	street lighting fuse . . . . .	53	**LST	street lighting fuse . . . . . 53
**D27	d11/e27 gL/gG bottle fuse 22mm x 50mm . 38		**MJ30-7	J type fuse 82mm fixing centres. . . . . 51
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	fuse 22mm x 50mm . . . . .	38	**MJ31-7	J type fuse 92mm fixing centres . . . . . 52
**D33	d111/e33 gL/gG bottle		**MMT	BS88 rectifier fuse gR/uR ultra rapid 660v . 70
	fuse 27mm x 50mm . . . . .	39	**MT	BS88 rectifier fuse gR/uR ultra rapid 660v . 70
**D33R	d111/e33 gR ultra rapid bottle		**MO9	BS88 HRC fuse 111mm fixing centres . . . . . 7
	fuse 27mm x 50mm . . . . .	39	**MO9M**	BS88 HRC motor rated fuse
**ER	house service cut out fuse			111mm fixing centres. . . . . 14
	57mm x 22.2mm. . . . .	54	**MT	BS88 rectifier fuse gR/uR ultra rapid 660v . 70
**ESD	BS88 HRC fuse . . . . .	8	**NH00B	continental NH fuse size 00 gL/gG . . . . . 43
**ET	BS88 rectifier fuse gR/uR		**NH0B	continental NH fuse size 0 gL/gG . . . . . 45
	ultra rapid 660v. . . . .	69	**NH1B	continental NH fuse size 1 gL/gG . . . . . 46
**FO6	BS88 HRC fuse . . . . .	6	**NH1G	continental NH fuse size 1 gL/gG . . . . . 46
**FO6M**	BS88 HRC motor rated fuse . . . . .	13	**NH1M	continental NH fuse size 1 aM motor rated 46
**F21	BS88 HRC fuse 44mm fixing centres . . . . 4		**NH2B	continental NH fuse size 2 gL/gG . . . . . 50
**F21M**	BS88 HRC motor rated fuse		**NH2G	continental NH fuse size 2 gL/gG . . . . . 50
	44mm fixing centres. . . . .	11	**NH3B	continental NH fuse size 3 gL/gG . . . . . 48
**FMA	BS88 rectifier fuse gR/uR ultra rapid 250v . 67		**NH3G	continental NH fuse size 3 gL/gG . . . . . 48
**FMM	BS88 rectifier fuse gR/uR ultra rapid 660v . 70		**NHC00B	continental NH fuse size C00/000 gL/gG . 41
**FNA	BS88 rectifier fuse gR/uR ultra rapid 250v . 67		**NHC00G	continental NH fuse size C00/000 gL/gG . 41
**FPA	BS88 rectifier fuse gR/uR ultra rapid 250v . 68		**NHC00M	continental NH fuse size 00 aM
**FRB	BS88 rectifier fuse gR/uR ultra rapid 660v . 69			motor rated . . . . . 43
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**FUB	BS88 rectifier fuse gR/uR ultra rapid 660v . 70		**NO9M**	BS88 HRC motor rated fuse 111mm f
**FUB2	BS88 rectifier fuse gR/uR ultra rapid 660v . 70			ixing centres . . . . . 15
**GD27	d11/e27 gauge pieces . . . . .	40	**NZ01	d01/e14 gL/gG bottle fuse 11mm x 36mm. . 36
**GD33	d111/e33 gauge pieces . . . . .	40	**NZ02	d02/e18 gL/gG bottle fuse 15.3mm x 36mm. 36
**GO5	BS88 HRC fuse . . . . .	8	**NZ02R	d02/e18 gR ultra rapid bottle fuse
**HO7	BS88 HRC fuse 73mm fixing centres . . . . 5			15.3mm x 36mm. . . . . 37
**HO7M**	BS88 HRC motor rated fuse		**P11	BS88 HRC fuse 133/184mm fixing centres. . 9
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**JCS92	J type fuse 92mm fixing centres . . . . .	52	**PO9	BS88 HRC fuse 111mm fixing centres . . . . . 8
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**K7M**	BS88 HRC motor rated fuse			111mm fixing centres. . . . . 15
	73mm fixing centres. . . . .	12	**R11	BS88 HRC fuse 133/184mm fixing centres . 10
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	fuse 57mm x 22.2mm. . . . .	54	**SA2M**	BS88 HRC motor rated fuse
**L14	BS88 HRC fuse 94mm fixing centres . . . . 5			44mm fixing centres . . . . . 11
**L14M**	BS88 HRC motor rated fuse		**SB3	BS88 HRC fuse 73mm fixing centres . . . . . 5
	94mm fixing centres. . . . .	12	**SB3M**	BS88 HRC motor rated fuse
**LA	house service cut out fuse . . . . .	55		73mm fixing centres. . . . . 11
**LC	house service cut out fuse . . . . .	55	**SB4	BS88 HRC fuse 73mm fixing centres . . . . . 5
			**SB4M**	BS88 HRC motor rated fuse
				73mm fixing centres. . . . . 12

\*\* Denotes Amperage

?? Denotes other number relating to but not Amperage (Amps would still need to be established)

