



### 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



## MA15 Series

Although industrial computers and PLCs are designed to be rugged, the extra protection provided by the DIN-rail mounting MA15 units is critical. Ideally suited for protecting panel mounted equipment and typically used in the controls section of a motor control center (MCC), the MA15 range provides surge and RFI protected power.

With a unique ‘three-stage’ combination of protection elements, these units suppress conducted RFI and voltage surges. The circuit elements are: (1) surge clipping components to absorb transient surges that may otherwise damage equipment, (2) a filter to suppress noise in the system and, (3) ring suppression. Ring suppression prevents surges causing the filter to ‘ring’ (oscillate) under low load conditions – an effect that actually accentuates interference in most commercially available filters.

Suitable for AC or DC application, MA15 units reduce both electromagnetic emissions and the susceptibility of the associated equipment to emissions from other sources. MA15 devices also offer installation flexibility. To protect circuits rated 15A or less, MA15 devices should be installed in series. To protect higher current circuits, simply install the MA15 in parallel.

LED status indication is standard with the MA15 units. Thermal fusing is also incorporated into each 18kA rated device as an additional safety feature. MA15 modules also offer short circuit protection for added safety.

## Specifications MA15 Series

<b>Maximum surge current:</b> 18kA (8/20 $\mu$ s) per mode	
<b>Maximum leakage current:</b> <0.3mA	
<b>Maximum continuous operating current</b>	
15A series connection	
Unlimited Amps in parallel	
<b>Maximum continuous operating voltage</b>	
25% above nominal	
<b>Limiting voltage</b>	<b>Let through voltage</b>
<b>@ 500A ring</b>	
120V/140V versions	295V
240V/280V versions	356V
<b>@ 500A 8/20 <math>\mu</math>s</b>	
120V/140V versions	320V
240V/280V versions	800V
<b>@ 3kA 8/20 <math>\mu</math>s</b>	
120V/140V versions	396V
240V/280V versions	975V
<b>@ 10kA 8/20 <math>\mu</math>s</b>	
120V/140V versions	585V
240V/280V versions	1210V
<b>Maximum attenuation (typical):</b> -55dB @ 100MHz	
<b>Modes protected:</b> L-N, L-G, N-G	
<b>Ambient temperature limits</b>	
-40°F to +185°F (working)	
-40°C to +85°C (working)	
<b>Humidity</b>	
95% RH (non-condensing)	
<b>Casing</b>	
Polyimide-PA, with G- or T-section	
(Top-hat) DIN-rail mounting foot	
<b>Connectors</b>	
Screw terminal	
<b>Terminals</b>	
0.1 inch <sup>2</sup> (2.5mm <sup>2</sup> ) 12 AWG	
<b>Mounting</b>	
G- or T-section (‘Top-hat’) or	
1.4 inch (35mm) DIN rail	
<b>Weight</b>	
3.53oz (100g)	
<b>EMC compliance</b>	
BS EN 60950 : 1992	
BS EN 61000-6-2 : 1999	
<b>LED Indication</b>	
Green LED on Protection present	
Green LED off Internal failure	

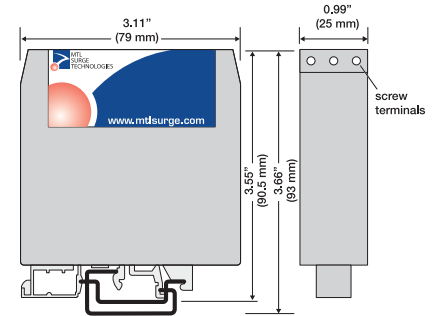
All figures typical at 77°F (25°C) unless otherwise stated

Ordering Data Part No.	AC		DC
	MA15D1SI	120V, 47-63Hz	140V
MA15D2SI	240V, 47-63Hz	280V	

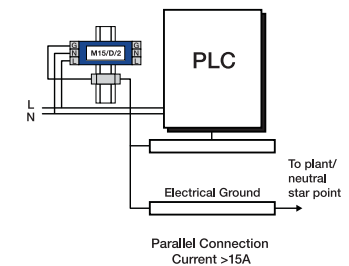
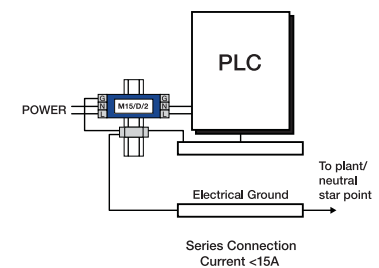
## Approvals

Country (Authority)	Standard	Approved for	Product No.
United States	UL 1449	AC Power Product	MA15D1SI, MA15D2SI
Canada	Recognized Component		
United States	UL 1449	Hazardous Locations	MA15D1SI, MA15D2SI
Canada	Recognized Component	Class I, Division 2 Groups A, B, C and D	
	UL 1604		

## Dimensions



## Installation



The grounding of the surge protector and the protected equipment is very important and, if possible, should be accomplished as illustrated.

Please note that the unit is marked Line and Load and it is important that the unit is installed with the Line side connected to the incoming power and the Load connected to the equipment to be protected. For parallel application however, the Line side is connected to the incoming power and the Load left unconnected.

