MTL SD Modular range

Safeguards electronic equipment and systems against surges on signal and I/O cabling

- Slim, modular, space saving design
- Multi stage hybrid circuit
- 20kA maximum surge current
- Voltage ratings to suit process I/O applications
- Intrinsically safe
- ATEX and IECEx certified
- 10 year warranty

The MTL SD modular range takes the established SD range of high performance surge protectors for I/O and introduces a replaceable element. Maintaining the unrivalled packing density and field proven hybrid circuit design the modular range makes maintenance easy, enabling the replacement of surge protection modules without disconnecting the loop.

The multi-stage high performance hybrid circuit provides protection for I/O in the most demanding applications in the most hostile areas of the world where the traditional SD has been established as a market leader. Each plugin module provides full hybrid line-line and line-ground protection.

The base design can double up as a basic feed-through terminal to which the surge protection is added at a later stage. The SDFTMXX module should be selected for permanent feed through applications.

The MTL SD modular range of products is backwards compatible with existing installed SD’s. The footprint will enable the user to replace already installed SD’s with the new modular design.

The addition of the MTL SD modular will enhance any process control system by ensuring maximum availability and ultimate reliability. These surge protectors will ensure the operation and up-time of the most critical systems failure.

The MTL SD**MXL diagnostic LED option, provides visual indication of degradation of voltage limiting components, reducing the effectiveness of the surge protection module, generally after repeated surge events. The LED variant is optimised for AI/DI applications. The LED option will assist maintenance personnel in rapidly identifying the failed module requiring replacement.

The MTL Data surge tester allows the continued effectiveness of the surge protection function to be tested by removing the surge protection module from the base and plugging it into the tester.

Designed from the outset using our experience of safety management the MTL SD modular will be suitable for use in safety systems most commonly used today. Additionally our leadership in the intrinsic safety market guarantees attention to detail where safety is paramount.

The hot swappable design of the SD**M module with the SDBE-BC* feed-through base option allows replacement of the module without interruption of the process signal. Careful design, to give a “make before break” contact configuration, is further enhanced by the earth connection being the first to “make” and the last to “break” giving added safety for taking any residual voltages down to earth.

The cable screen can either be connected directly to Earth with the SDBE-B*N option or alternatively the screen is isolated from ground with a Gas Discharge Tube (GDT) providing a path to ground during a surge event with the SDBE-B*G version.

The MTL SD**MFX fuse option provides both fused protection against fault currents and a convenient method of isolating field circuitry from protected circuitry without needing additional disconnect terminals. The standard fuse (which is replaceable) is rated 250mA. As an example, this feature is of particular value in applications in which an SPD is used with a bulk power supply feeding multiple loops. The individual module fuse prevents a fault or follow on current on one loop disrupting the power supply to the others. Also, loops can be removed from the circuit for maintenance reasons or added without needing additional disconnect terminals. Where only the disconnect feature is required, the SD**MDX solid link disconnect option can be selected.

One simple operation clamps the base securely to the DIN rail and automatically provides the high integrity earth (ground) connection.

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**MTL SD Modular range**

**SPECIFICATION**

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

**Protection**

- Full hybrid line to line
- Each line to screen/ground
- Overstressed fault mode (i_n = 3kA)
- Category tested
- Humidity
- Ambient temperature
- Response time
- Lightning impulse current (I_{imp}) (10/350µs)

**ANSI/IEEE testing**

**IEC compliance**

**EMC compliance**

**Service conditions**

- All figures typical at 25°C (77°F)

**APPROVALS**

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<th>Country (Authority)</th>
<th>Standard</th>
<th>Certificate/ File No.</th>
<th>Approved for</th>
<th>Parameters</th>
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<td>Baseefa 02ATEX0211X</td>
<td>Ex ia IIC T4 Ga</td>
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</table>

* P_{1} = 1W (-30°C ≤ Ta ≤ 75°C); P_{2} = 1.2W (-30°C ≤ Ta ≤ 60°C); P_{3} = 1.3W (-30°C ≤ Ta ≤ 40°C)

**ORDERING INFORMATION**

Order insert and base together - see below - or individually.

**Part number codes - MODULE INSERT**

<table>
<thead>
<tr>
<th>SD SERIES</th>
<th>VOLTAGE CODE</th>
<th>DISCONNECT METHOD</th>
<th>LED</th>
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<tr>
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<td>32 - 32V</td>
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<tr>
<td>55 - 55V</td>
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</tbody>
</table>

**FEED THROUGH MODULE**

**BASE MODULE**

- SD BASE
- BASE MODULE
- EARTH ISOLATION
- N - NONE
- G - SPD EARTH ISOLATED BY GDT
- DISCONNECT WHEN SD MODULE REMOVED
- C - NO DISCONNECT TO SIGNAL LINE
- D - DISCONNECT SIGNAL LINE

**MTL DATA SURGE TESTER**

To order a module with base, specify, for example: SD 16 M DX - B D G to obtain a 16V insert with disconnect link in a base with signal disconnect on removal of insert and GDT isolation.

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The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.