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The Power in Electrical Safety©

NSL Slimline Signal Line Protecters

Monitoring and control protection

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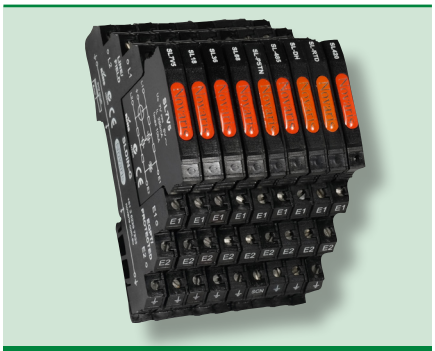


NSL-18-G

Standards
ITU-T K.44: 2012
AS / NZS 1768: 2007
IEC61643-21: 2012
AS/CA S008: 2010
AS/NZS 4117: 1999
UL 1449 3rd edition & UL 497B

Process Control Protection for most twisted pair signalling schemes. Ideal for the protection of PLCs, fire and security systems, telecommunications and telemetry systems, railway signalling, SCADA and other industrial monitoring and control equipment.

Multistage failsafe design

A high energy gas discharge tube (GDT) as primary protection plus series impedance and secondary components provide very robust surge protection with high transient suppression offering low let-through voltages.

Two different earthing options

With two different base options the NSL protectors offer either direct earthing via DIN rail, for the most effective, low impedance earth connection (-G base) or a connection via GDT to the DIN rail, offering isolation under normal conditions and equipotential bonding during a surge (-EC90 base).

Slimline pluggable modules

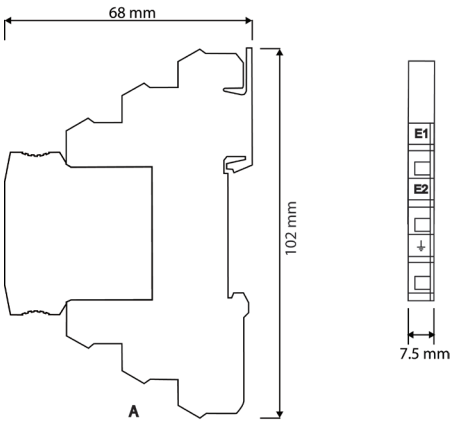
The plug-in design provides simple and rapid replacement and testing - no rewiring needed. This also provides a convenient method of field equipment isolation if required.

CE

NSL-7v5 - [*]

