

MTL MA15

DIN rail RFI and surge protection devices

NOTE

Adhering to these instructions guarantees maximum performance of this Protection device.

The MA15 DIN RAIL RFI & SURGE PROTECTION DEVICES (SPDs) are a range of DIN Rail mounting SPDs for mains power applications.

Introduction

The MA15 protects electronic equipment from surges and Radio Frequency Interference (RFI) on the mains power supply. The MA15 has a unique 3-stage combination of protection elements providing filtering, surge protection and ring suppression.

Installation

The MA15 simply clips on to "G"(EN0035 DIN46277-1) or "Top Hat" (EN50022, DIN46277-2) DIN rail.

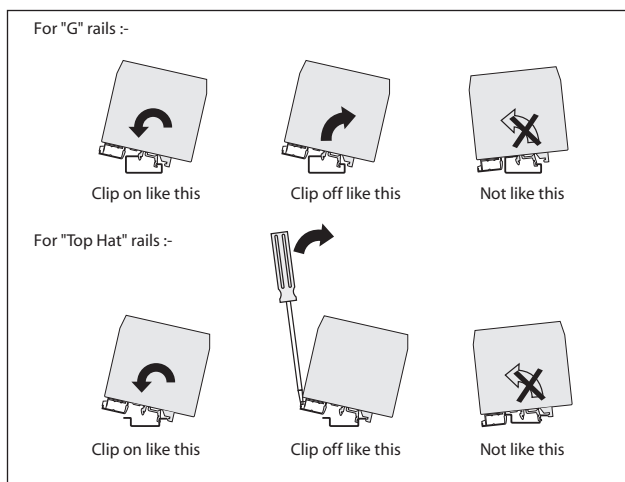


Figure 1 Installation

Construction

The casing of the MA15 has screw-clamp terminals for input and output connections. The maximum allowable wire cross section for the terminals is #10 AWG (2.5mm²)

Connection

The MA15 may be installed in series with the load or, if the load current exceeds 15A, it may be installed in parallel.

Series connection

Connect the incoming mains (LNG) to the “UNPROTECTED” side of the MA15 device, as indicated on the product labeling. The protected equipment is connected to the “PROTECTED” side.

Parallel connection

Connect the incoming mains supply or equipment power (LNG) to the “UNPROTECTED” side of the MA15 device, as indicated on the product labeling. This will install the SPD in parallel with the supply and it will not be subjected to any load current. Install 15A overcurrent protection (fuse or circuit breaker) in the LINE wire.

The Live wire must be connected to the “L” terminal and the Neutral wire must be connected to the “N” terminal of the MA15. If two core cable without an integral earth wire is being used, then for full protection, the earth “E” terminal should be bonded to a suitable system earth point.

NOTE

A fuse or circuit breaker must be inserted in the mains input side of the incoming supply. Rating will be according to the required load current and apply to Series connection only.



WARNING

This device is suitable for use in Class I, Division 2 Groups A, B, C and D or non-hazardous locations ONLY.



WARNING

EXPLOSION HAZARD
Substitution of components may impair suitability for Class I, Division 2.



WARNING

EXPLOSION HAZARD
DO NOT disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

IMPORTANT SAFETY INFORMATION

To avoid risk of shock or fire, which can be caused by incorrect wiring or regulation, whenever installing mains surge protection devices, the safety procedures must be followed.

Suitably qualified personnel should carry out all installation.

1. Always isolate supply before installing or removing any connections.
2. The maximum rating of fuse/circuit breakers must not exceed the lower of:
 - a. The maximum value specified for the surge protection device.
 - b. The power supply short circuit current.
 - c. The maximum rating of equipment protected by the surge protection device.

Examples: For an in-line surge protection device with maximum specified through or line current of 15A,

- a. Connected to a 30A power supply - Protect with 15A maximum.
 - b. Connected to a 8.5A UPS or standby generator - Protect at 5A (A, 1.7 is the usual safety margin of fuses).
 - c. Connected to equipment rated at 5A maximum - Protect at 5A maximum.
- Correct polarity of live, neutral and earth (L,N,E) is essential. Check both at SPD and source of supply.
 - The supply voltage must be less than the maximum working voltage of the SPD. Pay particular attention to UPS and standby generator regulation and neutral earth bond.

NOTE

Ensure that surge protection devices are removed before performing insulation or flash tests on equipment.

MAINTENANCE

The lifetime of the MA15 is dependent on the number of surges experienced; however, the unit will typically provide maintenance-free protection over a twenty year period.

In the event of a surge exceeding the device ratings, the unit is designed to fail-safe, due to the secondary protection elements. The equipment, therefore, remains protected.

NOTE

The MA15 is designed to limit the voltage that can occur both line-line and line-earth. Any system insulation test should be carried out with the MA15 disconnected from the circuit.

