DINsafe Signal Line Protectors

Installation Instructions

IMPORTANT: Please read these instructions carefully. Whilst straightforward, the installation of these devices is critical to their performance. Installation should only be carried out by a suitably qualified person in accordance with all relevant standards.

1. Introduction

1.1 These installation instructions apply to the Novaris DINsafe range of signal line protectors.

Cat No : **SLD 1-PSTN-2**
Signal Pairs — Options
Uc (V or signal protocol)

1.2 These products are 3-stage signal line protectors that protect against the effects of lightning induced surges and other transient overvoltages.

They provide both common-mode and transverse-mode protection, which is essential for the effective protection of any system.

Figure 1: Novaris DINsafe signal line protec-

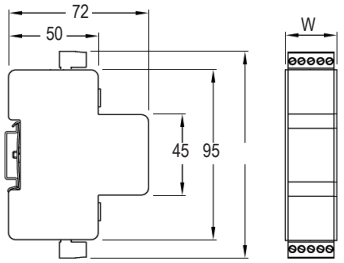
2. Before Installation

2.1 Ensure that the maximum operating voltage of the signal line does not exceed the clamping voltage of the signal line protector.

2.2 Ensure that the operating current of the signal line does not exceed 350mA for standard versions, or 2A for 2 amp versions.

2.3 If isolation between earth and the cable screen (or 'common' conductor) is required, please request an isolated earth version from Novaris. All other models have a direct connection between cable screen (or 'common' conductor) and earth.

2.4 Turn the power off before beginning the installation.



No. of Pairs	Widths W (mm)
1	18
2	28
4	48

Figure 2: Dimensions of DINsafe signal line protectors

3. Installation

3.1 **Point of Connection:** The surge protector should be connected at the closest practical point to the equipment to be protected.

3.2 **Mounting:** DINsafe signal line protectors are most easily and effectively mounted on DIN rail using their integral clips. This also provides an excellent earth connection (provided the DIN rail is properly earthed).

Alternatively, the unit may be panel mounted using brackets that are available from Novaris.

If the unit is to be positioned in an exposed environment it should be mounted in a suitably rated enclosure. Suitable polycarbonate enclosures are available from Novaris.

Figure 3: Signal line protectors are connected in series

3.3 Wiring: Signal line protectors are connected in series with the equipment (Figure 3).

Signal pairs should be connected to the terminals labelled L1, L2 etc.

The cable screen (or 'common' conductor) should be connected to the terminals labelled with an earth symbol.

Connect the exposed cable to the line side of the signal line protector (labelled 'LINE').

Connect the equipment to be protected from the equipment side of the signal line protector (labelled 'EQPT').

3.4 Earthing: The surge protector must be earthed to the same point as the equipment to be protected. The earth connection should be made:

From the DIN rail clip on the surge protector (or DIN rail)

To a point that is directly connected to the earth of the equipment to be protected (e.g. the metal frame of the equipment).

The earth connection should be made using multistranded conductor with cross-sectional area of at least 6mm^2.

IMPORTANT: Because the earth is shunt-connected, the inductance of the connection has a significant effect on performance. Most importantly, **the length of the earth connection must be kept as short as possible**. This is not the case with the other connections because they are series-connected.

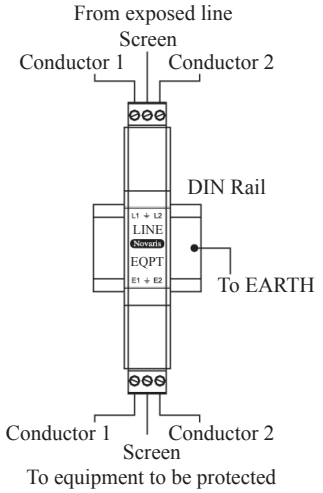


Figure 4: Installation of SLD1-x-x

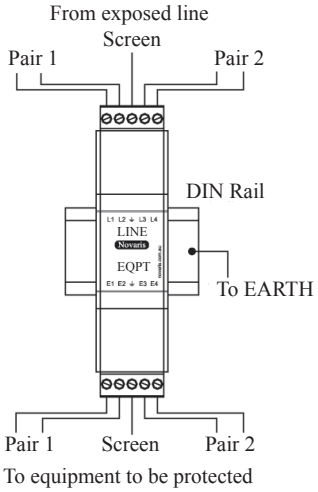


Figure 5: Installation of SLD2-x-x

4. After Installation

4.1 Check the installation by testing that the equipment is still operating correctly.

4.2 Novaris DINsafe signal line protectors are extremely robust and require very little maintenance. They feature failsafe overcurrent fusing. In the event of a surge that is large enough to damage the surge protection components, the fuses will operate. This is easily detectable as the signal will no longer pass. Under these circumstances the signal line protector should be replaced as soon as possible.

4.3 If the signal line protector appears damaged or defective in any way, please contact Novaris about replacement.

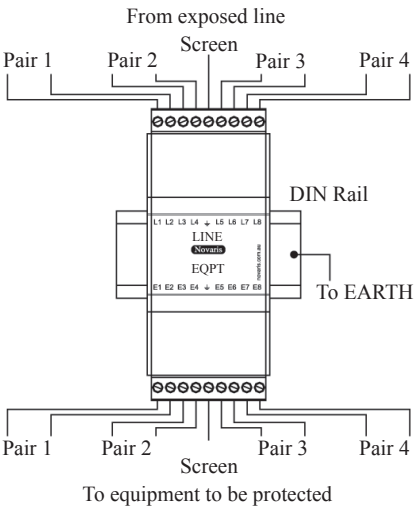


Figure 6: Installation of SLD4-x-x