

MTL 9491-PS

12V DC Intrinsically Safe Power Supply

- Isolated power supply
- Zone 2 & Division 2 mountable
- DIN-rail or backplane mounting
- ATEX / IECEx certified
- FM / FMC approved
- 200mA @ 10.9V DC - Ex ia IIB Groups C, D output
- 400mA @ 11.8V DC - Ex ib IIB output
- Power over Ethernet option
- Multiple outputs achieved by ganging 9491-PS modules using 24V DC power distribution backplane



The **9491-PS Power Supply** is the preferred method for supplying the 9460-ET range of intrinsically safe Ethernet modules and is based on an isolating power supply. It takes a 24V DC safe area / Zone 2 / Division 2 supply and produces an intrinsically safe, 12V DC nominal output capable of powering the Ethernet modules mounted in a Zone 1/ Division 1 hazardous area. The 9491-PS may be mounted in a safe area, Zone 2 or Division 2 hazardous area.

Each 9491-PS can power a single Ethernet module. In order to provide multiple outputs required for several Ethernet modules, the 9491-PS power supply module is ganged up to the required number of ways, either DIN-rail mounted or using the power distribution backplane to simplify the 24VDC input connection to the modules.

The **9491-PS module has LED power indication** for both input and output along with internal current limiting and electronic auto-reset circuit breaker action to protect the module in the event of its output being short circuited or overloaded. This also minimises the power dissipation during the fault to a negligible level, thus improving reliability.

The output can be from either the Ex ia IIB Group C, D or Ex ib IIB output connectors depending upon application. The 'ib' IIB output provides a higher useable output power where the Gas Group and Zone allows.

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SPECIFICATION

See also System Specification

POWER INPUT

Separately powered

Input voltage
24V DC (20–30V)

Input current
350mA

Input protection
Fuse + supply reversal diode

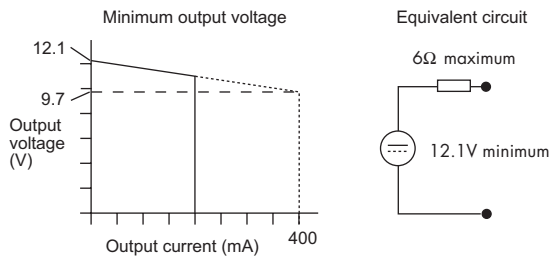
Connectors (see dimension drawing)

DIN rail mounting: screw terminals – capacity 2.5mm² stranded or single core
Backplane mounting: multipin connector

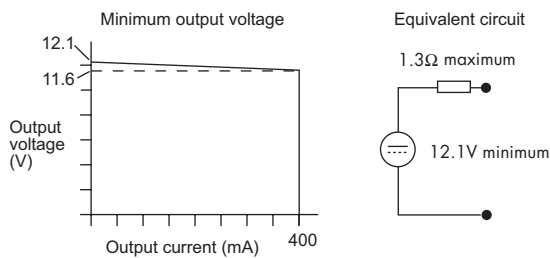
POWER OUTPUT

[Ex ia] output (pins 1 & 3)

Graph shows normal working range & total available range



[Ex ib] output (pins 5 & 6)



Connectors

9491-PS is supplied with two IS output connectors.
Capacity 2.5mm² stranded or single core
(When using crimp ferrules for the IS connectors the metal tube length should be 12mm and the wire trim length 14mm.)

ISOLATION

Isolation - input to output

Um = 253V rms

SAFETY

Location of module

Safe area, Zone 2, Division 2

Location of field wiring

[Ex ia] output
Zone 0, IIB hazardous area
or Class 1, Div 1, Groups C, D hazardous location

[Ex ib] output
Zone 1, IIB hazardous area

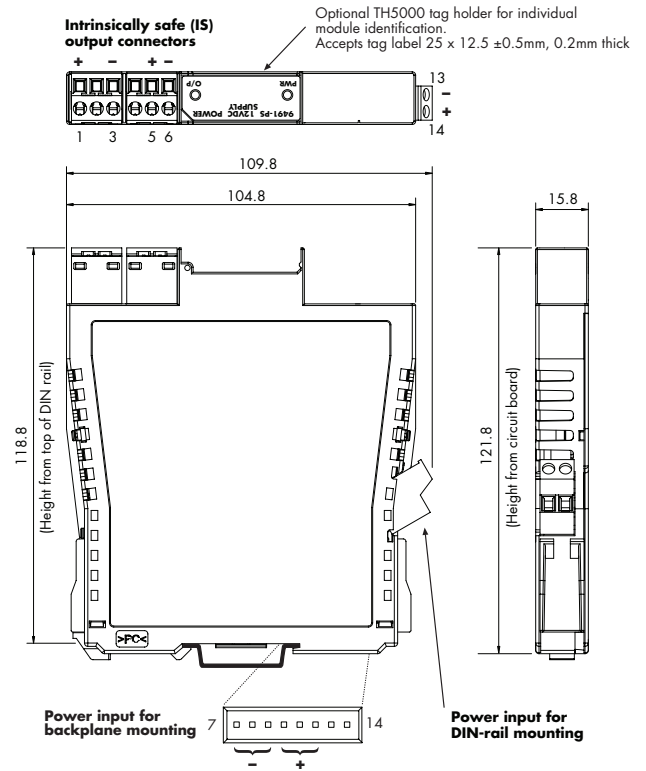
Certification Code

See approvals

Safety description

See certificate

DIMENSIONS (mm)



MECHANICAL

Mounting

DIN rail or power distribution backplane

Dimensions

See diagram

Weight

130 g

ENVIRONMENTAL

Ambient temp

Operating 0°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

LED INDICATORS

	OFF	Flash	ON
Pwr (green)	24V power fail	N/A	24V power OK
IS (green)	IS power fail	output overload or short circuit present	IS power OK



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