

MEDIUM VOLTAGE DIN Fuse-Links

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

MV DIN



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

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

Dimensional Data:

Fuse Reference	A	C	D	Weight (Kg)
TDMEJ	442	54	51	2.5
THMEJ	442	67	64	3.7
TFMEJ	442	80	76	5.1
TXMEJ	442	88	88	5.9

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.

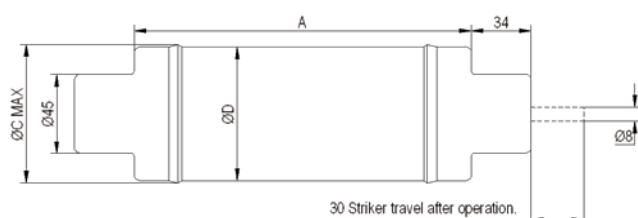
Packaging:

All fuse-links are packed individually.
MOQ: 3
Packaging 100% recyclable

Technical Data:

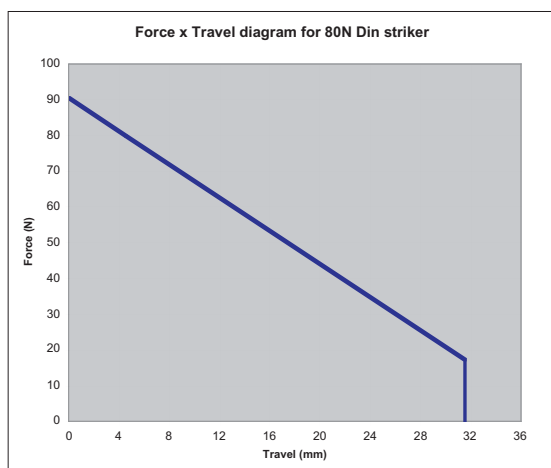
DIN fuse-links
Rated voltage: 10kV - 24kV
Amps: 6.3A to 160A
Rated breaking capacity: 50kA to 63kA
Rated frequency: 50 Hz
Suitable for outdoor and indoor use
RoHS compliant

EJ Outline



Striker Diagram:

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



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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

Part Number	Current Rating I_n (A)	Breaking Capacity I_1 (kA)	Minimum Breaking Capacity I_3 (A)	Cold Resistance & Watts Loss in Free Air		Joule Integral (I^2t)		Length mm	Diameter mm	Weight kg
				mΩ	W	Minimum Pre-Arcing	Maximum Operating			
24TDMEJ6.3	6.3	50	23	444	20	9.8×10^1	1.0×10^3	442	51	2.5
24TDMEJ10	10	50	34	262	32	2.8×10^2	2.3×10^3	442	51	2.5
24TDMEJ16	16	50	56	109	34	2.6×10^2	3.9×10^3	442	51	2.5
24TDMEJ20	20	50	73	78.2	38	5.2×10^2	5.4×10^3	442	51	2.5
24TDMEJ25	25	50	92	62.4	49	8.1×10^2	8.4×10^3	442	51	2.5
24TDMEJ31.5	31.5	50	92	46.8	59	1.4×10^3	1.5×10^4	442	51	2.5
24TDMEJ40	40	50	118	34.3	79	2.4×10^3	2.5×10^4	442	51	2.5
24TDMEJ50	50	50	185	27.0	98	2.8×10^3	3.1×10^4	442	51	2.5
24THMEJ63	63	50	217	21.1	127	4.3×10^3	4.7×10^4	442	64	3.7
24TFMEJ80	80	50	265	15.7	153	7.9×10^3	9.1×10^4	442	76	5.1
24TFMEJ100*	100	63	430	18.0	400	2.8×10^4	9.4×10^4	442	76	5.1
24TXMEJ125*	125	40	760	11.0	340	9.7×10^4	3.5×10^5	442	88	5.9
24TXMEJ160*	160	31.5	900	9.60	515	1.3×10^5	5.0×10^5	442	88	5.9

