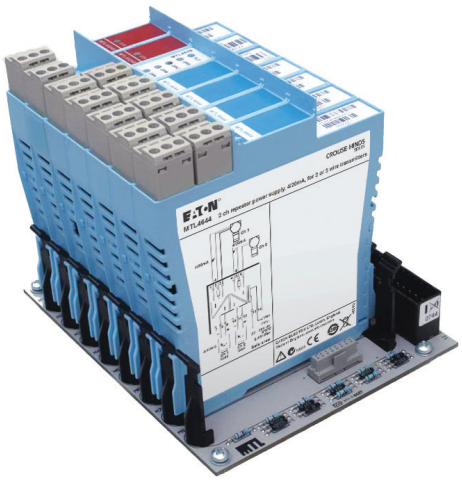
MTL4600 range

Isolating interfaces

- **3-port isolation as standard**
- **Highest module/channel packing densities**
- **Low power dissipation**
- **Quick install and release mechanism**
- **Multi-channel I/O modules**
- **Broken line and earth-fault protection**



Isolation—protecting your system Designing your plant with good clean earth systems is not always possible. Poor ground conductivity, large process areas and heavy electrical machinery, all contribute to increased noise. This noise is induced or conducted into adjacent wiring, which in turn degrades the quality of the signals passing through the cables. Without isolation this noise is superimposed on the process signal causing a loss of accuracy, poor control and possibly failures or false trips.

Many control systems, PLCs and safety systems do not have full isolation between channels. In compact well defined plant layouts this is acceptable, but these are not always guaranteed. To avoid interference between channels, isolation is the solution.

The MTL4600 range of isolators offer reduced risk and greater protection to the system, with all the advantages of a common design approach for both IS and non-IS signals.

System Solutions

Building on the base of the MTL4500 range of solutions, the MTL4600 offers a high level of signal isolation for installations where multiple loops on a common connection are not desirable.

Signal isolation provides excellent protection against surges, common faults and noisy environments. It also eliminates the risk of earth loops between different areas of the plant, which, if not isolated, can cause significant errors or failures under fault conditions.

MTL4600 isolators are fully compatible with all existing backplanes used with MTL4500 range and many control systems. The form factor and signal types offer the user a common approach for both IS and non-IS signals.

The backplane mounting MTL4600 range is designed with system vendors in mind for "project-focussed" applications such as Distributed Control System (DCS), Emergency Shutdown Systems (ESD) and Fire and Gas monitoring (F&G).

The reduced power consumption and high efficiency enable high signal density to be achieved together with improved freedom in cabinet layout and design. Easy integration with the input/output assemblies of control or safety instrumentation systems not only simplifies project engineering but also reduces installation and maintenance costs.

A multiway connector to the backplane provides safe-area and power supply connections, while hazardous-area connections plug into the front of the module, simplifing installation and maintenance and reducing time, cost, and the risk of errors.

Line fault detection (LFD) facilities are provided across the range of I/O functions; on the switch/proximity detectors, the MTL4623 solenoid/alarm drivers and the isolating drivers. Analogue input units such as the MTL4641 provide line fault detection by repeating o/c or s/c currents to the control system.

Status LEDs, configuration switches and ports are located on the top or side of individual modules, as appropriate, for easy access.

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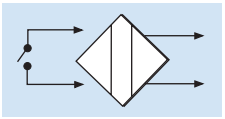
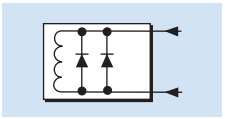
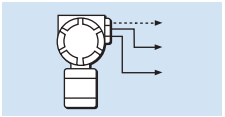
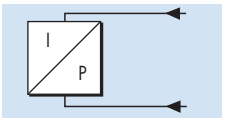
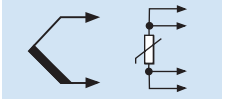
ISOLATOR FUNCTION SELECTOR

		Channels	*Function*
Digital Input			
MTL4604		1	switch/prox input, phase reversal + LFD
MTL4610		4	switch/prox input, solid-state output
MTL4611		1	switch/prox input, c/o relay output
MTL4613		2	switch/prox input, solid-state output
MTL4614		1	switch/prox input, relay + LFD alarm
MTL4614D		1	switch/prox input, dual output relay
MTL4616		2	switch/prox input, relay
MTL4617		2	switch/prox input, relay + LFD alarm
MTL4619L		1	24V/48V digital input
MTL4619H		1	110Vac/125Vdc digital input
Digital Output			
MTL4621		1	loop powered solenoid driver
MTL4623		1	solenoid driver with LFD alarm
MTL4623L		1	loop powered solenoid driver with LFD alarm
MTL4623R		1	solenoid driver with reverse LFD alarm
MTL4624		1	switch operated solenoid driver
MTL4624S		1	switch operated solenoid driver, 24V override
MTL4626		2	switch operated relay
MTL4627		1	24V 250mA digital output
MTL4628		1	Relay output
Pulse Output			
MTL4632		1	pulse isolator, digital or analogue output
Analogue Input			
MTL4641		1	2/3 wire transmitter repeater
MTL4641A		1	transmitter repeater, passive input
MTL4641AS		1	transmitter repeater, passive input, current sink
MTL4641S		1	2/3 wire transmitter repeater, current sink
MTL4644		2	2/3 wire transmitter repeater
MTL4644A		2	transmitter repeater, passive input
MTL4644AS		2	transmitter repeater, passive input, current sink
MTL4644S		2	2/3 wire transmitter repeater, current sink
MTL4644D		1	2/3 wire transmitter repeater, dual output
Analogue Output			
MTL4646		1	4-20mA smart isolating driver + LFD
MTL4646Y		1	4-20mA smart isolating driver + oc LFD
MTL4649		2	4-20mA smart isolating driver + LFD
MTL4649Y		2	4-20mA smart isolating driver + oc LFD
Temperature Input			
MTL4675		1	temperature converter, THC or RTD
MTL4676-RTD		2	temperature converter, RTD
MTL4676-THC		2	temperature converter, THC

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