PART CODE	DESCRIPTION	PAGE	150**	french industrial fuse
**SD5	BS88 HRC fuse 94mm fixing centres . . . . . 5	150??	22mm x 58mm aM motor rated . . . . . 32	
**SD5M**	BS88 HRC motor rated fuse	153**	french industrial fuse 8mm x 32mm gL/gG . . 26	
	94mm fixing centres . . . . . 12	160??	french industrial fuse 22mm x 58mm gL/gG . 32	
**SD6	BS88 HRC fuse 94mm fixing centres . . . . . 6	165??	french industrial fuse 10mm x 38mm gL/gG . 27	
**SE4M**	BS88 HRC motor rated fuse		french industrial fuse	
	97mm fixing centres . . . . . 13	170??	10mm x 38mm aM motor rated . . . . . 28	
**SF5	BS88 HRC fuse 111mm fixing centres . . . . . 7	170M14??	french industrial fuse 14mm x 51mm gL/gG . 29	
**SF5M**	BS88 HRC motor rated fuse		continental NH fuse size C00/000 gR ultra	
	111mm fixing centres . . . . . 14	170M15??	rapid 80mm base . . . . . 42	
**SF6	BS88 HRC fuse 111mm fixing centres . . . . . 7	170M15??	continental NH fuse size c00/000 gR	
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**SH10	BS88 HRC fuse 133/184mm fixing centres. . 10	170N10??	french industrial fuse	
**SH8	BS88 HRC fuse 133/184mm fixing centres. . 9	170N11??	14mm x 51mm gR ultra rapid no striker . . . 30	
**SH9	BS88 HRC fuse 133/184mm fixing centres. . 10	170N20??	french industrial fuse	
**SJ31-6	J type fuse 92mm fixing centres . . . . . 52		14mm x 51mm gR ultra rapid with striker . . 31	
**SN2	BS88 HRC fuse . . . . . 6	170N21??	french industrial fuse	
**SN2M**	BS88 HRC motor rated fuse . . . . . 13		22mm x 58mm gR ultra rapid no striker . . . 33	
**SP	BS88 HRC fuse . . . . . 8	175??	french industrial fuse 22mm x 58mm	
**SS	BS88 HRC fuse . . . . . 9	180??	gR ultra rapid with striker . . . . . 33	
10-002-04/**	d1/e16 gL/gG bottle fuse 12.5mm x 50mm . 37	185??	french industrial fuse	
10-005-04/**	d11/e27 gL/gG bottle fuse 22mm x 50mm . 38		14mm x 51mm aM motor rated . . . . . 30	
10-005-07/**	d11/e27 gR ultra rapid bottle		french industrial fuse	
	fuse 22mm x 50mm . . . . . 38		22mm x 58mm gL/gG . . . . . 32	
10-005-08/**	d11/e27 gR ultra rapid bottle fuse		french industrial fuse	
	22mm x 50mm . . . . . 38	20-000-04/**	22mm x 58mm aM motor rated . . . . . 32	
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	14mm x 51mm aM motor rated . . . . . 30		miniature glass fuse	
143**	french industrial fuse 14mm x 51mm gL/gG . 29	218**	20mm x 5mm quick blow . . . . . 16	
14G**	french industrial fuse 14mm x 51mm gL/gG . 29		miniature glass fuse	
14M**	french industrial fuse	221100??	20mm x 5mm slow blow. . . . . 17	
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22C**	french industrial fuse 22mm x 58mm gL/gG	32	50-074-06/** BS88 rectifier fuse gR/uR ultra rapid 660v . 70
22M**	french industrial fuse 22mm x 58mm aM motor rated . . . . .	32	50-075-06/** BS88 rectifier fuse gR/uR ultra rapid 660v 250a . . . . .
231140??	d1/e16 gL/gG bottle fuse 12.5mm x 50mm . 37		50-076-06/** BS88 rectifier fuse gR/uR ultra rapid 250v . . 67
231240??	d11/e27 gL/gG bottle fuse 22mm x 50mm . 38		50-077-06/** BS88 rectifier fuse gR/uR ultra rapid 660v . . 68
231340??	d111/e33 gL/gG bottle fuse 27mm x 50mm. 39		50-085-01/** BS88 HRC fuse 44mm fixing centres . . . . . 4
24000	8mm x 32mm fuse holder . . . . .	26	50-085-16/** BS88 HRC motor rated fuse 44mm fixing centres . . . . . 11
24002	8mm x 32mm fuse holder . . . . .	26	50-086-01/** BS88 HRC fuse . . . . . 6
24202	10mm x 38mm fuse holder . . . . .	29	50-086-16/** BS88 HRC motor rated fuse . . . . . 13
24206	10mm x 38mm fuse holder . . . . .	29	50-110-01/** BS88 HRC fuse 111mm fixing centres . . . . . 8
24212	10mm x 38mm fuse holder . . . . .	29	50-124-06/** french industrial fuse 14mm x 51mm gR ultra rapid no striker . . . 30
24214	10mm x 38mm fuse holder . . . . .	29	50-126-06/** french industrial fuse 14mm x 51mm gR ultra rapid with striker . . . . . 31
29014	14mm x 51mm three pole fuse holder. . . . .	31	50-140-06/** french industrial fuse 22mm x 58mm gR ultra rapid no striker . . . . . 33
29202	22mm x 58mm single pole fuse holder. . . . .	34	50-142-06/** french industrial fuse 22mm x 58mm gR ultra rapid with striker . . . . . 33
29214	22mm x 58mm three pole fuse holder. . . . .	34	520?? french industrial fuse 10mm x 38mm gR ultra rapid . . . . . 28
3NA10??	continental NH fuse size C00/000 gL/gG . . . . .	41	522?? french industrial fuse 14mm x 51mm gR ultra rapid no striker. . . . . 30
3NA11??	continental NH fuse size 0 gL/gG . . . . .	45	523?? french industrial fuse 14mm x 51mm gR ultra rapid with striker . . . . . 31
3NA12??	continental NH fuse size 1 gL/gG . . . . .	46	524?? french industrial fuse 22mm x 58mm gR ultra rapid no striker . . . . . 33
3NA13??	continental NH fuse size 2 gL/gG . . . . .	50	525?? french industrial fuse 22mm x 58mm gR ultra rapid with striker . . . . . 33
3NA14??	continental NH fuse size 3 gL/gG . . . . .	48	5SA21?? d1/e16 gL/gG bottle fuse 12.5mm x 50mm . 37
3NA30??	continental NH fuse size 0 gL/gG . . . . .	45	5SB2?? d11/e27 gL/gG bottle fuse 22mm x 50mm . 38
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3NA38??	continental NH fuse size C00/000 gL/gG . . 41		5SE20** d02/e18 gL/gG bottle fuse 15.3mm x 36mm. . 36
3NA38??	continental NH fuse size 00 gL/gG . . . . .	43	60-033-05/** french industrial fuse 10mm x 38mm gR ultra rapid . . . . . 28
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50-001-16/**	BS88 HRC motor rated fuse 73mm fixing centres . . . . .	11	70-001-35/** miniature glass fuse 20mm x 5mm slow blow . . . . . 17
50-002-01/**	BS88 HRC fuse 73mm fixing centres . . . . .	5	70-007-33/** miniature ceramic fuse 20mm x 5mm quick blow. . . . . 20
50-002-16/**	BS88 HRC motor rated fuse 73mm fixing centres . . . . .	12	70-007-65/** miniature ceramic fuse 20mm x 5mm slow blow . . . . . 20
50-003-01/**	BS88 HRC fuse 94mm fixing centres . . . . .	5	70-010-04/** miniature ceramic fuse 25mm x 5mm quick blow. . . . . 21
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50-006-16/**	BS88 HRC motor rated fuse 97mm fixing centres . . . . .	13	70-059-61/** miniature glass fuse 32mm x 6mm slow blow . . . . . 19
50-008-01/**	BS88 HRC fuse 111mm fixing centres . . . . .	7	70-065-63/** miniature ceramic fuse 32mm x 6mm quick blow . . . . . 22
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50-009-01/**	BS88 HRC fuse 111mm fixing centres . . . . .	7	
50-009-16/**	BS88 HRC motor rated fuse 111mm fixing centres . . . . .	14	
50-010-01/**	BS88 HRC fuse 111mm fixing centres . . . . .	8	
50-010-16/**	BS88 HRC motor rated fuse 111mm fixing centres . . . . .	15	
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50-023-01/**	J type fuse 82mm fixing centres. . . . .	51	
50-026-01/**	J type fuse 92mm fixing centres . . . . .	52	
50-039-01/**	BS88 HRC fuse 133/184mm fixing centres. . . 9		
50-040-01/**	BS88 HRC fuse 133/184mm fixing centres . . 10		
50-041-01/**	BS88 HRC fuse 133/184mm fixing centres . . 10		
50-053-06/**	BS88 rectifier fuse gR/uR ultra rapid 250v . . 67		

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70-125-40/**	miniature ceramic fuse 32mm x 6mm ultra rapid	24	B210612C continental NH fuse size c00/000 gR ultra rapid 35a 42
90-030-05/**	fork lift truck fuse open type	65	B211141J american midget fuse time delay 500v 30a 61
90-058-05/**	fork lift truck fuse enclosed type	66	B211946H continental NH fuse size C00/000 gL/gG 2a 41
A082455J	BS88 rectifier fuse gR/uR ultra rapid 660v 20a	68	B212061J french industrial fuse 10mm x 38mm gL/gG 1a 27
A200859J	american fuse class cc fast acting 600v 2a	56	B213211J american midget fuse time delay 500v 5a 61
A210611C	continental NH fuse size c00/000 gR ultra rapid 25a	42	B215695J d01/e14 gL/gG bottle fuse 11mm x 36mm 6a 36
A211025J	french industrial fuse 8mm x 32mm gL/gG 6a	26	B216362A BS88 rectifier fuse gR ultra rapid 500v 400a 71
A211508E	d11/e27 gL/gG bottle fuse 22mm x 50mm 20a	38	B217742J d02/e18 gL/gG bottle fuse 15.3mm x 36mm 20a 36
A211554J	french industrial fuse 14mm x 51mm gL/gG 16a	29	B217788J american midget fuse fast acting 600v 8a 59
A213601J	french industrial fuse 10mm x 38mm aM motor rated 12a	28	B219122H continental NH fuse size C00/000 gL/gG 100a 41
A214107J	french industrial fuse 10mm x 38mm gL/gG 32a	27	B219329J american fuse RK5 dual element time delay 600v 25a 62
A214613J	french industrial fuse 8mm x 32mm gL/gG 10a	26	B219651H continental NH fuse size C00/000 gL/gG 10a 41
A218247C	continental NH fuse size 1 gL/gG 160a	46	B222526J american fuse K5 dual element time delay 600v 30a 63
A218385E	fork lift truck fuse enclosed type 50a	66	B222549J american midget fuse fast acting 600v 10a 59
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A222548J	american fuse class cc dual element time delay 600v 7a	58	B230024J BS88 rectifier fuse gR ultra rapid 700v 30a 72
A222847H	continental NH fuse size C00/000 gL/gG 20a	41	B301255C continental NH fuse size 1 gR ultra rapid 250a 47
A223008C	NH size 1 single pole polyester fuse holder	47	B320069C continental NH fuse size C00/000 urb ultra rapid solid tag 160a 43
A227861C	continental NH fuse size 00 aM motor rated 50a	43	B330189 continental NH fuse size 00 gR, aR ultra rapid 80mm base 350a 44
A301254C	continental NH fuse size 1 gR ultra rapid 200a	47	BAO** BS88 HRC fuse 73mm fixing centres 5
A350-**	BS88 rectifier fuse gR/uR ultra rapid 250v	67	BAO**M** BS88 HRC motor rated fuse 73mm fixing centres 12
A50QS**-4	BS88 rectifier fuse gR ultra rapid 500v	71	BBS** american midget fuse fast acting 600v 59
A70P**	BS88 rectifier fuse gR ultra rapid 700v	72	BC**M** BS88 HRC motor rated fuse 97mm fixing centres 13
AAO**	BS88 HRC fuse 73mm fixing centres	5	BES** BS88 HRC fuse 8
AAO**M**	BS88 HRC motor rated fuse 73mm fixing centres	11	BLS** american midget fuse fast acting 600v 59
AGC**	miniature glass fuse 32mm x 6mm quick blow	18	C082457J BS88 rectifier fuse gR/uR ultra rapid 660v 10a 68
ATDR**	american fuse class cc dual element time delay 600v	58	C08G** french industrial fuse 8mm x 32mm gL/gG 26
ATM**	american midget fuse fast acting 600v	59	C10G** french industrial fuse 10mm x 38mm gL/gG 27
ATMR**	american fuse class cc fast acting 600v	56	C10M** french industrial fuse 1 0mm x 38mm aM motor rated 28
ATQ**	american midget fuse time delay 500v	61	C14G** french industrial fuse 14mm x 51mm gL/gG 29
ATQR**	american fuse class cc time delay 600v	57	C14M** french industrial fuse 14mm x 51mm aM motor rated 30
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C211947H	continental NH fuse size C00/000 gL/gG 25a . . . . .	41	D218710J	french industrial fuse 8mm x 32mm gL/gG 25a26
C213603J	french industrial fuse 14mm x 51mm gL/gG 25a . . . . .	29	D219814C	continental NH fuse size 0 gL/gG 100a . . . . 45
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C220733J	french industrial fuse 22mm x 58mm gR ultra rapid with striker 63a . . . . . 33		D320163	continental NH fuse size 00 gR, aR ultra rapid 80mm base 100a . . . . . 44
C220917J	french industrial fuse 22mm x 58mm gR ultra rapid with striker 100a . . . . . 33		DD**	BS88 HRC fuse 111mm fixing centres . . . . . 7
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C22M**	french industrial fuse 22mm x 58mm aM motor rated . . . . . 32		DEO**	BS88 HRC fuse 94mm fixing centres . . . . . 6
C330006J	french industrial fuse 10mm x 38mm gR ultra rapid 4a . . . . . 28		DSA**	BS88 rectifier fuse gR/uR ultra rapid 250v . 67
CCMR**	american fuse class cc dual element time delay 600v . . . . . 58		DSG**	BS88 rectifier fuse gR/uR ultra rapid 660v . 69
CD**	BS88 HRC fuse 111mm fixing centres . . . . 7		DSL**	BS88 rectifier fuse gR/uR ultra rapid 250v . 67
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CEO**M**	BS88 HRC motor rated fuse 94mm fixing centres . . . . . 12		E201346C	continental NH fuse size 2 gL/gG 315a . . . 50
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D213995H	continental NH fuse size C00/000 gL/gG 6a . . . . . 41		E215744J	american midget fuse fast acting 600v 4a . . . 59
D214708J	american fuse RK5 dual element time delay 250v 20a . . . . . 62		E217791J	american midget fuse time delay 500v 1a . . 61
D215191J	d02/e18 gL/gG bottle fuse 15.3mm x 36mm 50a . . . . . 36		E218205J	french industrial fuse 22mm x 58mm gL/gG 100a . . . . . 32
			E219769J	french industrial fuse 14mm x 51mm aM motor rated 25a . . . . . 30
			E219815C	continental NH fuse size 1 gL/gG 250a . . . 46
			E220735J	french industrial fuse 14mm x 51mm gR ultra rapid no striker 20a . . . . . 30
			E220919J	french industrial fuse 22mm x 58mm gR ultra rapid with striker 40a . . . . . 33
			E301258C	continental NH fuse size 1 gR ultra rapid 350a . . . . . 47
			E330008J	french industrial fuse 10mm x 38mm gR ultra rapid 6a . . . . . 28
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F223013C	continental NH fuse size 0 gL/gG 160a	45	GDB**	miniature glass fuse 20mm x 5mm quick blow	16
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F320487C	continental NH fuse size 2 gR ultra rapid 500a	48	GSA** (<20)	BS88 rectifier fuse gR/uR ultra rapid 660v	68
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FLNR**	american fuse RK5 dual element time delay 250v	62	GSGB** (<250A)	BS88 rectifier fuse gR/uR ultra rapid 660v	70
FLQ**	american midget fuse time delay 500v	61	GSGB** (<80A)	BS88 rectifier fuse gR/uR ultra rapid 660v	69
FLSR**	american fuse RK5 dual element time delay 600v	62	GSGB** (>200A)	BS88 rectifier fuse gR/uR ultra rapid 660v	70
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FNQ**	american midget fuse time delay 500v	61	H213700J	american midget fuse time delay 250v 3a	60
FNQR**	american fuse class cc time delay 600v	57	H216667J	french industrial fuse 22mm x 58mm aM motor rated 80a	32
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FRNR**	american fuse RK5 dual element time delay 250v	62	H222210J	french industrial fuse 14mm x 51mm gL/gG 6a	29
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			LPN2**	continental NH fuse size 2 gL/gG .....	50
			LPN3**	continental NH fuse size 3 gL/gG .....	48
			LPVG10**	french industrial fuse 10mm x 38mm gL/gG. 27	