Product Series
Top
Base option

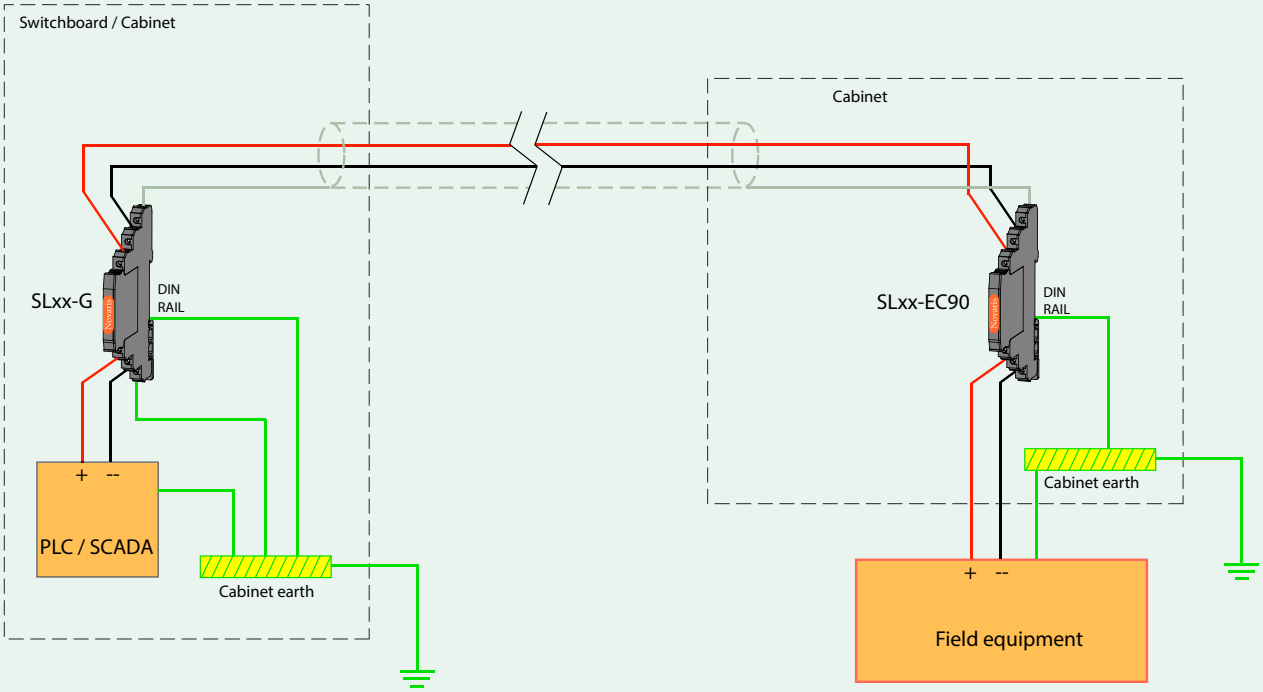
Dimensions



Type		NSL-7V5	NSL-18	NSL-36	NSL-68	NSL-PSTN	SL-485	SL-RTD	NSL-420
Electrical Specifications									
Connection type		Series							
Number of lines		1 pair							
Modes of protection		Transverse and common mode							
Maximum continuous voltage (DC)	U_C	7 V	16 V	34 V	65 V	200 V	8 V	3 V	34 V
Maximum continuous voltage (AC)	U_C	5 V	11 V	24 V	46 V	140 V	6 V	2 V	-
Maximum discharge current (8/20µs)	I_{max}	5 kA per line (10 kA common mode)							
Maximum discharge current (10/350µs)	I_{imp}	1.25 kA per line (2.5 kA common mode)							
impulse durability		C2: 10 x 5 kA 8/20 µs D1: 2 x 1 kA 10/350 µs							
Maximum load current	I_L	250 mA							
L-L Voltage protection level @ 1 kV / µs	U_P	15 V	30 V	45 V	80 V	220 V	35 V	15 V	40 V
L-L Voltage protection level @ 3 kA 8/20µs	U_P	15 V	30 V	45 V	80 V	220 V	35 V	15 V	40 V
L-L Voltage protection level @ 100 V / s		9 V	20 V	38 V	72 V	210 V	15 V	4 V	36 V
L-PE Voltage protection level @ 1 kV / µs	U_P	350 V	350 V	350 V	350 V	350 V	350 V	350 V	350 V
L-PE Voltage protection level @ 3 kA 8/20µs	U_P	600 V	600 V	600 V	600 V	600 V	600 V	600 V	600 V
L-PE Voltage protection level @ 100 V / s		230 V	230 V	230 V	230 V	330 V	230 V	230 V	230 V
AC durability		5 x 1 sec, 1 Arms							
Overstressed fault mode		Mode 3 (open circuit)							
Response time	t_A	< 5ns							
Line resistance		8.2 Ω	8.2 Ω	8.2 Ω	8.2 Ω	8.2 Ω	3.9 Ω	3.9 Ω	12 Ω
Line inductance		-							
L-L capacitance	U_T	17 pF	18.5 pF	18.5 pF	17.7 pF	17.4 pF	18 pF	18 pF	17 pF
L-PE Capacitance	U_C	4.5 pF							
Insertion loss @ 150 Ω		< 0.5 dB (< 1 MHz)							
3 dB Frequency @ 150 Ω	f_C	60 Mhz							

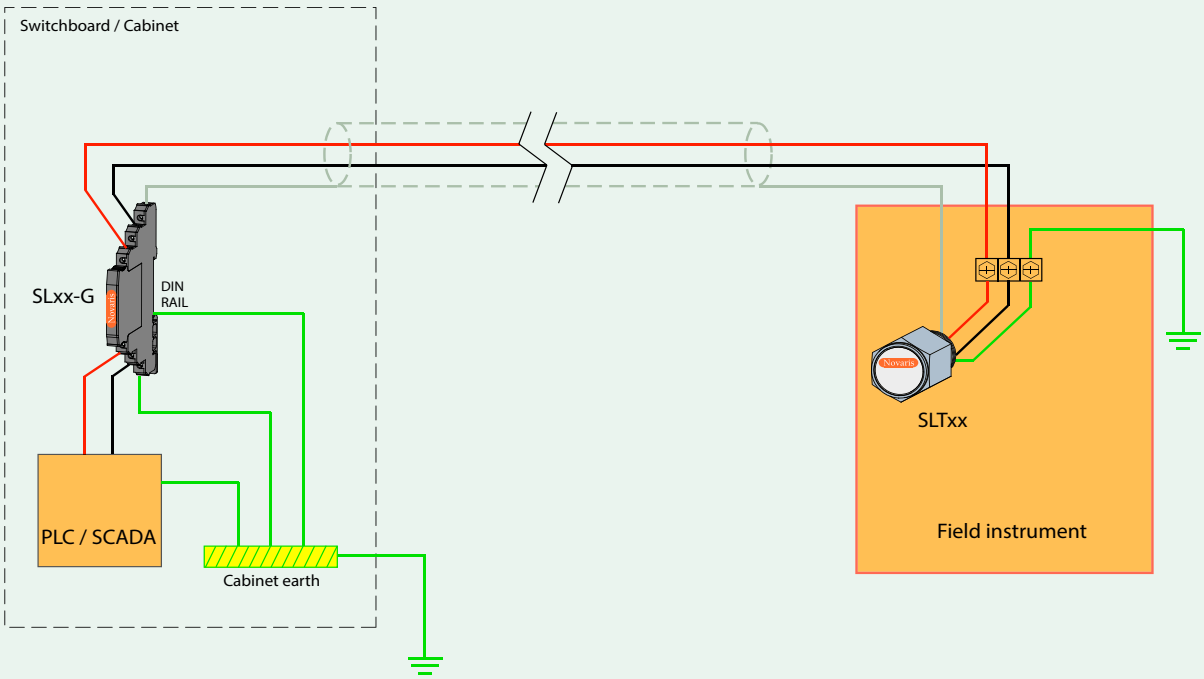
Mechanical Specifications	
Operating temperature / humidity	-40 to +70°C / 5 to 95 % non-condensing
Connection type / capacity	0.25 - 2.5 mm^2 cage clamp
Terminal screw torque	0.5 Nm
Environmental	IP 20 / Indoor
Dimensional drawing	A
Mounting	TS35 DIN-rail
Earthing via G-base	Direct earth connection via DIN-rail and screw terminals
Earthing via EC90-base	90 V isolation between DIN-rail earth and shield
Enclosure/colour	Polycarbonate UL94 V-0 / black
Weight	35 g

