



9466-ET

Intrinsically Safe Managed Ethernet Switch

- 5-port 10/100Mbps links
- Zone 1, Division 1 mountable in suitable enclosure
- Broadcast “storm” protection
- Intelligent Routing
- Programmable Management
- ATEX / IECEx certified
- FM / FMC approved
- Wide temp. range -20°C to $+70^{\circ}\text{C}$
- Half/Full Duplex
- Power source for PoEx™ Power over IS Ethernet
- Status LEDs to show activity



The 9466-ET 10/100Mbps, Layer 2, Ethernet switch allows the interconnection of MTL 9400-ET series networking modules via its 5 ports. It also enables an Ethernet network to cover a greater distance using either Cat5e cable or fibre-optic for longer spans. This capability is due to the low latency 'store and forward' mechanism integral to the switch, which ensures that the stringent timing associated with Ethernet is maintained.

With the 9466-ET switch each connection is effectively a 'point-to-point' network segment unlike the older generation hubs that were simple 'dumb' repeaters. The old hubs needed to impose a limit on overall network length to ensure proper collision detection; this limit is overcome by the 9466-ET. Broadcast “storm” protection is also provided to eliminate network overload due to excessive 'broadcast' & 'multicast' packets.

The 9466-ET switch can also distribute power to compatible devices connected to each of its five ports via the RJ45 Cat5e cables (PoEx). This method eliminates the separate power supply cable to the device simplifying installation and maintenance.

The 9466-ET is designed for hazardous-area mounting inside a suitable enclosure with intrinsically safe Zone 1, ATEX and IECEx certification and Division 1 FM USA and Canada approvals. The ATEX and IECEx approvals cover both surface industry and mining applications.

The default mode of operation is a 5-port, unmanaged switch with auto negotiation. However the onboard EEPROM memory can be configured via the serial RS232/TTL port either in the safe area, using a PC, or in the hazardous area using the 9461-ET Ethernet Gateway as its host processor.

Programmable features such as Rate Limiting, VLAN support and Forced Speed and Duplex settings may be configured in this way, along with access to MIB counters etc. The 9466-ET also has Intelligent Routing with automatic address learning, aging and migration.

It supports IEEE 802.3: 10Base-T, 100Base-TX and also MDI / MDI-X auto crossover, for easy cascading of switches with standard cables.

The module is supplied as a DIN-rail mounting device.

SPECIFICATION

See also System Specification

POWER INPUT

Separately powered

Input voltage

12V DC (10–15.4V)

Input current

200mA

Input protection

Fuse + supply reversal diode

ETHERNET

Intrinsically Safe 10/100 base T, auto negotiation speed and X-over

Ports

5

Connector

RJ45

PoEx

Power Source Equipment, each port selectable by connection of IS power supply such as 9491-IS

TECHNOLOGY

Standards

IEEE802.3, 802.3u, 802.3x, 802.1d, 802.1p, 802.1q

Protocols

IGMP V1/V2 device

MIB Counters

(via RS232 port)

Flow Control

IEEE802.3x flow control, back pressure flow control

IS RS232 MANAGED SWITCH CONNECTION

Number of channels

1

Connector Type

8-pin mini-DIN

Baudrate

115K2baud

Parity

None

Data Bits

8

Stop Bits

1

Flow Control

None

SAFETY

Location of module

Zone 1, IIC T4 hazardous area
or Class 1, Div 1, Groups A, B, C, D T4 hazardous location

Location of field wiring

Zone 0, IIC T4 hazardous area
or Class 1, Div 1, Groups A, B, C, D T4 hazardous location

Ethernet protection

intrinsically safe

Certification Code

See approvals

Safety description

See certificate

MECHANICAL

Mounting

DIN rail

Dimensions (mm)

Length 75

Width 100

Height (off rail) 116

Weight

1200 g

LED INDICATORS

	OFF	FLASH	ON
PWR (green)	Power fail	N/A	Power OK
WDG (red)	Watchdog Fault	Healthy (10Hz)	Watchdog Fault
FDX (red)	Half Duplex	N/A	Full Duplex
10 ACT (yellow)	No Ethernet link at 10Mbps	Ethernet connected and activity at 10Mbps	Ethernet connected at 10Mbps
100 ACT (green)	No Ethernet link at 100Mbps	Ethernet connected and activity at 100Mbps	Ethernet connected at 100Mbps

ENVIRONMENTAL

Ambient temp

Operating -20°C to +70°C

Storage -20°C to +70°C

Relative Humidity

5 to 95% RH (non-condensing)

Ingress Protection

Select enclosure to suit application, see certificate for information

DATA & POWER TERMINALSW

LAN PORTS (RJ45) 10/100 BASE-T Ethernet

Pin	Function
1	Tx +
2	Tx -
3	Rx +
4	Supply 12V - PoEx †
5	Supply 12V - PoEx †
6	Rx -
7	Supply 0V - PoEx †
8	Supply 0V - PoEx †

All five RJ45 ports
are identical.

Screw Terminals

Terminal	Function	
1	+12V DC in	9466 module supply input
2	+12V DC in	
3	0V	
4	0V	
5	No Connection	
6	+12V DC in	(PoEx - Port1)
7	0V	
8	+12V DC in	(PoEx - Port2)
9	0V	
10	+12V DC in	(PoEx - Port3)
11	0V	
12	+12V DC in	(PoEx - Port4)
13	0V	
14	+12V DC in	(PoEx - Port5)
15	0V	

Notes:

1. Terminals 1+2 and 3+4 are linked internally

2. When using PoEx - 'inject' device power into terminals 6 to 15 as required

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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