MTL 9492-PS-PLUS
12V DC intrinsically safe power supply

- Isolated power supply
- Zone 2 mountable
- DIN-rail or backplane mounting
- ATEX / IECEx certified
- 480mA @ 10.00V DC - Ex ia IIB
- 550mA @ 11.90V DC - Ex ib IIB output
- Power over Ethernet option
- Multiple outputs achieved by ganging 9492-PS-PLUS modules using 24V DC power distribution backplane
- Wide operating temperature −40°C to +70°C

The MTL 9492-PS-PLUS power supply is the preferred method for supplying the 9460-ET series of intrinsically safe ethernet modules and is based on an isolating power supply. It takes a 24V DC safe area / Zone 2 supply and produces an intrinsically safe, 12V DC nominal output capable of powering the ethernet modules mounted in a Zone 1 hazardous area. The 9492-PS-PLUS may be mounted in a safe area or Zone 2 hazardous area.

Each 9492-PS-PLUS can power a single ethernet module. In order to provide multiple outputs required for several ethernet modules, the 9492-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 9492-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.
SPECIFICATION
See also System Specification

POWER INPUT
Separately powered
Input voltage
24V DC (20–30V)
Input current
390mA
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

<table>
<thead>
<tr>
<th>Output current (mA)</th>
<th>Minimum output voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>480</td>
<td>12.5</td>
</tr>
<tr>
<td>550</td>
<td>9.6</td>
</tr>
</tbody>
</table>

Equivalent circuit
\[ V = 5.27 \times I + 12.5 \text{V minimum} \]

[Ex ib] output (pins 5 & 6)

<table>
<thead>
<tr>
<th>Output current (mA)</th>
<th>Minimum output voltage (V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>480</td>
<td>12.5</td>
</tr>
<tr>
<td>550</td>
<td>11.9</td>
</tr>
</tbody>
</table>

Equivalent circuit
\[ V = 1.09 \times I + 12.5 \text{V minimum} \]

Connectors
9492-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
Um = 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

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

<table>
<thead>
<tr>
<th></th>
<th>OFF</th>
<th>Flash</th>
<th>ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pwr (green)</td>
<td>24V power fail</td>
<td>N/A</td>
<td>24V power OK</td>
</tr>
<tr>
<td>IS (green)</td>
<td>IS power fail</td>
<td>output overload or short circuit present</td>
<td>IS power OK</td>
</tr>
</tbody>
</table>