



# MTL4850-TR



- ◆ **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.

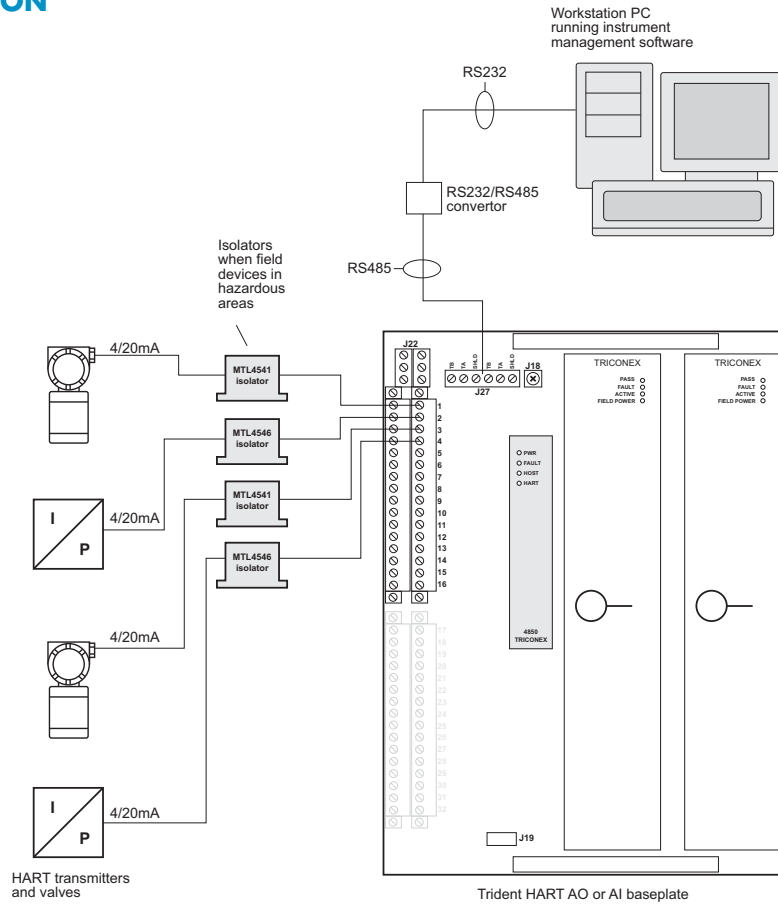
**The benefits** of utilising these powerful software packages online include:

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

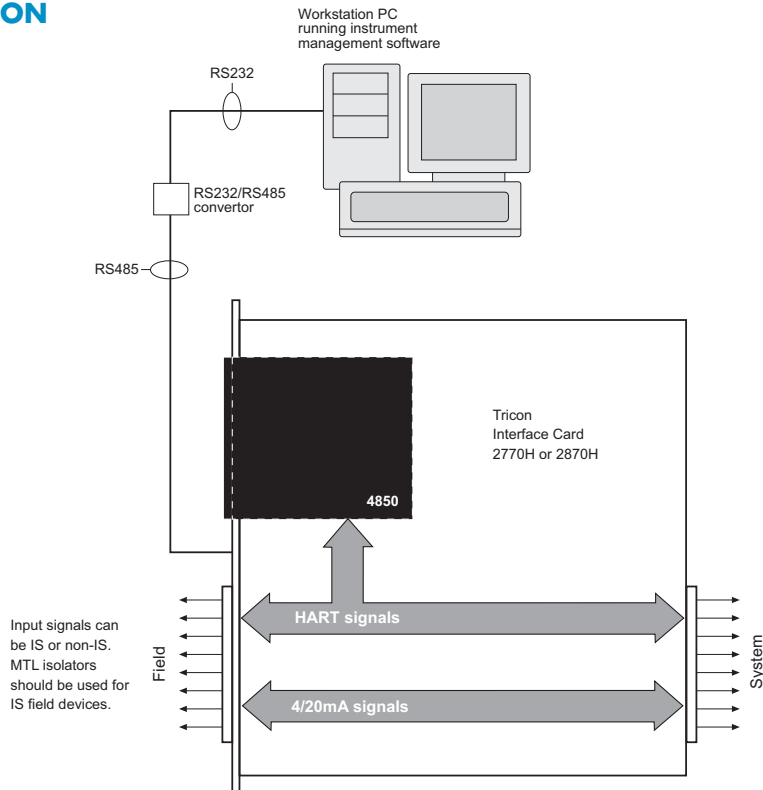
The 4850-TR will offer connectivity to a comprehensive range of FDT based software packages via the 4850-TR Device Type Manager (DTM). The DTM can be downloaded from [www.mtl-inst.com](http://www.mtl-inst.com).



