

# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

**MV DIN**



**Catalogue Symbol:**  
 17.5TDLSJ(amp)  
 17.5TFLSJ(amp)  
 17.5TDMEJ(amp)  
 17.5THMEJ(amp)  
 17.5TFMEJ(amp)  
 17.5TKMEJ(amp)

**Class of Operation:** Back-up as IEC 60282-1 (2005)

**Dimensional Data:**

| Fuse Reference | A   | C  | D  | Weight (Kg) |
|----------------|-----|----|----|-------------|
| TDLSJ          | 292 | 54 | 51 | 1.7         |
| TFLSJ          | 292 | 80 | 76 | 3.1         |
| TDMEJ          | 442 | 54 | 51 | 2.5         |
| THMEJ          | 442 | 67 | 64 | 3.7         |
| TKMEJ          | 442 | 80 | 76 | 5.1         |

**Standards/Approvals:**

DIN 43625, VDE 0670 part 4, VDE 0670 part 402 and IEC 60282-1 (2005)

**Description:**

A range of medium voltage DIN Fuses, complete with sealed striker, suitable for transformer protection. The fuses can be used even where there is no secondary LV protection, provided they are used with fuse switches fitted with instantaneous striker tripping.

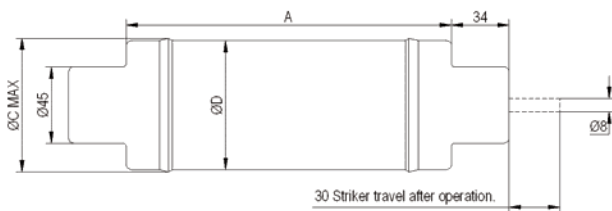
**Packaging:**

All fuse-links are packed in 3's.  
 MOQ: 3  
 Packaging 100% recyclable

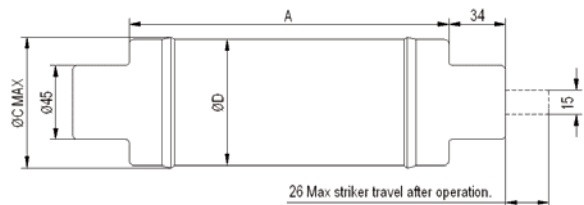
**Technical Data:**

DIN fuse-links  
 Rated voltage: 17.5kV  
 Amps: 6.3A to 125A  
 Rated breaking capacity: 35.5 kA to 50kA  
 Rated frequency: 50 - 60Hz  
 Suitable for indoor and outdoor use

**EJ Outline**



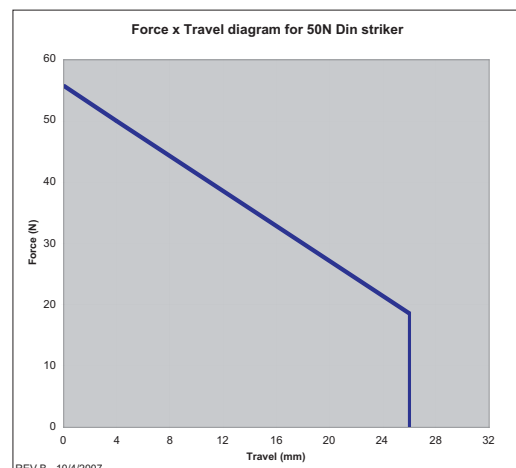
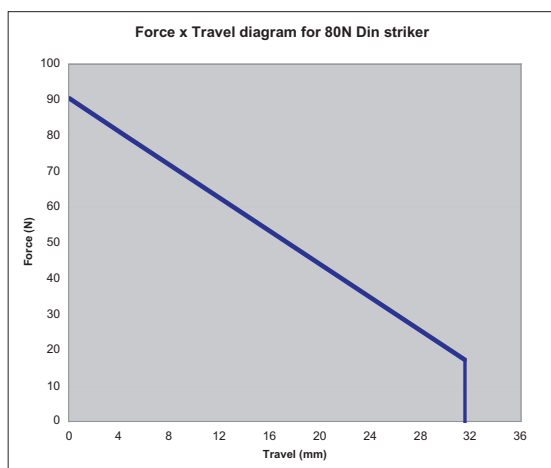
**SJ Outline**



**Striker Diagrams:**

E = Spring Striker 80N to IEC 60282-1 designation "medium"

S = Spring Striker 50N to DIN 43625 and IEC 60282-1 designation "medium"



# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

# MV DIN

### Table of Ratings:

**Standard Approvals:** DIN 43625, VDE 0670 part 4, VDE 0670 part 402 and IEC 60282-1 (2005)

**Technical Data:** 6.3, 10, 16, 20, 25, 31.5, 40, 50, 63, 80, 100, 125 Amps

| Part Number    | Current Rating<br>$I_n$ (A) | Breaking Capacity<br>$I_1$ (kA) | Minimum Breaking Capacity<br>$I_3$ (A) | Cold Resistance & Watts Loss in Free Air |     | Joule Integral ( $I^2t$ ) |                   | Length<br>mm | Diameter<br>mm | Weight<br>kg |
|----------------|-----------------------------|---------------------------------|--|--|-----|---------------------------|-------------------|--------------|----------------|--------------|
|                |                             |                                 |  | mΩ                                       | W   | Minimum Pre-Arcing        | Maximum Operating |              |                |              |
| 17.5TDLSJ6.3*  | 6.3                         | 35.5                            | 23                                     | 313                                      | 15  | $4.8 \times 10^1$         | $6.1 \times 10^2$ | 292          | 51             | 1.7          |
| 17.5TDLSJ10*   | 10                          | 35.5                            | 19                                     | 185                                      | 23  | $2.8 \times 10^2$         | $4.0 \times 10^3$ | 292          | 51             | 1.7          |
| 17.5TDLSJ16*   | 16                          | 35.5                            | 59                                     | 104                                      | 34  | $2.9 \times 10^2$         | $2.0 \times 10^3$ | 292          | 51             | 1.7          |
| 17.5TDLSJ20*   | 20                          | 35.5                            | 80                                     | 69.2                                     | 38  | $5.7 \times 10^2$         | $4.4 \times 10^3$ | 292          | 51             | 1.7          |
| 17.5TDLSJ25*   | 25                          | 35.5                            | 100                                    | 55.4                                     | 48  | $8.9 \times 10^2$         | $6.6 \times 10^3$ | 292          | 51             | 1.7          |
| 17.5TDLSJ31.5* | 31.5                        | 35.5                            | 118                                    | 41.4                                     | 58  | $5.1 \times 10^2$         | $1.1 \times 10^4$ | 292          | 51             | 1.7          |
| 17.5TDLSJ40*   | 40                          | 35.5                            | 148                                    | 31.1                                     | 76  | $8.0 \times 10^2$         | $1.8 \times 10^4$ | 292          | 51             | 1.7          |
| 17.5TFLSJ50*   | 50                          | 35.5                            | 225                                    | 17.3                                     | 62  | $8.1 \times 10^3$         | $6.0 \times 10^4$ | 292          | 76             | 3.1          |
| 17.5TDMEJ6.3   | 6.3                         | 50                              | 25                                     | 324                                      | 14  | $9.8 \times 10^1$         | $1.0 \times 10^3$ | 442          | 51             | 2.5          |
| 17.5TDMEJ10    | 10                          | 50                              | 36                                     | 192                                      | 24  | $2.8 \times 10^2$         | $2.3 \times 10^3$ | 442          | 51             | 2.5          |
| 17.5TDMEJ16    | 16                          | 50                              | 55                                     | 79.6                                     | 23  | $2.6 \times 10^2$         | $3.9 \times 10^3$ | 442          | 51             | 2.5          |
| 17.5TDMEJ20    | 20                          | 50                              | 69                                     | 57.0                                     | 27  | $5.2 \times 10^2$         | $5.4 \times 10^3$ | 442          | 51             | 2.5          |
| 17.5TDMEJ25    | 25                          | 50                              | 87                                     | 45.5                                     | 34  | $8.1 \times 10^2$         | $8.4 \times 10^3$ | 442          | 51             | 2.5          |
| 17.5TDMEJ31.5  | 31.5                        | 50                              | 87                                     | 34.1                                     | 41  | $1.4 \times 10^3$         | $1.5 \times 10^4$ | 442          | 51             | 2.5          |
| 17.5TDMEJ40    | 40                          | 50                              | 111                                    | 25.0                                     | 53  | $2.4 \times 10^3$         | $2.5 \times 10^4$ | 442          | 51             | 2.5          |
| 17.5TDMEJ50    | 50                          | 50                              | 174                                    | 19.7                                     | 69  | $2.8 \times 10^3$         | $3.1 \times 10^4$ | 442          | 51             | 2.5          |
| 17.5TDMEJ63    | 63                          | 50                              | 200                                    | 15.4                                     | 89  | $4.3 \times 10^3$         | $4.7 \times 10^4$ | 442          | 51             | 2.5          |
| 17.5THMEJ80    | 80                          | 50                              | 270                                    | 11.5                                     | 108 | $7.9 \times 10^3$         | $9.1 \times 10^4$ | 442          | 64             | 3.7          |
| 17.5THMEJ100   | 100                         | 50                              | 376                                    | 8.38                                     | 127 | $2.0 \times 10^4$         | $1.4 \times 10^5$ | 442          | 64             | 3.7          |
| 17.5TKMEJ125   | 125                         | 50                              | 467                                    | 5.95                                     | 146 | $3.4 \times 10^4$         | $3.5 \times 10^5$ | 442          | 76             | 5.1          |

\* Not compliant with VDE 0670 part 402

# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

# MV DIN

### Cross-Reference

| Bussmann     | EFEN | SIBA    | MESA          | ETI           |               | Merlin Gerin | eilmann | INASEL        | ABB             |
|--------------|------|---------|---------------|---------------|---------------|--------------|---------|---------------|-----------------|
|              |      |         |               | (80N Striker) | (50N Striker) |              |         |               |                 |
| 17.5DLSJ6.3  | N/A  | 3025513 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531003M0001 |
| 17.5DLSJ10   | N/A  | 3025513 | CFR-17,5/10   | N/A           | N/A           | 51006 522 M0 | N/A     | IB-D1         | 1YMB531003M0002 |
| 17.5DLSJ16   | N/A  | 3025513 | CFR-17,5/16   | N/A           | N/A           | 51006 523 M0 | N/A     | IB-D1         | 1YMB531003M0003 |
| 17.5DLSJ20   | N/A  | 3022113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531003M0013 |
| 17.5DLSJ25   | N/A  | 3022113 | CFR-17,5/25   | N/A           | N/A           | 51006 524 M0 | N/A     | IB-D1 & IB-D2 | 1YMB531003M0004 |
| 17.5DLSJ31.5 | N/A  | 3022113 | CFR-17,5/31.5 | N/A           | N/A           | 51006 525 M0 | N/A     | IB-D1 & IB-D2 | 1YMB531003M0014 |
| 17.5DLSJ40   | N/A  | 3022113 | CFR-17,5/40   | N/A           | N/A           | 51006 526 M0 | N/A     | IB-D1 & IB-D2 | 1YMB531003M0021 |
| 17.5TFLSJ50  | N/A  | 3022113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D2         | 1YMB531003M0022 |
| 17.5DMEJ6.3  | N/A  | 3023113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531037M0001 |
| 17.5DMEJ10   | N/A  | 3023113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531037M0002 |
| 17.5DMEJ16   | N/A  | 3023113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531037M0003 |
| 17.5DMEJ20   | N/A  | 3023113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531037M0013 |
| 17.5DMEJ25   | N/A  | 3023113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531037M0004 |
| 17.5DMEJ31.5 | N/A  | 3023113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531037M0014 |
| 17.5DMEJ40   | N/A  | 3023113 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D1         | 1YMB531037M0021 |
| 17.5DMEJ50   | N/A  | 3023213 | N/A           | N/A           | N/A           | N/A          | N/A     | N/A           | 1YMB531037M0006 |
| 17.5DMEJ63   | N/A  | 3023213 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D2         | 1YMB531037M0007 |
| 17.5THMEJ80  | N/A  | 3023213 | N/A           | N/A           | N/A           | N/A          | N/A     | N/A           | 1YMB531037M0008 |
| 17.5THMEJ100 | N/A  | 3023313 | N/A           | N/A           | N/A           | N/A          | N/A     | IB-D2         | 1YMB531003M0009 |
| 17.5TKMEJ125 | N/A  | 3023314 | N/A           | N/A           | N/A           | N/A          | N/A     | N/A           | 1YMB531003M0010 |