* Not compliant with VDE 0670 part 402

Cross-Reference

Bussmann	EFEN	SIBA	MESA	ETI (80N Striker)	ETI (50N Striker)	Merlin Gerin	eliman	INAE	ABB
24TDMEJ6.3	67140.0060	3000613	CF-24/6.3	4256005	4255005	51006 538 M0	ES 6513-006	IB-D1	1YMB531044M0001
24TDMEJ10	67140.0100	3000613	CF-24/10	4256006	4255006	51006 539 M0	ES 6513-010	IB-D1	1YMB531044M0002
24TDMEJ16	67140.0160	3000613	CF-24/16	4256007	4255007	51006 540 M0	ES 6513-016	IB-D1	1YMB531044M0003
24TDMEJ20	67140.0200	3000613	CF-24/20	4256008	4255008	51006 541 M0	ES 6513-020	IB-D1	1YMB531044M0004
24TDMEJ25	67140.0250	3000613	CF-24/25	4256009	4255009	51006 542 M0	ES 6513-025	IB-D1 & IB-D2	1YMB531004M0004
24TDMEJ31.5	67140.0320	3000613	CF-24/31.5	4256010	4255010	51006 543 M0	ES 6513-030	IB-D1 & IB-D2	1YMB531004M0012
24TDMEJ40	67140.0400	3000613	CF-24/40	4256011	4255011	51006 544 M0	ES 6513-040	IB-D1 & IB-D2	1YMB531004M0005
24TDMEJ50	67140.0500	3001413	CF-24/50	4253012	4255012	51006 545 M0	ES 6513-050	IB-D2	1YMB531004M0021
24THMEJ63	67140.0630	3001413	CF-24/63	4253013	4255013	51006 546 M0	ES 6513-063	IB-D2	1YMB531004M0022
24TFMEJ80	67140.0800	3001413	CF-24/80	4253014	4255014	51006 547 M0	ES 6513-080	IB-D3	1YMB531022M0001
24TFMEJ100	67240.1000	3002213	CF-24/100	4253015	4255015	51006 548 M0	ES 6513-100	IB-D3	1YMB531022M0002
24TXMEJ125	67240.1250	3002213	N/A	4253016	4255016	N/A	N/A	N/A	1YMB531022M0003
24TXMEJ160	67240.1600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Watts Loss Comparison

Lowest Watts Loss

Bussmann	Bussmann	EFEN	SIBA	MESA	ETI	Merlin Gerin	eliman	INAE	ABB
Part Number	Watts Loss	Watts Loss	Watts Loss	Watts Loss	Watts Loss	Watts Loss	Watts Loss	Watts Loss	Watts Loss
24TDMEJ6.3	20	32	31	25	29	25	38	20	91
24TDMEJ10	32	48	52	31	19	31	36	42	62
24TDMEJ16	34	43	59	58	33	58	70	57	72
24TDMEJ20	38	53	46	67	47	67	73	60	61
24TDMEJ25	49	64	56	79	61	79	78	64	79
24TDMEJ31.5	59	85	72	96	81	96	83	77	98
24TDMEJ40	79	103	106	119	97	119	113	115	106
24TDMEJ50	99	146	108	136	81	136	148	112	130
24THMEJ63	127	163	132	144	125	144	178	140	147
24THMEJ80	155	196	174	200	151	200	215	225	165
24TFMEJ100	400	400	234	240	228	240	224	260	186
24TXMEJ125	340	340	320		301	-	-	-	234
24TXMEJ160	515	515				-	-	-	-

