

MTL MA4000 range

Installation guide

This installation guide is applicable to the following Eaton's MTL surge protection products:

MA4020-F-024-1-D-R MA4020-F-048-1-D-R
MA4020-F-110-1-D-R MA4020-F-230-1-D-R

The MTL MA4000 product range attenuates voltage and current spikes from all sources that are commonly experienced in industrial environments. The products are specifically designed to safely redirect damaging spikes to earth therefore protecting any sensitive electronics located locally.

The MTL MA4000 enclosure can readily be mounted using the four fixing points provided on the enclosure. Flying leads are provided for easy connection to the power supply cable, along with remote monitoring wires.


Where required, the remote monitoring wires can be utilised to provide indication on the status of the MTL MA4000 unit(s). A short circuit indicates that the unit is fully operational, whereas an open circuit connection provides indication that the MTL MA4000 device requires replacing.

There are currently four variants in the MTL MA4000 range:

24VDC, 48VDC, 110VAC and 230VAC


The MTL MA4000 range is certified for use in hazardous areas, see data sheet and unit labeling for details.

SPECIAL CONDITIONS OF USE




WARNING!

These devices must be installed by competent, authorised personnel. Isolate circuit before connecting/disconnecting AC/DC power source.



WARNING!

The flying leads must be suitably protected against mechanical damage and terminated in a suitable facility for the utilised protection concept.



WARNING!

ELECTROSTATIC HAZARD
Do not rub with a dry cloth or clean with solvents.

IMPORTANT

The MTL MA4000 range of products are factory-sealed.

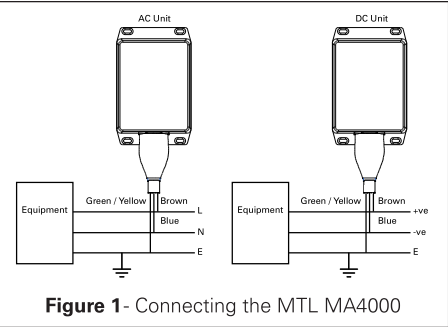
Positioning

The MTL MA4000 range should be mounted close to the equipment it is protecting. It should be bonded directly to the equipment with as short a length of cable as possible.

Connecting

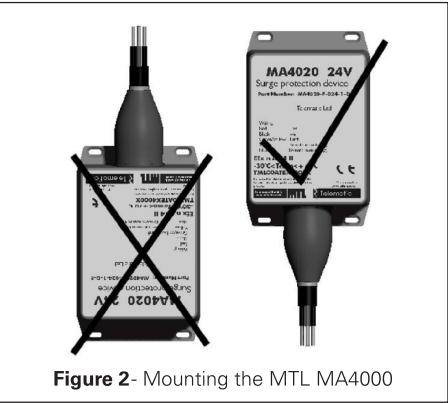
Avoid large loops and sharp bends in the wire. Cut the wire as short as possible when connecting the MA4000 and connect the wires in the following table and Figure 1.

	AC power applications	DC power applications
Brown	Live	+ power supply
Blue	Neutral	- power supply
Green/Yellow	Earth	Earth
Black	Monitoring 1	Monitoring 1
Black	Monitoring 2	Monitoring 2

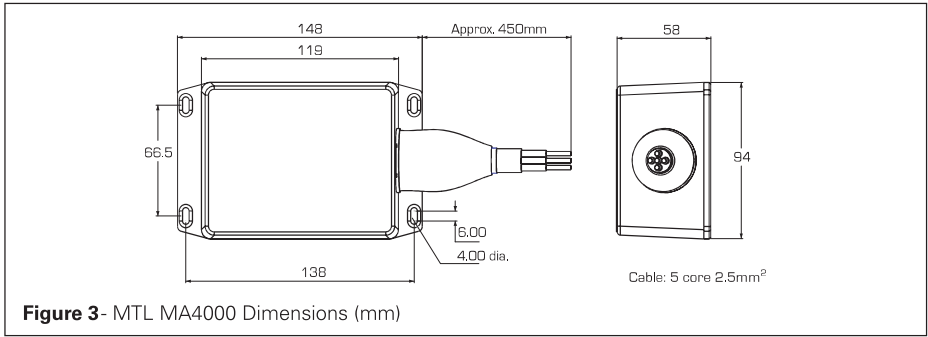


Mounting

The MTL MA4000 range should ideally be mounted using the four holes provided and with the cable exiting from the bottom, see Figure 2.



DIMENSIONS



SPECIFICATION

Model No.	Weight	Supply voltage	Line frequency	Leakage current
MA4020-F-024-1-D-R	1.6 Kg	24VDC	DC	0.3mA
MA4020-F-048-1-D-R	1.6 Kg	48VDC	DC	0.3mA
MA4020-F-110-1-D-R	1.6 Kg	110VAC	DC to 60Hz	0.3mA
MA4020-F-230-1-D-R	1.6 Kg	230VAC	DC to 60Hz	0.3mA

Temperature range

-30°C to +60°C

Certification

ATEX: MTL02ATEX4020X

Ex II 3G

Ex nA IIC T4 Gb

The cables should be adequately protected according to the protection concept utilised.

Fusing

Although the MTL MA4000 range have temperature protection devices fitted it is important that external fusing is fitted to interrupt the maximum fault current which the supply can deliver under fault conditions. The chosen fuse should be of a HBC (high breaking capacity) or HRC (high rupture capacity) type.

Remote monitoring wires

Remote monitoring wires are provided as an optional way of identifying / determining the status of the MA4000 unit. These wires have a closed contact which will open to indicate that the protection provided by the MA4000 unit is no longer present. The remote monitoring lines should be fused using a 250VAC, 2A rated fuse to protect the remote contact inside the unit.

Maintenance

This product is not a repairable unit, if the product fails it must be replaced.

The MA4000 unit requires no maintenance as there are no user-serviceable parts. However, where the remote monitoring wires are not being fully utilised, a maintenance plan may be advisable to check the status of the protectors.