### Watts Loss Comparison

Lowest Watts Loss

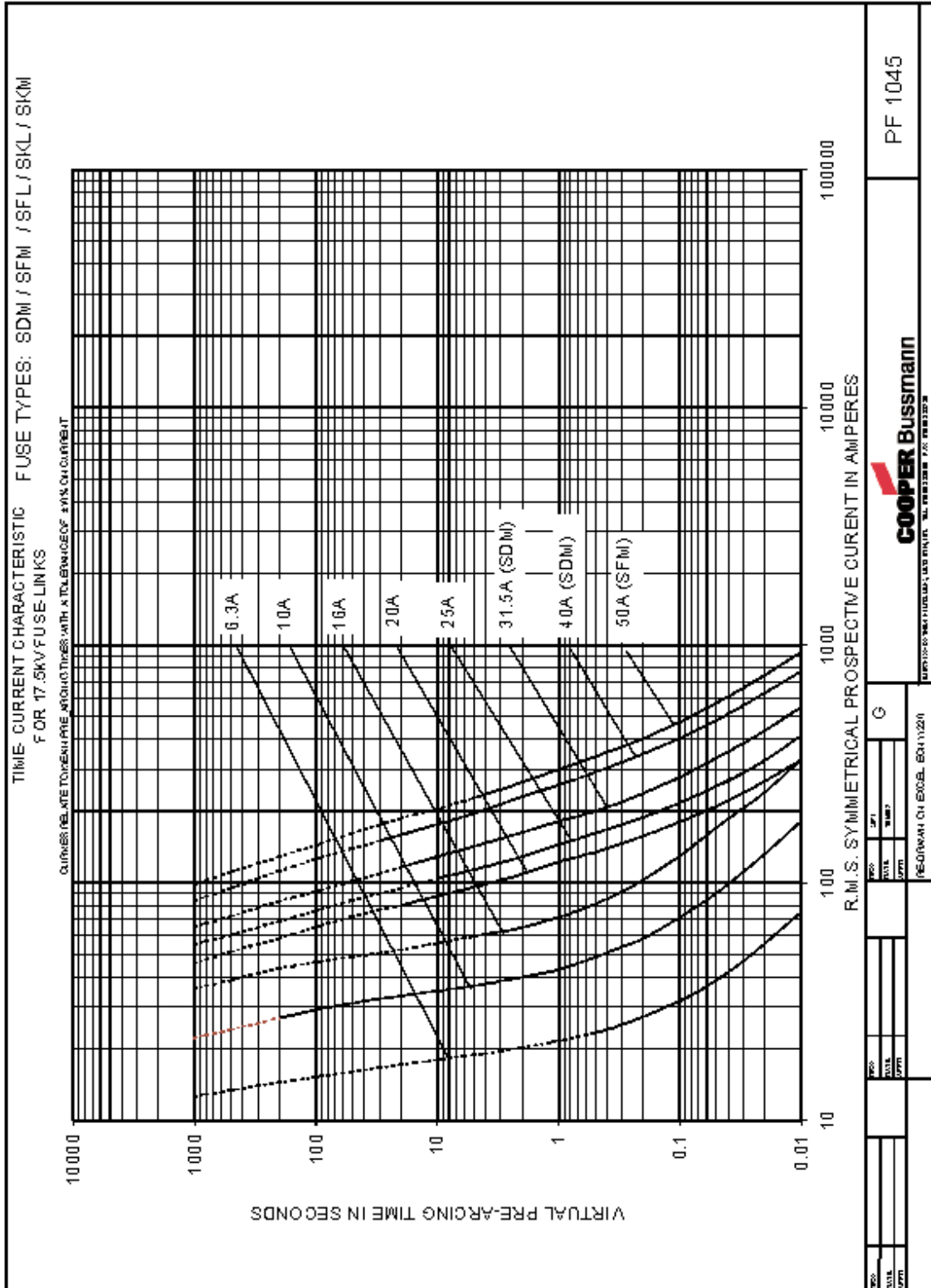
| Bussmann     | Bussmann   | EFEN       | SIBA       | MESA       | ETI        | Merlin Gerin | eilmann    | INASEL     | ABB        |
|--------------|------------|------------|------------|------------|------------|--------------|------------|------------|------------|
| Part Number  | Watts Loss | Watts Loss | Watts Loss | Watts loss | Watts Loss | Watts Loss   | Watts Loss | Watts Loss | Watts Loss |
| 17.5DLSJ6.3  | 15         | -          | 25         | -          | -          | -            | -          | -          | 54         |
| 17.5DLSJ10   | 23         | -          | 48         | 23         | -          | 23           | -          | -          | 41         |
| 17.5DLSJ16   | 34         | -          | 37         | 47         | -          | 47           | -          | -          | 67         |
| 17.5DLSJ20   | 38         | -          | 40         | -          | -          | -            | -          | -          | 52.6       |
| 17.5DLSJ25   | 48         | -          | 56         | 72         | -          | 72           | -          | -          | 64         |
| 17.5DLSJ31.5 | 58         | -          | 65         | 78         | -          | 78           | -          | -          | 56.7       |
| 17.5DLSJ40   | 76         | -          | 84         | 90         | -          | 90           | -          | -          | 80         |
| 17.5TFLSJ50  | 62         | -          | 101        | -          | -          | -            | -          | -          | 90         |
| 17.5DMEJ6.3  | 14         | -          | 31         | -          | -          | -            | -          | -          | 54         |
| 17.5DMEJ10   | 24         | -          | 48         | -          | -          | -            | -          | -          | 41         |
| 17.5DMEJ16   | 23         | -          | 37         | -          | -          | -            | -          | -          | 67         |
| 17.5DMEJ20   | 27         | -          | 42         | -          | -          | -            | -          | -          | 52.6       |
| 17.5DMEJ25   | 34         | -          | 56         | -          | -          | -            | -          | -          | 64         |
| 17.5DMEJ31.5 | 41         | -          | 69         | -          | -          | -            | -          | -          | 56.7       |
| 17.5DMEJ40   | 53         | -          | 84         | -          | -          | -            | -          | -          | 80         |
| 17.5DMEJ50   | 69         | -          | 101        | -          | -          | -            | -          | -          | 90         |
| 17.5DMEJ63   | 89         | -          | 106        | -          | -          | -            | -          | -          | 100        |
| 17.5THMEJ80  | 106        | -          | 137        | -          | -          | -            | -          | -          | 124        |
| 17.5THMEJ100 | 128        | -          | 182        | -          | -          | -            | -          | -          | 136        |
| 17.5TKMEJ125 | 146        | -          | 229        | -          | -          | -            | -          | -          | 175        |

