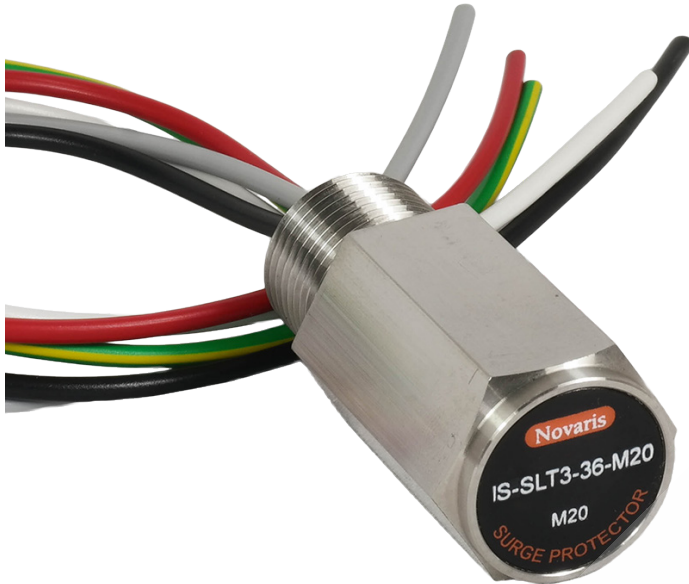


IS-SLT - Intrinsically Safe Protectors



Intrinsically Safe & Flameproof Instrument Protectors

The intrinsically safe and flameproof IS-SLT range provides surge protection for most twisted pair signal cables associated with intrinsically safe field devices.

IECEx & ATEX approved

Novaris 'IS-SLT' products are certified intrinsically safe and flameproof according to IEC Ex and ATEX and so may be installed in Ex d rated instruments without loss of integrity.

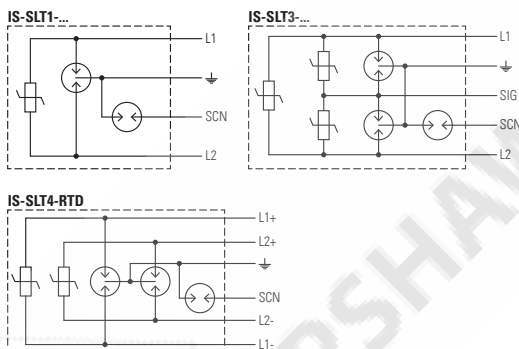
Multistage design

The multistage design provides a high energy gas discharge tube (GDT) as primary protection for common mode disturbances, commonly associated with lightning strikes and power system earth faults and a secondary metal-oxide varistor clamping stage across the signal lines. This combination provides very robust surge protection with high transient suppression and low let-through voltages. In addition protection is provided for cable screens which may be open circuit at the instrument.

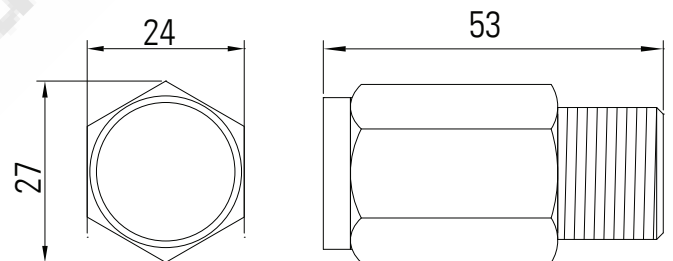
IS-SLT-Y Adapter

Where a field instrument has no free cable entry Novaris can supply a Y-piece adapter to accommodate the threaded instrument protector and cable gland.

Diagram



Dimensions

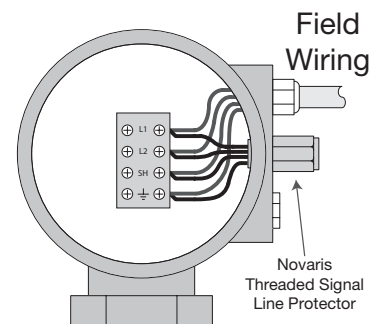


M20 x 1.5 Thread Size

Ordering Information

| Model | Signal Type | |
|-------------|-------------------|--------------|
| IS-SLTx-7v5 | 0 - 5 VDC analog | 5 V digital |
| IS-SLTx-18 | 0 - 12 VDC analog | 12 V digital |
| IS-SLTx-36 | 0 - 24 VDC analog | 4-20 mA |
| IS-SLT4-RTD | RTD applications | Thermocouple |