\*\* Denotes Amperage

?? Denotes other number relating to but not Amperage (Amps would still need to be established)

PART CODE	DESCRIPTION	PAGE	
LPVG14**	french industrial fuse 14mm x 51mm gL/gG . . . 29		N213613J french industrial fuse 22mm x 58mm
LPVG22**	french industrial fuse 22mm x 58mm gL/gG . . 32		aM motor rated 40a. . . . . 32
LPVG8**	french industrial fuse 8mm x 32mm gL/gG. . . 26		N213705J american midget fuse fast acting 600v 30a . . 59
LPVM10**	french industrial fuse 10mm x 38mm		N216373J BS88 rectifier fuse gR ultra rapid 700v 25a. 72
	aM motor rated . . . . . 28		N216764J american midget fuse time delay 500v 2.5a . . 61
LPVM14**	french industrial fuse 14mm x 51mm		N218765C continental NH fuse size 0 gL/gG 63a. . . . . 45
	aM motor rated . . . . . 30		N218811J american fuse RK5 dual element
LPVM22**	french industrial fuse 22mm x 58mm		time delay 600v 10a . . . . . 62
	aM motor rated . . . . . 32		N220904J french industrial fuse 14mm x 51mm
LS**	street lighting fuse . . . . . 53		gR ultra rapid no striker 25a . . . . . 30
LST**	street lighting fuse . . . . . 53		N330177 continental NH fuse size 00 gR, aR
M075888C	BS88 rectifier fuse gR/uR ultra		ultra rapid 80mm base 50a . . . . . 44
	rapid 660v 40a . . . . . 69		N330177C continental NH fuse size C00/000 gR
M212462H	continental NH fuse size C00/000 gL/gG 4a 41		ultra rapid 80mm base 50a . . . . . 42
M214210J	american midget fuse time delay 250v 1a. . . 60		NH00** continental NH fuse size 00 gL/gG . . . . . 43
M214670C	continental NH fuse size 2 gL/gG 100a . . . 50		NH01** continental NH fuse size 1 gL/gG . . . . . 46
M216257J	american fuse class cc fast acting 600v 5a. . 56		NH02** continental NH fuse size 2 gL/gG . . . . . 50
M217223A	continental NH fuse size 3 gL/gG 500a . . . 48		NH03** continental NH fuse size 3 gL/gG . . . . . 48
M220903J	french industrial fuse 14mm x 51mm		NHG0** continental NH fuse size 0 gL/gG . . . . . 45
	gR ultra rapid no striker 40a . . . . . 30		NHG00** continental NH fuse size 00 gL/gG . . . . . 43
M220949J	french industrial fuse 14mm x 51mm		NHG00C0** continental NH fuse size C00/000 gL/gG . . 41
	gR ultra rapid with striker . . . . . 31		NHG1** continental NH fuse size 1 gL/gG . . . . . 46
M222214J	french industrial fuse		NHG2** continental NH fuse size 2 gL/gG . . . . . 50
	14mm x 51mm aM motor rated 32a . . . . . 30		NHG3** continental NH fuse size 3 gL/gG . . . . . 48
M222513F	NH00 cover shields . . . . . 45		NIT** BS88 HRC fuse 44mm fixing centres . . . . . 4
M320079C	continental NH fuse size C00/000		NIT**M** BS88 HRC motor rated fuse
	urb ultra rapid solid tag 315a. . . . . 43		44mm fixing centres . . . . . 11
M320171	continental NH fuse size 00 gR,		NITD** BS88 HRC fuse 44mm fixing centres . . . . . 4
	aR ultra rapid 80mm base 200a. . . . . 44		NITD**M** BS88 HRC motor rated fuse
M320355C	continental NH fuse size 1 gR		44mm fixing centres . . . . . 11
	ultra rapid 63a. . . . . 47		NLF** BS1362 plug top fuse . . . . . 73
M330015J	french industrial fuse 10mm x 38mm		NLS** american fuse K5 dual element time
	gR ultra rapid 30a. . . . . 28		delay 600v . . . . . 63
M330176	continental NH fuse size 00 gR,		NOS** american fuse K5 dual element time
	aR ultra rapid 80mm base 40a. . . . . 44		delay 600v . . . . . 63
M330176C	continental NH fuse size C00/000 gR		NS** BS88 HRC fuse . . . . . 6
	ultra rapid 80mm base 40a . . . . . 42		NS**M** BS88 HRC motor rated fuse . . . . . 13
MD**	house service cut out fuse . . . . . 55		NSD** BS88 HRC fuse . . . . . 6
ME**	house service cut out fuse		NSD**M** BS88 HRC motor rated fuse . . . . . 13
	57mm x 22.2mm. . . . . 54		OTS** american fuse K5 dual element
MES**	BS88 HRC fuse . . . . . 8		time delay 600v . . . . . 63
MF**	house service cut out fuse		P075890C BS88 rectifier fuse gR/uR ultra
	57mm x 30.2mm. . . . . 54		rapid 660v 50a . . . . . 69
MS**	BS88 HRC fuse . . . . . 9		P097165C BS88 rectifier fuse gR/uR ultra
MSG**	street lighting fuse . . . . . 53		rapid 660v 100a . . . . . 70
N075889C	BS88 rectifier fuse gR/uR		P211084C continental NH fuse size 00 gL/gG 160a . . 43
	ultra rapid 660v 45a . . . . . 69		P212809E BS88 rectifier fuse gR ultra rapid 700v 300a 72
N211083C	continental NH fuse size 2		P214626J french industrial fuse
	gL/gG 400a . . . . . 50		22mm x 58mm gL/gG 50a. . . . . 32
N211658J	american midget fuse fast acting		P215592A NH00 fuse puller . . . . . 45
	600v 20a . . . . . 59		P216259J american midget fuse time
N212463H	continental NH fuse size C00/000		delay 500v 2a . . . . . 61
	gL/gG 40a . . . . . 41		P216650J french industrial fuse 8mm x 32mm
N212693J	american fuse class cc		gL/gG 16a . . . . . 26
	fast acting 600v 3a . . . . . 56		P216765J american midget fuse time delay 500v 7a. . . 61
			P217777J american fuse RK5 dual
			element time delay 600v 20a. . . . . 62