# MEDIUM VOLTAGE DIN Fuse-Links

17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

MV DIN

## Time Current Curves



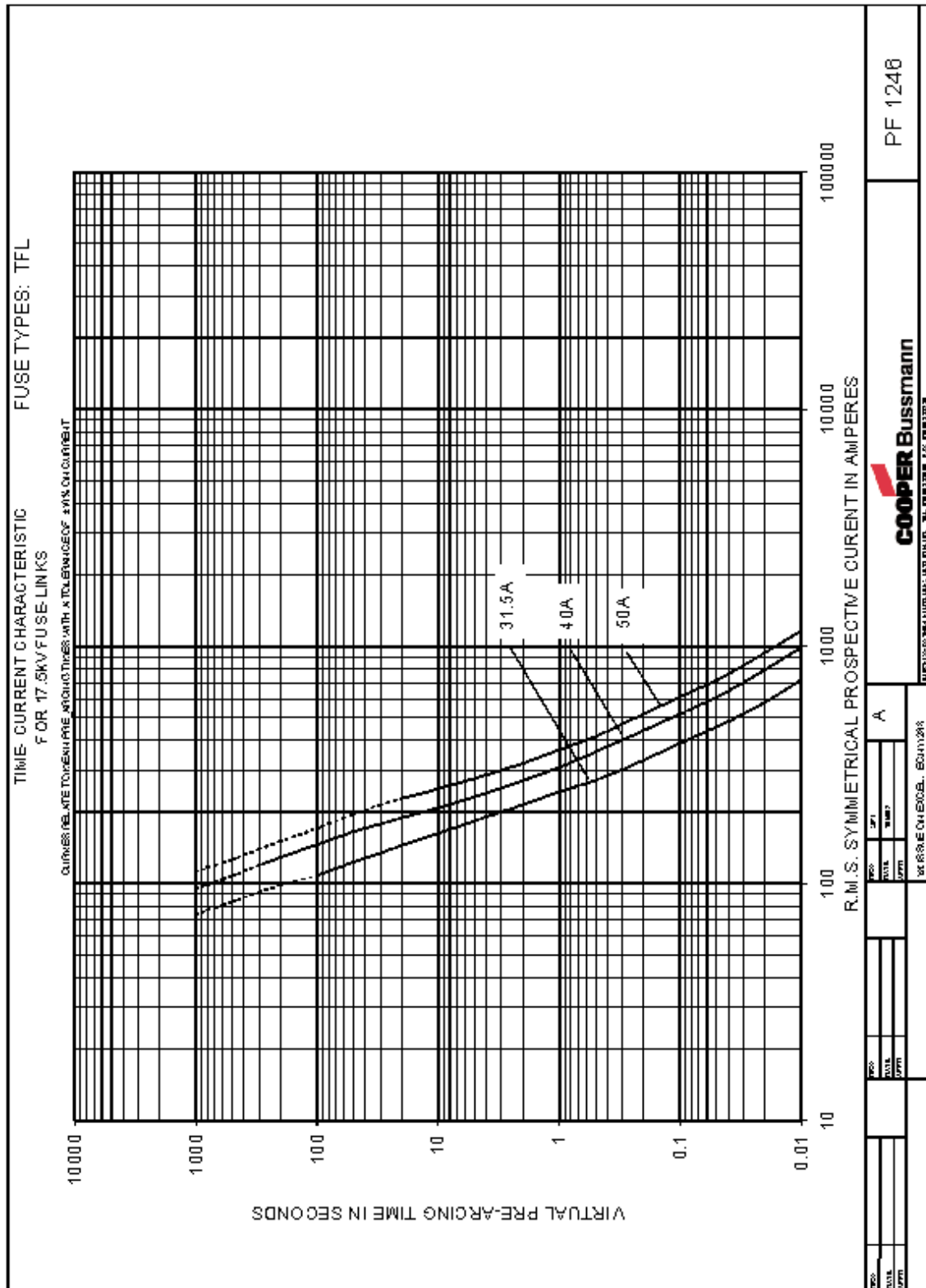


# MEDIUM VOLTAGE DIN Fuse-Links

17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

**MV DIN**

## Time Current Curves

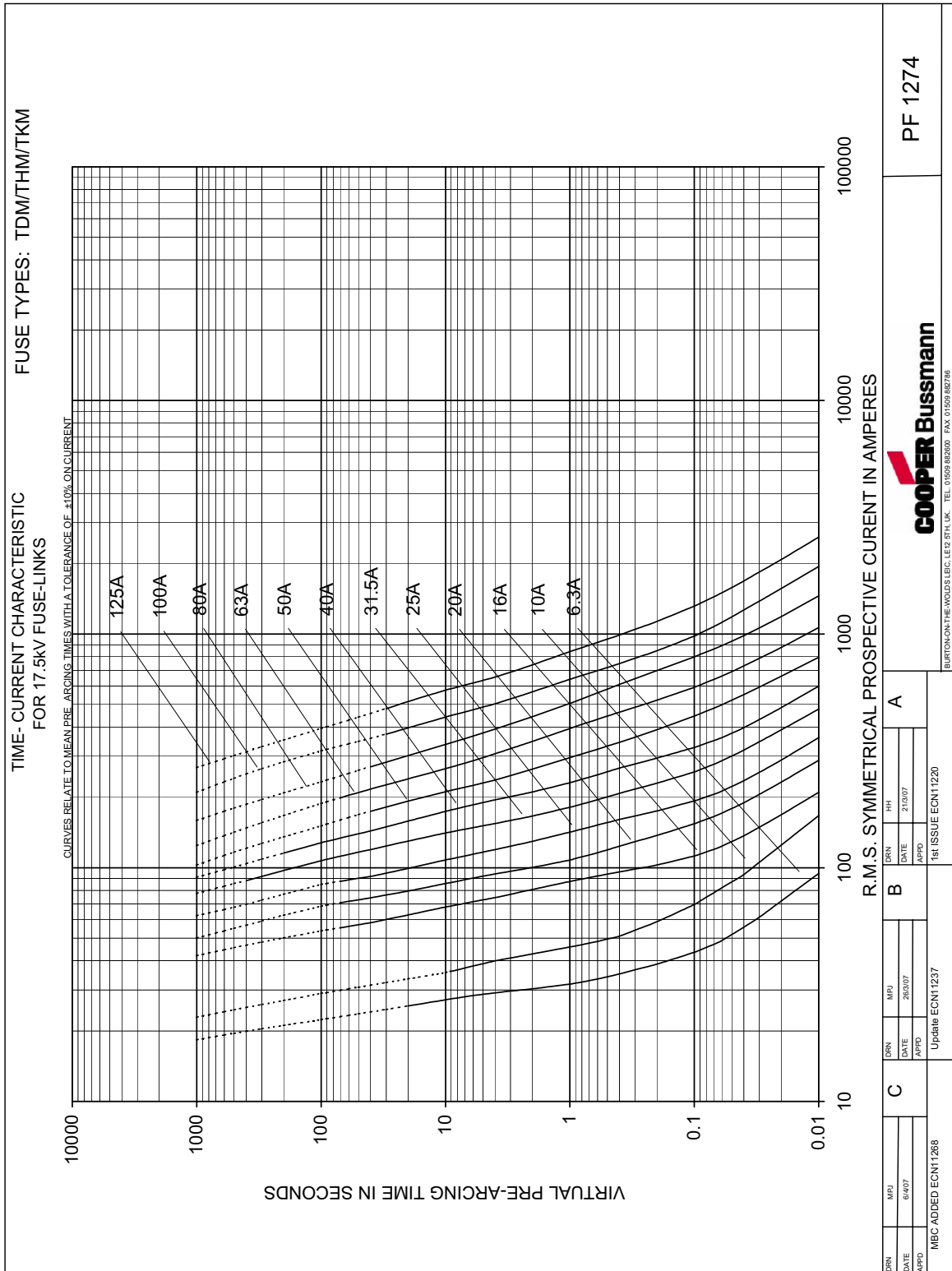


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17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

