9478-ETX

MTL Intrinsically Safe Gigabit Ethernet Galvanic Isolator

- **Intrinsically Safe ATEX / UKEX / IECEx Certification / North America (MET$_{C/US}$) approvals**
- **Galvanically Isolated Safe and Hazardous Area Ports**
- **Single IS Ethernet Switch Port 10/100/1000Mbs LAN**
- **Easy installation with independent Safe and Hazardous links with auto- negotiation**
- **Status LEDs**
- **Single 12V/24VDC (10-30V) supply**
- **Easy migration of 9468-ET with same dimensions (W: 100 x H: 75 x D: 116 mm)**
- **[Ex ia Ga] IIB, [Ex ia Da] IIIC (non-mining),**

  [Ex ia Ma] I (M1 mining).
- **Ta = -40ºC to +70ºC**
- **Safe Area or Zone 2 / Zone 22 mounting**

The 9478-ETX(G) is an Intrinsically Safe (IS) Ethernet Isolator suitable for Safe Area or Zone 2 / Zone 22 mounting.

The RJ45 (LAN) port on the Safe Area side supports 10/100/1000 standard Ethernet connections. The Hazardous Area RJ45 provides an IS LAN connection.

A single (12V/24V DC) power supply is required plus a 12V IS power supply if PoEx is required.

The compact and cost effective design makes it the ideal choice for many applications:

Petrochem - Process Monitoring, Galvanic Isolation...

Mining - Underground Communication Links, Machine Monitoring….

Electrical connections are via cage-clamp and/or screw type plug/socket terminals along with RJ45 type connectors for the Ethernet LAN ports.

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9478-ETX

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SPECIFICATION

Power supply
12V/24VDC (10-30V) Power Supply Input
Typically 24V @ 110mA or 12V @ 200mA
12VDC IS Power Supply Input PoEx (*optional with 9478-ETX)
9492-PS-PLUS recommended

Input protection
Fuse + supply reversal diode

Ethernet
Standard 10/100/1000Base-T (Safe Area Port)
Intrinsically Safe 10/100/1000Base-T (Haz. Area Port)

Connector
RJ45 (x1) Safe Area
RJ45 (x1) Haz. Area

Cable Length
Up to 100m Cat5e

SAFETY

Location of Unit
Safe Area or Zone 2 / 22

Certification Code
[Ex ia Ga] IIB (9478-ETXG)
[Ex ia Ga] IIC (9478-ETX)
Ex ec [Ex ia] IIB T4 Gc (9478-ETXG)
Ex ec [Ex ia] IIC T4 Gc (9478-ETX)
[Ex ic Gc] IIB (9478-ETXG)
[Ex ic Gc] IIC (9478-ETX)
[Ex ia Da] IIIC (non-mining)
[Ex ia Ma] I (M1 mining)
Ta = -40ºC to +70ºC

Certificate numbers
CML 21ATEX21077X
CML 21ATEX41106X
CML 21UKEX21078X
CML 21UKEX41107X
IECEx CML 21.0121X
IECEx ExTC 22.0002X

See certificates for further information

ENVIRONMENTAL

Operating Temperature
-40°C…+70°C

Storage Temperature
-40°C…+70°C

Humidity
0…95% RH, non-condensing

Ingress Protection
Select enclosure to suit application,
see certificates for information

MECHANICAL

Width	100mm
Height	75mm
Depth	116mm
Weight	400g
Mounting	Din Rail

LED INDICATORS

	OFF	FLASH	ON
12V/24V PWR (green)	Power Fail	N/A	Power OK
HAZ PWR (green)	Internal Supply Fail	N/A	Power OK
STAT (green)	Fault	Healthy	Healthy
WDG (green)	Fault	Green – Healthy (10Hz)	Fault
RJ45 ACT (yellow)	Ethernet link disconnected	Ethernet link activity	Ethernet link connected
RJ45 1000 (green)	10/100Mbps	N/A	1000Mbps

Note: The HAZ PWR LED indicator monitors the internal isolated power supply generated from the 12V/24V Safe Area supply input.

DATA & POWER TERMINALS

Power (Enclosure Terminals)

Terminal	Function
T1	Power In +12V/24V
T2	Power In +12V/24V
T3	Power 0V
T4	Power 0V
T5-13	No connections
T14	PoEx +12V*
T15	PoEx 0V*

Note – Power terminals 1+2 and 3+4 internally connected
To allow looping to other units

LAN (RJ45 - SK1, SK2)
10/100/1000 BASE-T Ethernet

Pin	10/100 Function	Gigabit Function
1	Tx +	BI_DA+
2	Tx-	BI_DA-
3	Rx +	BI_DB+
4	PoEx +12V*	BI_DC+
5	PoEx +12V*	BI_DC-
6	Rx-	BI_DB-
7	PoEx 0V*	BI_DD+
8	PoEx 0V*	BI_DD-

*Note- PoEx only on SK2 of ETX model
Hazardous Area RJ45 SK2 is marked BLUE

ORDERING INFORMATION

Part Number	Description	Comments
9478-ETXG	Ethernet Isolator – 10/100/1000Mbps Gigabit	**Standard**
9478-ETX	Ethernet Isolator – 10/100/Mbps + PoEx	Special Order

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