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P218766C	continental NH fuse size 1 gL/gG 200a . . . . .	46	R214214J american fuse class cc dual element time delay 600v 20a . . . . . 58
P219870J	american fuse class cc fast acting 600v 10a . . . . .	56	R215088E d111/e33 gL/gG bottle fuse 27mm x 50mm 63a . . . . . 39
P220905J	french industrial fuse 14mm x 51mm gR ultra rapid no striker 16a . . . . .	30	R216192C NH size 00 single pole rail fixing fuse holder . . . . . 45
P222492C	continental NH fuse size 0 gL/gG 125a . . . . .	45	R217733C continental NH fuse size 2 gL/gG 200a . . . . . 50
P227897C	continental NH fuse size 1 aM motor rated 200a . . . . .	46	R219274C NH size 1 single pole ceramic fuse holder . . . . . 47
P330178	continental NH fuse size 00 gR, aR ultra rapid 80mm base 63a . . . . .	44	R219826J d02/e18 gL/gG bottle fuse 15.3mm x 36mm 35a . . . . . 36
P330178C	continental NH fuse size C00/000 gR ultra rapid 80mm base 63a . . . . .	42	R220907J french industrial fuse 14mm x 51mm gR ultra rapid no striker 10a . . . . . 30
PCC**	miniature ceramic fuse 20mm x 5mm quick blow . . . . .	20	R222494C continental NH fuse size 2 gL/gG 250a . . . . . 50
PCC**S	miniature ceramic fuse 20mm x 5mm slow blow . . . . .	20	R223023J d01/e14 gL/gG bottle fuse 11mm x 36mm 16a . . . . . 36
PDC**	miniature glass fuse 20mm x 5mm quick blow . . . . .	16	R301177C continental NH fuse size 1 gR ultra rapid 315a . . . . . 47
PDC**S	miniature glass fuse 20mm x 5mm slow blow . . . . .	17	R320175 continental NH fuse size 00 gR, aR ultra rapid 80mm base 250a . . . . . 44
Q075891C	BS88 rectifier fuse gR/uR ultra rapid 660v 55a . . . . .	69	R320589A continental NH fuse size 3 gR/uR ultra rapid 630a . . . . . 49
Q097166C	BS88 rectifier fuse gR/uR ultra rapid 660v 160a . . . . .	70	RH** house service cut out fuse 57mm x 22.2mm . . . . . 54
Q200758J	french industrial fuse 14mm x 51mm aM motor rated 40a . . . . .	30	RHC** house service cut out fuse 57mm x 22.2mm . . . . . 54
Q201862C (350)	continental NH fuse size 2 gL/gG 355a . . . . .	50	RHD** house service cut out fuse 57mm x 22.2mm . . . . . 54
Q211660J	american fuse class cc fast acting 600v 25a . . . . .	56	RHF** house service cut out fuse 57mm x 22.2mm . . . . . 54
Q212695J	american midget fuse time delay 500v 0.25a . . . . .	61	RHL** house service cut out fuse 57mm x 30.2mm . . . . . 54
Q213201J	american midget fuse time delay 250v 25a . . . . .	60	RHLD** house service cut out fuse 57mm x 30.2mm . . . . . 54
Q217180J	french industrial fuse 22mm x 58mm gL/gG 80a . . . . .	32	RHLF** house service cut out fuse 57mm x 30.2mm . . . . . 54
Q217686J	french industrial fuse 14mm x 51mm aM motor rated 16a . . . . .	30	S075893C BS88 rectifier fuse gR/uR ultra rapid 660v 75a . . . . . 69
Q217732C	continental NH fuse size 1 gL/gG 125a . . . . .	46	S097283C BS88 rectifier fuse gR/uR ultra rapid 660v 355a . . . . . 70
Q217778J	american fuse RK5 dual element time delay 600v 40a . . . . .	62	S200852J american midget fuse time delay 250v 2a . . . . . 60
Q218307J	american midget fuse time delay 500v 1.5a . . . . .	61	S212168J american fuse class cc dual element time delay 600v 2a . . . . . 58
Q218905E	fork lift truk fuse enclosed type 500a . . . . .	66	S212697J american fuse class cc time delay 600v 10a . . . . . 57
Q219227J	french industrial fuse 8mm x 32mm gL/gG 2a . . . . .	26	S215135J french industrial fuse 14mm x 51mm aM motor rated 6a . . . . . 30
Q219457D	BS88 rectifier fuse gR ultra rapid 500v 600a . . . . .	71	S215687C continental NH fuse size 1 gL/gG 80a . . . . . 46
Q320059C	continental NH fuse size C00/000 urb ultra rapid solid tag 80a . . . . .	43	S217734A continental NH fuse size 3 gL/gG 630a . . . . . 48
Q330179	continental NH fuse size 00 gR, aR ultra rapid 80mm base 80a . . . . .	44	S218194J french industrial fuse 10mm x 38mm gL/gG 10a . . . . . 27
R075892C	BS88 rectifier fuse gR/uR ultra rapid 660v 63a . . . . .	69	S219344J american midget fuse time delay 500v 20a . . . . . 61
R097282C	BS88 rectifier fuse gR/uR ultra rapid 660v 315a . . . . .	70	S219873J american midget fuse time delay 500v 25a . . . . . 61
R201863C	continental NH fuse size 00 gL/gG 125a . . . . .	43	S320590A continental NH fuse size 3 gR/uR ultra rapid 700a . . . . . 49
R211569J	neutral link . . . . .	28	S500/** miniature glass fuse 20mm x 5mm quick blow . . . . . 16
R213708J	american midget fuse time delay 500v 10a . . . . .	61	S501/** miniature ceramic fuse . . . . . 20
			S505/** miniature ceramic fuse 20mm x 5mm slow blow . . . . . 20
			S506/** miniature glass fuse 20mm x 5mm slow blow . . . . . 17
			SBS** american midget fuse fast acting 600v . . . . . 59
			SF627 d11/e27single pole fuse base . . . . . 40

