

## Low Voltage Fuse-Links

**Industrial Fuse-Links:** Comply with the dimensional requirements and current ratings of BS88: Part 2, IEC 60269-2 and EN 60269-2. Ranges are available for 400/415V a.c. and 660/690V a.c.

**Compact Dimension Fuse-Links:** With offset blade tags this range meets the requirements of BS88: Part 6 and IEC 60269-2 at rated voltages of 230/240V a.c. and 400/415V a.c.

**General Purpose Fuse-Links:** The popular Lawson type MD cylindrical style fuse-links are rated at 400/415V a.c. and are approved to BS88: Part 1 and IEC 60269-1. They also meet the performance requirements of BS88: Part 2, IEC 60269-2 and EN 60269-2.

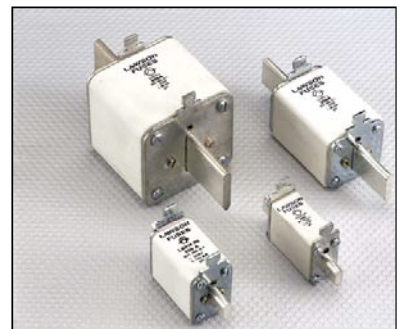
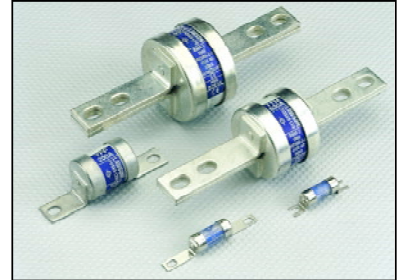
**Motor Circuit Fuse-Links:** To accommodate motor starting currents, motor circuit protection fuse-links are available to extend the range of standard fuse-links.

**Additional Tag Forms:** BS88 industrial and motor circuit fuse-links are available with special tags, including those designed to fit ARTIC and REYROLLE pattern fusegear.

**Utility Fuse-Links:** Type J fuse-links for electricity supply networks comply with BS88: Part 5, meet the requirements of the corresponding draft IEC 60269-2 document and also comply with UK Electricity Supply Industry Standards. Fuse-links complying with the requirements of BS1361 are available for both house service cut-outs and consumer units. In addition BS1362 domestic plug fuse-links are also available which meet the requirements of IEC60269-3.

**Street Lighting Fuse-Links:** Type LST 230/240V a.c. fuse-links for street lighting cut-outs comply with BS88: Part 1 and IEC 60269-1. These fuse-links, with a breaking capacity of 20kA at 240V a.c., offer excellent protection and meet the requirements of UK Electricity Supply Industry Standards and BS7654.

**DIN Standard Fuse-Links:** Type LSPN 500V a.c. fuse-links for industrial usage comply with IEC 60269-2. This range is complemented by Type D 500V a.c. fuse-links to IEC 60269-3 (DIN-VDE 0636-41) and Type DO 400V a.c. fuse-links to IEC 60269-3 (DIN-VDE 0636-31).



# Lawson Low Voltage Fuse-Links

# Index

Industrial Fuse-Links with Bolted Tags -400/415V

Industrial Fuse-Links with Bolted Tags -660/690V

Compact Dimension Fuse-Links

Street Lighting Fuse-Links

Dual Rated Fuse-Links for Motor Circuit Protection

DIN NH - Bottle D and DO

Additional Fuse-Link Types

Electricity Supply Fuse-Links

Artic & Reyrolle Pattern Fuse-Links

Cylindrical Fuse-Links

Miniature Fuse-Links

Fuse-Link Characteristics

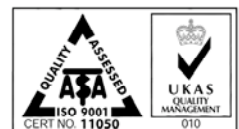
Application Data



## Quality

Lawson Fuses operates a Quality Management System which has been independently assessed and approved by ASTA Certification Services as complying with ISO 9001 and is supported by the issue of Certificate No. 11050. Lawson manufactured fuse-links have been independently certified by ASTA and where appropriate comply with the the rules of the latest ASTA 20 Scheme, which authorises Lawson Fuses to endorse those products "ASTA (20)CERT"

For details of products other than Low Voltage Fuse-Links, please ask for other publications.

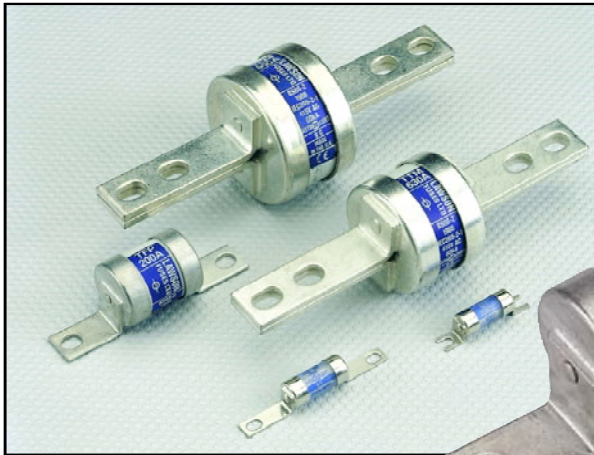


## INDUSTRIAL FUSE-LINKS WITH BOLTED CONNECTIONS

TYPE N&T

### 400/415 Volt Industrial Fuse-Links with Bolted Connections to BS88: Part 2 • IEC60269-2 • EN60269-2

Rated voltages: 415V a.c., 250V d.c. Breaking range and utilization category: gG Rated breaking capacities: 80kA at 415V a.c, 40kA at 250V d.c.



Lawson Type "N" & "T" fuse-links are for use in industrial installations and can be fitted into BS88 bolted fuse-holders and distribution fusegear. The range includes all BS88: Part 2 reference fuse-links up to 800 Amps and has gG classification, ensuring compliance with the current edition of the UK Wiring Regulations. Many non-reference tag variants are available to cater for installation in non-standard or specialised equipment.

The range has a rated voltage of 415V a.c. and has been certified at a test recovery voltage of at least 110%. These fuse-links are therefore suitable for use on systems with voltages up to 457V a.c. The range also has a rating of 250V d.c. A complementary range of solid/neutral links is available to suit our fuse-link range.

