MEDIUM VOLTAGE DIN Fuse-Links
24kV, Current Limiting Back-Up Fuse-Links, 6.3 to 160 Amps

Catalogue Symbol: 24TDMEJ(amp)
24THMEJ(amp)
24TFMEJ(amp)
24TXMEJ(amp)

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

Dimensional Data:

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<th>A</th>
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<th>D</th>
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EJ Outline

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

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 individually.
MOQ: 3
Packaging 100% recyclable

Technical Data:
DIN fuse-links
Rated voltage: 10kV - 24kV
Amps: 6.3A to 160A
Rated breaking capacity: 50kA to 63kA
Rated frequency: 50 Hz
Suitable for outdoor and indoor use
RoHS compliant
### 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 and 160 Amps

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* Not compliant with VDE 0670 part 402

### Cross-Reference

**Bussmann**
- 24TDMF, 24TFM, 24TMF, 24TME, 24TXXME

**EFEN**
- 24TFMEJ100* 24TXMEJ125 24TXMEJ160* 24TXMEJ160

**SIBA**
- 24TDMEJ6.3 24TDMEJ10 24TDMEJ16 24TDMEJ20 24TDMEJ25 24TDMEJ31.5 24TDMEJ40 24TDMEJ50 24THMEJ63 24TMEJ80 24TFMEJ100* 24TXMEJ125 24TXMEJ160

**MESA**
- (80N Striker)

**ETI**
- (63N Striker)

**Merlin Gerin**
- (80N Striker)

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### Watts Loss Comparison

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**MESA Watts loss**

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Time Current Curves

Time-Current Characteristic for 24kV Fuse-Links

Fuse Types: TFM / TXM

Curves relate to mean pre-arcing times with a tolerance of ±10% on current

R.M.S. Symmetrical Prospective Current in Amperes

Virtual Pre-Arcing Time in Seconds
MEDIUM VOLTAGE DIN Fuse-Links
24kV, Current Limiting Back-Up Fuse-Links, 6.3 to 160 Amps

Time Current Curves

![Diagram of Time Current Curves]

Fuse Types: TDM/THM/TFM

Curves relate to mean pre-arcing times with a tolerance of ±10% on current
Cut-Off Curves

MEDIUM VOLTAGE DIN Fuse-Links
24kV, Current Limiting Back-Up Fuse-Links, 6.3 to 160 Amps

REF. No. PF 2276
CUT-OFF CURRENT
CHARACTERISTIC
FOR 24kV FUSE-LINKS

FUSE TYPE
TDM/THM/TFM

NOTES
1. CURVES SHOW EXTREME MAXIMUM VALUES WHICH WILL NOT BE EXCEEDED UNDER CONDITIONS STATED IN 2
   AND 3 BELOW.
2. FOR HIGH VALUES OF PROSPECTIVE CURRENT A SYMMETRICAL FAULT GIVES THE HIGHEST CUT-OFF CURRENT.
   FOR LOW VALUES OF PROSPECTIVE CURRENT, WHERE THERE IS LITTLE OR NO CURRENT LIMITATION, AN
   ASYMMETRICAL FAULT PASSES THE HIGHEST PEAK CURRENT. THE CURVES ARE THEREFORE BASED ON THE
   DEGREE OF ASYMMETRY WHICH GIVES THE MAXIMUM CUT-OFF CURRENT AT ANY PARTICULAR VALUE OF
   PROSPECTIVE CURRENT.
3. CURVES RELATE TO FREQUENCY OF 50 Hz AND A RECOVERY VOLTAGE EQUAL TO THE FUSE RATED VOLTAGE.
Cut-Off Curves

