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.

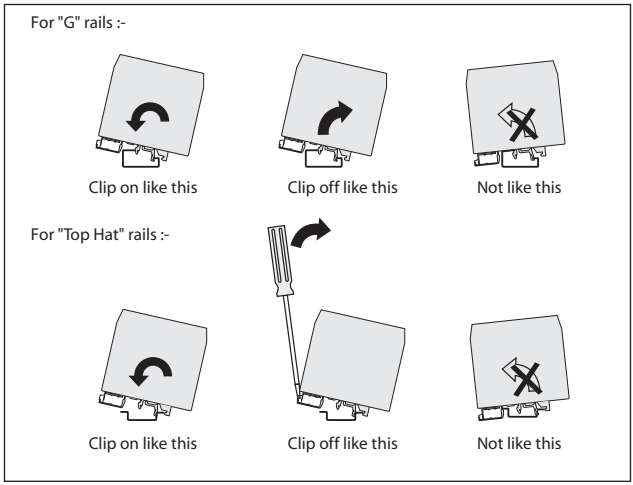

Figure 1 Installation

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: mtlenquiry@eaton.com
www.mtl-inst.com

Publication No. INS 801-602 Rev B
October 2016

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 (2.5mm$^{2)}$

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, Heqing 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 sarl,
7 rue des Rosiéristes, 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: csckerpen@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: mtlgulf@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: mtlenquiry@eaton.com

AMERICAS
Cooper Crouse-Hinds MTL Inc.
3413 N. Sam Houston Parkway W.
Suite 200, Houston TX 77086, 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: mtlenquiry@eaton.com
www.mtl-inst.com

Publication No. INS 801-602 Rev B 171016
October 2016

EUROPE (EMEA):
+44 (0)1582 723633
mtlenquiry@eaton.com

THE AMERICAS:
+1 800 835 7075
mtl-us-info@eaton.com

ASIA-PACIFIC:
+65 6645 9864 / 6645 9865
sales.mtlsing@eaton.comm