### Product Detail

#### Product detail - Offset Tag Fuse-Links

| List Reference | Current Rating (A)   | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight (Kg) |
|----------------|----------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|--------------------|
| NIT            | 2,4,6,10,16,20,25,32 | A1             | 415a.c. 240d.c.    | 80kA-a.c. 40kA-d.c.    | BS88: Part 2 | 60269-2      | 10              | 0.13               |
| GTIA           | 2,4,6,10,16,20,25,32 | A2             |                    |                        |              |              | 10              | 0.20               |
| TIA            | 2,4,6,10,16,20,25,32 | A2             |                    |                        |              |              | 10              | 0.54               |
| TIS            | 35,40,50,63,         | A3             |                    |                        |              |              | 10              | 0.58               |
| TIS            | 80,100,125           | A3             |                    |                        |              |              | 10              | 0.70               |
| TCP            | 6,10,16,20,25,32,    | A4             |                    |                        |              |              | 5               | 0.46               |
| TCP            | 40,50,63,80,100      | A4             |                    |                        |              |              | 5               | 0.52               |
| TFP            | 125,160,200          | (as A4)        |                    |                        |              |              | 5               | 0.82               |
| 85TM           | 200,250,315,355,400  | -              |                    |                        |              |              | 1               | 0.46               |
| 86 TT          | 450,500,560,630,     | -              |                    |                        |              |              | 1               | 0.58               |
| 86 TT          | 670,710,750,800      | -              |                    |                        |              |              | 1               | 0.70               |

#### Product detail - Central Tag Fuse-Links

| List Reference | Current Rating (A)  | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight (Kg) |
|----------------|---------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|--------------------|
| TB             | 2,4,6,10,16,20,25,  | -              | 415a.c. 240d.c.    | 80kA-a.c. 40kA-d.c.    | BS88: Part 2 | 60269-2      | 10              | 0.60               |
| TB             | 32,35,40,50,63      | -              |                    |                        |              |              | 10              | 0.60               |
| TBC            | 2,4,6,10,16,20,25,  | (as B1)        |                    |                        |              |              | 10              | 0.62               |
| TBC            | 32,35,40,50,63      | (as B1)        |                    |                        |              |              | 10              | 0.62               |
| TC             | 80,100              | B1             |                    |                        |              |              | 5               | 0.58               |
| TF             | 125,160,200         | B2             |                    |                        |              |              | 5               | 0.85               |
| 84TF           | 80,100,125,160,200  | -              |                    |                        |              |              | 5               | 0.94               |
| TKF            | 250,315             | B3             |                    |                        |              |              | 1               | 0.23               |
| 84TK           | 250,315             | -              |                    |                        |              |              | 1               | 0.23               |
| TKM            | 125,160,200,250,315 | -              |                    |                        |              |              | 1               | 0.28               |
| TMF            | 315,355,400         | B4             |                    |                        |              |              | 1               | 0.43               |
| TM             | 250,315,355,400     | C1             |                    |                        |              |              | 1               | 0.55               |
| TMT            | 355,400             | -              |                    |                        |              |              | 1               | 0.60               |
| TTM            | 450,500,560,630     | C2             |                    |                        |              |              | 1               | 0.74               |
| TT             | 450,500,560,630     | -              |                    |                        |              |              | 1               | 0.60               |
| TLM            | 670,710,750,800     | C3             |                    |                        |              |              | 1               | 1.00               |
| TLT            | 670,710,750,800     | -              |                    |                        |              |              | 1               | 1.30               |
| TLU            | 450,500,560,630     | D1             |                    |                        |              |              | 1               | 1.50               |
| TLU            | 670,710,750,800     | D1             | 1                  | 1.50                   |              |              |                 |                    |

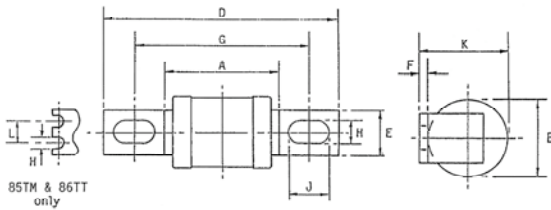
See pages 22 & 23 for the time/current and cut-off current characteristics.  
See pages 10 & 11 for Motor Circuit Protection.



# INDUSTRIAL FUSE-LINKS WITH BOLTED CONNECTIONS

## TYPE N&T

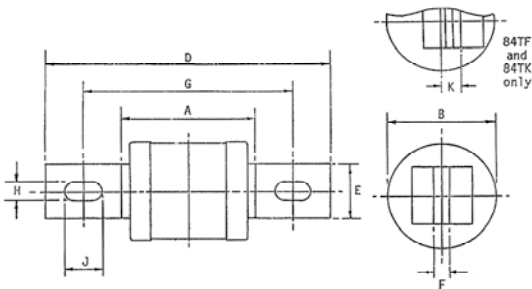
### Dimensional Drawings



BS88: Part 2 reference 'A' fuse-link dimensions and tag variants

| BS88 Ref. | Type Ref. | Current Ratings (A)                  | Dimensions (mm) |       |       |       |       |       |       |           |       |       |  |
|-----------|-----------|--------------------------------------|-----------------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|--|
|           |           |                                      | A max           | B max | D max | E max | F nom | G nom | H nom | J nom     | K max | L nom |  |
| A1        | NIT       | 2,4,6,10,16,20,25*,32*               | 33              | 12.7  | 56    | 9.5   | 0.8   | 44.5  | 4.8   | OPEN SLOT | 14.3  |       |  |
| A2        | GTIA      | 2,4,6,10,16,20,25,32                 | 34              | 14.3  | 86    | 9     | 1.2   | 73    | 5.5   | 8         | 16    |       |  |
| A2        | TIA       | 2,4,6,10,16,20,25,32                 | 49              | 22    | 86    | 9     | 1.2   | 73    | 5.5   | 8         | 24    |       |  |
| A3        | TIS       | 35*,40,50,63,80*,100*,125*           | 49              | 22    | 89    | 13    | 1.2   | 73    | 5.5   | OPEN SLOT | 24    |       |  |
| A4        | TCP       | 6,10,16,20,32,40,50,63,80,100        | 51              | 22    | 110   | 20    | 2.4   | 94    | 8.7   | 11        | 25    |       |  |
| as A4     | TFP       | 125,160,200                          | 51              | 35    | 110   | 20    | 2.4   | 94    | 8.7   | 11        | 38    |       |  |
| -         | 85TM      | 200,250,315,355*,400                 | 56              | 51    | 117   | 45    | 4.8   | 102   | 8.7   | OPEN SLOT | 45    | 22    |  |
| -         | 86TT      | 450*,500,560*,630,670*,710*,750*,800 | 56              | 61    | 117   | 45    | 4.8   | 102   | 8.7   | OPEN SLOT | 54    | 22    |  |
| -         |           |                                      | 56              | 73    | 117   | 45    | 4.8   | 102   | 8.7   | OPEN SLOT | 61    | 22    |  |

