

MTL 9493-PS-XXX

Intrinsically safe power supply

- Isolated power supply
- Zone 2 mountable
- DIN-rail or backplane mounting
- ATEX / IECEx / UKEX / North America (MET_{C/US}) 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 2023

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

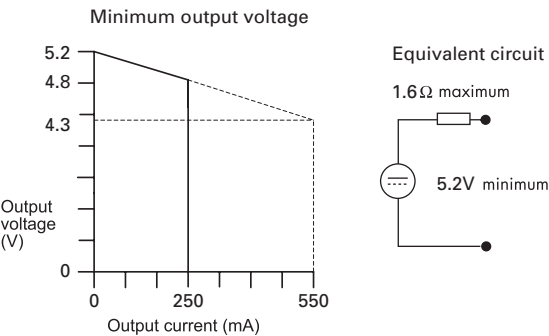
Nominal Output Current

250mA (Max 550mA)

U_o

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

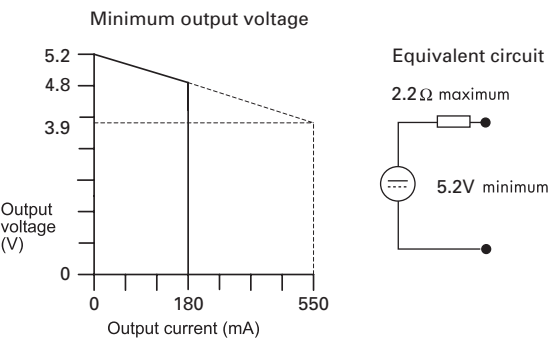
Nominal Output Current

180mA (Max 550mA)

U_o

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

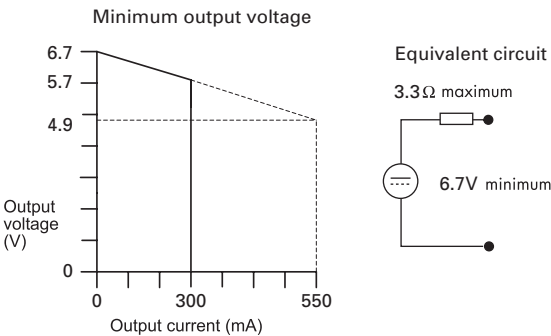
Nominal Output Current

300mA (Max 550mA)

U_o

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

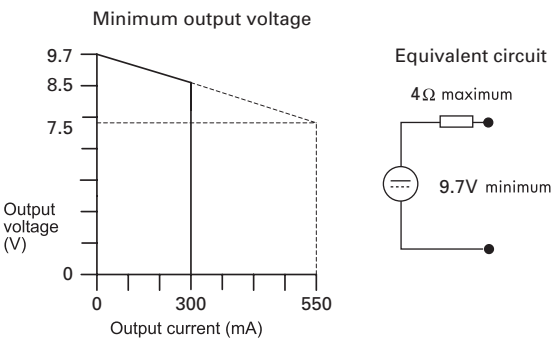
Nominal Output Current

300mA (Max 550mA)

U_o

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

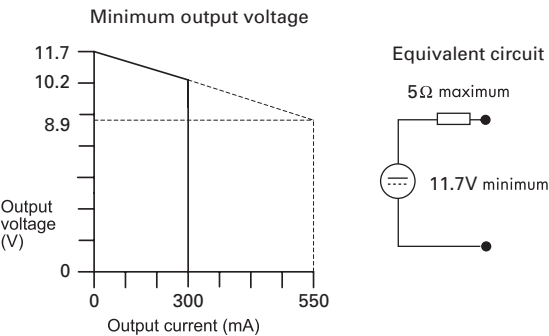
Nominal Output Current

300mA (Max 550mA)

U_o

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

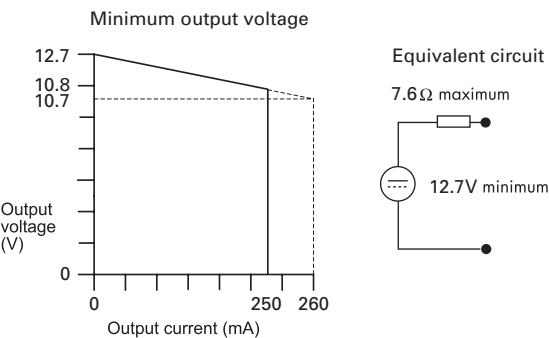
Nominal Output Current

250mA (Max 260mA)