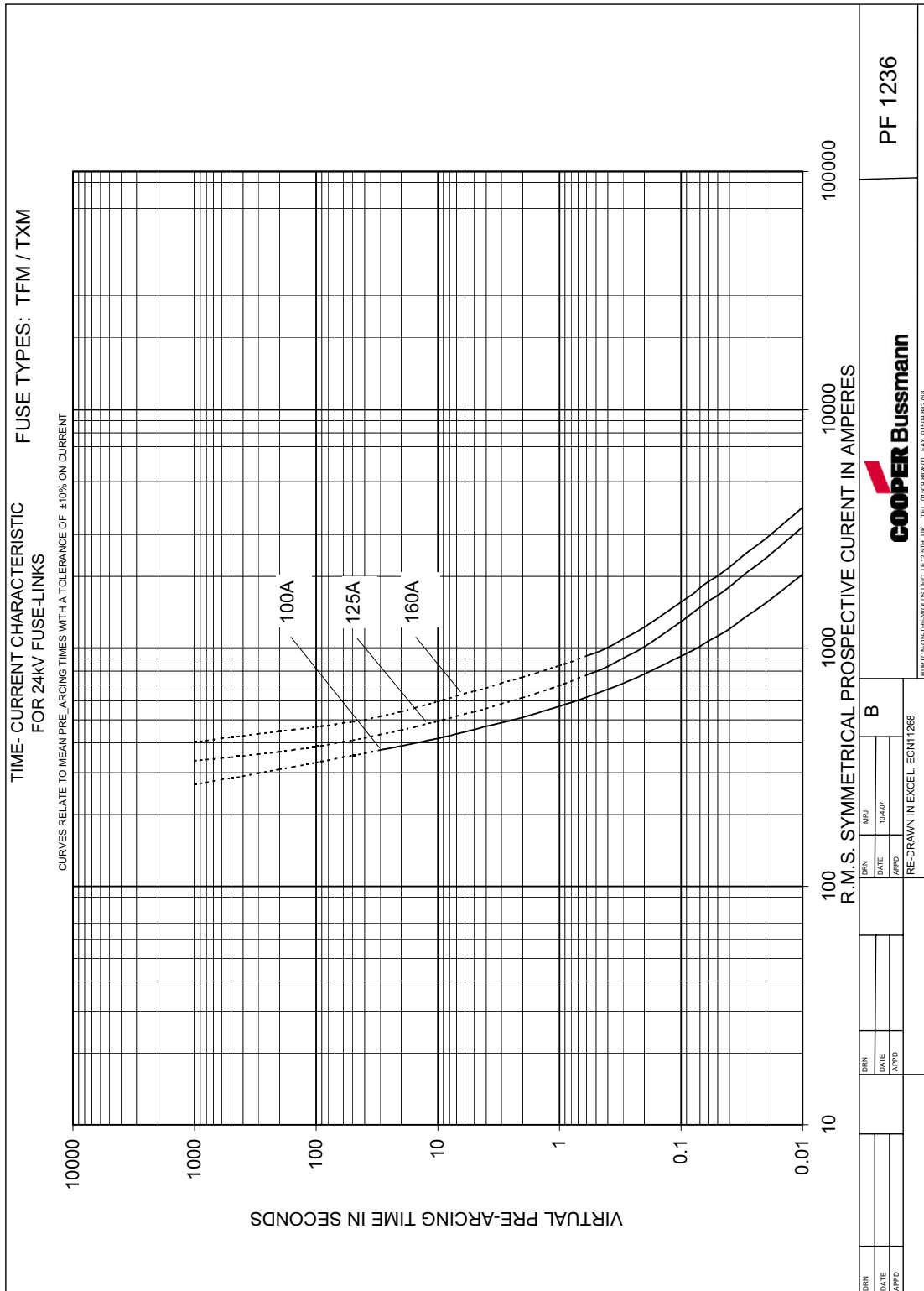


MEDIUM VOLTAGE DIN Fuse-Links

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

MV DIN

Time Current Curves

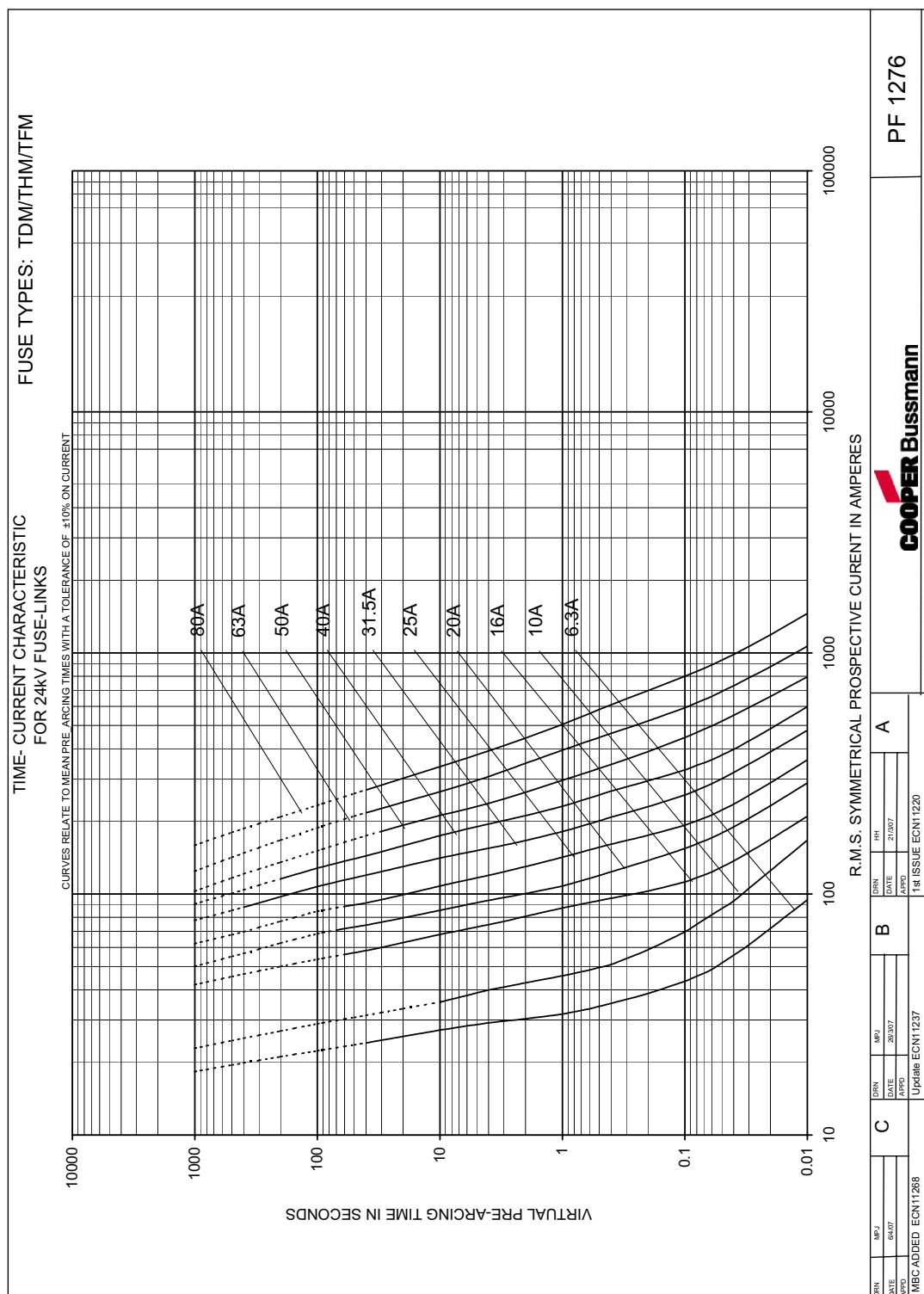


MEDIUM VOLTAGE DIN Fuse-Links