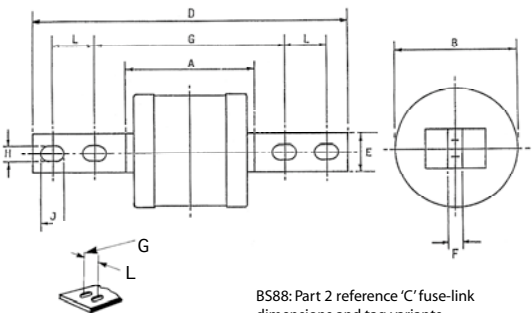
\* Non-Standardized current rating additional to BS88: Part 2



BS88: Part 2 reference 'B' fuse-link dimensions and tag variants

| BS88 Ref. | Type Ref. | Current Ratings (A)            | Dimensions (mm) |       |       |       |       |       |       |       |       |  |
|-----------|-----------|--------------------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|           |           |                                | A max           | B max | D max | E max | F nom | G nom | H nom | J nom | K max |  |
| -         | TB        | 2,4,6,10,16,25,32,35*,40,50,63 | 45              | 22    | 111   | 13    | 1.2   | 97    | 7.1   | 13    |       |  |
| as B1     | TBC       | 2,4,6,10,16,25,32,35*,40,50,63 | 45              | 22    | 137   | 15    | 1.4   | 111   | 8.7   | 14    |       |  |
| B1        | TC        | 80,100                         | 45              | 26    | 137   | 20    | 3.2   | 111   | 8.7   | 14    |       |  |
| B2        | TF        | 125,160,200                    | 45              | 35    | 137   | 20    | 3.2   | 111   | 8.7   | 14    |       |  |
| -         | 84TF      | 80,100,125,160,200             | 45              | 35    | 121   | 20    | 3.2   | 99    | 8.7   | 14    | 5     |  |
| B3        | TKF       | 250,315                        | 45              | 41    | 137   | 26    | 3.2   | 111   | 8.7   | 14    |       |  |
| -         | 84TK      | 250,315                        | 45              | 41    | 121   | 26    | 3.2   | 99    | 8.7   | 14    | 8     |  |
| -         | TKM       | 125,160,200,250,315            | 45              | 41    | 159   | 26    | 3.2   | 133   | 10.3  | 14    |       |  |
| B4        | TMF       | 315,355*,400                   | 52              | 51    | 137   | 26    | 6.4   | 111   | 8.7   | 16    |       |  |

\* Non-Standardized current rating additional to BS88: Part 2



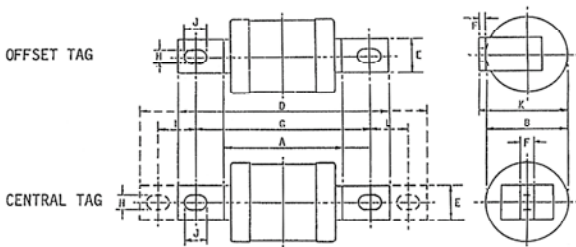
BS88: Part 2 reference 'C' fuse-link dimensions and tag variants

Parallel tag fixings on TLU only

| BS88 Ref. | Type Ref. | Current Ratings (A)                  | Dimensions (mm) |       |       |       |       |       |       |       |       |  |
|-----------|-----------|--------------------------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|           |           |                                      | A max           | B max | D max | E max | F nom | G nom | H nom | J nom | L nom |  |
| C1        | TM        | 250*,315*,355*,400                   | 52              | 51    | 210   | 26    | 6.3   | 133   | 10.3  | 16    | 25.4  |  |
| -         | TMT       | 355*,400                             | 52              | 61    | 267   | 26    | 6.3   | 165   | 10.3  | 16    | 31.8  |  |
| C2        | TTM       | 450*,500,560*,630                    | 54              | 61    | 210   | 26    | 7.8   | 133   | 10.3  | 16    | 25.4  |  |
| -         | TT        | 450*,500,560*,630                    | 54              | 61    | 267   | 26    | 7.8   | 165   | 10.3  | 16    | 31.8  |  |
| C3        | TLM       | 670*,710*,750*,800                   | 56              | 73    | 210   | 26    | 9.5   | 133   | 10.3  | 16    | 25.4  |  |
| -         | TLT       | 670*,710*,750*,800                   | 56              | 73    | 267   | 26    | 9.5   | 165   | 10.3  | 16    | 31.8  |  |
| D1        | TLU       | 450*,500,560*,630,670*,710*,750*,800 | 56              | 73    | 267   | 26    | 9.5   | 149   | 10.3  | 16    | 31.8  |  |

\* Non-Standardized current rating additional to BS88: Part 2

### Motor Circuit Protection Fuse-Links see pages 10 & 11



| BS88 Ref.                 | Type Ref. | Current Ratings (A) | Dimensions (mm) |       |       |       |       |       |       |           |       |       |
|---------------------------|-----------|---------------------|-----------------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|
|                           |           |                     | A max           | B max | D max | E max | F nom | G nom | H nom | J nom     | K max | L nom |
| Offset Tag                |           |                     |                 |       |       |       |       |       |       |           |       |       |
| A1                        | NIT       | 20M25,32            | 33              | 12.7  | 56    | 9.5   | 0.8   | 44.5  | 4.8   | OPEN SLOT | 14.3  |       |
| A2                        | TIA       | 32M40,50,63         | 49              | 22    | 86    | 9     | 1.2   | 73    | 5.5   | 8         | 24    |       |
| A3                        | TIS       | 63M80,100M125       | 49              | 26    | 89    | 13    | 1.2   | 73    | 5.5   | OPEN SLOT | 28    |       |
| A4                        | TCP       | 100M125,160,200     | 51              | 35    | 110   | 20    | 2.4   | 94    | 8.7   | 11        | 38    |       |
| as A4                     | TFP       | 200M250,315         | 51              | 41    | 110   | 20    | 2.4   | 94    | 8.7   | 11        | 45    |       |
| Central Tag (single hole) |           |                     |                 |       |       |       |       |       |       |           |       |       |
| -                         | TB        | 63M80,100           | 45              | 26    | 111   | 13    | 1.2   | 97    | 7.1   | 13        | -     |       |
| as B1                     | TBC       | 63M80,100           | 45              | 26    | 137   | 20    | 3.2   | 111   | 8.7   | 14        | -     |       |
| B1                        | TC        | 100M125,160,200     | 45              | 35    | 137   | 20    | 3.2   | 111   | 8.7   | 14        | -     |       |
| B2                        | TF        | 200M250,315         | 45              | 41    | 137   | 20    | 3.2   | 111   | 8.7   | 14        | -     |       |
| B3                        | TKF       | 315M400*            | 45              | 51    | 137   | 26    | 6.4   | 111   | 8.7   | 14        | -     |       |
| B4                        | TMF       | 400M500*            | 52              | 61    | 137   | 26    | 6.4   | 111   | 8.7   | 16        | -     |       |
| Central Tag (double hole) |           |                     |                 |       |       |       |       |       |       |           |       |       |
| C1                        | TM        | 400M500*            | 51              | 61    | 210   | 26    | 6.4   | 133   | 10.3  | 16        | -     | 25.4  |

