

technical datasheet

MTL4600 Series

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 series 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 series 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 series 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 Series 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

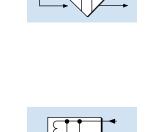
Digital Input



Digital Output

MTL4621
MTL4623
MTL4623L
MTL4623R
MTL4624
MTL4624S
MTL4626

MTL4632



Channels Function

1

4

1

2

1

1

2

2

1

1

1

1

1

1 2

1

1

1

2

1

1

1

2

2

1

2

2

switch/prox input,	phase reversal + LFD
switch/prox input,	solid-state output
switch/prox input,	c/o relay output
switch/prox input,	solid-state output
switch/prox input,	relay + LFD alarm
switch/prox input,	dual output relay
switch/prox input,	relay
switch/prox input,	relay + LFD alarm

- loop powered solenoid driver
- solenoid driver with LFD alarm
- loop powered solenoid driver with LFD alarm
- solenoid driver with reverse LFD alarm
- switch operated solenoid driver
- switch operated solenoid driver, 24V override
- switch operated relay
- pulse isolator, digital or analogue output

2/3 wire transmitter repeater

transmitter repeater, passive input

Analogue Input

Pulse Output

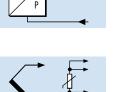
MTL4641	
MTL4641A	
MTL4641AS	
MTL4641S	
MTL4644	
MTL4644A	
MTL4644AS	
MTL4644S	
MTL4644D	

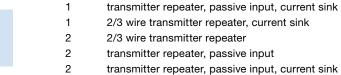
Analogue Output

MTL4646 MTL4646Y MTL4649 MTL4649Y

Temperature Input

MTL4675 MTL4676-RTD MTL4676-THC





2/3 wire transmitter repeater, current sink

- 2/3 wire transmitter repeater, dual output
- 4-20mA smart isolating driver + LFD
- 4-20mA smart isolating driver + oc LFD
- 4-20mA smart isolating driver + LFD
- 4-20mA smart isolating driver + oc LFD

temperature converter, THC or RTD

- temperature converter, RTD
- temperature converter, THC



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