

# 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.

# 9493-PS-XXX

## Intrinsically safe power supply

February 2016

### 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

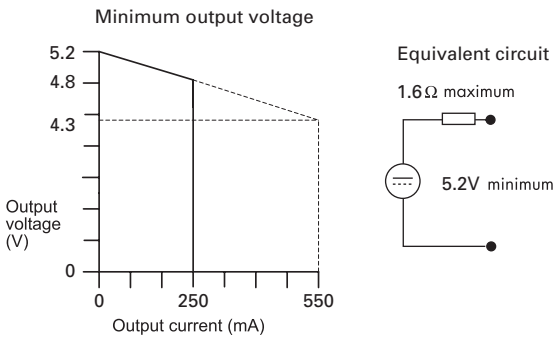
Nominal Output Current

250mA (Max 550mA)

##### U<sub>o</sub>

5.4V

Graph shows normal working range & total available range



#### 9493-PS-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

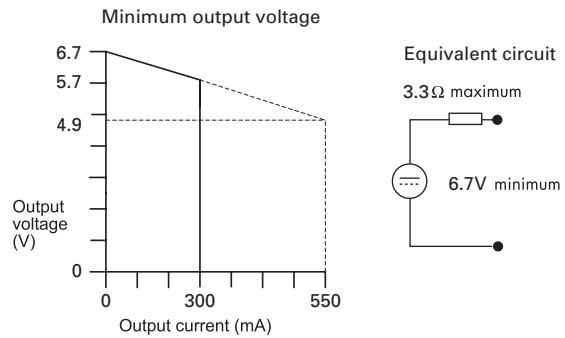
Nominal Output Current

300mA (Max 550mA)

##### U<sub>o</sub>

7V

Graph shows normal working range & total available range



#### 9493-PS-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

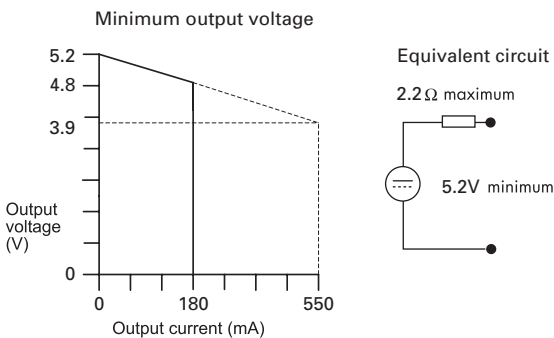
Nominal Output Current

180mA (Max 550mA)

##### U<sub>o</sub>

5.4V

Graph shows normal working range & total available range



#### 9493-PS-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

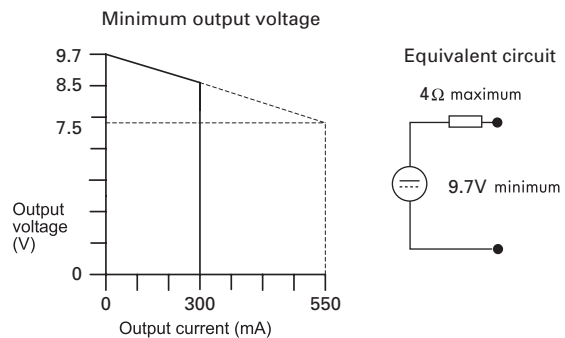
Nominal Output Current

300mA (Max 550mA)

##### U<sub>o</sub>

10V

Graph shows normal working range & total available range



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**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

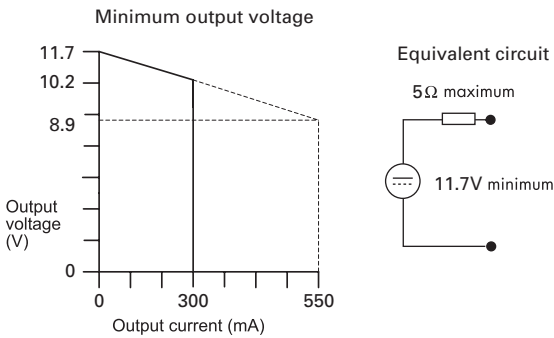
Nominal Output Current

300mA (Max 550mA)

**U<sub>o</sub>**

12V

Graph shows normal working range & total available range



**9493-PS-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

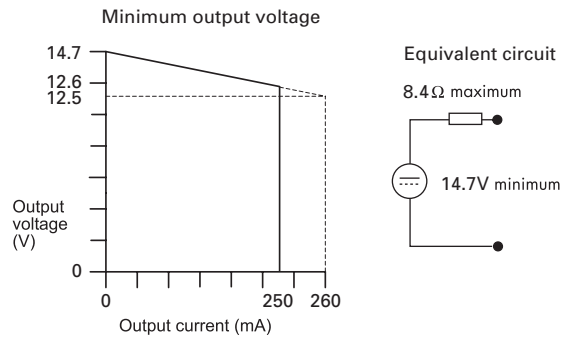
Nominal Output Current

250mA (Max 260mA)