\* Non-Standardized current rating additional to BS88: Part 2

NOTE: Cont= Continuous Current. Motor = Motor Starting Current

## INDUSTRIAL FUSE-LINKS WITH BOLTED CONNECTIONS

TYPE SS

### 660/690 Volt Industrial Fuse-Links with Bolted Connections to BS88: Part 2 • IEC60269-2 • EN60269-2

Rated voltages: 660V a.c., 250V d.c. Breaking range and utilization category: gG Rated breaking capacities: 80kA at 660V a.c., 40kA at 250V d.c.



Lawson Type "SS" fuse-links are for use in industrial applications and have been approved by leading authorities including Electricity Supply Authorities. The range includes all BS88: Part 2 reference fuse-links up to 800 Amps and has gG classification. Non-reference tag variants cater for installation in non-standard or specialised equipment.

The range has a rated voltage of 660V a.c., and has been certified at a test recovery voltage of at least 110%. These fuse-links are therefore suitable on systems that meet the nominal harmonised voltage of 690V a.c., + 5%. The range also has a rating of 250V d.c.

A complementary range of solid/neutral links is available to suit our fuse-link range.

### Product Detail

#### Product detail - Offset Tag Fuse-Links

| List Reference | Current Rating (A)   | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight (Kg) |
|----------------|----------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|--------------------|
| SSA1           | 2,4,6,10,16,20       | A1             | 660a.c. 250d.c.    | 80kA-a.c. 40kA-d.c.    | BS88: Part 2 | 60269-2      | 10              | 0.15               |
| SSA2           | 2,4,6,10,16,20,25,32 | A2             |                    |                        |              |              | 10              | 0.50               |
| SSA3           | 35,40,50,63          | A3             |                    |                        |              |              | 10              | 0.80               |
| SSA4           | 32,40,50,63,80,100   | A4             |                    |                        |              |              | 5               | 0.90               |
| SSFP           | 125,160,200          | (asA4)         |                    |                        |              |              | 1               | 0.25               |
| 85SSM          | 355,400              | -              |                    |                        |              |              | 1               | 1.05               |
| 86SST          | 450,500,560,630,     | -              |                    |                        |              |              | 1               | 1.40               |
| 86SST          | 670,710,750,800      | -              |                    |                        |              |              | 1               | 1.40               |

#### Product detail - Central Tag Fuse-Links

| List Reference | Current Rating (A)  | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight Kg |
|----------------|---------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|------------------|
| SSB            | 2,4,6,10,16,20,25,  | -              | 660a.c. 250d.c.    | 80kA-a.c. 40kA-d.c.    | BS88: Part 2 | 60269-2      | 10              | 0.60             |
| SSB            | 32,35,40,50,63      | -              |                    |                        |              |              | 10              | 0.75             |
| SSBC           | 2,4,6,10,16,20,25,  | (as B1)        |                    |                        |              |              | 10              | 0.60             |
| SSBC           | 32,35,40,50,63      | (as B1)        |                    |                        |              |              | 10              | 0.75             |
| SSB1           | 80,100              | B1             |                    |                        |              |              | 5               | 0.90             |
| SSB2           | 125,160,200         | B2             |                    |                        |              |              | 1               | 0.25             |
| 84SSF          | 125,160,200         | -              |                    |                        |              |              | 1               | 0.25             |
| SSB3           | 250,315             | B3             |                    |                        |              |              | 1               | 0.45             |
| 84SSK          | 250,315             | -              |                    |                        |              |              | 1               | 0.45             |
| SSKM           | 125,160,200,250,315 | -              |                    |                        |              |              | 1               | 0.45             |
| SSB4           | 355,400             | B4             | 1                  | 0.65                   |              |              |                 |                  |
| SSC1           | 355,400             | C1             | 1                  | 0.78                   |              |              |                 |                  |
| SSMT           | 355,400             | -              | 1                  | 0.83                   |              |              |                 |                  |
| SSC2           | 450,500,560,630     | C2             | 1                  | 1.05                   |              |              |                 |                  |
| SST            | 450,500,560,630     | -              | 1                  | 1.05                   |              |              |                 |                  |
| SSC3           | 670,710,750,800     | C3             | 1                  | 1.40                   |              |              |                 |                  |
| SSLT           | 670,710,750,800     | -              | 1                  | 1.40                   |              |              |                 |                  |
| SSLU           | 450,500,560,630,    | D1             | 1                  | 2.40                   |              |              |                 |                  |
| SSLU           | 670,710,750,800     | D1             | 1                  | 2.40                   |              |              |                 |                  |

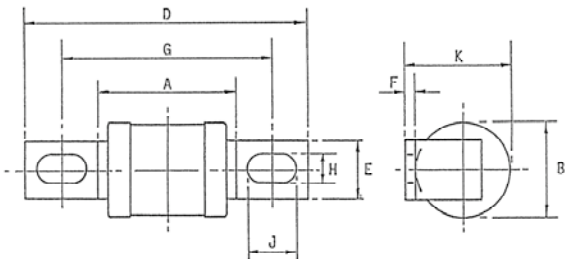
See page 24 for the time/current and cut-off current characteristics.



