

MTL 9491-PS-PLUS

12V DC intrinsically safe power supply

- Isolated power supply
- Zone 2 mountable
- DIN-rail or backplane mounting
- ATEX / IECEx / UKEX / North America (MET_{C/US}) certified
- 200mA @ 10.9V DC - Ex ia IIB
- 400mA @ 11.8V DC - Ex ib IIB output
- Power over Ethernet option
- Multiple outputs achieved by ganging 9491-PS-PLUS modules using 24V DC power distribution backplane
- Wide operating temperature -40°C to $+70^{\circ}\text{C}$



The **MTL 9491-PS-PLUS** takes a 24V DC safe area / Zone 2 supply and produces an intrinsically safe, 12V DC nominal output capable of powering devices mounted in a Zone 0 (ia) or Zone 1 (ib) hazardous area. The 9491-PS-PLUS may be mounted in a safe area or Zone 2 hazardous area.

Each **9491-PS-PLUS** provides a single IS output with connections for Ex ia and also Ex ib to suit different applications. In order to provide multiple outputs, the 9491-PS-PLUS 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-PLUS** 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** 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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May 2023

SPECIFICATION

See also System Specification

POWER INPUT

Separately powered
Input voltage
 24V DC (20–30V)
Input current
 350mA

Input protection
 Fuse + supply reversal diode

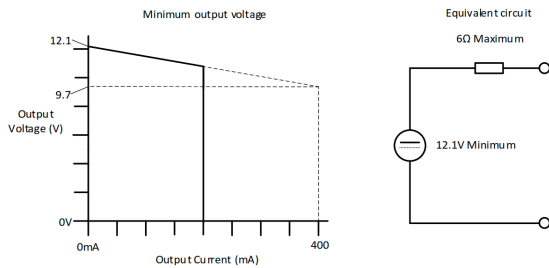
Connectors (see dimension drawing)

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

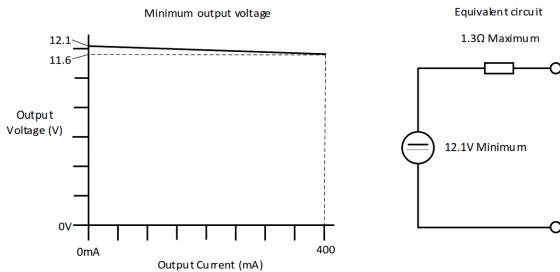
POWER OUTPUT

[Ex ia] output (pins 1 & 3)

Graph shows normal working range & total available range



[Ex ib] output (pins 5 & 6)



Connectors

9491-PS-PLUS 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
 $U_m = 253V$ rms

SAFETY

Location of module

Safe area, Zone 2

Location of field wiring

[Ex ia] output
 Zone 0, IIB hazardous area
[Ex ib] output
 Zone 1, IIB hazardous area



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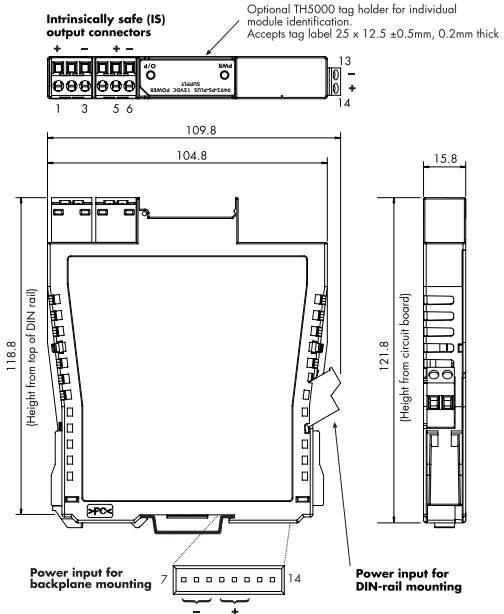
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Certification Code

See approvals

Safety description

See certificates CML 15ATEX2071X, CML 15ATEX 4072X,
 IECEx CML 15.0034X, IECEx TRA 17.0003X CML
 21UKEX21069X, CML 21UKEX41070X



DIMENSIONS (mm)

MECHANICAL

Mounting

DIN rail

Please contact Eaton MTL product line for 'backplane' option

Dimensions

See diagram

Weight

130 g

ENVIRONMENTAL

Ambient temp

Operating –40°C to +70°C
 Storage –40°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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