SLxx protection of field instruments



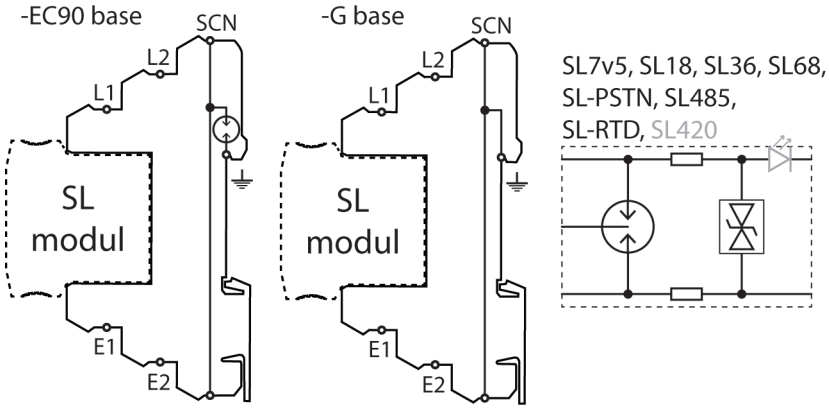
How to use the NSL-XX-G and NSL-XX-EC 90 example

SLTxx for protection of field instruments



How to use the NSL-XX- G in combination with the NSLT-XX example

Diagram / installation

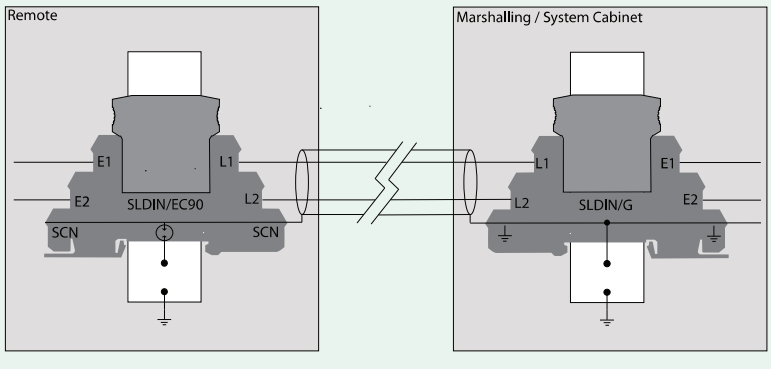


Ordering information

Type	Signal Type		* Base Option		Art. No.
			direct earting	indirect earthing	
NSL-7v5	5 V digital		-G	-EC90	**B-SL-7v5 - ***
NSL-18	12 V digital		-G	-EC90	**B-SL-18 - ***
NSL-36	24 V digital		-G	-EC90	**B-SL-36 - ***
NSL-68	48V digital		-G	-EC90	**B-SL-68 - ***
NSL-36	RS232	Data Highway	-G	-EC90	**B-SL-36 - ***
NSL-PSTN	PABX	PSTN	-G	-EC90	**B-SL-PSTN - ***
NSL-485	RS485	RS422	-	-EC90	**B-SL-485 - ***
NSL-RTD	RTD Applications	Thermocouple	-G	-EC90	**B-SL-RTD - ***
NSL-420	0 - 20 mA	4 - 20 mA	-G	-EC90	**B-SL-420 - ***

If you need hazardous aera products, please contact us.

* Base options



How to use the Bases "G" and "EC 90"

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