# INDUSTRIAL FUSE-LINKS WITH BOLTED CONNECTIONS

TYPE SS

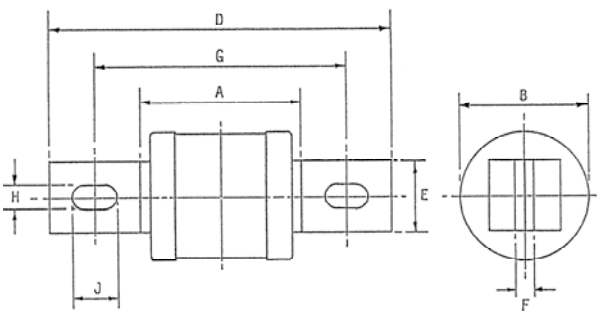
## Dimensional Drawings



BS88: Part 2 reference 'A' fuse-link dimensions and tag variants

| BS88 Ref. | Type Ref. | Current Ratings (A)  | Dimensions (mm) |       |       |       |       |       |       |       |       |  |
|-----------|-----------|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|           |           |                      | A max           | B max | D max | E max | F nom | G nom | H nom | J nom | K max |  |
| A1        | SSA1      | 2,4,6,10,16,20       | 34              | 14.3  | 56    | 9.5   | 1.2   | 44.5  | 4.8   | OPEN  | 14.3  |  |
| A2        | SSA2      | 2,4,6,10,16,20,25,32 | 49              | 22    | 86    | 9     | 1.2   | 73    | 5.5   | 8     | 24    |  |
| A3        | SSA3      | 35*,40,50,63         | 53              | 26    | 89    | 13    | 1.2   | 73    | 5.5   | OPEN  | 28    |  |
| A4        | SSA4      | 32,40,50,63          | 51              | 26    | 110   | 20    | 2.4   | 94    | 8.7   | 11    | 25    |  |
| A4        | SSA4      | 80,100               | 60              | 35    | 110   | 20    | 2.4   | 94    | 8.7   | 11    | 38    |  |
| as A4     | SSFP      | 125,160,200          | 60              | 41    | 110   | 20    | 2.4   | 94    | 8.7   | 11    | 42    |  |
| -         | 85SSM     | 355,400              | 60              | 61    | 110   | 20    | 2.4   | 102   | 8.7   | 11    | 42    |  |
| -         | 86SST     | 450*,500,560*,630    | 60              | 73    | 110   | 20    | 2.4   | 102   | 8.7   | 11    | 42    |  |
| -         |           | 670*,710*,750*,800   | 60              | 83    | 110   | 20    | 2.4   | 102   | 8.7   | 11    | 42    |  |

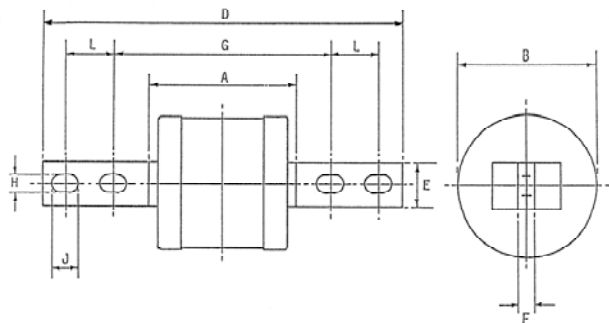
\* Non-Standardized current rating additional to BS88: Part 2



BS88: Part 2 reference 'B' fuse-link dimensions and tag variants

| BS88 Ref. | Type Ref. | Current Ratings (A)  | Dimensions (mm) |       |       |       |       |       |       |       |  |  |
|-----------|-----------|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|--|--|
|           |           |                      | A max           | B max | D max | E max | F max | G nom | H nom | J nom |  |  |
| -         | SSB       | 2,4,6,10,16,20,25,32 | 45              | 22    | 111   | 13    | 1.2   | 97    | 7.1   | 13    |  |  |
| -         |           | 35*,40,50,63         | 53              | 26    | 111   | 13    | 1.2   | 97    | 7.1   | 13    |  |  |
| as B1     | SSBC      | 2,4,6,10,16,20,25,32 | 45              | 22    | 137   | 15    | 1.4   | 111   | 8.7   | 14    |  |  |
| -         |           | 35*,40,50,63         | 53              | 26    | 137   | 15    | 1.4   | 111   | 8.7   | 14    |  |  |
| B1        | SSB1      | 80,100               | 60              | 35    | 137   | 20    | 3.2   | 111   | 8.7   | 14    |  |  |
| B2        | SSB2      | 125,160,200          | 60              | 41    | 137   | 20    | 3.2   | 111   | 8.7   | 14    |  |  |
| -         | 84SSF     | 125,160,200          | 60              | 41    | 137   | 20    | 3.2   | 111   | 8.7   | 14    |  |  |
| B3        | SSB3      | 250,315              | 75              | 51    | 137   | 26    | 3.2   | 111   | 8.7   | 14    |  |  |
| -         | 84SSK     | 250,315              | 60              | 51    | 137   | 20    | 3.2   | 111   | 8.7   | 14    |  |  |
| -         | SSKM      | 125,160,200,250,315  | 75              | 51    | 159   | 26    | 3.2   | 133   | 10.3  | 14    |  |  |
| B4        | SSB4      | 355*,400             | 77              | 61    | 137   | 26    | 6.4   | 111   | 8.7   | 16    |  |  |

\* Non-Standardized current rating additional to BS88: Part 2



BS88: Part 2 reference 'C' fuse-link dimensions and tag variants

| BS88 Ref. | Type Ref. | Current Ratings (A) | Dimensions (mm) |       |       |       |       |       |       |       |       |  |
|-----------|-----------|---------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
|           |           |                     | A max           | B max | D max | E max | F max | G nom | H nom | J nom | L max |  |
| C1        | SSC1      | 355*,400            | 77              | 61    | 210   | 26    | 6.3   | 133   | 10.3  | 16    | 25.4  |  |
| -         | SSMT      | 355*,400            | 77              | 61    | 267   | 26    | 6.3   | 165   | 10.3  | 16    | 31.8  |  |
| C2        | SSC2      | 450*,500,560*,630   | 80              | 73    | 210   | 26    | 7.8   | 133   | 10.3  | 16    | 25.4  |  |
| -         | SST       | 450*,500,560*,630   | 80              | 73    | 267   | 26    | 7.8   | 165   | 10.3  | 16    | 31.8  |  |
| C3        | SSC3      | 670*,710*,750*,800  | 83              | 83    | 210   | 26    | 9.5   | 133   | 10.3  | 16    | 25.4  |  |
| -         | SSLT      | 670*,710*,750*,800  | 83              | 83    | 267   | 26    | 9.5   | 165   | 10.3  | 16    | 31.8  |  |
| D1        | SSLU      | 450*,500,560*,630   | 83              | 73    | 267   | 26    | 9.5   | 149   | 10.3  | 16    | 31.8  |  |
|           |           | 670*,710*,750*,800  | 83              | 83    | 267   | 26    | 9.5   | 149   | 10.3  | 16    | 31.8  |  |

\* Non-Standardized current rating additional to BS88: Part 2



Parallel tag fixings on SSLU only

## COMPACT DIMENSION FUSE-LINKS

TYPE CDS

### 230/240 Volt and 400/415 Volt Compact Dimension Fuse-Links to BS88: Part 6 • IEC60269-2

Rated voltages: 240V a.c. and 415V a.c. Breaking range and utilisation category: gG Rated breaking capacities: 20kA at 240V a.c. and 80kA at 415V a.c.

