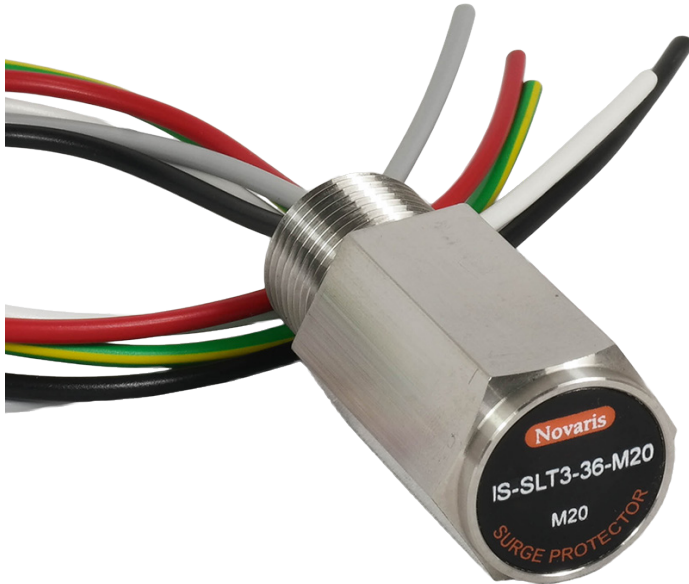


## IS-SLT - Intrinsically Safe Protectors



### 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.

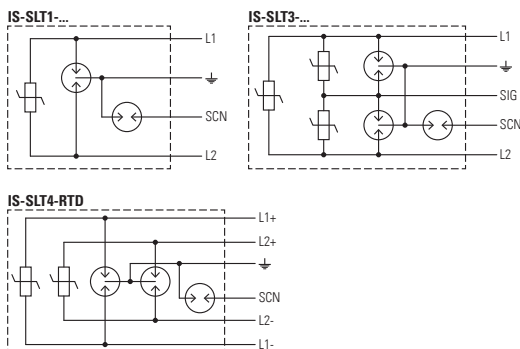
#### Multistage design

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.

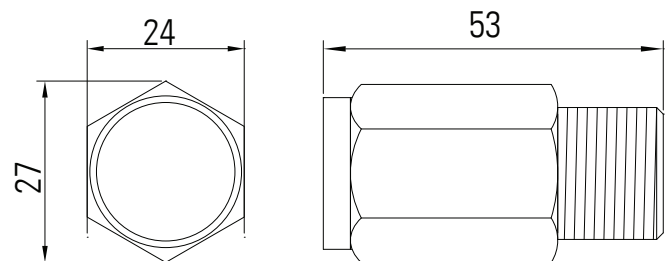
#### IS-SLT-Y Adapter

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

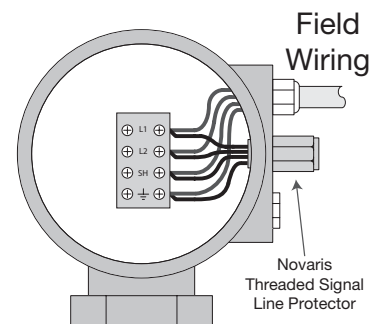


M20 x 1.5 Thread Size

### 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



# Novaris

## Product Specifications

Model		IS-SLTx-7v5	IS-SLTx-18	IS-SLTx-36	IS-SLT4-RTD
<b>Electrical Specifications</b>					
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 $\mu$ s)	$I_{max}$	5 kA per line (10 kA common mode)			
Maximum discharge current (10/350 $\mu$ s)	$I_{imp}$	1.25 kA per line (2.5 kA common mode)			
Impulse durability		C2 10 x 2.0 kA 8/20 $\mu$ s D1 2 x 0.5 kA 10/350 $\mu$ s			
Maximum load current	$I_L$	-			
L-L Voltage protection level @ 1 kV/ $\mu$ s	$U_p$	45 V	50 V	75 V	45 V
L-L Voltage protection level @ 1 kA 8/20 $\mu$ 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/ $\mu$ s	$U_p$	350 V	350 V	350 V	350 V
L-PE Voltage protection level @ 2 kA 8/20 $\mu$ 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 $\Omega$		-			
3 dB Frequency @ 150 $\Omega$	$f_c$	100 kHz			
<b>Safety Parameters</b>					
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 $\mu$ H	0.2 $\mu$ H	0.2 $\mu$ H	0.2 $\mu$ H
<b>Mechanical Specifications</b>					
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 <sup>2</sup> flying leads	250 mm, 0.75 mm <sup>2</sup> flying leads	250 mm, 0.75 mm <sup>2</sup> flying leads	250 mm, 0.75 mm <sup>2</sup> 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
<b>Accreditations</b>					
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			
<b>Standards</b>					
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 <sup>rd</sup> 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			
<b>Shipping</b>					
Weight		180 g	180 g	180 g	180 g
Customs Tariff		85363000	85363000	85363000	85363000



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