



MA15 Series

AC & DC Power Protection

The MA15 Series of surge protection devices protects electronic equipment and computer networks against the effects of noise pollution induced in power supplies. MA15 units filter out and suppress the effects of industrial noise and surges caused by lightning, switching devices, thyristor controls, transmission system overloads and power-factor correction circuits.

Product Features:

- 18kA surge protection and RFI filtering
- Protects panel loads up to 15 Amps in series, unlimited Amps in parallel
- Suitable for AC or DC application
- Thermal and short circuit protection
- LED status indication feature
- 10 year product warranty

SD Series SLP Series

Data and Signal Protection

The SD Series are ultra-slim user-friendly devices for protecting electronic equipment and systems against surges on signal and I/O cabling, and the SLP Series provides 20kA power surge protection for process control, equipment systems and distribution panels.

Product Features:

- Range of ATEX Certified intrinsically safe surge protectors
- Ultra-slim and space saving designs; easy installation
- Multistage hybrid protection circuitry - 10kA maximum surge current for SD Series, and 20kA maximum surge current for SLP Series
- Range of voltage ratings ideal for process I/O applications
- Designed for high bandwidth, low resistance applications; RTD, Public Switch Telephone Network (PSTN) and 3-wire transmitter versions available in SD Series
- Surge protection for two loops or one 4-wire circuit per SLP Series module
- 10 year product warranty

The SD and SLP Series surge protection devices provide unparalleled packing densities, application versatility, proven and reliable hybrid circuitry, simple installation and optional 'loop disconnect' facilities (SD Series). These features make the SD and SLP Series the ultimate surge protection solutions for process control equipment, I/O systems and communications networks.

TP48 Series

Transmitter and Sensor Protection

The TP48 Series of transmitter protectors safeguards electronic process transmitters against induced surges and transients from field cabling. They uniquely provide a level of protection for 2, 3 and 4 wire field-mounted transmitters that greatly exceeds the optional transient protection facilities available from the transmitter manufacturers without any additional wiring, conduit modifications or other expensive extras.

Product Features:

- Easy and direct mounting – simply screw into spare conduit entry
- Intrinsically safe; flameproof to GENELEC standards; ATEX approved
- Parallel connection avoids introduction of resistance into loop

Introduction – 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, Thermo- couples (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.

Public Switched 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.

Surge Protection Devices – SLP Series

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

2.5mm² (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

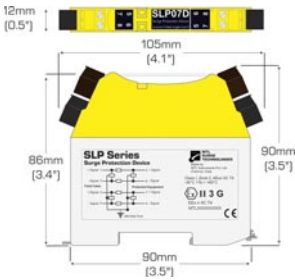
EMC compliance

BS EN 60950:1992

BS EN 61000-6-2:1999

BS EN 61010-1:1993

Dimensions



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 incendeive: I/2/A-D, I/2/II C	SLP07D, SLP16D, SLP32D				
	Canada (FM)				C22.2 No. 213, 142, 94, 157, 30	3025374	IS/I/1/ABCD I/O/Ex ia/II C I/O/Ex ib/II C NE/I/2/ABCD NE/I/2/II C	SLP07D, SLP16D, SLP32D
					ANSI/NEMA 250			
					CAN/CSA-E79-0			
					CAN/CSA-E79-11			



Ordering Data

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_{limp}	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	80kPa - 160kPa	80kPa - 160kPa
	5% - 95% RH	5% - 95% RH	5% - 95% RH

Part No.

SLP07D

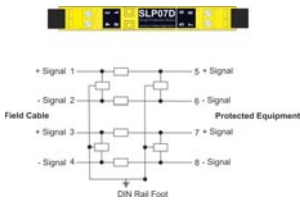
Part No.

SLP16D

Part No.

SLP32D

Connections



Installation

