

PRA-PSM24 Power supply module 24V

PRAESENSA



The PRA-PSM24 power supply module is a compact DIN-rail mounted power supply, delivering 24 V at up to 10 A continuously. This power supply is an OEM power supply, made for Bosch by Delta Power Supply, as a cost effective alternative to the PRAESENSA multifunction power supply PRA-MPS3 to power a PRAESENSA system controller or other devices and utilities that need 24 V, in case the additional functions and characteristics of the multifunction power supply are not needed.

The PRA-PSM24 power supply can also power Bosch PAVIRO controllers and routers in case no battery backup is needed, as alternative to the Bosch PLN-24CH12 battery charger and power supply. The PRA-PSM24 is not certified for EN 54-4 and similar standards.

Functions

Mains power supply

- Compact DIN-rail mounted power supply, delivering 24 V at up to 10 A continuously, for powering various utilities and devices in Public Address systems.
- Universal mains input with power factor correction to maximize the amount of power that can be taken from a single phase power distribution network.
- The mains is supplied via a 3-pole screw plug that requires the module to be installed by professional installers and mounted in a safe place, without user access.
- Adjustable output voltage, 24 to 28 V.
- For fail safe redundancy it is possible to use two 24 V power supplies for one PRAESENSA system controller, one connected to its 24 V input A and

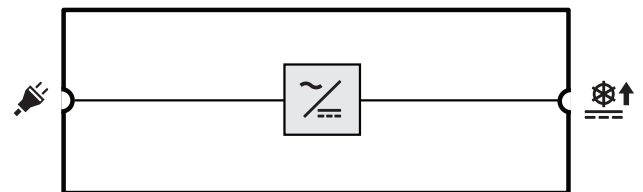
- ▶ Universal mains input voltage
- ▶ Power factor correction
- ▶ Protection with automatic recovery
- ▶ Approved to power a PRAESENSA system controller and a PAVIRO controller and router
- ▶ Compact and DIN-rail mountable


the other to input B. In that case, the power supply with the highest voltage will supply the power, the other one is available as backup.

Protections

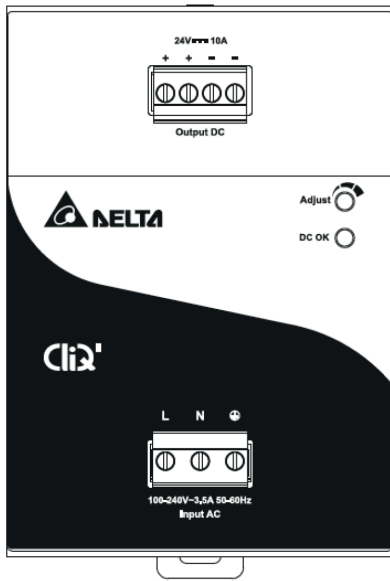
- Overvoltage protection with automatic recovery.
- Overload protection with automatic recovery.
- Over-temperature protection with automatic recovery.

Connection and functional diagram

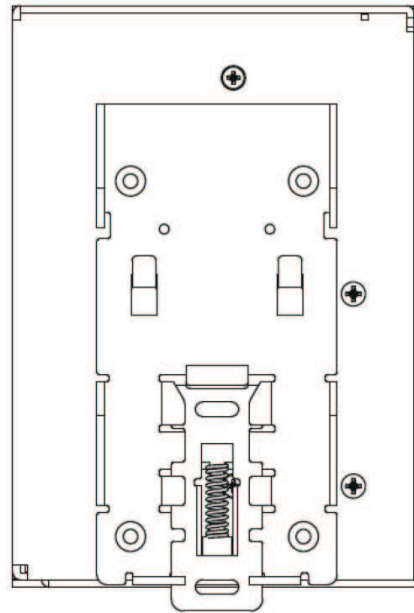


 Mains to DC converter

Front view



Rear view



Front panel control and indicator

Adjust	Output voltage adjustment	Rotary control
DC OK	Output voltage present	Green

Front panel connections

	24 VDC output	
	Mains input	

Architects' and engineers' specifications

The 24 V power supply module shall contain a mains input with power factor correction and a 24 V output. Output current capability shall be 10 A continuous and 15 A peak. It shall be approved to power Bosch PRAESENSA and PAVIRO equipment. The power supply shall be DIN-rail mountable with passive cooling. The power supply shall be marked for UL and CE and be compliant with the RoHS directive. Warranty shall be three years minimum. The power supply module shall be a Bosch PRA-PSM24.

