MTL4850-TR

Triconix 4850 HART® multiplexer

- **Designed to mount directly to Tricon Interface cards and Trident backplanes**
- **Designed for use in SIL3 loops (non interfering)**
- **Connect up to 992 loops on one RS485 network**
- **Auto baud rate detection**
- **Automatic addressing for Tricon and Trident systems**
- **LED indication for fault diagnosis**
- **Isolated Power Supply**
- **Firmware upgradeable**
- **Onboard Diagnostics**
- **Alarm output**

The 4850-TR HART multiplexer provides a simple interface between smart devices in the field; Triconex safety systems and FDT based HART® instrument management software running on a PC.

The system is based on 32-channel modularity to provide a compact, easily configurable and expandable system. Using a standard RS485 serial link, up to 992 individual HART® devices can be connected to a single network.

For the optimum solution, the 4850-TR mounts directly to either the Tricon (Interface) card or the Trident backplanes via a 100-way connector.

Connectivity to HART Configuration and Asset Management Software

The online access to the information contained within HART devices allows users to diagnose field device troubles before they lead to costly problems. Software such as PACTWARE can capture and use diagnostic data from HART field instruments via the MTL HART connection hardware. This allows users to realise the full potential of their field devices to optimise plant assets, which results in significant operations improvement and direct maintenance savings.

IMS products provide essential configuration, calibration, monitoring and maintenance history functions for conventional analog (4-20 mA) and HART protocol compatible smart process instruments and field devices. They deliver powerful tools to meet the need for standardised instrument maintenance procedures and record keeping mandated by some quality standards and regulatory bodies.

The benefits of utilising these powerful software packages online include:

- Reduced commissioning time and costs
- Reduced maintenance costs
- Reduced documentation
- Reduced process downtime

The 4850-TR will offer connectivity to a comprehensive range of FDT based software packages via the 4850-TR Device Type Manager (DTM). The DTM can be downloaded from www.mtl-inst.com.

HART® is a registered trademark of the HART Communication Foundation

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MTL4850 HART® Connection Systems

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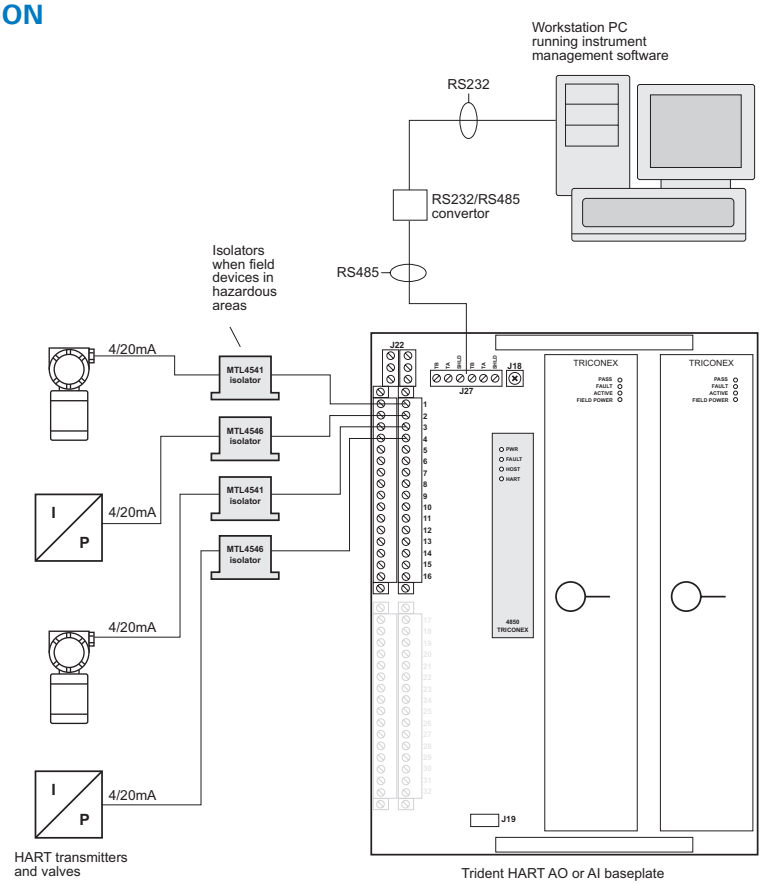
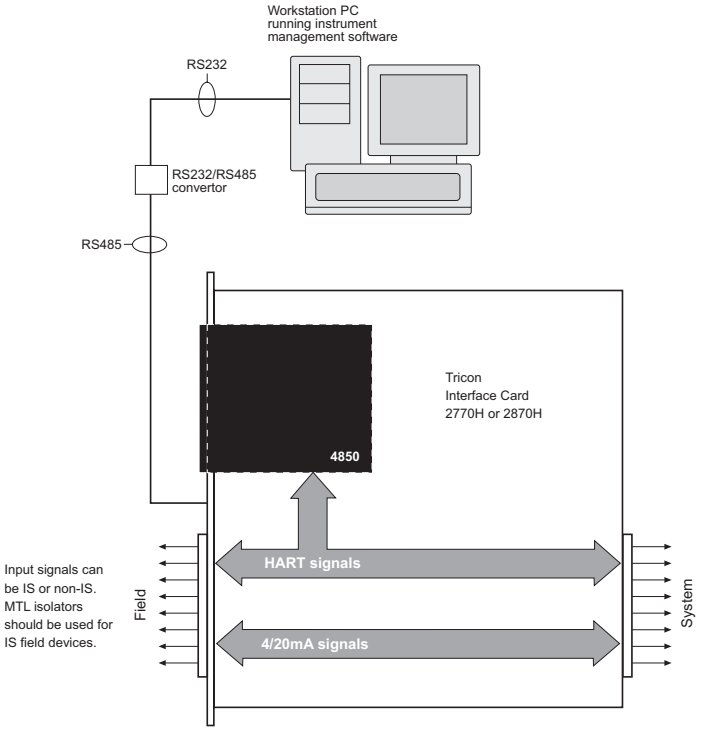
TRIDENT APPLICATION