Field Installation



Product Specifications

| Model | | IS-SLTx-7v5 | IS-SLTx-18 | IS-SLTx-36 | IS-SLT4-RTD |
|---|-----------|--|---|---|---|
| Electrical Specifications | | | | | |
| Connection Type | | Shunt | Shunt | Shunt | Shunt |
| Number of lines | | | x = 1 → 1 pair; x = 3 → 3 lines | | 4 lines |
| Modes of protection | | Transverse and common mode | | | |
| Maximum continuous voltage (DC) | U_c | 7 V | 18 V | 36 V | 8 V |
| Maximum continuous voltage (AC) | U_c | 5 V | 14 V | 30 V | 6 V |
| Maximum discharge current (8/20 μ s) | I_{max} | 5 kA per line (10 kA common mode) | | | |
| Maximum discharge current (10/350 μ s) | I_{imp} | 1.25 kA per line (2.5 kA common mode) | | | |
| Impulse durability | | C2 10 x 2.0 kA 8/20 μ s D1 2 x 0.5 kA 10/350 μ s | | | |
| Maximum load current | I_L | - | | | |
| L-L Voltage protection level @ 1 kV/ μ s | U_p | 45 V | 50 V | 75 V | 45 V |
| L-L Voltage protection level @ 1 kA 8/20 μ s | U_p | 70 V | 75 V | 110 V | 70 V |
| L-L Voltage protection level @ 100 V/ s | | 25 V | 30 V | 60 V | 25 V |
| L-PE Voltage protection level @ 1 kV/ μ s | U_p | 350 V | 350 V | 350 V | 350 V |
| L-PE Voltage protection level @ 2 kA 8/20 μ s | U_p | 530 V | 530 V | 530 V | 530 V |
| L-PE Voltage protection level @ 100 V/ s | | 230 V | 230 V | 230 V | 230 V |
| AC durability | | 1 A rms, 5 x 1 s | 1 A rms, 5 x 1 s | 1 A rms, 5 x 1 s | 1 A rms, 5 x 1 s |
| Overstressed fault mode | | Mode 1 (IS-SLTx disconnected, line still operable) | | | |
| Response time | t_A | < 5 ns | | | |
| Line resistance | | - | | | |
| Line inductance | | - | | | |
| L-L capacitance | | 20 nF | 10 nF | 7 nF | 20 nF |
| L-PE capacitance | | < 1 pF | | | |
| Insertion loss @ 150 Ω | | - | | | |
| 3 dB Frequency @ 150 Ω | f_c | 100 kHz | | | |
| Safety Parameters | | | | | |
| Max. input voltage | U_i | 30 V | 30 V | 30 V | 30 V |
| Max. input current | I_i | 3 A | 3 A | 3 A | 3 A |
| Max. input power | P_i | 2.2 W | 2.2 W | 2.2 W | 2.2 W |
| Capacitance | C_i | 0.2 nF | 0.2 nF | 0.2 nF | 0.2 nF |
| Inductance | L_i | 0.2 μ H | 0.2 μ H | 0.2 μ H | 0.2 μ H |
| Mechanical Specifications | | | | | |
| Operating temperature | | -20 to +40°C | -20 to +40°C | -20 to +40°C | -20 to +40°C |
| Humidity Range | | 5 to 95% | 5 to 95% | 5 to 95% | 5 to 95% |
| Connection type / capacity | | 250 mm, 0.75 mm ² flying leads | 250 mm, 0.75 mm ² flying leads | 250 mm, 0.75 mm ² flying leads | 250 mm, 0.75 mm ² flying leads |
| Environmental | | IP 67 installed | IP 67 installed | IP 67 installed | IP 67 installed |
| Mounting | | M20 x 1.5 | M20 x 1.5 | M20 x 1.5 | M20 x 1.5 |
| Earthing | | via lead; 90 V isolation between earth and shield | | | |
| Enclosure / colour | | Stainless steel | Stainless steel | Stainless steel | Stainless steel |
| Accreditations | | | | | |
| TÜV 14 ATEX 7569 X | | II 1 G Ex ia IIC T4 Ga | | | |
| TÜV 14 ATEX 7600 U | | II 2 G Ex d IIC Gb | | | |
| IECEX ITA 14.0011X | | Ex ia IIC T4 | | | |
| IECEX ITA 14.0012U | | Ex db IIC | | | |
| Standards | | | | | |
| Directive 94/9/EC | | Equipment and protective systems intended for use in potentially explosive atmospheres | | | |
| IEC 60079-0 | | Explosive atmospheres - Part 0: Equipment - General requirements | | | |
| IEC 60079-1 | | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures 'd' | | | |
| IEC 60079-11 | | Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i' | | | |
| IEC 61643-21:2012 | | SPD connected to telecommunications and signalling networks - Cat C2, D1 | | | |
| AS/NZS 1768:2007 | | Signalling/Telecommunications surge protection | | | |
| UL 1449 3 rd edition & UL 497B | | Protectors for data communications and fire-alarm circuits | | | |
| ITU-T K.44: 2012 | | Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents | | | |
| Shipping | | | | | |
| Weight | | 180 g | 180 g | 180 g | 180 g |
| Customs Tariff | | 85363000 | 85363000 | 85363000 | 85363000 |



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