U_o

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

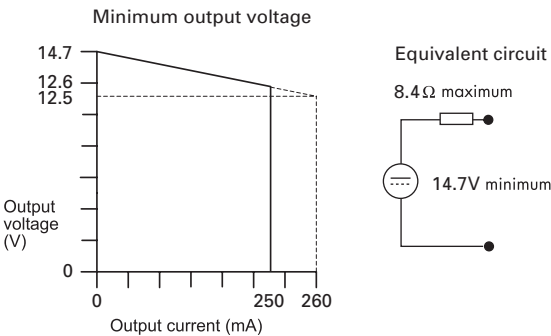
Nominal Output Current

250mA (Max 260mA)

U_o

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

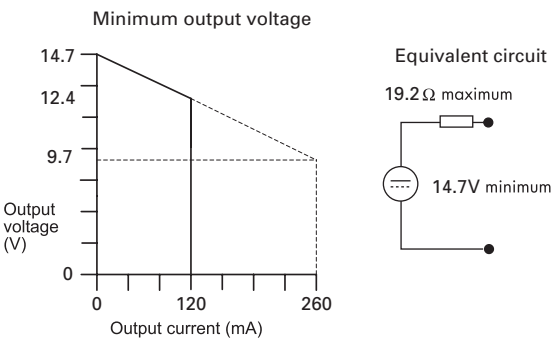
Nominal Output Current

120mA (Max 260mA)

U_o

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

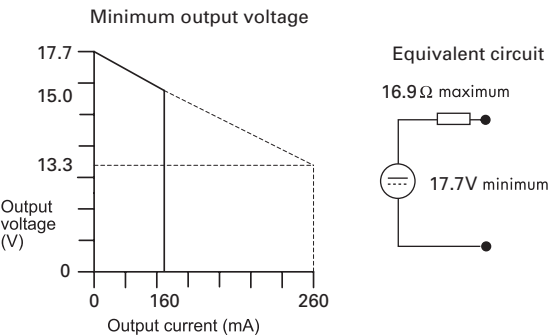
Nominal Output Current

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

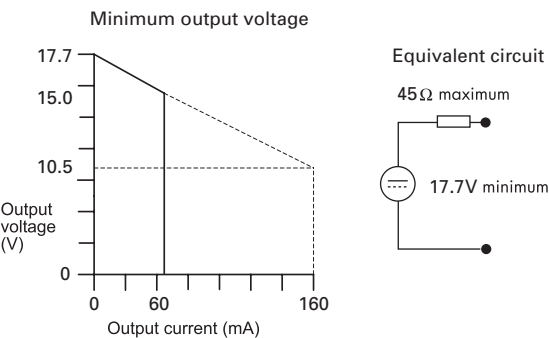
Nominal Output Current

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 details.

SPECIFICATION (continued)

Connectors

9493-PS-XXX is supplied with one 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, (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 certificates
CML 15ATEX2071X,
CML ATEX 4072X,
IECEX CML 15.0034X ,
IECEX TRA 17.0003X
CML 21UKEX21069X,
CML 21UKEX41070X,
MET File E115585

DIMENSIONS (mm)

MECHANICAL

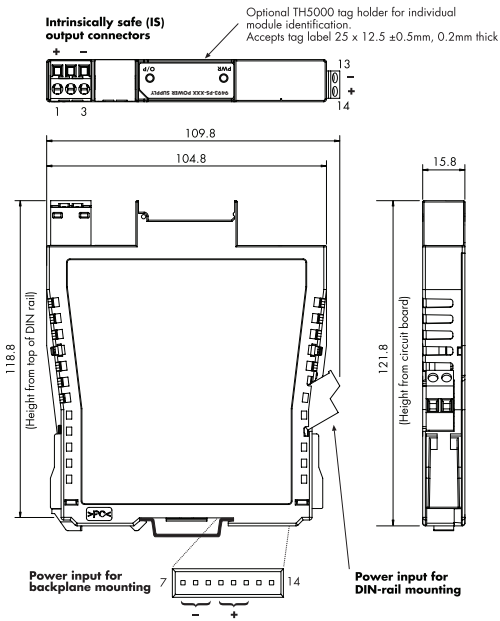
Mounting

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