

# MTL 9493-PS-XXX

## Intrinsically safe power supply

- Isolated power supply
- Zone 2 mountable
- DIN-rail or backplane mounting
- ATEX / IECEx certified
- Range of Ex ia output voltages available
- Power over Ethernet option
- Multiple outputs achieved by ganging 9493-PS-XXX modules using 24V DC power distribution backplane



**The 9493-PS-XXX Power Supply is a general purpose Intrinsically Safe power supply unit.** It takes a 24V DC safe area or Zone 2 supply and produces an Intrinsically Safe output available in a range of different DC voltages. The 9493-PS-XXX may be mounted in a safe area or Zone 2 hazardous area.

**In order to provide multiple outputs as required, the 9493-PS-XXX 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 9493-PS-XXX power supply 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 minimizes the power dissipation during the fault to a negligible level, thus improving reliability.

**The output is Ex ia certified for Group I, IIA, IIB or IIC,** depending on model to suit different applications.

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Intrinsically safe power supply  
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SPECIFICATION

See also System Specification

9493-PS-B5

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

83mA

Power output

[Ex ia IIB] Output (pins 1 & 3)

Nominal Output Voltage

4.8V ... 5.2V

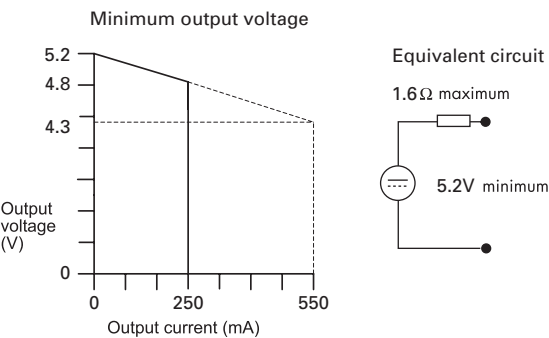
Nominal Output Current

250mA (Max 550mA)

U<sub>o</sub>

5.4V

Graph shows normal working range & total available range



9493-PS-C5

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

61mA

Power output

[Ex ia IIC] Output (pins 1 & 3)

Nominal Output Voltage

4.8V ... 5.2V

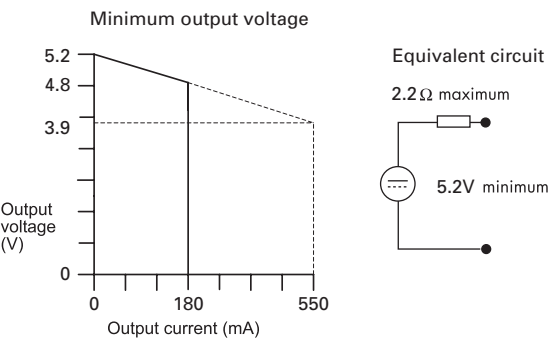
Nominal Output Current

180mA (Max 550mA)

U<sub>o</sub>

5.4V

Graph shows normal working range & total available range



9493-PS-C6

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

122mA

Power output

[Ex ia IIC] Output (pins 1 & 3)

Nominal Output Voltage

5.7V ... 6.7V

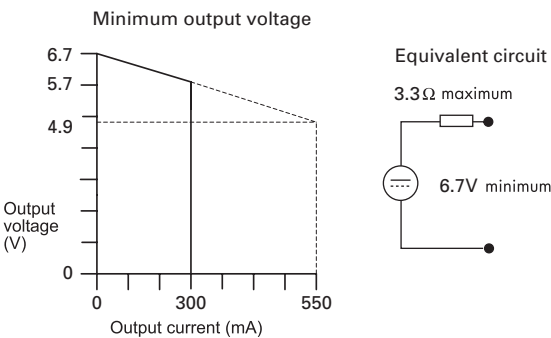
Nominal Output Current

300mA (Max 550mA)

U<sub>o</sub>

7V

Graph shows normal working range & total available range



9493-PS-C9

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

165mA

Power output

[Ex ia IIC] Output (pins 1 & 3)

Nominal Output Voltage

8.4V ... 9.7V

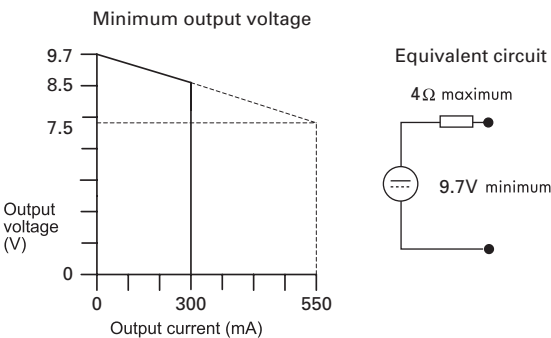
Nominal Output Current

300mA (Max 550mA)