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PART CODE	DESCRIPTION	PAGE	TM**	BS88 HRC fuse 133/184mm fixing centres... 9
SFD33	d111/e33single pole fuse base..... 40		TMF**	BS88 HRC fuse 111mm fixing centres..... 8
SMD**	house service cut out fuse..... 55		TMF**M**	BS88 HRC motor rated
SS**	BS88 HRC fuse..... 9			fuse 111mm fixing centres..... 15
SSD**	BS88 HRC fuse..... 9		TR**R	american fuse RK5 dual
STD**	street lighting fuse..... 53			element time delay 250v..... 62
T075894C	BS88 rectifier fuse gR/uR		TRM**	american midget fuse time delay 250v..... 60
	ultra rapid 660v 80a..... 69		TRS**R	american fuse RK5 dual
T097169C	BS88 rectifier fuse gR/uR			element time delay 600v..... 62
	ultra rapid 660v 200a..... 70		TTM**	BS88 HRC fuse 133/184mm
T200853	american midget fuse time delay 250v 8a... 60			fixing centres..... 10
T201911J	american midget fuse time delay 250v 2.5a... 60		V211135J	american fuse class cc dual
T211663J	american midget fuse time delay 500v 4a... 61			element time delay 600v 15a..... 58
T212146J	american fuse K5 dual		V212170J	american midget fuse fast acting 600v 25a... 59
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T212974H	continental NH fuse size			22mm x 58mm aM motor rated 32a..... 32
	C00/000 gL/gG 50a..... 41		V214723J	american fuse class cc
T214676J	d01/e14 gL/gG bottle fuse			dual element time delay 600v 25a..... 58
	11mm x 36mm 2a..... 36		V217276J	american fuse class cc
T215434A	BS88 rectifier fuse gR			dual element time delay 600v 4a..... 58
	ultra rapid 500v 350a..... 71		V217782J	american midget fuse
T216769J	american midget fuse fast acting 600v 0.5a... 59			time delay 250v 0.5a..... 60
T217275J	american fuse class cc dual		V218817J	american midget fuse
	element time delay 600v 1a..... 58			time delay 250v 10a..... 60
T217873E	fork lift truk fuse enclosed type 400a..... 66		V220818J	french industrial fuse 14mm x 51mm
T218310J	american fuse class cc time delay 600v 3a... 57			gR ultra rapid with striker..... 31
T2999001	NH size 2 load switch 3 pole..... 50		V220933J	french industrial fuse 14mm x 51mm
T305020K	10mm x 38mm fuse holder..... 29			gR ultra rapid with striker..... 31
T320591A	continental NH fuse size 3		V223072J	american fuse class cc fast
	gR/uR ultra rapid 800a..... 49			acting 600v 15a..... 56
T330182C	continental NH fuse size		V301226C	continental NH fuse size 1 gR
	C00/000 gR ultra rapid 80mm base 80a... 42			ultra rapid 400a..... 47
T350-**	BS88 rectifier fuse gR/uR ultra rapid 250v... 68		V305021F	10mm x 38mm fuse holder..... 29
TB**M**	BS88 HRC motor rated		V320063C	continental NH fuse size C00/000
	fuse 97mm fixing centres..... 13			urb ultra rapid solid tag 100a..... 43
TC**	BS88 HRC fuse 111mm fixing centres..... 7		V320592A	continental NH fuse size 3 gR/uR
TC**M**	BS88 HRC motor rated			ultra rapid 900a..... 49
	fuse 111mm fixing centres..... 14		V330183C	continental NH fuse size C00/000
TCC**	miniature ceramic fuse			gR ultra rapid 80mm base 100a..... 42
	25mm x 5mm quick blow..... 21		W097171C	BS88 rectifier fuse gR/uR
TCP**	BS88 HRC fuse 94mm fixing centres..... 5			ultra rapid 660v 250a..... 70
TCP**M**	BS88 HRC motor rated		W200809J	d01/e14 gL/gG bottle fuse
	fuse 94mm fixing centres..... 12			11mm x 36mm 4a..... 36
TF**	BS88 HRC fuse 111mm fixing centres..... 7		W202695E	BS88 rectifier fuse gR
TF**M**	BS88 HRC motor rated			ultra rapid 700v 50a..... 72
	fuse 111mm fixing centres..... 14		W211090J	d01/e14 gL/gG bottle fuse
TFP**	BS88 HRC fuse 94mm fixing centres..... 6			11mm x 36mm 10a..... 36
TIA**	BS88 HRC fuse 73mm fixing centres..... 5		W211251A	BS88 rectifier fuse gR
TIA**M**	BS88 HRC motor rated			ultra rapid 500v 250a..... 71
	fuse 73mm fixing centres..... 11		W211665J	american fuse class cc
TIS**	BS88 HRC fuse 73mm fixing centres..... 5			time delay 600v 5a..... 57
TIS**M**	BS88 HRC motor rated		W212654B	PB00 separatin plate..... 45
	fuse 73mm fixing centres..... 12		W212769E	fork lift truk fuse enclosed type 160a... 66
TKF**	BS88 HRC fuse 111mm fixing centres..... 8		W213160J	d02/e18 gL/gG bottle fuse
TKF**M**	BS88 HRC motor rated			15.3mm x 36mm 25a..... 36
	fuse 111mm fixing centres..... 15		W216656J	french industrial fuse
TLM**	BS88 HRC fuse 133/184mm fixing centres... 10			14mm x 51mm gL/gG 32a..... 29
			W217277J	american midget fuse fast acting 600v 1a... 59

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W220819J	french industrial fuse 14mm x 51mm gR ultra rapid no striker 32a . . . . .	30	Y211552J	french industrial fuse 10mm x 38mm aM motor rated 10a . . . . . 28
W220911J	french industrial fuse 22mm x 58mm gR ultra rapid no striker 100a . . . . .	33	Y212173J	american midget fuse time delay 500v 0.5a . 61
W220934J	french industrial fuse 14mm x 51mm gR ultra rapid with striker . . . . .	31	Y214220J	american midget fuse time delay 500v 12a . 61
W222544J	american midget fuse time delay 250v 15a . 60		Y215232J	american fuse class cc dual element time delay 600v 3a . . . . . 58
W222958J	french industrial fuse 8mm x 32mm gL/gG 4a . . . . .	26	Y215646J	french industrial fuse 22mm x 58mm gL/gG 63a . . . . . 32
W305022F	10mm x 38mm fuse holder . . . . .	29	Y215738J	american midget fuse time delay 250v 1.4a . . . . . 60
W320179	continental NH fuse size 00 gR, aR ultra rapid 80mm base 315a . . . . .	44	Y216543H	continental NH fuse size C00/000 gL/gG 80a . . . . . 41
W320363C	continental NH fuse size 1 gR ultra rapid 100a . . . . .	47	Y217693J	french industrial fuse 22mm x 58mm aM motor rated 100a . . . . . 32
W320593A	continental NH fuse size 3 gR/uR ultra rapid 1000a . . . . .	49	Y219234J	french industrial fuse 14mm x 51mm gL/gG 2a . . . . . 29
W330184C	continental NH fuse size C00/000 gR ultra rapid 80mm base 125a . . 42		Y219947E	fork lift truck fuse enclosed type 80a . . . . . 66
X097057J	BS88 rectifier fuse gR/uR ultra rapid 660v 6a . . . . .	68	Y220821J	french industrial fuse 22mm x 58mm gR ultra rapid no striker 80a . . . . . 33
X200856J	american fuse class cc dual element time delay 600v 8a . . . . .	58	Y220913J	french industrial fuse 22mm x 58mm gR ultra rapid no striker 50a . . . . . 33
X201914J	american fuse class cc dual element time delay 600v 12a . . . . .	58	Y301252C	continental NH fuse size 1 gR ultra rapid 125a . . . . . 47
X212540E	d11/e27 gL/gG bottle fuse 22mm x 50mm 25a . . . . .	38	Y330186C	continental NH fuse size C00/000 gR ultra rapid 80mm base 200a . . . . . 42
X213598J	french industrial fuse 10mm x 38mm gL/gG 4a . . . . .	27	Z097289C	BS88 rectifier fuse gR/uR ultra rapid 660v 500a . . . . . 70
X216151J	french industrial fuse 10mm x 38mm aM motor rated 20a . . . . .	28	Z201295J	french industrial fuse 10mm x 38mm aM motor rated 8a . . . . . 28
X216703C	continental NH fuse size 1 gL/gG 100a . . 46		Z201916J	american midget fuse fast acting 600v 2a . . 59
X216841E	fork lift truck fuse enclosed type 355a . . . 66		Z210610C	continental NH fuse size C00/000 gR ultra rapid 20a . . . . . 42
X217255J	american fuse K5 dual element time delay 600v 15a . . . . .	63	Z211139J	american fuse class cc fast acting 600v 20a . 56
X218198J	french industrial fuse 14mm x 51mm gL/gG 40a . . . . .	29	Z211438H	continental NH fuse size C00/000 gL/gG 63a . . . . . 41
X220820J	french industrial fuse 22mm x 58mm gR ultra rapid with striker 80a . . . . .	33	Z212588J	french industrial fuse 14mm x 51mm gL/gG 20a . . . . . 29
X220912J	french industrial fuse 22mm x 58mm gR ultra rapid no striker 63a . . . . .	33	Z214221J	american midget fuse time delay 500v 6a . . 61
X220935J	french industrial fuse 14mm x 51mm gR ultra rapid with striker . 31		Z215739J	american midget fuse time delay 250v 30a . 60
X223074J	american midget fuse time delay 500v 1.6a . 61		Z216659J	french industrial fuse 14mm x 51mm aM motor rated 10a . . . . . 30
X305000K	8mm x 32mm fuse holder . . . . .	26	Z216682B	22mm x 58mm three pole fuse holder . . . 34
X305023D	10mm x 38mm fuse holder . . . . .	29	Z217211K	NH size 00 single pole ceramic fuse holder. 45
X330185C	continental NH fuse size C00/000 gR ultra rapid 80mm base 160a . . . . .	42	Z218798J	american fuse K5 dual element time delay 600v 20a . . . . . 63
X330277C	continental NH fuse size C00/000 gR ultra rapid 80mm base 16a . . . . .	42	Z219235J	french industrial fuse 14mm x 51mm gL/gG 50a . . . . . 29
XS**	street lighting fuse . . . . .	53	Z219718E	d11/e27 gL/gG bottle fuse 22mm x 50mm 2a . . . . . 38
Y097288C	BS88 rectifier fuse gR/uR ultra rapid 660v 450a . . . . .	70	Z220914J	french industrial fuse 22mm x 58mm gR ultra rapid no striker 40a . . . . . 33
			Z301253C	continental NH fuse size 1 gR ultra rapid 160a . . . . . 47

\*\* Denotes Amperage

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## Ampere

The measurement of intensity of rate of flow of electrons in an electric circuit. An ampere is the amount of current that will through a resistance of one ohm under a pressure of one volt.

## Ampere Rating

The current-carrying capacity of a fuse. When a fuse is subjected to a current above its ampere rating, it will open the circuit after a determined period of time.

## Ampere squared seconds, I<sup>2</sup>t

The measurement of heat energy developed within a circuit during the fuses clearing. It can be expressed as "melting I<sup>2</sup>t", "arcing I<sup>2</sup>t" or the sum of them as "clearing I<sup>2</sup>t". "I" stands for effective let-through current (RMS), which is squared, and "t" stands for time of opening in seconds.

