

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 RTD instrument protectors.

Cat No.:

IS-SLT4-RTD-M20 IS-SLT4-RTD-N12 IS-SLT4-RTD-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.

1.3 The IS-SLT4-RTD threaded instrument protectors are specifically designed for the protection of resistance temperature detectors (RTDs). Protection is provided for all two, three and four wire configurations.



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-SLT4-RTD-M20 has an M20 x 1 thread size
- IS-SLT4-RTD-N12 has a 1/2" NPT thread size
- IS-SLT4-RTD-N34 has a 3/4" NPT thread size

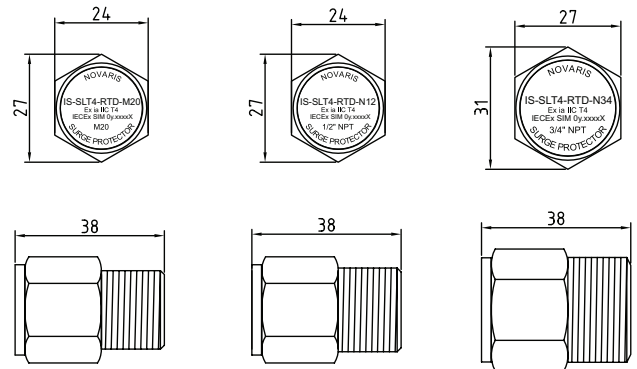


Figure 2: Dimensions of threaded signal line protectors

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:** RTD threaded instrument protectors are shunt connected in parallel with the equipment (Figure 3).

The arrangement of the wiring is shown in Figure 3. Connect each wire to its appropriate terminal. For three wire RTDs, connect both red wires in parallel to the red terminal. For two wire RTDs connect both the red and white wire pairs in parallel with the red and white terminals respectively. The green/yellow earth wire should be connected to the earth terminal within the equipment housing.

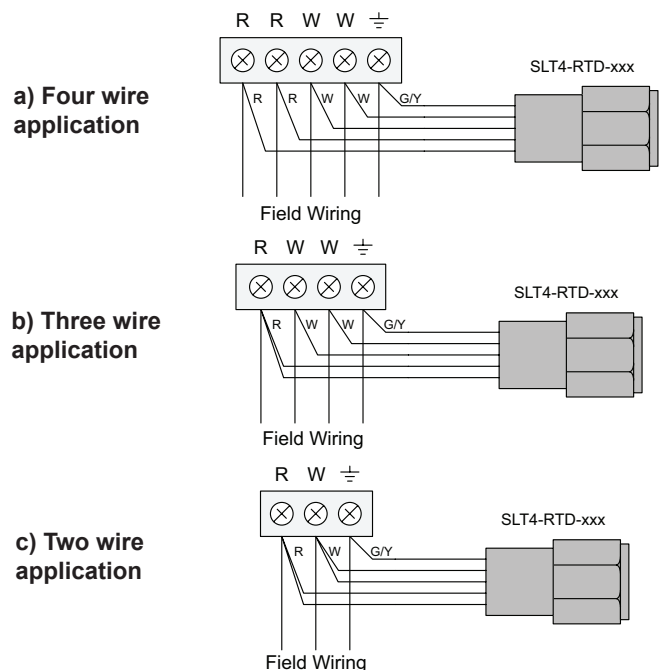


Figure 3: Wiring of IS-SLT4-RTD-xxx models

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 4.
- 5.2** Installation method of the threaded signal line protector in hazardous locations is the same as described in section 3.

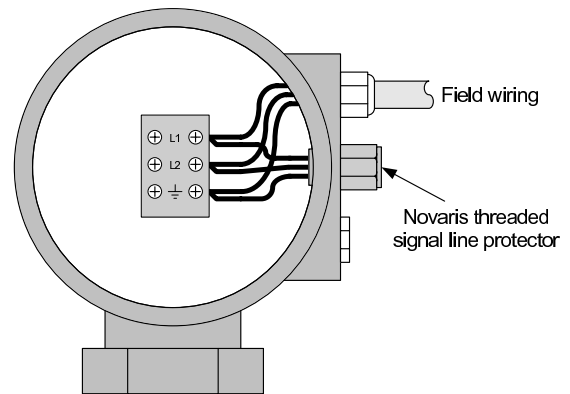


Figure 4: Typical installation of the threaded signal line protector.

6. Specifications and Standards Compliance

		IS-SLT4-RTD
Electrical Specifications:		
Connection Type		Shunt
Modes of protection		Transverse and common mode
Maximum continuous voltage (DC)	U_c	7V
Maximum continuous voltage (AC)	U_c	5V
Maximum discharge current (8/20 μ s)	I_{max}	5kA
Protection stages		MOV and GDT
Number of lines protected	I_L	All lines
Voltage protection level @ 5kV (10/700 μ s)	U_p	8V

Safety Parameters:	
U_i	30V
I_i	2.22A
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

Novaris

72 Browns Road, Kingston, TAS. 7050
AUSTRALIA
Telephone +61 3 6229 7233
Facsimile +61 3 6229 9245
E-mail sales@novaris.com.au
Web site www.novaris.com.au