

IMPORTANT: Please read these instructions carefully. Whilst straightforward, the installation of these devices is critical to their performance. Installation must be performed by a suitably qualified person in accordance with applicable standards.

1. Introduction

1.1 These user instructions apply to the intrinsically safe range of Novaris threaded signal line protectors.

Cat No.:

IS-SLT1-7v5-M20	IS-SLT1-7v5-N12	IS-SLT1-7v5-N34
IS-SLT1-18-M20	IS-SLT1-18-N12	IS-SLT1-18-N34
IS-SLT1-36-M20	IS-SLT1-36-N12	IS-SLT1-36-N34
IS-SLT1-68-M20	IS-SLT1-68-N12	IS-SLT1-68-N34
IS-SLT3-7v5-M20	IS-SLT3-7v5-N12	IS-SLT3-7v5-N34
IS-SLT3-18-M20	IS-SLT3-18-N12	IS-SLT3-18-N34
IS-SLT3-36-M20	IS-SLT3-36-N12	IS-SLT3-36-N34
IS-SLT3-68-M20	IS-SLT3-68-N12	IS-SLT3-68-N34

1.2 These products are multistage 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 threaded signal line protector

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 Turn the power off before beginning the installation.
- 2.3 Ensure correct thread size has been selected:
- IS-SLT_x-xxx-M20 has an M20 x 1 thread size
 - IS-SLT_x-xxx-NPT has a 1/2" NPT thread size
 - IS-SLT_x-xxx-N34 has a 3/4" NPT thread size

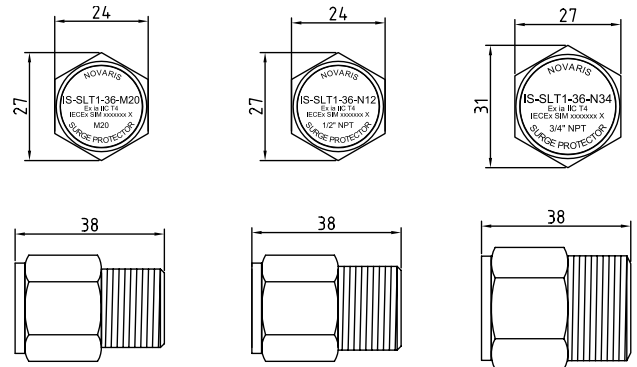


Figure 2: Dimensions of threaded signal line protectors

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:** Threaded signal line protectors are screwed directly into housings using the correct thread adapter if required.
- 3.3 **Isolation:** Threaded signal line protectors must be galvanically isolated using a suitable safety barrier.
- 3.5 **Wiring:** Signal line protectors are shunt connected in parallel with the equipment (Figure 3 & Figure 4).

Signal pairs should be connected to the red and black wires for the IS-SLT1 versions (Figure 3). For IS-SLT3 versions the white wire should be connected to the signal terminal (Figure 4).

The green/yellow earth wire should be connected to the earth terminal within the equipment housing.

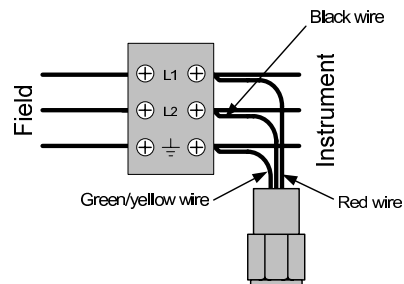


Figure 3: Wiring of IS-SLT1 models

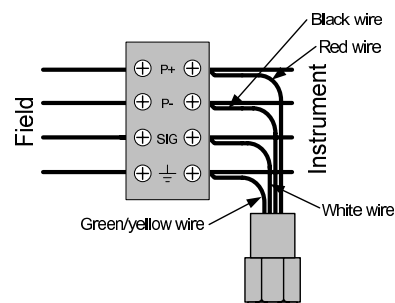


Figure 4: Wiring of IS-SLT3 models

3.6 Earthing: The surge protector must be earthed to the same point as the equipment to be protected. The earth connection should be made to a point that is directly connected to the earth of the equipment to be protected (e.g. the metal frame of the equipment).

IMPORTANT: Because the unit is shunt connected, the inductance of the connections has a significant effect on performance. **The length of the all wires must be kept as short as possible.**

4. After Installation

- 4.1 Check the installation by testing that the equipment is still operating correctly.
- 4.2 Novaris threaded signal line protectors are extremely robust and require very little maintenance. Period inspection and testing is recommended.

5. Hazardous Location Application

- 5.1 Novaris threaded signal line protectors are designed to be installed in zone 0,1 and 2 hazardous locations. Typically, the surge protector is installed into a spare gland hole on a field instrument. An example of this is shown in figure 5.
- 5.2 Installation method of the threaded signal line protector in hazardous locations is the same as described in section 3.

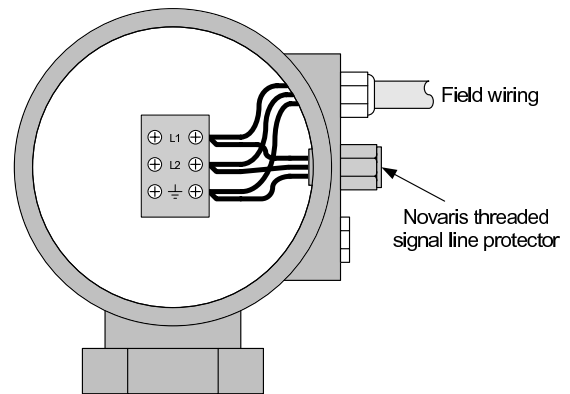


Figure 5: Typical installation of the threaded signal line protector.

6. Specifications and Standards Compliance

		IS-SLT1-7V5	IS-SLT1-18	IS-SLT1-36	IS-SLT1-68	IS-SLT3-7V5	IS-SLT3-18	IS-SLT3-36	IS-SLT3-68
Electrical Specifications:									
Connection Type		Shunt							
Modes of protection		Transverse and common mode							
Maximum continuous voltage (DC)	U_c	7V	16V	36V	65V	7V	16V	36V	65V
Maximum continuous voltage (AC)	U_c	5V	11V	24V	46V	5V	11V	24V	46V
Maximum discharge current (8/20 μ s)	I_{max}	5kA							
Protection stages		MOV and GDT							
Number of lines protected	I_L	One pair				Three wire			
Voltage protection level @ 5kV (10/700 μ s)	U_p	8V	19V	40V	76V	8V	19V	40V	76V

Safety Parameters:	
U_i	30V
I_i	3A
P_i	2.2W
C_i	0
L_i	0

Mechanical Specifications:	
Operating temperature range	-20°C to 40°C
Operating Humidity	0 to 90%
Connection type	300mm, 0.75mm ² flying leads
Environmental	IP 20
Mounting	Bulk head / gland plate
Weight	100g

Ex ia IIC T4 IP20
AS1768:2007
BS6651:1999
CP33:1996
IEEE C62.41:2002
IEC 61643-21