MTL SSP range

Surge protection against sustained voltages and AC faults

- **Withstands AC fault crossover voltages**
- **Protects against attenuated surges**
- **Full voltage range 7/16/32/55/75/200**
- **Resets automatically after removal of fault**
- **ATEX and IECEx certified intrinsically safe surge protection**
- **Extension of the IOP/SLP range**

The self-healing surge protector (SSP) from Eaton adds AC fault withstand capability and current limiting protection to our traditional hybrid surge technology.

The single loop design is packaged in the well-known IOP/SLP enclosure giving the customer a wider range of performance offering when choosing this family of products. The product eliminates the most common cause of SPD failure (continuous overvoltage/over current conditions) while adding current limiting protection to the circuit.

The use of Surge Protection Devices on communication lines has increased significantly over the last number of years. However, if the communication lines are subjected to induced AC power or AC power-cross, the surge protector can pose possible safety hazards. In these circumstances, the surge protector will respond and draw AC current. The magnitude of current could be large enough to represent a fire risk to the surge protector itself or the thin-gauge UTP (unshielded twisted pair) wiring.

The SSP range incorporates circuitry to mitigate the hazards of induced AC or AC power-cross up to 240Vrms. The SSP stops the flow of current in milli seconds to prevent surge protector and wiring damage. Once the AC power is removed, the SSP will cool down and automatically begins normal operation again.

The SSP range takes our proven hybrid surge circuit and its performance characteristics and adds another layer of protection.

Should the signal loop be subjected to surges which will not operate the Gas Discharge Tube (GDT), yet operate the other surge protection elements, the additional network will immediately protect these elements by elevating to high resistance. This will stop current flowing through the device and damaging the surge protection elements, while protecting the loop equipment from being subjected to these sustained over voltages.

The SSP range also provides overcurrent protection to the wiring and the load. Should a sustained current of 500mA, or greater, be present, the SSP will stop the current flow, thus providing additional protection to the load and the wiring.

Powering Business Worldwide

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SPECIFICATION

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

Maximum surge current
20kA (8/20µs waveform) per line

Leakage Current
see table below

Maximum rated load current
150mA

Loop resistance
<20 ohms

Bandwidth
see table below

Attenuation
–3.0dB @ 25kHz

Response time
<1ns

Ambient temperature
Working & Storage
-40°C to +80°C (-40°F to +176°F)

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
140g approx. (5oz)

Case flammability
UL94-V0

EMC compliance
BS EN 61326-1:2006

Electrical safety
See approvals table

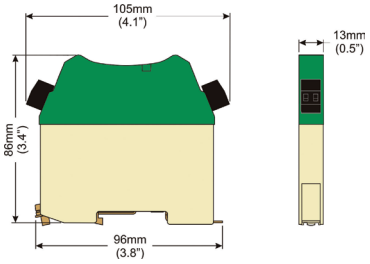

Figure 1 Dimensions

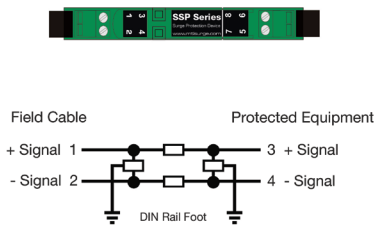

Figure 2 Connection details

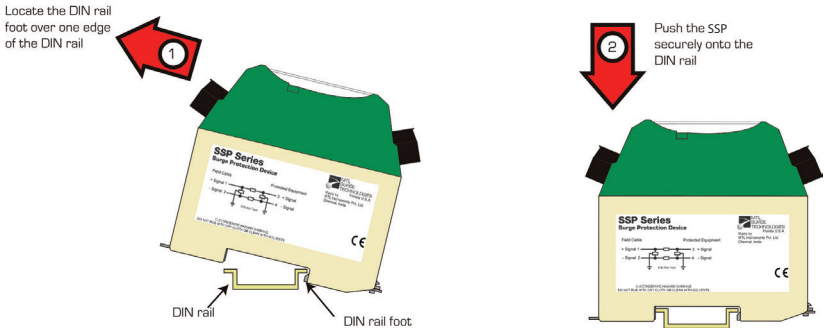

Figure 3 Installation

TO ORDER SPECIFY - Order by module, as listed in the specification table below.

Model		SSP07X	SSP16X	SSP32X	SSP55X	SSP75X	SSP200X
Nominal voltage	U_n	7Vdc	16Vdc	32Vdc	55Vdc	75Vdc	200Vdc
		5Vac	11Vac	22Vac	38Vac	53Vac	140Vac
Rated voltage (MCOV)	U_c	7.7V	17V	36V	62V	90V	220V
Max leakage current	µA	500	5	5	5	5	5
Residual voltage @ i_{sn}	U_p	50	60	100	122	184	344
Voltage protection level @ 1kV/µs	U_p	<12V	<25V	<45V	<90V	<115V	<300V
Bandwidth	f_G	25kHz	25kHz	25kHz	25kHz	25kHz	25kHz
Series resistance	R	20Ω	20Ω	20Ω	20Ω	20Ω	20Ω
Special feature		Sustained Over-voltage					

HAZARDOUS AREA APPROVALS

Country (Authority)	Standard No.	Certificate/File	Approved for	Product
EC (ATEX)	EN 60079-0:2012 EN 60079-11:2012	Baseefa13ATEX0023X	Ex ia IIC T4 Ga	SSP***X
Global (IECEx)	IEC 60079-0:2011 IEC 60079-11:2011	IECEx BAS 13.0017X	IEx ia IIC T4 Ga	SSP***X
ATEX Directive	EN 60079-14:2009 EN 60079-15:2010	MTL13ATEX0756X	Ex nA IIC T4 Gc	SSP***X
USA (FM)	Class 3600 (2001), Class 3610 (2010), Class 3611 (2004), Class3810 (2005) ANSI/ISA 60079-0 (2009) ANSI/ISA 60079-11 (2011) ANSI/ISA 61010.1 (2004)	3048513	Intrinsically Safe: Class I, Groups A-D Class I Zone 0, Group IIC Class I Zone 0, Group IIB Non-incendive: Class I, Div 2, Groups A-D	SSP***X
Canada (FM)	C22.2 No. 213 (2008) C22.2 No. 157 (2006) C22.2 No 60079-0 (2011) C22.2 No. 60079-11 (2011) C22.2 No. 1010.1 (2004)	3048513C	Intrinsically Safe: Class I, Groups A-D Class I Zone 0, Group IIC Class I Zone 0, Group IIB Non-incendive: Class I, Div 2, Groups A-D	SSP***X

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