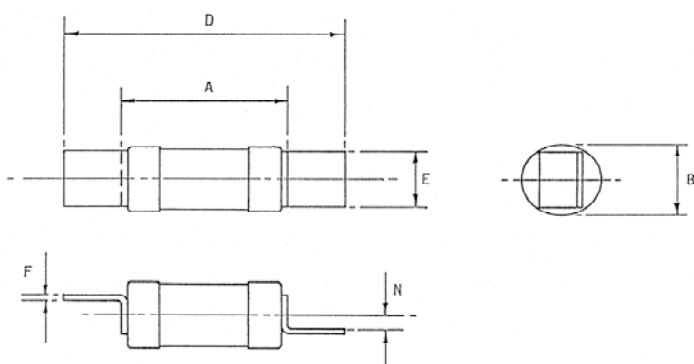


Compact Type "CDS" fuse-links are for use in single or three phase commercial and industrial installations and can be fitted into BS88 bladed type fuse-holders and distribution fusegear.

The Lawson CLIPFIT range has rated voltages of 240V a.c. or 415V a.c. and has been certified at a test recovery voltage of at least 110%. These fuse-links therefore are suitable for use on systems with voltages up to 264 or 457V a.c. The rated and test voltages also ensure that the range meets all the transitional voltage requirements specified within the harmonised nominal voltages of 230/400V a.c. A complementary range of solid/neutral links is available to suit our fuse-link range.

#### Product and Performance Data - Compact Dimension Fuse-Links

| List Reference | Current Rating (A)      | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight (Kg) |
|----------------|-------------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|--------------------|
| SS             | 2,4,6,10,16,20,25,32    | E1             | 240a.c.            | 20kA-a.c.              | BS88: Part 6 | 60269-2      | 10              | 0.12               |
| NS             | 2,4,6,10,16,20,25,32    | F1             | 415a.c.            | 80kA-a.c.              |              |              | 10              | 0.18               |
| MES            | 10,16,20,25,32,40,50,63 | F2             | 415a.c.            | 80kA-a.c.              |              |              | 10              | 0.32               |



#### Dimensions

| BS88 Ref. | Type Ref. | Rated Voltage (V a.c.) | Current Ratings (A)                  | Dimensions (mm) |       |       |       |       |       |  |
|-----------|-----------|------------------------|--------------------------------------|-----------------|-------|-------|-------|-------|-------|--|
|           |           |                        |                                      | A max           | B max | D max | E nom | F nom | N nom |  |
| E1        | SS        | 240                    | 2,4,6,10,16,20,25*,32*               | 25              | 12.7  | 51    | 11.5  | 0.8   | 3.5   |  |
| F1        | NS        | 415                    | 2,4,6,10,16,20,25*,32*,20M25*,20M32* | 35.5            | 14.3  | 62    | 11.5  | 0.8   | 3.5   |  |
|           |           |                        | 32M40*,32M50*,32M63*                 | 39              | 17.5  | 62    | 11.5  | 0.8   | 3.5   |  |
| F2        | MES       | 415                    | 10,16,20,25,32,40,50,63              | 39              | 17.5  | 69    | 15    | 1.4   | 3.5   |  |

\* Non-Standardized current rating additional to BS 88: Part 6



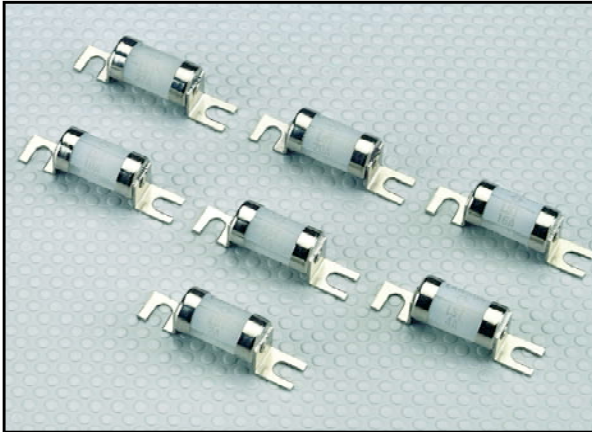
See pages 10 & 11 for Motor Circuit Protection.  
See page 25 for the time/current and cut-off current characteristics.

**STREET LIGHTING CUT-OUT FUSE-LINKS**

**TYPE LST**

**230/240 Volt Street Lighting Cut-Out Fuse-Links to BS88: Part 1 • IEC60269-1**

Rated voltage: 240V a.c. Breaking range and utilization category: gG Rated breaking capacity: 20kA at 240V a.c.



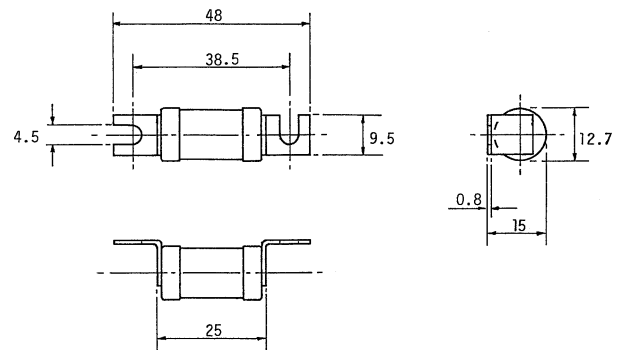
Lawson Type "LST" fuse-links are for use in single-phase street lighting cut-outs or similar installations. These fuse-links comply with UK Electricity Supply Industry Standards and BS7654.

Leading authorities, including Lloyds Register of Shipping and Electricity Supply Authorities, have approved fuse-links within this range.

A complementary range of solid/neutral links is available to suit our fuse-link range.

**Current ratings and fixing centre**

| Current Rating (A) | List Reference | Fixing Centre (mm) | Carton Quantity | Carton Weight (Kg) |
|--------------------|----------------|--------------------|-----------------|--------------------|
| 2                  | LST2           | 38.5               | 10              | 0.12               |
| 4                  | LST4           |                    |                 |                    |
| 6                  | LST6           |                    |                 |                    |
| 10                 | LST10          |                    |                 |                    |
| 16                 | LST16          |                    |                 |                    |
| 20                 | LST20          |                    |                 |                    |
| 25                 | LST25          |                    |                 |                    |
| 32                 | LST32          |                    |                 |                    |



Dimensions = mm

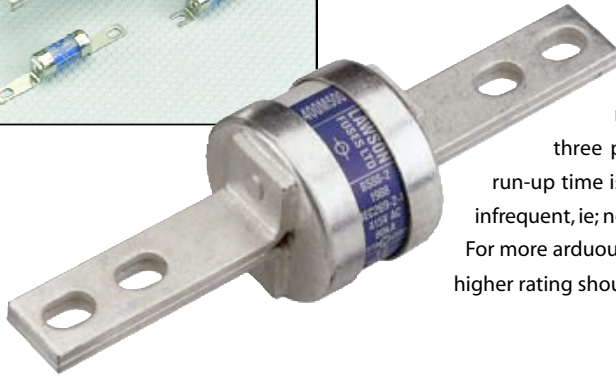




## MOTOR CIRCUIT PROTECTION FUSE-LINKS

### 400/415 Volt Industrial Fuse-Links with Bolted Connections to BS88: Part 2 • IEC60269-2 • EN60269-2

Rated voltage: 415V a.c. Breaking range and utilization category: gM Rated breaking capacity: 80kA at 415V a.c.