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MV DIN

Time Current Curves



MEDIUM VOLTAGE DIN Fuse-Links

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

MV DIN

Cut-Off Curves

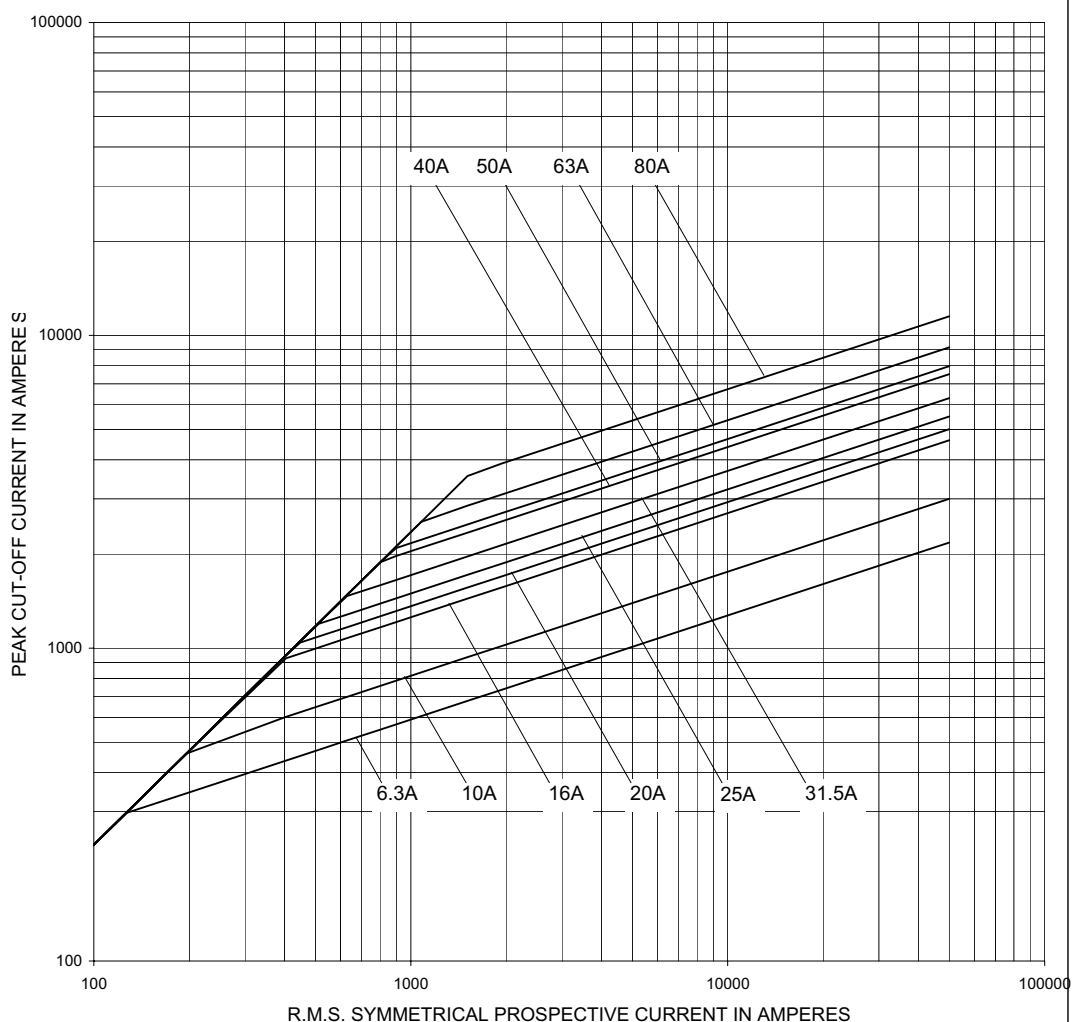
REF. No. PF 2276

**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.



DRN		DRN		DRN	MPJ		
DATE		DATE		DATE	21/3/07		
APPD		APPD		APPD			
C		B		A			
				1st ISSUE MPJ ECN11220		COOPER Bussmann	
						PF2276	