**MV DIN**

## Time Current Curves

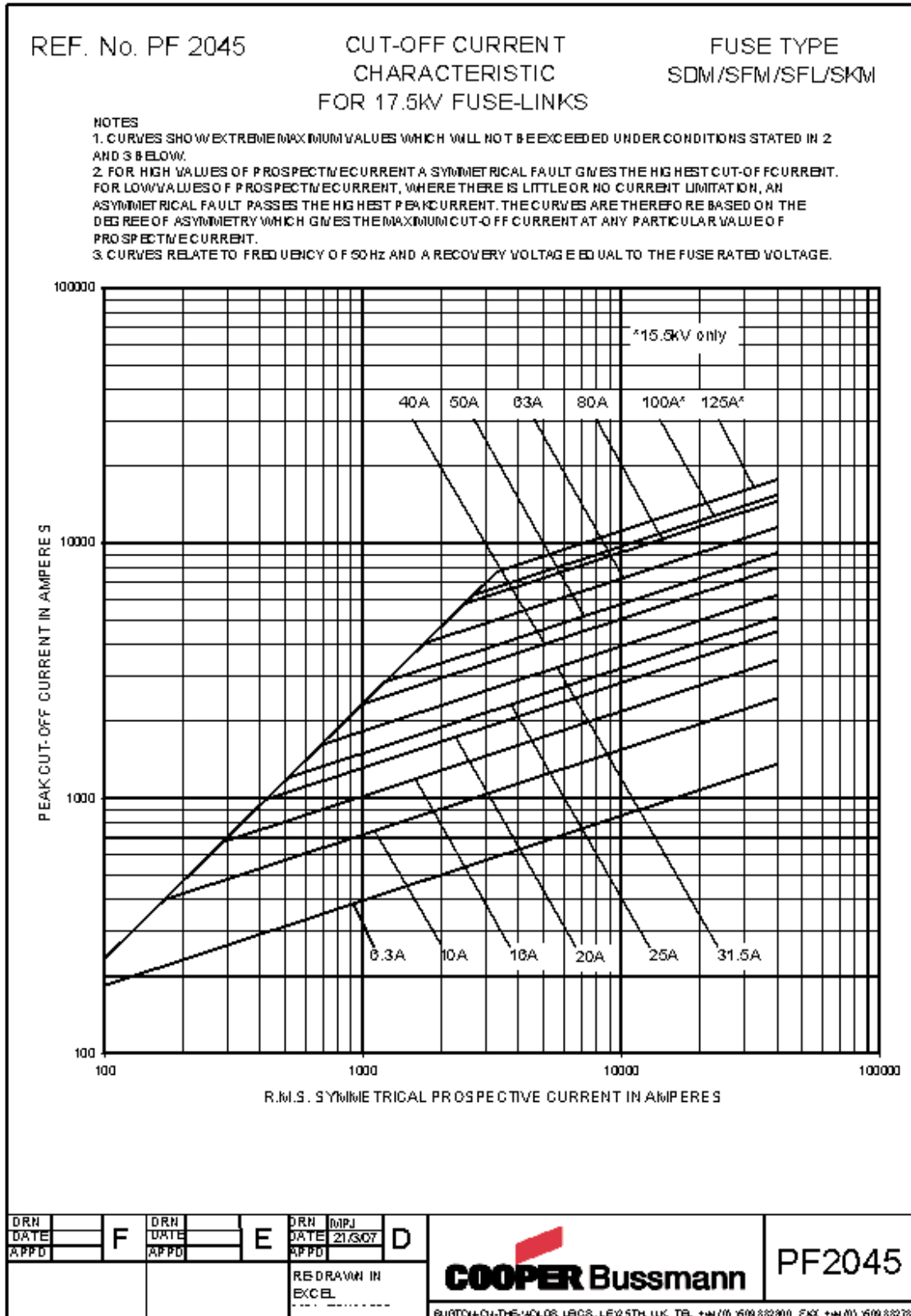


# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

**MV DIN**

### Cut-Off Characteristics



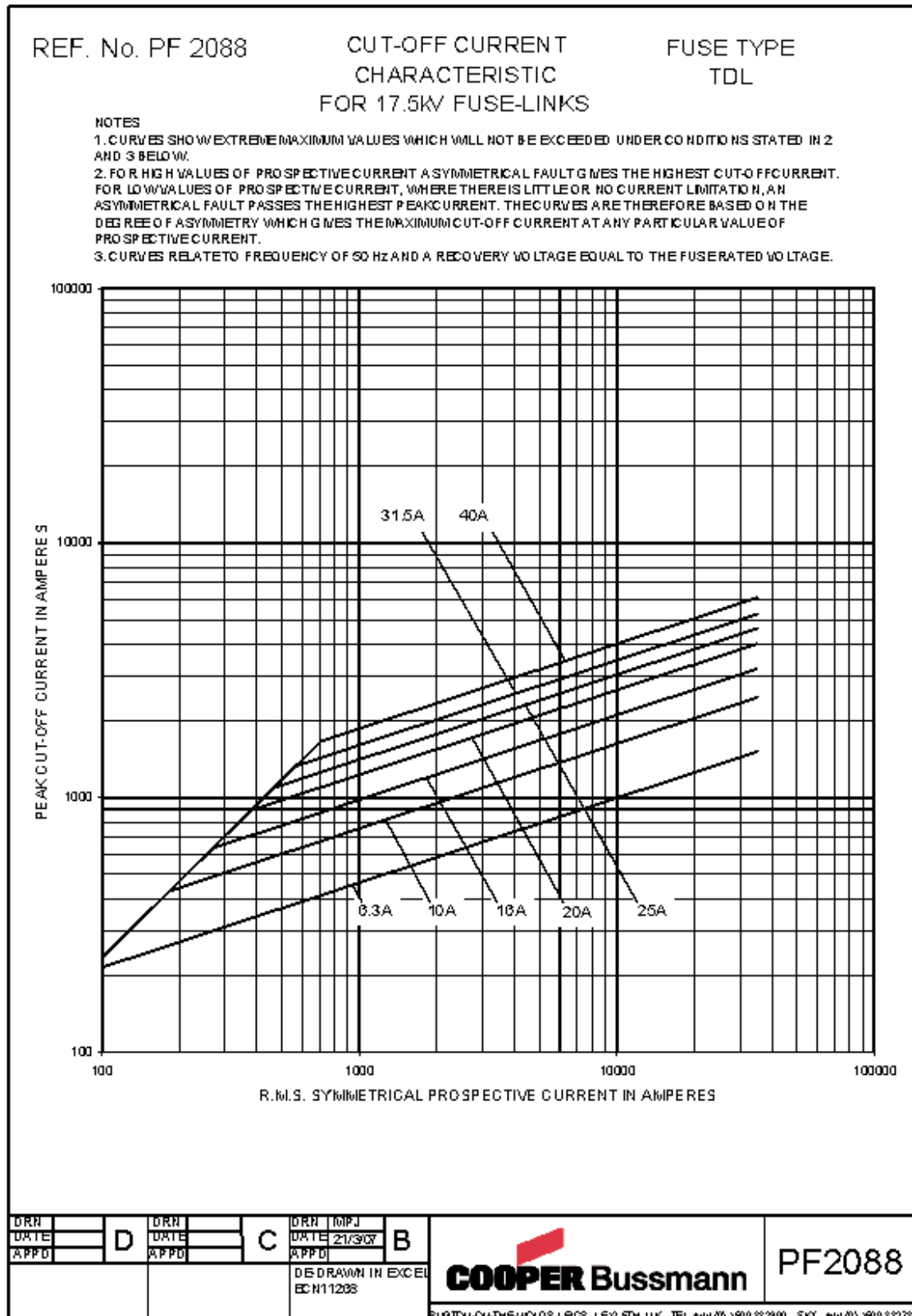


# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

**MV DIN**

### Cut-Off Characteristics

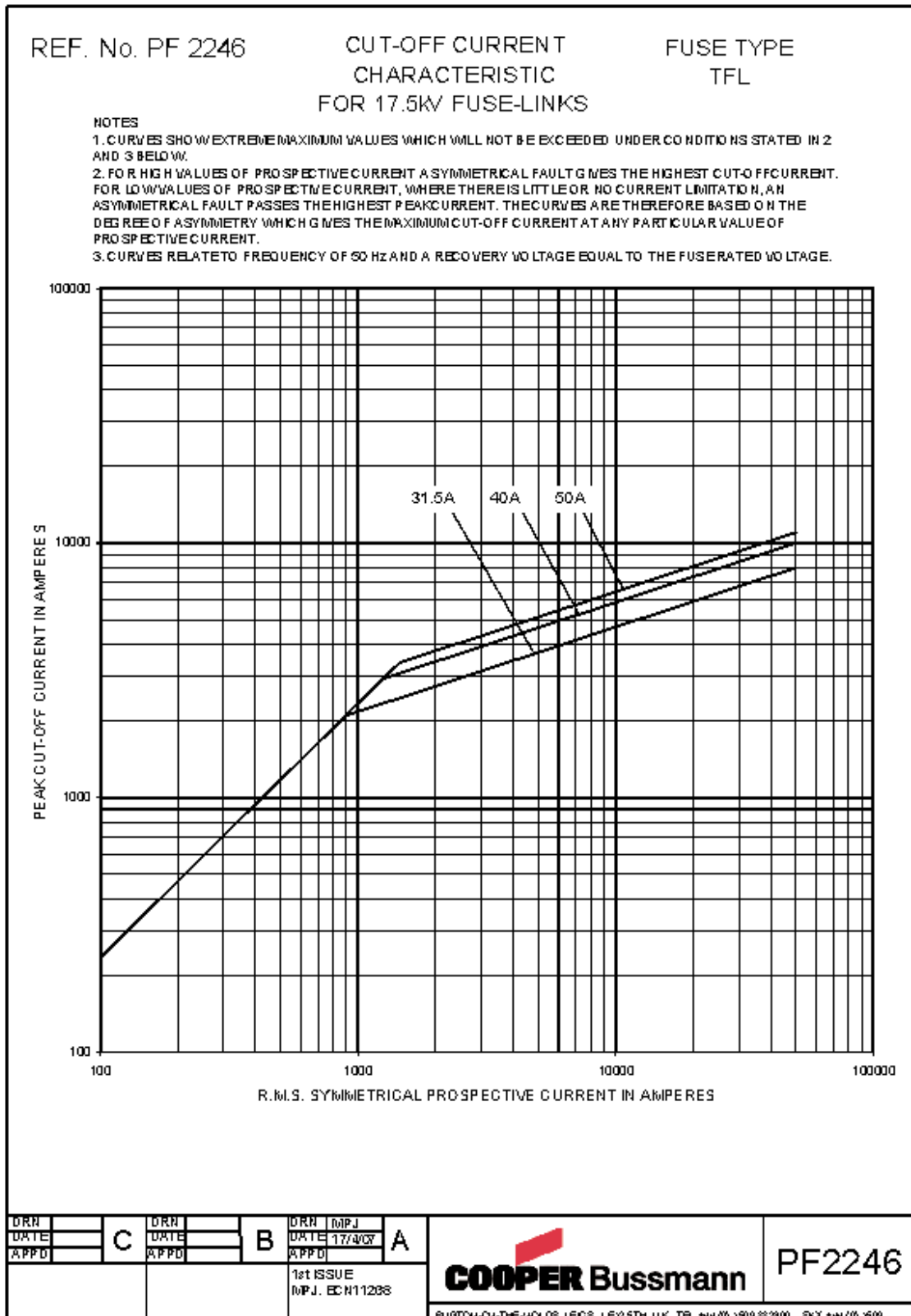


# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

**MV DIN**

### Cut-Off Characteristics



# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

MV DIN

ASTA Certificate

# ASTA

## CERTIFICATE OF SELECTED TYPE TESTS

Laboratory Ref. No: DHK007-02

**Certificate No. 16596**

**APPARATUS:** Eight Homogeneous Series of Air Insulated High Voltage Current Limiting Back-up Fuses Fitted with Spring Operated Medium Striker Devices.

| Ratings :- | Series 1, Type 17.5TDMEJ6.3 | Rated Voltage 17.5kV | Rated Current 6.3A  | Rated Frequency 50Hz |