To avoid nuisance fuse-link operation due to overcurrent starting surges, fuse-links used in motor circuits often require higher ratings than the full load current of the motor. Motor circuit protection fuse-links have a dual current rating, consisting of a continuous current rating and a rating relating to the operational characteristics. The letter 'M' separates these two ratings, for example, 32M50. This represents a fuse-link with a maximum continuous current rating of 32 Amps, and an operational characteristic of 50 Amps rating to meet the motor starting current.

The table below shows the recommended fuse-links for various sizes of three phase 415V a.c. induction motors, where the run-up time is less than five seconds and the starting duty infrequent, ie; not more than twice per hour.

For more arduous conditions the next higher rating should be used.

FUSE-LINK SELECTION FOR 3 PHASE 415V a.c. INDUCTION MOTOR CIRCUITS

| MOTOR RATING |      |      | DIRECT-ON-LINE START (7xFLC for 10 sec) |          | ASSISTED START (3.5xFLC for 20 sec) |          |
|--------------|------|------|---|----------|-------------------------------------|----------|
|              |      |      | FUSE-LINK RATING (AMPERES)              |          | FUSE-LINK RATING (AMPERES)          |          |
| KW           | HP   | FLC  | "gG"                                    | "gM"     | "gG"                                | "gM"     |
| 0.75         | 1    | 2    | 6                                       | -        | 4                                   | -        |
| 1.1          | 1.5  | 2.5  | 10                                      | -        | 6                                   | -        |
| 1.5          | 2    | 3.5  | 10                                      | -        | 6                                   | -        |
| 2.2          | 3    | 5    | 16                                      | -        | 10                                  | -        |
| 3            | 4    | 6.5  | 20                                      | -        | 16                                  | -        |
| 4            | 5    | 8    | 25                                      | 20M25    | 16                                  | -        |
| 5.5          | 7.5  | 11   | 32                                      | 20M32    | 20                                  | -        |
| 7.5          | 10   | 14   | 40                                      | 32M40    | 25                                  | 20M25    |
| 10           | 13.5 | 19   | 50                                      | 32M50    | 32                                  | 20M32    |
| 11           | 15   | 21   | 50                                      | 32M50    | 32                                  | -        |
| 15           | 20   | 28   | 63                                      | 32M63    | 40                                  | 32M40    |
| 18.5         | 25   | 35   | 80                                      | 63M80    | 50                                  | -        |
| 22           | 30   | 41   | 100                                     | 63M100   | 50                                  | -        |
| 26           | 35   | 48   | 100                                     | 63M100   | 63                                  | -        |
| 30           | 40   | 55   | 125                                     | 100M125  | 80                                  | 63M80    |
| 33           | 45   | 62   | 160                                     | 100M160  | 80                                  | 63M80    |
| 37           | 50   | 69   | 160                                     | 100M160  | 100                                 | -        |
| 45           | 60   | 83   | 200                                     | 100M200  | 100                                 | -        |
| 53           | 70   | 97   | 200                                     | 100M200  | 125                                 | 100M125  |
| 55           | 75   | 100  | 200                                     | 100M200  | 125                                 | 100M125  |
| 60           | 80   | 110  | 250                                     | 200M250  | 160                                 | -        |
| 67           | 90   | 120  | 250                                     | 200M250  | 160                                 | -        |
| 75           | 100  | 135* | 250                                     | 200M250  | 160                                 | -        |
| 90           | 120  | 160  | 315                                     | 200M315  | 200                                 | -        |
| 93           | 125  | 170  | 355*                                    | 315M400* | 200                                 | -        |
| 110          | 150  | 200  | 400                                     | 315M400* | 250                                 | 200M250  |
| 130          | 175  | 230  | 400                                     | 315M400* | 315                                 | -        |
| 150          | 200  | 260  | 450*                                    | 400M500* | 315                                 | -        |
| 160          | 215  | 280  | 500                                     | 400M500* | 355*                                | 315M400* |
| 170          | 225  | 290  | 500                                     | 400M500* | 355*                                | 315M400* |
| 180          | 250  | 320  | 560*                                    | -        | 400                                 | -        |
| 200          | 270  | 350  | 630                                     | -        | 400                                 | -        |
| 220          | 300  | 380  | 670*                                    | -        | 450                                 | 400M500* |
| 250          | 335  | 420  | 710*                                    | -        | 500                                 | -        |
| 260          | 350  | 450  | 750*                                    | -        | 560*                                | -        |
| 300          | 400  | 500  | 800                                     | -        | 630                                 | -        |

MAXIMUM FULL LOAD CURRENT STARTING CAPABILITY

| DIRECT-ON-LINE START (7xFLC for 10 sec) |          |                   | ASSISTED START (3.5xFLC for 20 sec) |          |
|---|----------|-------------------|-------------------------------------|----------|
| FUSE-LINK RATING (AMPERES)              |          | MAXIMUM MOTOR FLC | FUSE-LINK RATING (AMPERES)          |          |
| "gG"                                    | "gM"     |                   | "gG"                                | "gM"     |
| 2                                       | -        | 0.6               | 2                                   | -        |
| 4                                       | -        | 1.3               | 4                                   | -        |
| 6                                       | -        | 2.3               | 6                                   | -        |
| 10                                      | -        | 4.1               | 10                                  | -        |
| 16                                      | -        | 6.0               | 16                                  | -        |
| 20                                      | -        | 7.9               | 20                                  | -        |
| 25                                      | 20M25    | 10                | 25                                  | 20M25    |
| 32                                      | 20M32    | 13                | 32                                  | -        |
| 40                                      | 32M40    | 18                | 40                                  | 32M40    |
| 50                                      | 32M50    | 26                | 50                                  | -        |
| 63                                      | 32M63    | 30                | 63                                  | -        |
| 80                                      | 63M80    | 40                | 80                                  | -        |
| 100                                     | 63M100   | 54                | 100                                 | -        |
| 125                                     | 100M125  | 61                | 125                                 | -        |
| 160                                     | 100M160  | 82                | 160                                 | -        |
| 200                                     | -        | 110               | 200                                 | -        |
| 250                                     | 200M250  | 150               | 250                                 | -        |
| 315                                     | 200M315  | 170               | 315                                 | -        |
| 355*                                    | 315M400* | 200               | 355*                                | -        |
| 400                                     | 315M400* | 240               | 400                                 | -        |
| 450*                                    | 400M500* | 280               | 450*                                | 400M500* |
| 500                                     | 400M500* | 310               | 500                                 | -        |
| 560*                                    | -        | 350               | 560*                                | -        |
| 630                                     | -        | 380               | 630                                 | -        |
| 670*                                    | -        | 420               | 670*                                | -        |
| 710*                                    | -        | 450               | 710*                                | -        |
| 750*                                    | -        | 480               | 750*                                | -        |
| 800                                     | -        | 510               | 800                                 | -        |

