

# 9474-ET(G)/BxLAN

## MTL intrinsically safe ethernet interface



## **DECLARATION OF CONFORMITY**

A printed version of the Declaration of Conformity has been provided separately within the original shipment of goods. However, you can find a copy of the latest version at -

<http://www.mtl-inst.com/certificates>

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## 1 DESCRIPTION

The BxLAN is available in several versions to suit different applications.

### Boxed Types

- 9474-ET 10/100Mbps Ethernet Interface
- 9474-ETG 10/100/1000Mbps Gigabit Ethernet Interface

### OEM PCB Types

- BxLAN 10/100Mbps Ethernet Interface

The two Ethernet LAN ports are provided with RJ45 connectors, the two earth conductors are terminated into screw type terminals. The OEM types may have PCB headers fitted instead of the connectors if the user wishes to mount it directly onto their PCB.

The Gigabit versions are suitable for IIB gas groups, the 100Mbps versions are suitable for IIC gas groups. All versions are suitable for Group I Mining.

## 2 FEATURES

- Intrinsically Safe 'Ex ia' Group I Mining M1 and Group IIC\*/IIB ATEX and IECEx Certified for Gas and Dust.
- DIN-rail mounting (cased version)
- OEM version for incorporating into other designs
- Compact dimensions:  
(Cased W:72xH:90xD:60mm / OEM W:40xH:78xD:20)
- Operating Temperature: -40°C to +70°C

\* Model dependant

## 3 CONNECTIONS

The Ethernet LAN ports are marked up HAZ and SAFE. The connection going into the Hazardous Area must be plugged into the RJ45 marked HAZ and the Safe Area device is connected to the port marked SAFE.

It is recommended that the RJ45 Cat5e cable that is used for the Hazardous Area LAN connection is Blue in colour to identify this cable as carrying Intrinsically Safe signals and the Safe Area LAN cable be some other colour to avoid any confusion.

Two independent high integrity safety earths are required, this is the same requirement as with any diode safety barrier type device. The conductors used should be 0.75mm<sup>2</sup> minimum.

## 4 INSTALLATION

- This apparatus must only be installed or replaced by a competent person who must ensure that existing I.S. segregation and earth arrangements are maintained.
- The operating parameters must not exceed those detailed on the certificate.
- Consideration should be given to any possible adverse effects on the polycarbonate enclosure by exposure to any chemicals that may be present in the intended installation environment.
- When using the OEM PCB versions the end equipment should provide a degree of protection of at least IP20. This may be achieved by the enclosure housing the equipment.

### NOTE

Both Safety Earths MUST be connected at all times.  
Refer to certificate for 'Special Conditions of Safe Use'.

#### 4.1 Special conditions of safe use

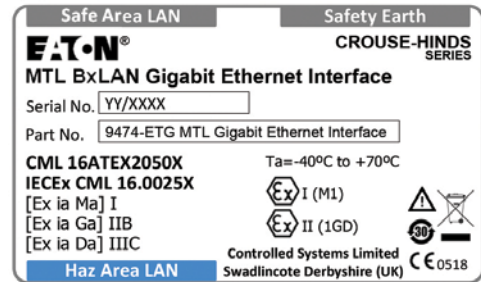
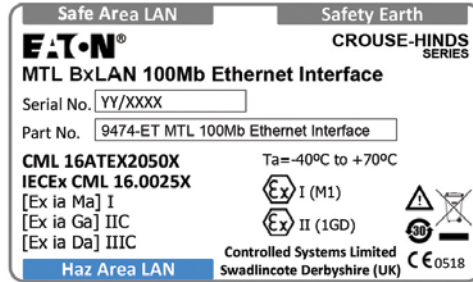
The following conditions relate to safe installation and/or use of the equipment.

- When the equipment is supplied for incorporation into larger apparatus, it must be installed within an enclosure providing a minimum ingress protection of IP20
- When the equipment is supplied for incorporation into larger apparatus, separations between the PCB and all other voltage sources within the enclosure must be in accordance with Table 5 of EN 60079-11
- The quoted entity parameters of  $C_o$  and  $L_o$  are applicable for the distributed capacitance and inductance in cable. Where there is circuit capacitance or inductance in the connect equipment (represented by  $C_i$  and  $L_i$  respectively), then these values shall not exceed 50% of the quoted  $C_o$  and  $L_o$ .
- The safe area connection SK1 must only be connected to Ethernet sources which are not Power over Ethernet (PoE) capable.
- Identical connectors are used for the safe area and hazardous area connections. Equipment labelling for correct connections shall be observed.

## 5 CERTIFICATION

CML 16ATEX2050X  
IECEX CML 16.0025X

Example label marking –



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