**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)

V<sub>max</sub> = 35VI<sub>max</sub> = 5mAP<sub>max</sub> = 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

&lt;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

## 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

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.



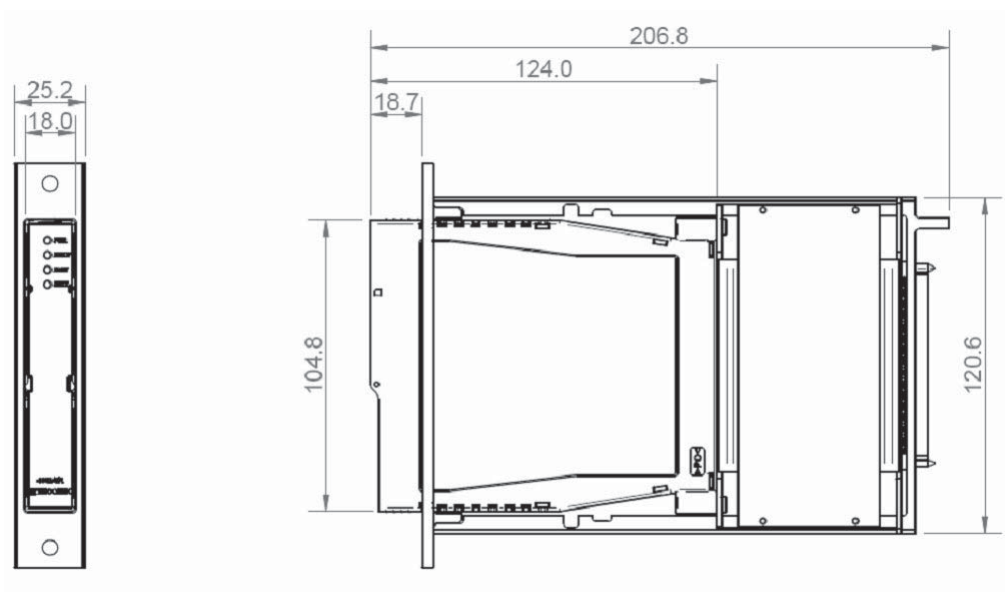
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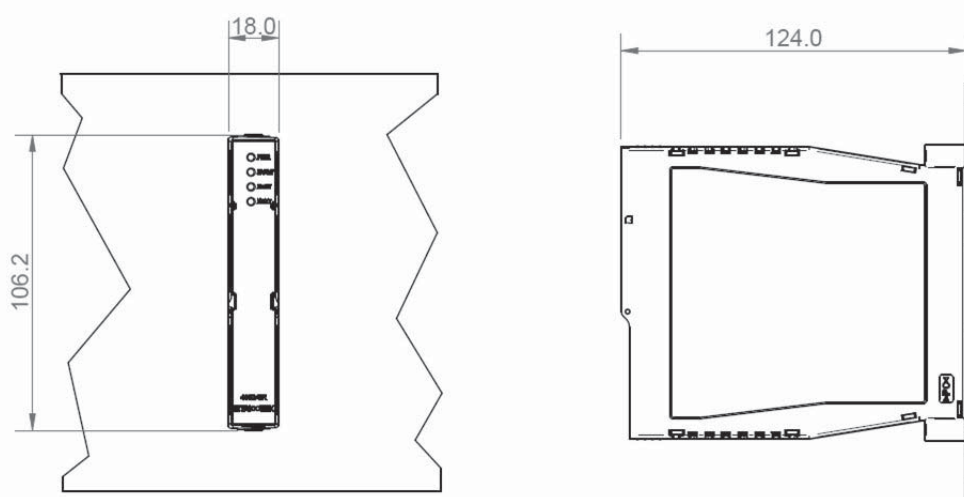
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## DIMENSIONS

### Mounting on caddy for Tricon Interface Card



### Mounting on Trident AI or AO backplane



## APPROVALS

Region	Europe (ATEX)	International IECEx	USA	CANADA
Authority	MTL	FME	FM	FM C
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	⊕ 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