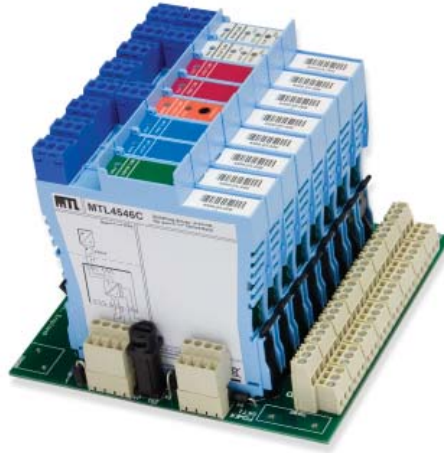




for close integration of  
IS circuits into process-  
connected systems

# MTL4500 SERIES



- ◆ Compact modular design with 'plug-in' connections
- ◆ Quick install and release mechanism
- ◆ High module/channel packing densities
- ◆ System backplanes with bussed power and safe-area connections
- ◆ Custom-designed backplanes for closest integration into process-connected systems
- ◆ Compatible with MTL4000 Series interface family

The **MTL4500 Series** of isolating interface units introduces key concepts for integrating intrinsic safety into large or medium sized process-connected systems. Being exceptionally compact, the units give high packing densities and plug into system backplanes with safe-area connections made by multiway connectors – an approach which not only simplifies engineering but also reduces installation and maintenance costs. MTL4500 modules are held on the backplane with plastic clips that are simple to use, secure in operation and avoid the use of screws, giving further reduction in installation and maintenance time and cost.

**Input and output modules** handle normal process applications covering on/off or analogue signals between hazardous-area equipment and safe-area systems. Modules incorporate proven intrinsically safe isolation techniques, internationally certified for protecting equipment and wiring in all zones and explosive atmospheres. Input, output and power-supply circuits are isolated from each other, giving maximum flexibility for control loop applications.

**Key module design features** include a multiway connector to the backplane for safe-area and power supply connections. Hazardous-area connections simply plug into the front of the module; this simplifies installation and maintenance and reduces time, cost, and the risk of errors. Status LEDs, configuration switches and ports are located on the top or side of individual modules for easy access. The compact, 16mm wide, design reduces weight and gives exceptionally high packing density.

**Based on proven IS isolation technology**, MTL4500 Series modules do not need a high integrity earth and the associated circuits can be left floating or be earthed at any one point in accordance with good earthing practices. MTL4500 Series provides single channel single loop integrity across the range with the addition of dual channel options for the switch/proximity modules, analogue inputs and analogue outputs. There is even a quad channel switch/proximity input module for the maximum channel density.

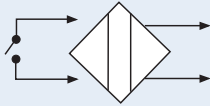
**Line fault detection (LFD)** facilities are provided across the range of I/O functions; on the switch/proximity detectors, the MTL4523 solenoid/alarm driver and the isolating drivers. Analogue input units such as the MTL4541 provide line fault detection by repeating o/c or s/c currents to the safe-area control system.

**System backplanes are located** in safe areas and, because the hazardous-area circuits are connected directly to the modules, do not need to be certified. See MTL series backplanes, enclosures and accessories for full details.

**The easy migration from MTL4000** supports existing installations because MTL4500 modules can be mounted on backplanes that were designed for MTL4000. A simple modification uses the backplane mounting holes of the MTL4000 to accept the mounting clips for the MTL4500 modules. This ensures continued availability and operation of process plant with new I/O modules and enhanced functionality.

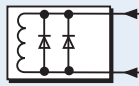


# MTL4500 I/O MODULE LIST



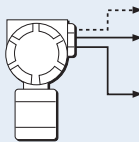
## DIGITAL INPUT

Part Number	Functions
MTL4510	4ch DI solid-state output
MTL4510B	4ch DI multifunction solid-state output
MTL4511	1ch DI relay output
MTL4513	2ch DI solid-state output
MTL4514	1ch DI relay output + LFD alarm
MTL4516	2ch DI relay output
MTL4516C	2ch DI with changeover relay output
MTL4517	2ch DI relay output + LFD alarm



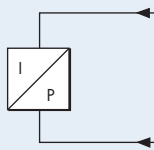
## DIGITAL OUTPUT

Part Number	Functions
MTL4521	Loop powered solenoid driver
MTL4523	Solenoid driver with LFD
MTL4523R	Solenoid driver with LFD
MTL4523L	Loop powered solenoid driver + LFD
MTL4524	Switch operated solenoid driver
MTL4524S	Switch operated solenoid driver, 24V override
MTL4525	Switch operated solenoid driver low power



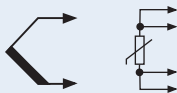
## ANALOGUE INPUT

Part Number	Functions
MTL4541	1ch 2/3 wire Transmitter repeater
MTL4541B	1ch 2/3 wire Transmitter repeater, 2 port isolation
MTL4541P	1ch 2/3 wire Transmitter repeater, high power
MTL4544	2ch 2/3 wire Transmitter repeater
MTL4544B	2ch 2/3 wire Transmitter repeater, 2 port isolation



## ANALOGUE OUTPUT

Part Number	Functions
MTL4546	1ch 4-20mA smart isolating driver + LFD
MTL4546C	1ch 4-20mA smart isolating driver + oc LFD
MTL4549	2ch 4-20mA smart isolating driver + LFD
MTL4549C	2ch 4-20mA smart isolating driver + oc LFD



## TEMPERATURE INPUT

Part Number	Functions
MTL4575	Temperature converter

## GENERAL

Part Number	Functions
MTL4599	Dummy isolator
MTL4599N	General purpose feed-through module