U<sub>o</sub>

10V

Graph shows normal working range & total available range



SPECIFICATION (continued)

See also System Specification

9493-PS-C11

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

196mA

Power output

[Ex ia IIC] Output (pins 1 & 3)

Nominal Output Voltage

9.9V ... 11.7V

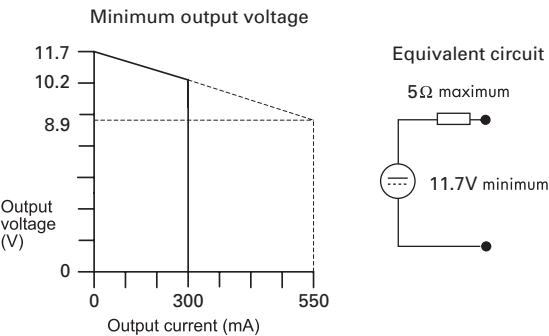
Nominal Output Current

300mA (Max 550mA)

U<sub>o</sub>

12V

Graph shows normal working range & total available range



9493-PS-C12

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

175mA

Power output

[Ex ia IIC] Output (pins 1 & 3)

Nominal Output Voltage

10.8V ... 12.7V

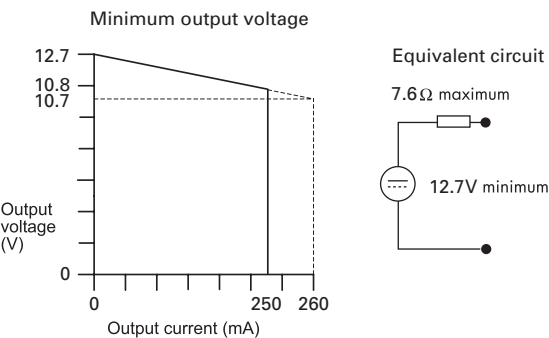
Nominal Output Current

250mA (Max 260mA)

U<sub>o</sub>

13V

Graph shows normal working range & total available range



9493-PS-B14

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

201mA

Power output

[Ex ia IIB] Output (pins 1 & 3)

Nominal Output Voltage

12.4V ... 14.7V

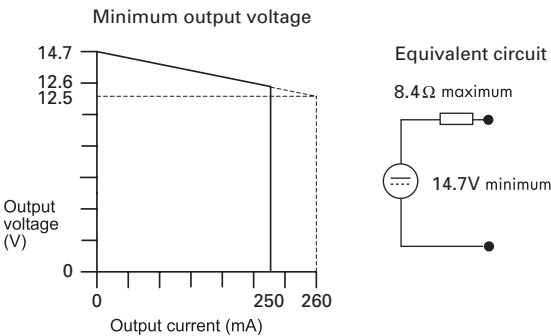
Nominal Output Current

250mA (Max 260mA)

U<sub>o</sub>

15V

Graph shows normal working range & total available range



9493-PS-C14

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

104mA

Power output

[Ex ia IIC] Output (pins 1 & 3)

Nominal Output Voltage

12.4V ... 14.7V

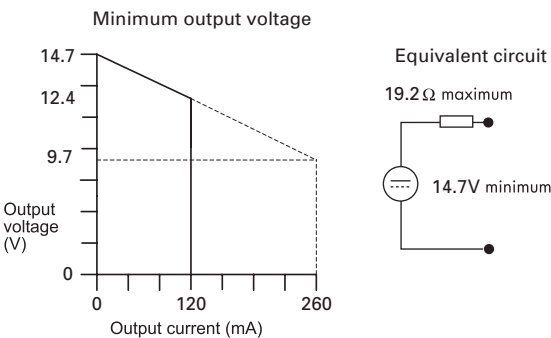
Nominal Output Current

120mA (Max 260mA)

U<sub>o</sub>

15V

Graph shows normal working range & total available range



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SPECIFICATION (continued)

See also System Specification

9493-PS-B17

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

163mA

Power output

[Ex ia IIB] Output (pins 1 & 3)