Certifications and approvals

Regulatory areas	
Safety	EN/IEC/CSA/UL 60950-1
Immunity	EN 55024 EN 61000-6-1 EN 61000-6-2
Emissions	EN 55032 EN 55011 CISPR 32 CISPR 11 FCC-47 part 15B class B EN/IEC 61000-3-2, Class A
Environment	EN 50581

Conformity declarations	
Europe	CE
USA/Canada	FCC/c-UL/CSA

Conformity declarations	
China	CCC
Korea	KE
Australia	RCM
Taiwan	BSMI
Russian Federation	EAC
India	BIS

Parts included	
Quantity	Component
1	Power supply module 24 V
1	Set of screw connectors
1	Manufacturer's datasheet

Technical specifications	
Quick overview	
Operating voltage (VAC)	85 - 264 VAC
Power consumption (W)	265 W maximum
Inrush current (mA)	35000 mA maximum
Output voltage (VDC)	24 - 28 VDC
Output current (A) (maximum continuous)	10 A
Output current (A) (maximum peak)	15 A
Nominal voltage (VDC)	24 VDC
Maximum heat loss (BTU/h)	85 BTU/h
Power factor	0,90
Air pressure (hPa)	750 - 1070 hPa
Material	Aluminum
Cooling	Convection
Mounting type	Rail-mounted; Wall-mounted
Protection	Overheat; Overload; Overvoltage
Degree of protection (IEC 60529)	IP20

Operating temperature (°C)	-25 - 80 °C
Operating relative humidity, non-condensing (%)	5 - 95%
Storage temperature (°C)	-40 - 85 °C
Dimension (H x W x D) (mm)	121 x 85 x 124 mm
Weight (kg)	1,10 kg

Electrical

Power transfer	
Mains power supply input	
Input voltage range	100 to 240 VAC
Input voltage tolerance	85 to 264 VAC
Frequency range	50 to 60 Hz
Inrush current	< 35 A (115 V, 230 V)
Power factor (PF)	0.9 to 1.0
Leakage current to safety ground	< 1 mA (240 V)
24 VDC output	
Nominal DC output voltage	24 V
Output voltage range	24 to 28 V
Maximum continuous current	10 A
Derating	-0.25 A/°C above 50°C
Maximum peak current	15 A
Power consumption	
Active mode, rated power	265 W
Heat loss	
Active mode, rated power	90 kJ/h (85 BTU/h)

Protection	
Overvoltage	Automatic recovery
Overload	Automatic recovery
Over-temperature	Automatic recovery

Reliability	
MTBF	> 500.000 h

Environmental

Climatic conditions	
Temperature	
Operating	-25 to +80 °C (-13 to 176 °F)
Storage and transport	-40 to +85 °C (-40 to 185 °F)
Humidity (non condensing)	5 to 95 %
Air pressure	750 to 1070 hPa

Climatic conditions	
Altitude (operating)	0 to 2500 m (0 to 8200 ft)
Vibration (operating)	
Amplitude	< 0.35 mm
Acceleration	< 3 G
Bump (transport)	< 10 G

Airflow	
Cooling	Convection

Mechanical

Enclosure	
Dimensions (HxWxD)	121 x 85 x 124 mm (4.76 x 3.35 x 4.86 in)
Ingress protection	IP20
Mounting rail	TS35 DIN Rail (EN 60715)
Case	Aluminum
Weight	1.10 kg (2.43 lb)

Ordering information

PRA-PSM24 Power supply module 24V
 24 V DIN-rail mountable power supply, full aluminum body
 Order number **PRA-PSM24 | F.01U.358.131**

Services
EWE-PRAPSM-IW 12 mths wrty ext Praes. PS Module
 12 months warranty extension
 Order number **EWE-PRAPSM-IW | F.01U.387.311**

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