## Arcing time

The amount of time from the instant the fuse link has melted until the overcurrent is interrupted, or cleared.

## Breaking capacity

(See interrupting rating)

## Cartridge fuse

A fuse consisting of a current responsive element inside a fuse tube with terminals on both ends.

## Class CC fuses

600v, 200,000 ampere interrupting rating, branch circuit fuses with overall dimensions of 13/32 x 1 1/2. Their design incorporates a rejection feature

that allows them to be inserted into rejection fuse holders and fuse blocks that reject all lower voltage, lower interrupting rating 13/32 x 1 \_ fuses. They are available from 1/10 amp through to 30 amps.

## Class G fuses

480v, 100,000 ampere interrupting rating branch circuit fuses that are size rejecting to eliminate overfusing. The fuse diameter is 13/32 while the length varies from 1 5/16 to 2 1/4. These are available in ratings from 1 amp through to 60 amps.

## Class H fuses

250v and 600v, 10,000 ampere interrupting rating branch circuit fuses that may be renewable or non-renewable. These are available in ampere ratings of 1 amp through to 600 amps.

## Class J fuses

These fuses are rated to interrupt a minimum of 200,000 amperes AC. They are labelled as "current-limiting", are rated for 600 volts AC, and are not interchangeable with other classes.

## Class K fuses

These are fuses listed as K-1, K-5, or K-9 fuses. Each subclass has designated I<sup>2</sup>t and Ip maximums. These are dimensionally the same as class h fuses, and they have interrupting ratings of 50,000, 100,000 or 200,000 amps. These fuses are current-limiting. However, they are not marked "current-limiting" on their label, as they do not have a rejection feature.

## Class L fuses

These fuses are rated for 601 through 6000 amperes, and are rated to interrupt a minimum of 200,000 amperes AC. They are labelled "current-limiting" and are rated for 600 volts AC. They are intended to be bolted into their mountings and are not normally used in clips. Some class L fuses have designed in time-delay features for all purpose use.

## Class R fuses

These are high performance fuses rated 1/10 - 600 amps in 250 volt and 600 volt ratings. All are marked "current limiting" on their label and all have a minimum of 200,000 amp interrupting rating. They have identical outline dimensions with the class H fuses but have a rejection feature which prevents the user from mounting a fuse of lesser capabilities (lower interrupting capacity) when used with special class R clips. Class R fuses will fit into either rejection or non-rejection clips.

## Class T fuses

An industry class of fuses in 300 volt and 600 volt ratings from 1 amp through 1200 amps. They are physically very small and can be applied where space is at a premium. They are fast acting and time-lag fuses, with an interrupting rating of 200,000 amps RMS.

## Classes of fuses

The industry has developed basic physical specifications and electrical performance requirements for fuses with voltage ratings of 600 volts or less. These are known as standards. If a type of fuse meets



# GLOSSARY

the requirements of a standard, it can fall into that class. Typical classes are K, RK1, RK5, G, L, H, T, CC and J.

## Clearing time

The total time between the beginning of the overcurrent and the final opening of the circuit at rated voltage by an overcurrent protective device. Clearing time is the total of the melting time and arcing time.

## Current Limitation

A fuse operation relating to short circuits only. When a fuse operates in its current limiting range, it will clear a short circuit in less than  $\frac{1}{2}$  cycle. Also, it will limit the instantaneous peak let-through current to a value substantially less than that obtainable in the same circuit if that fuses were replaced with a solid conductor of equal impedance.

## Dual element fuse

Fuse with a special design that utilises two individual elements in series inside the fuse tube. One element, the spring actuated trigger assembly, operates on overloads up to 5-6 times the fuse current rating. The other element, the short circuit section, operates on short circuits up to their interrupting rating.

## Electrical load

The part of the electrical system which actually uses the energy or does the work required.

## Fast acting fuse

A fuse which opens on overload and short circuits very quickly. This type of fuse is not designed

to withstand temporary overload currents associated with some electrical loads.

## Fuse

An overcurrent protective device with a fusible link that operates and opens the circuit on an overcurrent condition.

## High speed fuses

Fuses with no intentional time-delay in the overload range and designed to open as quickly as possible in the short-circuit range. These fuses are often used to protect solid-state devices.

## Inductive load

An electrical load which pulls a large amount of current- an inrush current- when first energised. After a few cycles or seconds the current "settles down" to the full load running current.

## Interrupting capacity

See interrupting rating.

## Interrupting rating (breaking capacity)

The rating which defines a fuse's ability to safely interrupt and clear short circuits. This rating is much greater than the ampere rating of a fuse. The NEC defines interrupting rating as "the highest current at rated voltage that an overcurrent protective device is intended to interrupt under standard test conditions."

## Melting time

The amount of time required to melt the fuse link during a specified overcurrent. (See arcing time and clearing time).

## "NEC" dimensions

These are dimensions once referenced in the national electrical code. They are common to class H and K fuses and provide interchangeability between manufacturers for fuses and fusible equipment of given ampere and voltage ratings.

## Ohm

The unit of measure for electric resistance. An ohm is the amount of resistance that will allow one ampere to flow under a pressure of one volt.

## Ohm's law

The relationship between voltage, current, and resistance, expressed by the equation  $E = IR$ , where E is the voltage in volts, I is the current in amperes, and R is the resistance in ohms.

## One Time fuses

Generic term used to describe a class H non-renewable cartridge fuse, with a single element.

## Overcurrent

A condition which exists on an electrical circuit when the normal load current is exceeded. Overcurrents take on two separate characteristics - overloads and short circuits.

## Overload

Can be classified as an overcurrent which exceeds the normal full load of a circuit. Also characteristic of this type of overcurrent is that it does not leave the normal current carrying path of the circuit - that is, it flows from the source, through the conductors, through the load back through the conductors, to the source again.



## Peak Let-through current, $I_p$

The instantaneous value of peak current let-through by a current-limiting fuse, when it operates in its current-limiting range.

## Renewable fuse (600v & below)

A fuse in which the element, typically a zinc link, may be replaced after the fuse has opened, and then reused. Renewable fuses are made to class H standards.

## Resistive load

An electrical load which is characteristic of not having any significant inrush current. When a resistive load is energised, the current rises instantly to its steady-state value, without first rising to a higher value.

## R.M.S current

The R.M.S (root-mean-square) value of any periodic current is equal to the value of the direct current which, flowing through a resistance, produces the same heating effect in the resistance as the periodic current does.

## Semi conductor fuses

Fuses used to protect solid state devices. See high speed fuses.

## Short circuit

Can be classified as an overcurrent which exceeds the normal full load current of a circuit by a factor many times (tens, hundreds, or thousands greater). Also characteristic of this type of overcurrent is that it leaves the normal current carrying path of the circuit - it takes a "short cut" around the load and back to the source.

## Short circuit rating

The maximum short-circuit current an electrical component can sustain without the occurrence of excessive damage when protected with an overcurrent protective device.

## Short circuit withstand rating

Same definition as short-circuit rating.

## Single phasing

That condition which occurs when one phase of a three phase system opens, either in a low voltage (secondary) or high voltage (primary) distribution system. Primary or secondary single phasing can be caused by any number of events. This condition results in unbalanced currents in polyphase motors and unless protective measures are taken, causes overheating and failure.

## Threshold current

The symmetrical RMS available current at the threshold of the current-limiting when tested to the industry standard. This value can be read off of a peak let-through chart where the fuse curve intersects the A-B line. A threshold ratio is the relationship of the threshold current to the fuse's continuous current rating.

## Time-Delay fuse

A fuse with a built-in delay that allows temporary and harmless inrush currents to pass without opening, but is so designed to open on sustained overloads and short circuits.

## Voltage rating

The maximum open circuit voltage in which a fuse can be used, yet safely interrupt an overcurrent. Exceeding the voltage rating of a fuse impairs its ability to clear an overload or short circuit safely.

## Withstand rating

The maximum current that an unprotected electrical component can sustain for a specified period of time without the occurrence of extensive damage.

# GLOSSARY

## 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 ratings 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 Regulations 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 occurrence.

### 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<sub>n</sub> is equal or less than the current carrying capacity of the cable I<sub>c</sub>.