**U<sub>o</sub>**

15V

Graph shows normal working range & total available range



**9493-PS-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

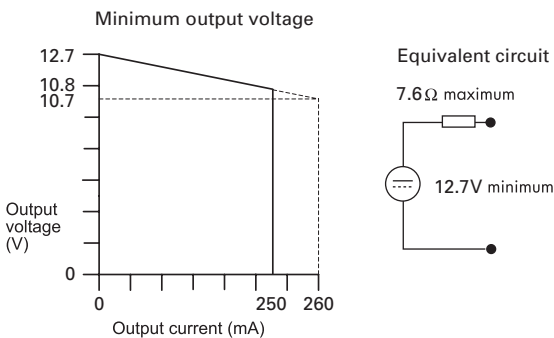
Nominal Output Current

250mA (Max 260mA)

**U<sub>o</sub>**

13V

Graph shows normal working range & total available range



**9493-PS-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

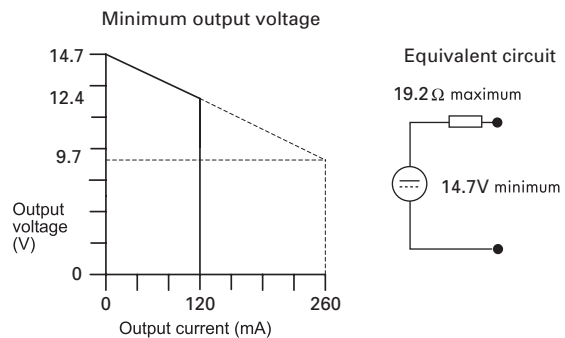
Nominal Output Current

120mA (Max 260mA)

**U<sub>o</sub>**

15V

Graph shows normal working range & total available range



# 9493-PS-XXX

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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

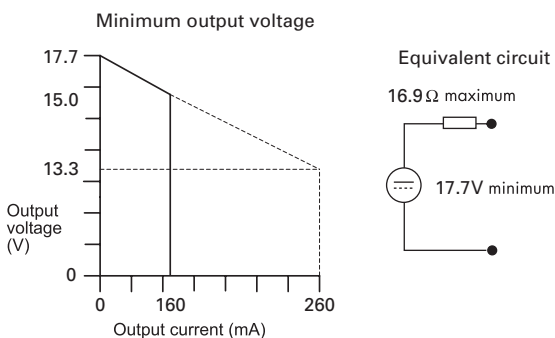
Nominal Output Current

160mA (Max 260mA)

##### U<sub>o</sub>

18V

Graph shows normal working range & total available range



#### Standard stock range

P/N	Gas Group	U <sub>o</sub>	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

#### 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

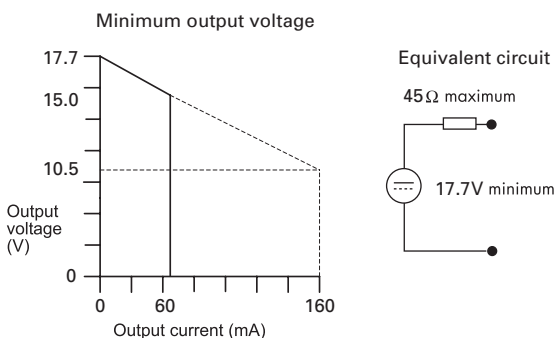
Nominal Output Current

60mA (Max 160mA)

##### U<sub>o</sub>

18V

Graph shows normal working range & total available range



# 9493-PS-XXX Intrinsically safe power supply

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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

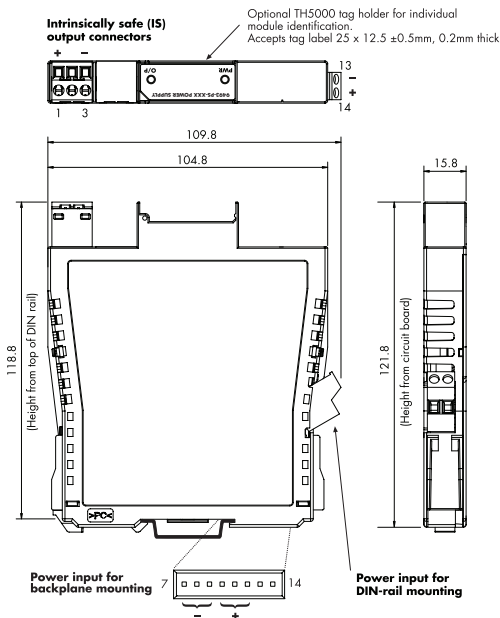
#### Mounting

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



**Measurement Technology Limited,**  
Great Marlings, Butterfield, Luton  
Beds, LU2 8DL, UK.  
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283  
E-mail: mtlenquiry@eaton.com  
www.mtl-inst.com

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**EUROPE (EMEA):**  
+44 (0)1582 723633  
mtlenquiry@eaton.com

**THE AMERICAS:**  
+1 800 835 7075  
mtl-us-info@eaton.com

**ASIA-PACIFIC:**  
+65 6 645 9888  
sales.mtlsing@eaton.com

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