

## IS-SL7V5-EC90



## Intrinsically Safe Protectors

Novartis slimline surge protection devices (SPDs) provide surge protection for most twisted pair signaling schemes. Certified to be intrinsically safe Novartis IS SPDs can be installed in the hazardous zone or the field side of the IS barrier. This not only provides protection for the PLC or RTU I/O, it also provides protection for the IS barrier. The IS-SL-## are designed to protect digital and analogue I/O circuits up to the maximum voltages indicated by the part number.

## IEC Ex and ATEX Certified

Novartis 'IS-' products are certified intrinsically safe according to IEC Ex and ATEX; the group IIC T4 certification makes it acceptable for use with all gas/air mixtures.

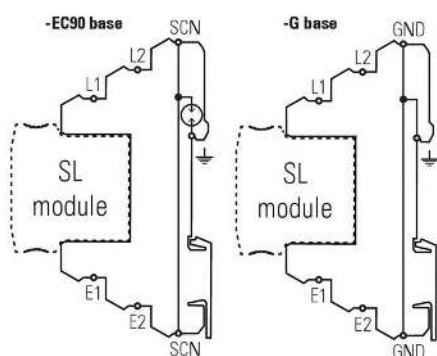
## Two Different Earthing Options

With two different base options the SL 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).

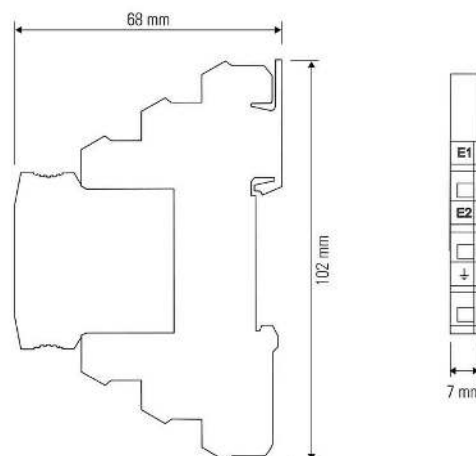
## Slimline Pluggable Modules

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.

## Wiring



## Dimensions



## Standards

Directive 94/9/EC  
IEC 60079-0  
IEC 60079-11  
IEC 61643-21  
AS/NZS 1768  
UL 1449 & UL 497B  
ITU-T K.44

Equipment and protective systems intended for use in potentially explosive atmospheres  
Explosive atmospheres - Part 0: Equipment - General requirements  
Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i'  
SPD connected to telecommunications and signalling networks - Cat C2, D1  
Signalling/Telecommunications surge protection  
Protectors for data communications and fire-alarm circuits  
Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents














## Product Datasheet

## Specifications






## Accreditations Specifications

|                    |                        |
|--------------------|------------------------|
| TÜV 14 ATEX 7569 X | II 1 G Ex ia IIC T4 Ga |
| IECEX ITA 14.0011X | Ex ia IIC T4           |

## Mechanical Specifications

|                               |   |                         |
|-------------------------------|---|-------------------------|
| Minimum operating temperature |  | -20°C                   |
| Maximum operating temperature |  | 40°C                    |
| Minimum operating humidity    |  | 5%                      |
| Maximum operating humidity    |  | 95%                     |
| Mounting method               |  | TS35 DIN Rail           |
| Environmental rating          |  | IP20                    |
| Enclosure material            |  | Polycarbonate UL 94 V-0 |
| Enclosure finish              |  | Blue                    |
| Terminal type                 |   | Screw cage              |
| Terminal capacity             |  | 2.5mm <sup>2</sup>      |
| Terminal screw torque         |  | 0.5Nm                   |
| Earthing                      |   | 90V isolation           |
| Length                        |  | 102mm                   |
| Width                         |  | 7mm                     |
| Height                        |  | 68mm                    |

## Electrical Specifications

|  |   |                       |
|--|---|-----------------------|
| Connection type  |    | Series                |
| Number of lines  |    | 1 pair                |
| Modes of protection                                    |    | Transverse and Common |
| Maximum continuous voltage (DC)                        | $U_c$   | 7V                    |
| Maximum continuous voltage (AC)                        | $U_c$   | 5V                    |
| Maximum discharge current (8/20 $\mu$ s)               | $I_{max}$   | 5kA                   |
| Maximum common mode discharge current (8/20 $\mu$ s)   |   | 10kA                  |
| Maximum discharge current (10/350 $\mu$ s)             |   | 1kA                   |
| Maximum common mode discharge current (10/350 $\mu$ s) | $I_{imp}$   | 2kA                   |
| Impulse durability C2 10x8/20 $\mu$ s                  |   | 5kA                   |
| Impulse durability D1 2x10/350 $\mu$ s                 |   | 1kA                   |
| Maximum load current                                   | $I_L$   | 250mA                 |
| AC durability 5x1s                                     |   | 1Arms                 |
| Overstressed fault mode                                |   | Mode 3                |
| Response time  | $t_A$   | <5ns                  |
| Line resistance  |  | 8.2 $\Omega$          |
| Insertion loss @ 150 $\Omega$                          |  | <0.5dB @ <10kHz       |
| 3 dB Frequency @ 150 $\Omega$                          |   | 50kHz                 |

## Other Specifications

|              |   |               |
|--------------|---|---------------|
| Product Code |  | IS-SL7V5-EC90 |
|--------------|---|---------------|

## Safety Specifications

|                    |        |
|--------------------|--------|
| Max. input voltage | 30V    |
| Max. input current | 1.639A |
| Max. input power   | 1.3W   |
| Capacitance        | 0      |
| Inductance         | 0      |

## Electrical (L-L) Specifications

|  |       |      |
|--|-------|------|
| Voltage protection level @ 1 kV/ $\mu$ s     | $U_p$ | 25V  |
| Voltage protection level @ 3 kA 8/20 $\mu$ s | $U_p$ | 25V  |
| Voltage protection level @ 100 V/ s          |       | 8V   |
| Capacitance                                  | -  -  | 40nF |

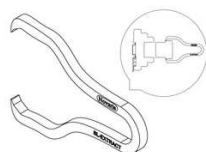
## Electrical (L-PE) Specifications

|  |       |      |
|--|-------|------|
| Voltage protection level @ 1 kV/ $\mu$ s     | $U_p$ | 25V  |
| Voltage protection level @ 3 kA 8/20 $\mu$ s | $U_p$ | 25V  |
| Voltage protection level @ 100 V/ s          |       | 8V   |
| Capacitance                                  | -  -  | 40nF |

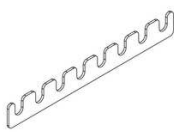
## Shipping Specifications

|                |   |                    |
|----------------|---|--------------------|
| Weight         |  | 40g                |
| Customs tariff |  | 85363000, 85363010 |

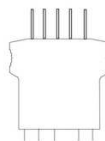
## Accessories



SL-EXTRACT



SL-COMB



SL-TEST



SL-DRIVER

For additional information please refer the SL Accessories Catalogue , No. 0004-D14V1