Nominal Output Voltage

15.0V ... 17.7V

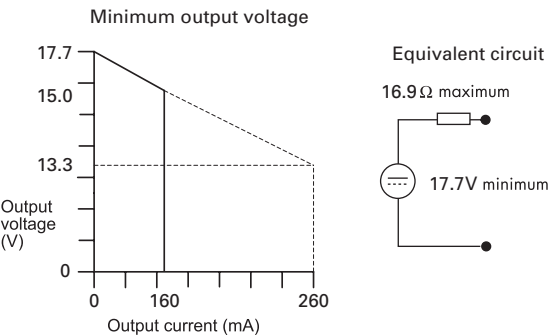
Nominal Output Current

160mA (Max 260mA)

Uo

18V

Graph shows normal working range & total available range



9493-PS-C17

Power input

Input Voltage

24V DC (20-30V)

Input Current @ 24V

74mA

Power output

[Ex ia IIC] Output (pins 1 & 3)

Nominal Output Voltage

15.0V ... 17.7V

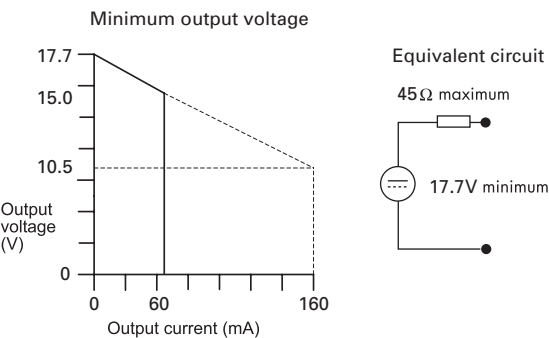
Nominal Output Current

60mA (Max 160mA)

Uo

18V

Graph shows normal working range & total available range



Standard stock range

| P/N         | Gas Group | Uo   | Nominal output voltage | Nominal output current |
|-------------|-----------|------|------------------------|------------------------|
| 9493-PS-C5  | IIC       | 5.4V | 4.8V ... 5.2V          | 180mA                  |
| 9493-PS-B5  | IIB       | 5.4V | 4.8V ... 5.2V          | 250mA                  |
| 9493-PS-C6  | IIC       | 7V   | 5.7V ... 6.7V          | 300mA                  |
| 9493-PS-C9  | IIC       | 10V  | 8.4V ... 9.7V          | 300mA                  |
| 9493-PS-C11 | IIC       | 12V  | 9.9V ... 11.7V         | 300mA                  |
| 9493-PS-C12 | IIC       | 13V  | 10.8V ... 12.7V        | 250mA                  |
| 9493-PS-C14 | IIC       | 15V  | 12.4V ... 14.7V        | 120mA                  |
| 9493-PS-B14 | IIB       | 15V  | 12.4V ... 14.7V        | 250mA                  |
| 9493-PS-C17 | IIC       | 18V  | 15.0V ... 17.7V        | 60mA                   |
| 9493-PS-B17 | IIB       | 18V  | 15.0V ... 17.7V        | 160mA                  |

**NOTE:** More variants outside the Standard Stock Range can be ordered, subject to an MOQ. Please contact MTL product line for further detail

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SPECIFICATION (continued)

**Connectors**  
9493-PS-XXX is supplied with one IS output connectors.  
Capacity 2.5mm<sup>2</sup> 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, (Gas group depends on model type)  
Model 9493-PS-CXX, IIC Hazardous area  
Model 9493-PS-BXX, IIB Hazardous area  
Model 9493-PS-AXX, IIA Hazardous area  
Model 9493-PS-MXX, Group 1 Mining

**Certification Code**  
See approvals

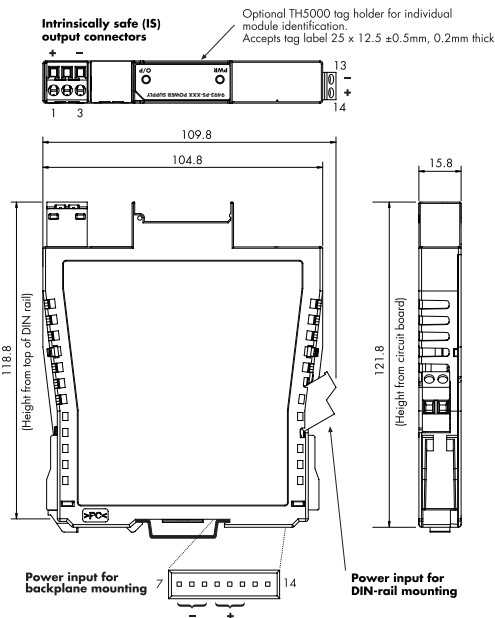
**Safety description**  
See certificate

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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Publication No. EPS 9493-PS-XXX rev1 030216  
February 2016

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