TRICON APPLICATION



SPECIFICATION

Number of Channels
32
Channel Transmitter Type
HART rev 5 - 7
Channel Isolation (Between Channels)
50V dc
Channel Interface
2 connections to each channel field loop (64 total)
Field Loop Isolation
50V dc
Module is coupled to loops via capacitor in each connection leg (i.e. 2 capacitors per channel)
Host System Interface
RS485 2-wire multidrop
(up to 31 MTL4850 modules can be connected to one host)
RS485 Interface Isolation (Between module and interface)
25VDC
RS485 Baud Rate
38400, 19200, 9600, 1200 (auto-detected)
Address Selection
8-bit interface, up to 64
Interface referenced to 0V selectable addresses
Address Interface Isolation (Between module and interface)
50VDC
Alarm Output (Open Collector - Referenced to 0V)
Vmax = 35V
Imax = 5mA
Pmax = 100mW
Alarm Output Isolation (Between module and output)
50VDC
Power Requirement
Min = 19V
Max = 35V
24V +/-10% @ 60mA
PSU Isolation (Between module and PSU input)
50V dc
Power Dissipation
<1.6W @ 24V +/-10%
PSU Protection
Reversed polarity protected
Fused (375mA)
Temperature Range
Operating: -40°C to +70°C
Non-operating: -40°C to +85°C
Relative Humidity
5% to 95% - non-condensing

Compatible FDT Frames include:-

FDT Frame	Manufacturer
FDM	Honeywell
FieldCare	Endress & Hauser/Metso Automation
PACTware	PACTware Consortium
FieldMate	Yokogawa
FDT Container	M&M Software

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.