AUSTRALIA

MTL Instruments Pty Ltd,
10 Kent Road, Mascot, New South Wales, 2020, Australia
Tel: +61 1300 308 374 Fax: +61 1300 308 463
E-mail: mtlsalesanz@eaton.com

BeNeLux

MTL Instruments BV
Ambacht 6, 5301 KW Zaltbommel
The Netherlands
Tel: +31 (0) 418 570290 Fax: +31 (0) 418 541044
E-mail: mtl@benelux.eaton.com

CHINA

Cooper Electric (Shanghai) Co. Ltd
955 Shengli Road, Hading Industrial Park
Pudong New Area, Shanghai 201201
Tel: +86 21 2899 3817 Fax: +86 21 2899 3992
E-mail: mtl-cn@eaton.com

FRANCE

MTL Instruments srl,
7 rue des Rosières, 69410 Champagne au Mont d'Or
France
Tel: +33 (0)4 37 46 16 53 Fax: +33 (0)4 37 46 17 20
E-mail: mtlfrance@eaton.com

GERMANY

MTL Instruments GmbH,
Heinrich-Hertz-Str. 12, 50170 Kerpen, Germany
Tel: +49 (0)22 73 98 12-0 Fax: +49 (0)22 73 98 12-2 00
E-mail: cskcrpern@eaton.com

INDIA

MTL India,
No.36, Nehru Street, Off Old Mahabalipuram Road
Sholinganallur, Chennai- 600 119, India
Tel: +91 (0) 44 24501660/24501857 Fax: +91 (0) 44 24501463
E-mail: mtlindiasales@eaton.com

ITALY

MTL Italia srl,
Via San Bovio, 3, 20090 Segrate, Milano, Italy
Tel: +39 02 959501 Fax: +39 02 95950759
E-mail: chmninfo@eaton.com

JAPAN

Cooper Crouse-Hinds Japan KK,
MT Building 3F, 2-7-5 Shiba Daimon, Minato-ku,
Tokyo, Japan 105-0012
Tel: +81 (0)3 6430 3128 Fax: +81 (0)3 6430 3129
E-mail: mtl-jp@eaton.com

NORWAY

Norex AS

Fekjan 7c, Postboks 147,
N-1378 Nesbru, Norway
Tel: +47 66 77 43 80 Fax: +47 66 84 55 33
E-mail: info@norex.no

RUSSIA

Cooper Industries Russia LLC
Elektrozavodskaya Str 33
Building 4
Moscow 107076, Russia
Tel: +7 (495) 981 3770 Fax: +7 (495) 981 3771
E-mail: mtlrussia@eaton.com

SINGAPORE

Cooper Crouse-Hinds Pte Ltd
No 2 Serangoon North Avenue 5, #06-01 Fu Yu Building
Singapore 554911
Tel: +65 6 645 9864/9865, Fax: +65 6 487 7997
E-mail: sales.mtlsing@eaton.com

SOUTH KOREA

Cooper Crouse-Hinds Korea
7F Parkland Building 237-11 Nonhyun-dong Gangnam-gu,
Seoul 135-546, South Korea.
Tel: +82 6380 4805 Fax: +82 6380 4839
E-mail: mtl-korea@eaton.com

UNITED ARAB EMIRATES

Cooper Industries/Eaton Corporation
Office 205/206, 2nd Floor SJ Towers, off. Old Airport Road,
Abu Dhabi, United Arab Emirates
Tel: +971 2 44 66 840 Fax: +971 2 44 66 841
E-mail: mtgulf@eaton.com

UNITED KINGDOM

Eaton Electric Limited,
Great Marlings, Butterfield, Luton
Beds LU2 8DL
Tel: +44 (0)1582 723633 Fax: +44 (0)1582 422283
E-mail: mtl enquiry@eaton.com

AMERICAS

Cooper Crouse-Hinds MTL Inc.
3413 N. Sam Houston Parkway W,
Suite 200, Houston TX 77066, USA
Tel: +1 281-571-8065 Fax: +1 281-571-8069
E-mail: mtl-us-info@eaton.com



Powering Business Worldwide

Eaton Electric Limited,
Great Marlings, Butterfield, Luton
Beds, LU2 8DL, UK.
Tel: +44 (0)1582 723633 Fax: +44 (0)1582 422283
E-mail: mtl enquiry@eaton.com
www.mtl-inst.com
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EUROPE (EMEA):
+44 (0)1582 723633
mtl enquiry@eaton.com
THE AMERICAS:
+1 800 835 7075
mtl-us-info@eaton.com
ASIA-PACIFIC:
+65 6645 9864 / 6645 9865
sales.mtlsing@eaton.com

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