

INTRODUCTION

This document explains how to install the ABB OVR 240-16A surge protector for in-line mains power supplies:

OVR 240-16A



1. Safety note:

Warning! Installation by person with electrotechnical expertise only.

Warnung! Installation nur durch elektrotechnische Fachkraft.

Avvertenza! Fare installare solo da un elettricista qualificato.

Avertissement! Installation uniquement par des personnes qualifiées en électrotechnique.

Advertencia! La instalación deberá ser realizada únicamente por electricistas especializados.

2. Before installation

2.1 Check that the supply is fused for the application, at or below 16 Amps.

If the supply current exceeds the OVR 240-16A protector's current rating, do not use this Protector.

If the supply is not fused, a fuse equal to or less than the OVR 240-16A protector's rating should be added.

Further advice is available from ABB.

2.2 Make sure that the supply voltage is within the 200-280 Vrms working voltage of the OVR 240-16A protector.

3. Installation

3.1 Location

The OVR 240-16A protector should be installed close to the equipment it is protecting, either:

- (a) within the system (see Figure 1) or
- (b) on the fused connection (or spur unit) to the equipment

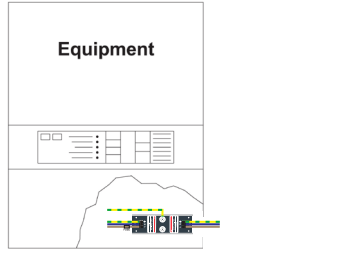


Figure 1: Installation within the system on a power supply fused at 16 A or less.

Except where it is installed on a supply which leaves the building (to protect equipment inside the building from incoming transients).

In this case the OVR 240-16A protector should be installed as close as possible to where the cable leaves the building.

3.2 Enclose unboxed OVR 240-16A protector

The OVR 240-16A protector is supplied with exposed terminals and should be installed within a panel or enclosure, for reasons of electrical safety.

Often this will be the housing or panel of the equipment being protected (see Figure 1).

Where, at CCTV cameras, the OVR 240-16A protector is in use alongside other SPDs for video and telemetry, these can be installed together in a single enclosure (see Figure 5) close to the camera.

This should be no more than 1 metre from the equipment. A suitable enclosure is available from ABB.

3.3 Series connection

OVR 240-16A protectors are connected in-line (or series) with the supply to be protected (see Figure 2).

The dirty, or line side of the OVR 240-16A protector should be connected to the cable carrying the incoming transient overvoltages - this is usually the cable from the power supply. The output or clean side ensures a transient free supply to the equipment being protected.

Maximum torque is 0.5 Nm power terminals, with cable stripping length 8 mm.

Note: Do NOT use power driven screwdrivers to make connections to the OVR 240-16A protector. Hand tighten only.

If the OVR 240-16A protector is connected to a supply leaving the building (to prevent transients being injected back into the building) its line end will be connected to the supply leaving the building.

3.4 Fixing methods

OVR 240-16A protectors can be:

- (a) screwed to a flat surface - remove the DIN rail foot and use the centre mounting holes by the clean and line screw terminals - see Figure 3
- (b) clipped onto a 'top hat' DIN rail - see Figure 4
- (c) installed on a Combined Mounting and Earthing (CME) kit - the twin M6 earth studs on the top of the OVR 240-16A protector can be used to install it on an accessory CME kit (see Section 3.7 - Cross bonding from SPDs)

Figure 5 shows an OVR 240-16A installed on a CME 4 alongside SPDs for CCTV video and telemetry lines.

Hand tighten screws, do not use power driven screwdrivers.

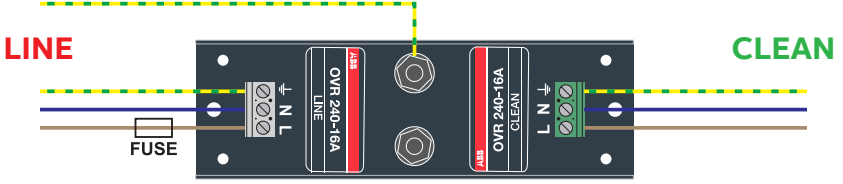


Figure 2: In-line connection for OVR 240-16A (on supplies fused at 16 A or less). Note how the OVR 240-16A protector can also be earthed from its earth stud.

3.5 Connection to live, neutral and earth

Connections are made to each supply conductor including earth. Terminals marked L, N, E (or ⊕) must be connected to live, neutral and earth respectively.

The screw terminals will accommodate conductor of up to 4 mm².

We recommend that these are terminated with a boot lace ferrule.

3.6 Earthing

It is essential that the OVR 240-16A protector is earthed.

If the OVR 240-16A SPD is being installed on a supply without an earth conductor (eg double insulated) the SPD must be connected to the local power earth via the M6 stud(s) provided.

Use either or both of the M6 earth studs on the top of the OVR 240-16A.



Figure 3: Flat mounting the OVR 240-16A.



Figure 4: DIN rail mounting OVR 240-16A protector.



Figure 5: Installation of OVR 240-16A next to Video and Telemetry SPDs assembled on a CME kit.

If OVR 240-16A protector are mounted on metal plates or DIN rails, or in metal panels or enclosures, this metalwork should, as a matter of general electrical safety, be bonded to earth.

3.7 Cross bonding from other SPDs

Surge protectors for telephone, signal and CCTV lines can be earthed by cross bonding them to the earth stud(s) of the OVR 240-16A.

This can be achieved by installing the surge protectors together on a CME kit (see Figure 5).


The surge protector can therefore derive their earth connection via the OVR 240-16A.

3.8 Keep clean cables away from dirty cables

Clean outgoing cables should never be routed next to dirty incoming cables or dirty earth leads (or cross bonds).

This applies to lines within or external to the equipment panel.

Environment
 Consider the protection of the environment! Used electrical and electronic equipment must NOT be disposed of with domestic waste. The device contains valuable raw materials which can be recycled. Therefore, contact ABB for disposal of this equipment.



Notes



**For in-line mains
 protector**
 OVR 240-16A



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