|------------|-----------------------------|----------------------|---------------------|----------------------|
|            | Series 2, Type 17.5TDMEJ10  | Rated Voltage 17.5kV | Rated Current 10A   | Rated Frequency 50Hz |
|            | Series 3, Type 17.5TDMEJ16  | Rated Voltage 17.5kV | Rated Current 16A   | Rated Frequency 50Hz |
|            | Type 17.5TDMEJ20            | Rated Voltage 17.5kV | Rated Current 20A   | Rated Frequency 50Hz |
|            | Type 17.5TDMEJ25            | Rated Voltage 17.5kV | Rated Current 25A   | Rated Frequency 50Hz |
|            | Type 17.5TDMEJ31.5          | Rated Voltage 17.5kV | Rated Current 31.5A | Rated Frequency 50Hz |
|            | Type 17.5TDMEJ40            | Rated Voltage 17.5kV | Rated Current 40A   | Rated Frequency 50Hz |
|            | Series 4, Type 17.5TDMEJ50  | Rated Voltage 17.5kV | Rated Current 50A   | Rated Frequency 50Hz |
|            | Series 5, Type 17.5TDMEJ63  | Rated Voltage 17.5kV | Rated Current 63A   | Rated Frequency 50Hz |
|            | Series 6, Type 17.5THMEJ80  | Rated Voltage 17.5kV | Rated Current 80A   | Rated Frequency 50Hz |
|            | Series 7, Type 17.5THMEJ100 | Rated Voltage 17.5kV | Rated Current 100A  | Rated Frequency 50Hz |
|            | Series 8, Type 17.5TKMEJ125 | Rated Voltage 17.5kV | Rated Current 125A  | Rated Frequency 50Hz |

**DESIGNATION:** Types "17.5TDMEJ6.3 to 63, 17.5THMEJ80 to 100, 17.5TKMEJ125"

**MANUFACTURER:** Cooper Bussmann India Private Limited, Evr Street, Sedarapet, Pondicherry - 605111, India.

**TESTED BY:** Dean H. Klohr Low Power Test Facility, Burton-on-the-Wolds, Loughborough, Leicestershire, LE12 5TH, United Kingdom.

