

# MTL MA05/D and MA10/D

## DIN rail RFI surge protection

### NOTE

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

## 1 Introduction

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

## 2. Important safety information



### WARNING

**To avoid risk of shock or fire which can be caused by incorrect wiring or regulation, whenever installing mains/power surge protection devices the following safety procedures should be followed**

Always isolate supply before installing or removing any covers.

The maximum rating of fuse/circuit breakers must not exceed the lower of:

- The maximum value specified for the surge protection device
- The power supply short circuit current
- 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 10A-

- Connected to a 30A power supply- Protect with 10A maximum.
- Connected to a 8.5A UPS or standby generator- Protect at 5A (8.5/1.7A, 1.7 is the usual safety margin of fuses).
- 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. In systems where neutral is bonded to earth, this is achieved for a correctly selected SPD under normal operation. 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.



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### 3 Installation

The MAxx/D units simply clips on to "G" (EN 0035 DIN46277-1) or "Top Hat"/T-section (EN 50022, DIN46277-2) DIN rail.

#### 3.1 Construction

The casing of the MAxx/D has screw-clamp terminals for input and output connections. The maximum allowable wire cross section for the terminals is 2.5mm<sup>2</sup> (12 AWG).

#### 3.2 Connection

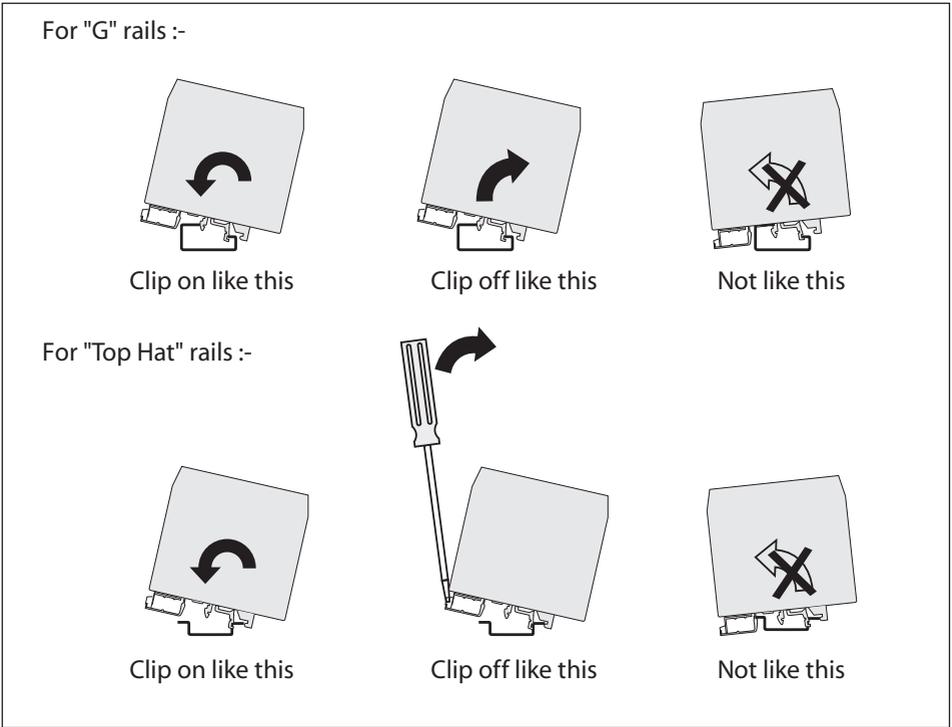
Connect the incoming mains to the "UNPROTECTED" side of the MAxx/D device, as indicated on the product labelling. The protected equipment is connected to the "PROTECTED" side. The Live wire must be connected to the "L" terminal of the MAxx/D. If two core cable without an integral earth wire is being used, for full protection, the earth "E" terminal should be bonded to a suitable system earth point.

**NOTE:** An internal thermal fuse is provided but a fuse or circuit breaker should be inserted in the mains input side of the incoming supply. Rating will be according to the required load current

### 4.0 Maintenance

The lifetime of the MAxx/D 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 going short circuit, the equipment therefore remains protected.

**NOTE:** The MAxx/D 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 MAxx/D disconnected from the circuit.



**Figure 1** Installation

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