

Surge Protection Devices



SD Series

The exceptionally high packing densities are the result of an ultra slim footprint for individual modules, which can double-up as feedback terminals. Each module provides full hybrid surge protection for 2 and 3-wire loop protection.

Modules with a comprehensive range of voltage ratings cover all process related signals such as RTDs, Thermocouples (THCs), 4 - 20mA loops, telemetry outstations, shut-down systems and fire and gas detectors.

The optional loop disconnect featured on the SD07, SD16, SD32 and SD55 modules allows users to perform commissioning and maintenance without removing the surge protection device. In addition, a third connection on the field and safe side of the module is provided for safe termination of shields.

For three wire applications the specially designed SDRTD (Resistance Temperature Detector) and the SD32T3, (for separately powered 4 - 20mA loops) provide full 3-wire protection in a single compact unit. The SD07R3 provides protection of 3-wire pressure transducers on low power circuits.

For higher bandwidth applications, the SDR Series meets the demands of today's highest speed communication systems.

120V and 240V AC versions are available for I/O and power supplies up to three Amps of load current.

Telephone networks can be protected by the SDPSTN.

All modules are DIN-rail mountable on a TS-35 rail. A comprehensive range of mounting and grounding accessories are available.



SLP Series

The multi-stage hybrid surge protection network at the heart of the SLP uses a combination of solid state electronics and a gas filled discharge tube (GDT) to provide surge protection up to 20kA. This impressive surge protection circuit is designed to exhibit exceptionally low line resistance and adds only a minimal voltage drop to the circuit.

The SLP device does not adversely affect the performance or operation of the loop or combined equipment during operation. The device allows signals to pass with very little attenuation, while diverting surge currents safely to the ground and clamping output voltages to safe levels.

Fully automatic in operation, SLP devices react immediately to ensure that equipment is never exposed to damaging surges between lines or the lines and ground. Reacting instantly, the SLP redirects surges safely to the ground and resets automatically.

The versatile SLP series provides full hybrid surge protection, combining protection for two process loops into one case.

For higher bandwidth applications, the SLP series has been developed to meet the demands of today's highest speed communication systems.

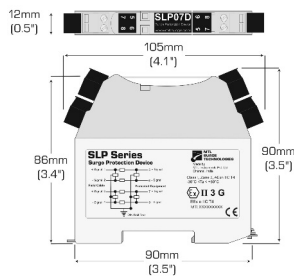
Specifications SLP Series

All figures typical at 77°F (25°C) unless otherwise stated

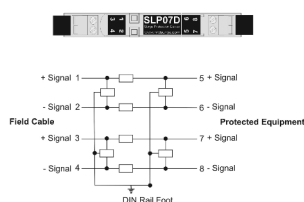
Maximum surge current	20kA (8/20µs waveform) per line
Leakage Current	<1mA @ working voltage
Maximum rated load current	1.50A
Loop resistance	2 Ohm
Capacitance	Line - Line - 60pF
Bandwidth	-0.1db @9kHz - 37MHz -3dB @50MHz
Response time	<1ns
Ambient temperature	-40°C to +80°C (working) -40°F to +176°F (working) -40°C to +80°C (storage) -40°F to +176°F (storage)
Humidity	5 to 95% RH (non-condensing)
Terminals	2.5mm ² (12 AWG)

Electrical connections	Plug/header screw terminal strip
Mounting	T-section DIN-rail (35 x 15mm rail)
Weight	5oz (140g approximately)
Case flammability	UL94-V0
EMC compliance	BS EN 60950:1992 BS EN 61000-6-2:1999 BS EN 61010-1:1993

Dimensions



Connections



Approvals

Country (Authority)	Standard	Certificate/File No.	Approved for	Product
ATEX	BS EN 60950:1992	ATEX0377X	EEx N IIC T4	SLP07D, SLP16D, SLP32D
	BS EN 61000-6-2:1999			
	BS EN 61010-1:1993			
USA (FM)	Class Nos. 3600 (1998), 3610 (1999), 3611 (1999), 3615 (1989), 3810 incl. Supp 1 (1995-07 (1989-03), ANSI/NEMA 250 (1991), ISA-S12.0.01 (1999)	3011208	Intrinsically Safe: I/1/A-D, I/O/II C Non incendive: I/2/A-D, I/2/II C	SLP07D, SLP16D, SLP32D
	C22.2 No. 213, 142, 94, 157, 30			
	ANSI/NEMA 250			
	CAN/CSA-E79-0 CAN/CSA-E79-11			
Canada (FM)	C22.2 No. 213, 142, 94, 157, 30	3025374	IS/I/1/ABCD I/O/Ex ia/IIC I/O/Ex ib/IIC NE/I/2/ABCD NE/I/2/IIC	SLP07D, SLP16D, SLP32D
	ANSI/NEMA 250			
	CAN/CSA-E79-0			
	CAN/CSA-E79-11			



Ordering Data	Part No.	Part No.	Part No.
	SLP07D	SLP16D	SLP32D
Technical Data			
Nominal voltage U _n	7V	16V	24V
Rated voltage (MCOV) U _c	8V	18V	32V
Nominal current I _n	1.50A	1.50A	1.50A
Nominal discharge current (8/20µs) i _{SN}	3kA	3kA	3kA
Max discharge current (8/20µs) I _{max}	20kA	20kA	20kA
Lightning impulse current (10/350µs) I _{imp}	2.5kA	2.5kA	2.5kA
Residual voltage @ i _{SN} U _p	10V	23V	40V
Voltage protection level @ 1kV/µs U _p	<8V	<18V	<38V
Bandwidth f _G	50MHz	50MHz	50MHz
Capitance C	60pF	60pF	60pF
Series resistance R	1.0	1.0	1.0
Operating Temperature Range	-40°C to +80°C	-40°C to +80°C	-40°C to +80°C
Category tested	A2, B2, C1, C2, C3, D1	A2, B2, C1, C2, C3, D1	A2, B2, C1, C2, C3, D1
Overstressed fault mode in=3kA	22kA	22kA	22kA
Impulse durability (8/20µs)	10kA	10kA	10kA
Degree of protection	IP20	IP20	IP20
AC durability	1Arms. 5T	1Arms. 5T	1Arms. 5T
Service conditions	80kPa - 160kPa 5% - 95% RH	80kPa - 160kPa 5% - 95% RH	80kPa - 160kPa 5% - 95% RH

Installation