REF. No. PF 2236

CUT-OFF CURRENT CHARACTERISTIC FOR 24kV FUSE-LINKS

NOTES
1. CURVES SHOW EXTREME MAXIMUM VALUES WHICH WILL NOT BE EXCEEDED UNDER CONDITIONS STATED IN 2 AND 3 BELOW.
2. FOR HIGH VALUES OF PROSPECTIVE CURRENT A SYMMETRICAL FAULT GIVES THE HIGHEST CUT-OFF CURRENT. FOR LOW VALUES OF PROSPECTIVE CURRENT, WHERE THERE IS LITTLE OR NO CURRENT LIMITATION, AN ASYMMETRICAL FAULT PASSES THE HIGHEST PEAK CUTOFF CURRENT. THE CURVES ARE THEREFORE BASED ON THE DEGREE OF ASYMMETRY WHICH GIVES THE MAXIMUM CUT-OFF CURRENT AT ANY PARTICULAR VALUE OF PROSPECTIVE CURRENT.
3. CURVES RELATE TO FREQUENCY OF 50 Hz AND A RECOVERY VOLTAGE EQUAL TO THE FUSE RATED VOLTAGE.
MEDIUM VOLTAGE DIN Fuse-Links
24kV, Current Limiting Back-Up Fuse-Links, 6.3 to 160 Amps

ASTA Certificate

ASTA
CERTIFICATE OF SELECTED TYPE TESTS

Laboratory Ref. No: DHK007-03

Certificate No. 16597

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

- Series 1: Type 24TDMEJ6.3 Rated Voltage 24kV; Rated Current 6.3A; Rated Frequency 50Hz.
- Series 2: Type 24TDMEJ10 Rated Voltage 24kV; Rated Current 10A; Rated Frequency 50Hz.
- Series 3: Type 24TDMEJ16 Rated Voltage 24kV; Rated Current 16A; Rated Frequency 50Hz.
- Type 24TDMEJ20 Rated Voltage 24kV; Rated Current 20A; Rated Frequency 50Hz.
- Type 24TDMEJ25 Rated Voltage 24kV; Rated Current 25A; Rated Frequency 50Hz.
- Type 24TDMEJ31.5 Rated Voltage 24kV; Rated Current 31.5A; Rated Frequency 50Hz.
- Type 24TDMEJ40 Rated Voltage 24kV; Rated Current 40A; Rated Frequency 50Hz.
- Series 4: Type 24TDMEJ50 Rated Voltage 24kV; Rated Current 50A; Rated Frequency 50Hz.
- Series 5: Type 24TFMEJ60 Rated Voltage 24kV; Rated Current 60A; Rated Frequency 50Hz.
- Series 6: Type 24TFMEJ80 Rated Voltage 24kV; Rated Current 80A; Rated Frequency 50Hz.

DESIGNATION:
Types "24TDMEJ6.3 to 50, 24THMEJ60, 24TFMEJ80"

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 50292-1:2008

- 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 46 pages, 1 diagram, 3 oscillograms, 7 photographs, 12 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.

ASTA Observer
J. Gould

Director
C. Dack-Evans

Date
KEMA Certificate

Type test Certificate of breaking performance

Cooper Bussmann India
Private Limited
Sedarapeet, Pondicherry, India

has successfully passed the type test sequence on

Current limiting fuses


Rating: 24 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.

136-06

This Certificate is issued on 17 April 2007

KEMA Nederland B.V.

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

Copyright © KEMA Nederland B.V.
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.
MEDIUM VOLTAGE DIN Fuse-Links
24kV, Current Limiting Back-Up Fuse-Links, 6.3 to 160 Amps

KEMA Certificate

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<th>Rated breaking capacity kA</th>
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Form No. 24kV DIN
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Data sheet 720106
**MEDIUM VOLTAGE DIN Fuse-Links**

**24kV, Current Limiting Back-Up Fuse-Links, 6.3 to 160 Amps**

**KEMA Report**

### REPORT OF PERFORMANCE

#### 523-06

#### APPARATUS

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#### CLIENT

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

#### MANUFACTURER

Cooper Bussmann India Private Limited,
Sedaraspal, Pondicherry, India

#### TESTED BY

KEMA HIGH-POWER LABORATORY
Utrechtseweg 310 - 8812 AR Arnhem - The Netherlands

#### DATE(S) OF TESTS

19 October 2008

#### TEST SPECIFICATION

The tests have been carried out in accordance with the client's instructions. Test procedure and test parameters were based on IEC 60282-1.

This report consists of 20 sheets in total.

This report falls under the scope of the accreditation certificate L 029 of the Dutch Council for Accreditation.

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

Arnhem, 17 April 2007

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This report of performance details 24kV DIN rated fuse-links tested in accordance with IEC60282-1:2005 to demonstrate correct operation on a 12kV system.
This report of performance details 24kV DIN rated fuse-links tested in accordance with IEC60282-1:2005 to demonstrate correct operation on a 25kV system