**DATE OF TESTS:** 12th October 2006 to 15th February 2007

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with

- IEC 60282-1:2005**
- Sub-clause 6.5 - Temperature-rise tests and power-dissipation measurement
  - Sub-clause 6.7 - Tests for time-current characteristics
  - Sub-clause 6.8 - Tests of strikers
  - Sub-clause 7.3 - Thermal shock tests
  - Sub-clause 7.5 - Waterproof test - (ingress of moisture)
  - Sub-clause 7.6.2 - Pre-arcing temperature rise tests

The results are shown in the Record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard(s) and to justify the ratings and characteristics assigned by the manufacturer as listed on page number 1.

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

This Certificate comprises 55 pages, 1 diagram, 3 oscillograms, 7 photographs, 16 drawings and no other sheets as detailed in page 2.

Only integral reproduction of this Certificate, or reproductions of this page accompanied by any page(s) on which are stated the assigned rated characteristics of the apparatus tested, are permitted without written permission from ASTA BEAB Certification Services, Hilton House, Corporation Street, Rugby. CV21 2DN England.



010

*J. Gould* ..... **ASTA Observer**  
J. Gould

*C. Diack-Evans* ..... **Director**  
C. Diack-Evans

20th April 2007 ..... **Date**

# MEDIUM VOLTAGE DIN Fuse-Links

17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

MV DIN

## KEMA Certificate



**Type test Certificate of breaking performance**

**Cooper Bussmann India Private Limited**  
Sedarapet, Pondicherry, India

has successfully passed the type test sequence on

**Current limiting fuses**

Type: 17.5TDLEJ6.3, 17.5TDMEJ6.3, 17.5TDLEJ10, 17.5TDMEJ10, 17.5TDMEJ16, 17.5TDMEJ20, 17.5TDMEJ25, 17.5TDMEJ31.5, 17.5TDMEJ40, 17.5TDMEJ50, 17.5TDMEJ63, 17.5THMEJ80, 17.5THMEJ100, 17.5TKMEJ125

Rating: 17,5 kV – 50 kA – 50 Hz

The test object passed the specification of test duties of

**IEC 60282-1**

The test results are recorded in Certificate No.

**104-06**

This Certificate is issued on 17 April 2007

KEMA Nederland B.V.



P.G.A. Bus  
KEMA T&D Testing Services  
Managing Director



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Please note that this document has been issued for information purposes only, and that the original bound and sealed paper copy of the Certificate including the results of the tests of the apparatus will prevail. This document does not imply that KEMA has certified or approved any apparatus other than the specimen tested.


Experience you can trust.

# MEDIUM VOLTAGE DIN Fuse-Links

## 17.5kV, Current Limiting Back-Up Fuse-Links, 6.3 to 125 Amps

MV DIN

### KEMA Certificate


104-06

### TYPE TEST CERTIFICATE OF BREAKING PERFORMANCE

**APPARATUS** Current limiting fuses

| Designation                    | Rated voltage | Rated breaking capacity | Rated current | Minimum breaking current | Rated frequency |
|--------------------------------|---------------|-------------------------|---------------|--------------------------|-----------------|
|                                | kV            | kA                      | A             | A                        | Hz              |
| 17.5TDLEJ6.3, 17.5TDMEJ6.3 (1) | 17,5          | 50                      | 6,3           | 25                       | 50              |
| 17.5TDLEJ10, 17.5TDMEJ10 (1)   | 17,5          | 50                      | 10            | 36                       | 50              |
| 17.5TDMEJ16 (1)                | 17,5          | 50                      | 16            | 55                       | 50              |
| 17.5TDMEJ20 (1)                | 17,5          | 50                      | 20            | 69                       | 50              |
| 17.5TDMEJ25 (1)                | 17,5          | 50                      | 25            | 87                       | 50              |
| 17.5TDMEJ31.5 (1)              | 17,5          | 50                      | 31,5          | 87                       | 50              |
| 17.5TDMEJ40 (1)                | 17,5          | 50                      | 40            | 111                      | 50              |
| 17.5TDMEJ50                    | 17,5          | 50                      | 50            | 174                      | 50              |
| 17.5TDMEJ63                    | 17,5          | 50                      | 63            | 200                      | 50              |
| 17.5THMEJ80                    | 17,5          | 50                      | 80            | 270                      | 50              |
| 17.5THMEJ100                   | 17,5          | 50                      | 100           | 376                      | 50              |
| 17.5TKMEJ125                   | 17,5          | 50                      | 125           | 467                      | 50              |

(1) See notes on page 7.

**MANUFACTURER** Cooper Bussmann India Private Limited,  
Sedarapet, Pondicherry, India

**TESTED FOR** Cooper Bussmann (UK) Limited,  
Burton-on-the-Wolds, United Kingdom

**TESTED BY** KEMA HIGH-POWER LABORATORY  
Utrechtseweg 310 - 6812 AR Arnhem - The Netherlands

**DATE(S) OF TESTS** 6, 7, 8 September 2006 and 15, 16 January, 1 February 2007

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with

**IEC 60282-1** clause 6.6 (test duty 1, 2 and 3).

This Type Test Certificate has been issued by KEMA following exclusively the STL Guides.

**The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard and to justify the ratings assigned by the manufacturer as listed on page 6.**


The Certificate applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

This Certificate consists of 195 sheets in total.

This Certificate falls under the scope of the accreditation certificate L 020 of the Dutch Council for Accreditation. See information sheet (page 2).

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KEMA Nederland B.V.



P.G.A. Bus  
KEMA T&D Testing Services  
Managing Director

Arnhem, 17 April 2007