LED INDICATORS

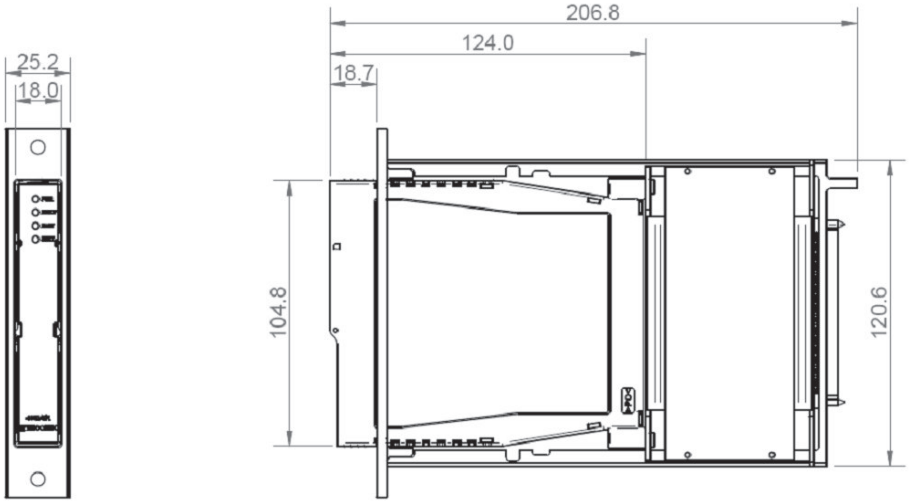
LED	Colour	State	Description
PWR	green	Off	Multiplexer is not receiving power
		On	Multiplexer is receiving power
FAULT	red	Off	Multiplexer is in the running state
		Steady flash	Multiplexer rebuild is in progress
		Short/long flash	No HART loops found
		On (steady)	A fault was detected and multiplexer operation has halted
HOST	yellow	Off	No communication on the channel
		Short flash (0.25 sec)	Correctly framed message received by the multiplexer
		Long flash (1 sec)	Response transmitted—this is re-triggerable so repeated transmissions will leave the indicator permanently on
HART	yellow	Off	No communication on the channel
		Short flash (0.25 sec)	Message transmitted
		Long flash (1 sec)	Response transmitted—this is re-triggerable so repeated transmissions will leave the indicator permanently on

ORDERING INFORMATION

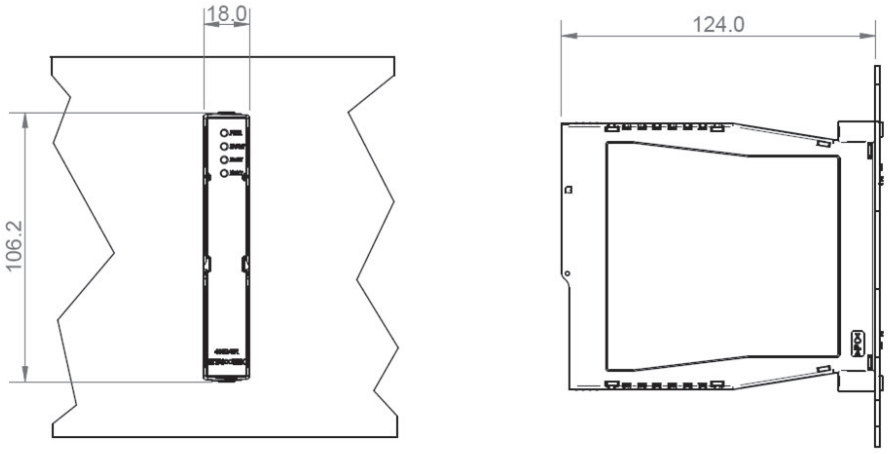
MTL4850-TR 32-channel HART multiplexer

DIMENSIONS

Mounting on caddy for Tricon Interface Card



Mounting on Trident AI or AO backplane



APPROVALS

Region	Europe (ATEX)	In ternational IECEx	USA	CANADA
Authority	**Eaton**	**FME**	**FM**	**FMC**
Standard	EN50079-15:2005	IEC60079-15:2005	3610 1998 3611 2004 3810 2005	CSA C22.2 No. 213 1987 CSA C22.2 No. 1010.1 1992
Approved for	E II 3G Ex nA IIC T4 Tamb = –40°C to +70°C)	Ex nA IIC T4 Ta = –40°C to +70°C	Class I, Div 2, Groups A - D, T4 @ 70°C	Class I, Div 2, Groups A - D, T4 @ 70°C
Cert. no.	MTL08ATEX4850X	IECEx FME 08.0001X	3032195	3032195C

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