BURTON-ON-THE-WOLDS, LEICS., LE12 5TH, U.K. TEL +44 (0) 1509 882600 FAX +44 (0) 1509 882786

MEDIUM VOLTAGE DIN Fuse-Links

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

MV DIN

Cut-Off Curves

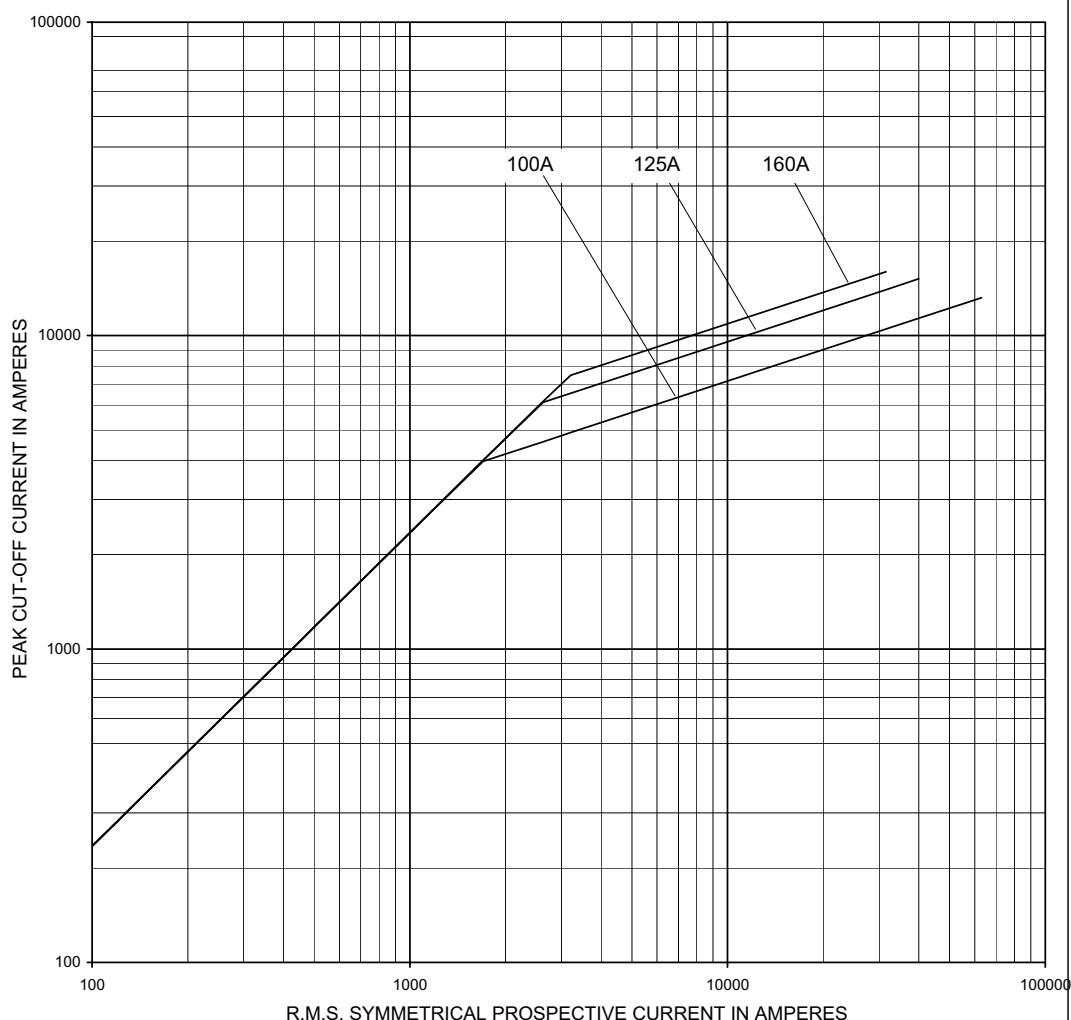
REF. No. PF 2236

CUT-OFF CURRENT
CHARACTERISTIC
FOR 24kV FUSE-LINKS

FUSE TYPE
TFM TXM

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.