\* Non-Standardized current rating additional to BS 88: Part 2

This data is based upon normal conditions and average efficiencies and power factors. Conditions such as long run-up times, large numbers of starts in succession, high ambient temperatures or abnormal transients during star/delta switching may necessitate adjustments to fuse-link selection.

For detailed dimensioned outline drawings see pages 5 & 8



## PRODUCT DETAIL AND PERFORMANCE DATA

### Product detail - Dual Rated Fuse-Links - Offset Tag

| List Reference | Current Rating (A)   | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight (Kg) |
|----------------|----------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|--------------------|
| NIT            | 20M25,20M32          | A1             | 415a.c.            | 80kA-a.c.              | BS88: Part 2 | 60269-2      | 10              | 0.13               |
| TIA            | 32M40,32M50,32M63    | A2             |                    |                        |              |              | 10              | 0.54               |
| TIS            | 63M80,63M100,100M125 | A3             |                    |                        |              |              | 10              | 0.70               |
| TCP            | 100M125,100M160      | A4             |                    |                        |              |              | 5               | 0.82               |
| TCP            | 100M200              | A4             |                    |                        |              |              | 5               | 0.82               |
| TFP            | 200M250,200M315      | (as A4)        |                    |                        |              |              | 1               | 0.24               |

### Product detail - Dual Rated Fuse-Links - Central Tag

| List Reference | Current Rating (A) | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight (Kg) |
|----------------|--------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|--------------------|
| TB             | 63M80,63M100       | -              | 415a.c.            | 80kA-a.c.              | BS88: Part 2 | 60269-2      | 10              | 0.72               |
| TBC            | 63M80,63M100       | (as B1)        |                    |                        |              |              | 10              | 0.72               |
| TC             | 100M125,100M160    | B1             |                    |                        |              |              | 5               | 0.85               |
| TC             | 100M200            | B1             |                    |                        |              |              | 5               | 0.85               |
| TF             | 200M250,200M315    | B2             |                    |                        |              |              | 1               | 0.24               |
| TKF            | 315M400            | B3             |                    |                        |              |              | 1               | 0.43               |
| TMF            | 400M500            | B4             |                    |                        |              |              | 1               | 0.55               |
| TM             | 400M500            | C1             | 1                  | 0.74                   |              |              |                 |                    |

### Product detail - Dual Rated Fuse-Links - Compact Dimension

| List Reference | Current Rating (A) | BS88 Reference | Voltage Rating (V) | Breaking Capacity (kA) | BS Standard  | IEC Standard | Carton Quantity | Carton Weight (Kg) |
|----------------|--------------------|----------------|--------------------|------------------------|--------------|--------------|-----------------|--------------------|
| NS             | 20M25, 20M32       | F1             | 415a.c.            | 80kA-a.c.              | BS88: Part 6 | 60269-2      | 10              | 0.18               |
| NS             | 32M40,32M50,32M63  | -              |                    |                        |              |              | 10              | 0.32               |

### Performance Data - Dual Rated Fuse-Links - Offset Tag

| List Reference | Current Rating (A) |       | BS88 Reference | Utilization Category |
|----------------|--------------------|-------|----------------|----------------------|
|                | Cont               | Motor |                |                      |
| NIT            | 20                 | 25    | A1             | gM                   |
| NIT            | 20                 | 32    | A1             |                      |
| TIA            | 32                 | 40    | A2             |                      |
| TIA            | 32                 | 50    | A2             |                      |
| TIA            | 32                 | 63    | A2             |                      |
| TIS            | 63                 | 80    | A3             |                      |
| TIS            | 63                 | 100   | A3             |                      |
| TIS            | 100                | 125   | A3             |                      |
| TCP            | 100                | 125   | A4             |                      |
| TCP            | 100                | 160   | A4             |                      |
| TCP            | 100                | 200   | A4             |                      |
| TFP            | 200                | 250   | (as A4)        |                      |
| TFP            | 200                | 315   | (as A4)        |                      |

### Performance Data - Dual Rated Fuse-Links - Central Tag

| List Reference | Current Rating (A) |       | BS88 Reference | Utilization Category |
|----------------|--------------------|-------|----------------|----------------------|
|                | Cont               | Motor |                |                      |
| TB             | 63                 | 80    | -              | gM                   |
| TB             | 63                 | 100   | -              |                      |
| TBC            | 63                 | 80    | (asB1)         |                      |
| TBC            | 63                 | 100   | (asB1)         |                      |
| TC             | 100                | 125   | B1             |                      |
| TC             | 100                | 160   | B1             |                      |
| TC             | 100                | 200   | B1             |                      |
| TF             | 200                | 250   | B2             |                      |
| TF             | 200                | 315   | B2             |                      |
| TKF            | 315                | 400   | B3             |                      |
| TMF            | 400                | 500   | B4             |                      |
| TM             | 400                | 500   | C1             |                      |

### Performance Data - Dual Rated Fuse-Links - Compact Dimension

| List Reference | Current Rating (A) |       | BS88 Reference | Utilization Category |
|----------------|--------------------|-------|----------------|----------------------|
|                | Cont               | Motor |                |                      |
| NS             | 20                 | 25    | F1             | gM                   |
| NS             | 20                 | 32    | F1             |                      |
| NS             | 32                 | 40    | -              |                      |
| NS             | 32                 | 50    | -              |                      |
| NS             | 32                 | 63    | -              |                      |

NOTE: Cont= Continuous Current. Motor = Motor Starting Current

See pages 22,23 & 25 for the time/current and cut-off current characteristics.