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

Cable Size mm <sup>2</sup>	Max. Fuse Rating	
	K = 115	K = 143
16	32*	32*
25	50*	50*
35	63*	63*
50	100*	125*
70	125*	160*
95	200*	250*
120	315*	355*
150	400*	500
185	560	630
240	710	800
300	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

Rating (A)	Zs Ohms Ω	Rating (A)	Zs Ohms Ω
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

exceeding 25 is permitted for a distribution circuit. The maximum values of earth fault loop impedance (Zs) corresponding to a disconnecting time of 0.1s for nominal voltage to earth (V<sub>n</sub>) of 240V for Bussmann gG Fuse links are:

### 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<sub>t</sub> 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 gG characteristics are available

Motor Rating	Direct On-Line		Inst. Start (Standard) (gG)
	Standard (gG)	Motor Circuit (gG)	
0.75	2.0	6	4
1.0	2.5	8	5
1.5	3.0	10	6
2.0	4.0	12	8
2.5	5.0	15	10
3.0	6.0	18	12
3.5	7.0	20	14
4.0	8.0	22	16
4.5	9.0	25	18
5.0	10	28	20
5.5	11	32	25
6.0	12	36	30
6.5	13	40	35
7.0	14	45	40
7.5	15	50	45
8.0	16	56	50
8.5	17	63	56
9.0	18	70	63
9.5	19	78	70
10	20	85	78
11	22	95	85
12	24	105	95
13	26	115	105
14	28	125	115
15	30	135	125
16	32	145	135
17	34	155	145
18	36	165	155
19	38	175	165
20	40	185	175
22	44	200	190
25	50	225	210
30	60	270	250
35	70	315	290
40	80	360	330
45	90	405	370
50	100	450	410
55	110	500	450
60	120	540	490
65	130	585	530
70	140	630	570
75	150	675	610
80	160	720	650
85	170	765	690
90	180	810	730
95	190	855	770
100	200	900	810
110	220	990	890
125	250	1125	1020
150	300	1350	1230
175	350	1575	1440
200	400	1800	1650
225	450	2025	1860
250	500	2250	2070
280	560	2520	2340
315	630	2835	2655
350	700	3150	2970
380	780	3510	3285
400	800	3600	3400

### 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<sub>t</sub> 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.

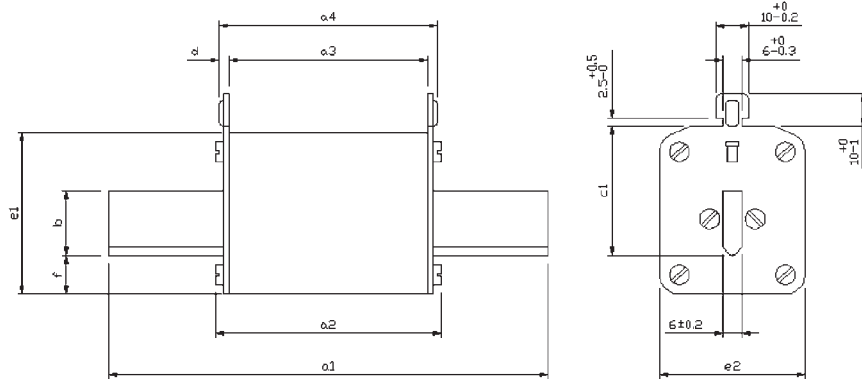
### TRANSFORMERS

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.

## DIMENSIONAL DATA FOR NH FUSES



Dimensions in millimetres

Fuse Size	I <sub>n</sub> (A)	a1	a2	a3	a4	b (min)	c1	D	e1	e2	f
C00	63	78.5	53	45.5	49	15	35	1.7	39.5	20.5	7
00	160	78.5	53	45.5	49	15	35	1.7	38	29	7
01	160	135	69	62	67	15	40	2.5	45	29	12
1	250	135	69	61	67	20	40	3	50	44.5	12
02	250	150	69	61	67	20	48	3	50	44.5	12
2	400	150	70	61	67	25	48	3	58	50	12
03	400	150	70	61	68	25	60	3	58	50	12
3	630	150	73	61	68	32	60	3	73	71	15
4a	1000	200	84	84	90	50	85	3	102	87	30
4a	1600	200	84	84	90	50	85	3	110	95	30

# TERMS & CONDITIONS

## General

All orders for goods (the "Goods") to be supplied by Hagemeyer (UK) Limited or any of its subsidiary companies as the case may be (hereinafter referred to as the "Company") are subject to these conditions of sale and the placing of an order by a Buyer ("The Buyer") constitutes acceptance of these conditions.

These conditions may not be modified or varied unless the Company agrees in writing and the Company will not be deemed to accept any other conditions nor waive any of these conditions by failing to object to provisions contained in any purchase order or other communications from the Buyer. No person has authority on behalf of the Company to vary any conditions contained in a written Notification signed by a director or the company secretary.

## Validity of Quotations

Quotations from the Company are stated to be open for such time as may be specified in each such quotation and provided it is not withdrawn by the Company in such period it remains capable of acceptance. No binding contract will be created by the acceptance by the Buyer of the Company's quotation until notice of such acceptance has been given in a purchase order and has either been signed by the Company's duly authorised representative or the Company has indicated to the Buyer orally or in writing its acceptance of such order.

If the Buyer places an order with the Company without requesting a quotation from the Company or before such a quotation has been provided, all deliveries carried out in satisfaction of such order will be subject to these conditions.

## New Accounts

Prospective customers wishing to open a credit account are requested to furnish two trade references and one Banker's reference. Until the opening of a credit account has been confirmed a remittance should accompany the order, otherwise delivery will not be made until after the references have proved acceptable to the Company.

## Settlement Terms

Accounts are payable by the last working day of the month following the month in which delivery of the Goods takes place. Time for payment will be of the essence. If the Buyer has exceeded any agreed credit terms, the Company may demand immediate payment of all amounts outstanding from the Buyer to the Company on any account. The Company reserves the right to refuse credit and to demand immediate payment of all monies outstanding. Receipts will only be issued against payments made by cheque if specifically requested.

The Company, at its discretion, reserves the right to charge interest on accounts outstanding beyond the time specified in this condition. The rate of interest will be 3% per annum over Barclays Bank base lending rate from time to time in force. The Company may exercise this right in addition to any other rights it may have in respect of the Goods or non-payment.

Where the contract is to be or may be fulfilled in separate instalments deliveries or parts, payment for each such instalment delivery or part will be made as if the same constituted a separate contract. Failure by the Buyer to pay for an instalment in accordance with this clause will entitle the Company without prejudice to its other rights and remedies to suspend further deliveries of Goods under any other contract to the Buyer, pending payment by the Buyer.

The Buyer will indemnify the Company against all costs, losses and liability including but not limited to all legal expenses and disbursements incurred by the Company in recovering any amount which is overdue from the Buyer to the Company pursuant to this Agreement or otherwise.

## Prices

Unless otherwise agreed in writing all orders are created subject to prices and any relevant discounts ruling at the date of receipt of the order and any price list of the Company whether published or not will not affect the right of the Company to charge for Goods in accordance with this clause. All prices are subject to the addition of value Added Tax at the appropriate rate.

In the event of termination, variation or suspension of a contract on the Buyer's instruction or by lack of instruction, the contract price will be adjusted to reflect the additional costs incurred by the Company. Where a price per unit has been quoted and the Buyer requires a smaller number of units to be delivered than those quoted for, the Company reserves the right to adjust the rates of prices applicable thereto.

## Credit

Any contract will be subject to the Company being satisfied as to the Buyer's credit worthiness and without prejudice to the generality of the foregoing the Company may in its absolute discretion, having informed the Buyer that the Goods are ready for delivery, refuse to deliver the Goods until such time as the Buyer tenders the purchase money to the Company in a form satisfactory to the Company.

## Orders

The Buyer may place orders by post, fax, email or telephone.

Where Orders are sent by post or fax or email in confirmation of telephone instructions the Buyer will ensure they are clearly marked as such, failing which any additional expense incurred by the Company as a result of duplication of orders will be charged to the Buyer.

## Delivery

Delivery dates (if any) given by the Company are given in good faith to indicate estimated delivery times but will not amount to any contractual obligation to deliver at the times stated. The Company will not be liable for any loss including (but not limited to) loss of profit, costs, damages, charges or expenses caused directly or indirectly by any delay in the delivery of the Goods (even if caused by the Company's negligence) nor unless any delay exceeds 180 days will such delay entitle the Buyer to terminate or rescind the contract.

Failure by the Company to deliver any one or more (but not all) instalments in accordance with this contract will not entitle the Buyer to treat this contract as repudiated.

If the Buyer fails to take delivery of any of the Goods when they are ready for delivery, or fails to provide any instructions or authorisations required to enable the Goods to be delivered in time, the Goods will be deemed to have been delivered and (without prejudice to its other rights) the Company may: store the Goods until actual delivery or sale and charge the Buyer for all related costs and expenses (including, without limitation, storage and insurance); and/or following written notice to the Buyer, sell any of the Goods at the best price reasonably obtainable in the circumstances and charge the Buyer for any shortfall below the price agreed with the Buyer.

## Passing of Title/Risk

Risk of damage to or loss of the Goods will pass to the Buyer upon delivery.

Ownership of the Goods will not pass to the Buyer until the Company has received full (in cash or cleared funds) all sums due to it in respect of the Goods and all other sums which are or which become due from the Company from the Buyer on any account.

Until ownership of the Goods has passed to the Buyer, the Buyer must:

hold the Goods on a fiduciary basis as the Company's bailee;

store the Goods (at its own cost) separately from all other goods of the Buyer or any third party so that they are identifiable as the Company's property; not destroy, damage or obscure any identifying mark or packaging on or relating to the Goods; maintain the Goods in satisfactory condition insured on the Company's behalf for their full price against all risks to the reasonable satisfaction of the Company. (In respect the Buyer will produce evidence of the policy of insurance to the Company, and hold any proceeds of such insurance on trust for the Company separately from any other money, and not pay the proceeds into an overdraft bank account).