DRN		DRN		DRN	MPJ	A		PF2236
DATE		DATE		DATE	20/4/07			
APPD	C	APPD	B	APPD				
			1st ISSUE MPJ ECN11268			BURTON-ON-THE-WOLDS, LEICS., LE12 5TH, U.K. TEL +44 (0) 1509 882600 FAX +44 (0) 1509 882786		

MEDIUM VOLTAGE DIN Fuse-Links

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

MV DIN

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.

Ratings -	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 24THMEJ63	Rated Voltage 24kV	Rated Current 63A	Rated Frequency 50Hz.
	Series 6.	Type 24TFMEJ80	Rated Voltage 24kV	Rated Current 80A	Rated Frequency 50Hz.

DESIGNATION: Types "24TDMEJ6.3 to 50, 24THMEJ63, 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 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 48 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.



010

J. Gould **ASTA Observer**
J. Gould
C. Diack-Evans **Director**
C. Diack-Evans
20th April 2007 **Date**

MEDIUM VOLTAGE DIN Fuse-Links

24kV, Current Limiting Back-Up Fuse-Links, 6.3 to 160 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: 24TDMEJ6.3, 24TDMEJ10, 24TDMEJ16, 24TDMEJ20,
24TDMEJ25, 24TDMEJ31.5, 24TDMEJ40, 24TDMEJ50,
24THMEJ63, 24TFMEJ80

Rating: 24 kV – 50 kA – 50 Hz

The test object passed the specification of test duties of

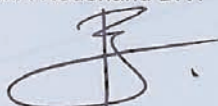
IEC 60282-1

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

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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

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

MV DIN

KEMA Certificate



136-06

TYPE TEST CERTIFICATE OF BREAKING PERFORMANCE

APPARATUS Current limiting fuses

Designation	Rated voltage kV	Rated breaking capacity kA	Rated current A	Minimum breaking current A	Rated frequency Hz
24TDMEJ6.3	24	50	6,3	24	50
24TDMEJ10	24	50	10	34	50
24TDMEJ16 (1)	24	50	16	56	50
24TDMEJ20 (1)	24	50	20	73	50
24TDMEJ25 (1)	24	50	25	92	50
24TDMEJ31.5 (1)	24	50	31,5	92	50
24TDMEJ40 (1)	24	50	40	118	50
24TDMEJ50	24	50	50	185	50
24THMEJ63	24	50	63	217	50
24TFMEJ80	24	50	80	265	50

(1) See note 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 18 and 19 October 2006

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 158 sheets in total.

This Certificate is under the scope of the accreditation certificate L 020 of the Dutch Council for Accreditation. (see information sheet on 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

MEDIUM VOLTAGE DIN Fuse-Links

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

MV DIN

KEMA Report

KEMA

REPORT OF PERFORMANCE **523-06**

APPARATUS Current limiting fuses

Designation	Rated voltage kV	Rated breaking capacity kA	Rated current A	Minimum breaking current A	Rated frequency Hz
24TDMEJ50	24	50	50	168	50
24THMEJ63	24	50	63	235	50
24TFMEJ80	24	50	80	272	50

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

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

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

DATE(S) OF TESTS 19 October 2006

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 55 sheets in total.

This report 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

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

MEDIUM VOLTAGE DIN Fuse-Links

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

MV DIN

KEMA Report



REPORT OF PERFORMANCE

221-07

APPARATUS Current limiting fuses

Designation	Rated voltage kV	Rated breaking capacity kA	Rated current A	Minimum breaking current A	Rated frequency Hz
24TDMEJ40	24	50	40	118	50
24TDMEJ50	24	50	50	185	50
24THMEJ63	24	50	63	217	50
24TFMEJ80	24	50	80	265	50

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

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

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

DATE(S) OF TESTS 15 January 2007

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 59 sheets in total.

This report falls under the scope of the accreditation certificate L 020 of the Dutch Council for Accreditation.
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

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