The Buyer may resell the Goods before ownership has passed to it provided such sale is:

in the ordinary course of the Buyer's business at full market value and the Buyer will account to the Company accordingly; and on the Buyer's own behalf and the Buyer deals as principal when making such sale.

If the Company cannot determine which goods are the Goods, the Buyer will be deemed to have sold all goods sold by the Company to the Buyer in the order in which they were invoiced to the Buyer.

The Company will be entitled to recover payment for the Goods notwithstanding that ownership of any Goods has not passed from the Company.

The Buyer grants the Company its agents and employees an irrevocable licence at any time to enter any premises where the Goods are or may be stored in order to inspect them or, where the Buyer's right to possession has terminated, to recover them.

## Delivery / Carriage

The Company normally makes no charge for delivery from its own warehouses within its normal delivery area but reserves the right to charge carriage for deliveries outside such delivery area.

Where Goods are specially ordered from manufacturers, and a carriage charge is made by such manufacturers, the Company reserves the right to recover this charge from the Buyer.

## Packaging

The Company may impose additional charges in respect of packaging it uses for transportation and delivery of the Goods. Any such charges will either be contained or referred to in the applicable quotation. For the avoidance of doubt, the parties agree that such additional charges will be levied in respect of Goods which are dispatched in crates, drums, cases, pallets or other similar packaging and may be levied at the Company's discretion in the case of any other packaging.

Where the Company charges for packaging pursuant to clause 11.1, unless otherwise specified by the Company, the Buyer will be entitled to a full credit for such additional charges, to be credited against subsequent invoices, so long as such packaging is returned undamaged to the Company carriage paid within 14 days of the date of the invoice for the Goods.

## Damage in transit and shortages

The Company will, when the price quoted includes delivery, repair or replace free of charge Goods damaged in transit provided that the Company and its designated carriers receive written notification of such damage within three days of delivery.

Goods received in a damaged or unsatisfactory condition must be signed for as such.

On receipt Goods should be checked by the Buyer with the advice note enclosed with the Goods. Shortage claims will be considered if the Company and its designated carriers receive written notification of any such shortage within 3 days of delivery failing which no liability will be admitted. In any such case, the packaging and contents should be retained for inspection.

## Returns

Goods correctly supplied may not be returned without the Company's prior written agreement. Goods so returned must be consigned carriage paid and accompanied by a packing note stating the Company's invoice number and date thereof together with the reason for return. In such circumstances, the Company may impose a restocking charge.

If the Goods (or any of them) are returned and are subsequently lost in transit the Company will only issue credit if it can conclusively prove that the Company or its agents have actually received the Goods from the Buyer's premises.

## Quality

Unless the Company specifies otherwise in its quotation, the Company will not be liable for any defect in quality of any of the Goods, and the obligations of the Company in such respect will be restricted to applying its reasonable endeavours to: transfer to the Buyer the benefit of any warranty or guarantee provided by the Company in respect of the Goods; or make and pursue any available claim under the terms of any warranty or guarantee as mentioned in clause 14.1. In the event of a claim being made, the Company will promptly account to the Buyer (to the extent of the Buyer's claim and subject to the deduction of an amount equal to the Company's reasonable costs incurred in making and pursuing such claim) for any proceeds resulting to the Company.

## Descriptive matter, specifications and illustrations

All descriptive and forwarding specifications drawings and particulars of weights and dimensions issued by the Company are approximate only and intended only to present a general idea of the goods to which they refer and will not form part of the contract.

The Company's policy is one of continuous improvement and it reserves the right to make reasonable changes to product specifications at its discretion. When placing an order with the Company, the Buyer must satisfy himself that the Company's then current specification of all the Goods is appropriate for its (or its customers') requirements.

## Limitations of Liability

Nothing in these terms and conditions excludes or limits the liability of the Company for death or personal injury caused by the Company's negligence or fraudulent misrepresentation, or the conditions as to title implied by section 12 of the Sale of Goods Act 1979 as amended from time to time.

Any quotation includes only such Goods accessories and work in the quantities and to the specifications which are stated therein.

Subject to clause 16.1 and 16.2.

The Company's total liability in contract (including negligence or breach of statutory duty) misrepresentation or otherwise, arising in connection with the performance of this contract will be limited to the price agreed for the Goods and the Company will not be liable to the Buyer by reason of any representation or any implied warranty, condition or other term, or any duty at law or under the express terms of this contract for any indirect or consequential loss or damage (whether for loss of profits, loss of business, expenditure (whenever or otherwise), costs, expenses or other claims for consequential compensation (whether caused by the negligence of the Company's employees, agents or subcontractors) which arise out of or in connection with this contract.

## Patents

In the event of any claim being made or action being brought against the Buyer in respect of infringement of British Patents by the use or sale of Goods supplied by the Company, the Buyer will notify the Company immediately and the Company will be at liberty with the Buyer's assistance if required but at the Company's expense to conduct through the Company's own lawyers and experts all negotiations for the settlement of the same or any litigation that may arise therefrom subject to such notifications and provided that no Goods or any part thereof will be used for any purpose other than that for which the Company supplied them and the Company will indemnify the Buyer in respect of any such claims.

Where the Company supplies Goods produced in accordance with designs or specifications provided by the Buyer, the Buyer warrants that to the best of its knowledge and belief such Goods do not infringe any third party right. The Buyer will indemnify and hold the Company harmless from all liability claims, damages and costs and any other expenses in respect of any patent, trade-mark, design rights, know-how or other intellectual property which may be infringed (or alleged to be infringed) by the manufacture, sale or use of the Goods so supplied.

## Termination

Without prejudice to any other rights or remedies under the contract, either party may by written notice to the other, terminate the contract or (in the case of the Company) suspend future deliveries if:

the other fails to comply with any material obligation hereunder and such failure has not been remedied within ten days of written notification from the party requiring remedy;

the Buyer fails to furnish the Company with any information or instructions it requires to fulfil any order;

any director or executive is listed upon the Goods of the Buyer or if he makes or offers to make any arrangement with or for the benefit of his creditors or commits any act of bankruptcy or, being a limited company has a receiver appointed of its undertaking or assets or any part thereof or for the purposes of a reconstruction or amalgamation without solvency goes into liquidation or has an administrator or administrative receiver appointed.

## Copyright

All drawings, descriptions and other information submitted by the Company will remain the property of the Company together with the copyright therein.

## Value Added Tax

Where chargeable Value Added Tax will be charged at the rate applicable at the date the Goods are dispatched.

## Legal Construction

Unless otherwise agreed by the Company in writing these conditions will in all respects be construed and operate as an English contract, in conformity with English Law, and the parties submit to the exclusive jurisdiction of the English courts.

Any provision of this contract which is held by any competent authority to be invalid, void, voidable, unenforceable or unreasonable (in whole or part) will to the extent of such invalidity, voidance, unenforceability or unreasonableness be deemed severable and the other provisions of this contract and the remainder of such provisions will not be affected. Failure by the Company to enforce or partially enforce any provision of this contract will not be construed as a waiver of any of its rights under this contract.

## Samples

Any samples submitted to the Buyer at the Buyer's request must be returned to the Company in good condition within ninety days of receipt or such shorter period as the Company may specify. The Company may charge the market value of all samples not so returned. Such market value will be the market value on the date when the sample was due to be returned.

## Cancellation of an order

The Company reserves the right to refuse to accept any cancellation of an order other than in accordance with the provisions of condition 16 unless written notice in writing is given to the Company and making such writing by the Company. In the event of any cancellation the Buyer must pay any expenses incurred by the Company.

## Minimum Invoice value

The Company reserves the right to impose a surcharge on orders less than GB£ net value exclusive of VAT and a minimum invoice charge of GB£5 plus VAT will be applied.

## Certification

A Buyer requiring Goods from a quality assured source or certificates of conformity must specify its requirements in writing at the time of placing the order.

## Force Majeure

The Buyer will not be liable to the Buyer in any manner or be deemed to be in breach of this contract (subject to condition 16) because of any delay in performing or any failure to perform any of the Company's obligations under this contract if the delay or failure was due to any cause beyond the Company's reasonable control.

Without prejudice to the generality of condition 26.1, the following will be included as causes beyond the Company's reasonable control: governmental actions, war or threat of war, national emergency, riot, civil disturbance, sabotage or requisition;

Act of God, fire, explosion, flood, epidemic or accident;

import or export regulations or embargoes;

labour disputes not including disputes involving the Company's work-force;

inability to obtain or delay in obtaining supplies of adequate or suitable material, fuel, parts, machinery or labour.

## Specialist Products

Your single point of contact for:

- Lamps
- Lighting Control Gear
- Street Lighting
- Fuses
- Heating, Lighting & Ventilation Spares



• Lighting Control Gear



• Heating, Lighting & Ventilation Spares



• Fuses



• Lampholders  
& Accessories



• Lamps

# Specialist Fuse Guide

We also offer a comprehensive range of Specialist lamps and lighting control gear from the following manufacturers:



Hagemeyer Specialist Products  
3-5 Wassage Way  
Hampton Lovett Industrial Estate  
Droitwich  
Worcestershire  
WR9 0NX

[www.hagemeyer.co.uk](http://www.hagemeyer.co.uk)

Phone: 01905 791 500

Fax: 01905 791 501



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