

PLN-24CH12 24 V and PRS-48CH12 48 V Battery Chargers

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- ▶ 12 A battery charger
- ▶ 6x 40 A, 3x 5 A outputs
- ▶ 150 A back-up current
- ▶ Fully supervised, EN 54-4 certified
- ▶ Under-voltage and over-voltage protection

The PLN-24CH12 and PRS-48CH12 Battery Chargers are designed for public address and emergency sound systems, to assure that the system batteries are always charged. Rack mountable, the unit charges lead-acid batteries and simultaneously provides 24 V or 48 V for system components that use 24 V or 48 V exclusively. These chargers are fully compliant and certified to EN 54-4. The battery chargers are premium quality, intelligent, microprocessor controlled devices.

Functions

Performance

The maximum charger current is 12 A for charging the battery. The maximum battery capacity, according to EN 54-4, is therefore 225 Ah, minimum size is 86 Ah. The maximum output of the back-up power system is 150 A.

The charger has an input voltage range of 195 V to 264 V, and a power factor corrector. The charger features automatic shutoff when the battery voltage is too low, to prevent battery damage. It also features over-voltage protection, protection against wrong battery polarity and short-circuit protection. The

outputs are protected by fuses. The power supply takes a resistance measurement of the battery including connections every 4 hours. The charger comes with a temperature sensor that is used to adjust the charging voltages. The charger has additional 24 V or 48 V (depending on model) auxiliary outputs, to supply power to equipment that needs 24 V or 48 V as primary power. The current capacity of these outputs is 5 A per output. The charger has relay outputs to signal a mains fault, battery fault and charger output voltage fault.

Controls and indicators

- Mains status LED
- Battery status LED
- Output voltage fault LED

Interconnections



- 6 main outputs for the system, each with their own fuse
- 3 auxiliary outputs for peripherals, system components that always use 24/48 V with a lower current need
- Fault relays
- Battery connection

Certifications and approvals

Safety	acc. to EN 60950-1
EMC	EN 61000-6-1 EN 61000-6-2 EN 61000-6-3 EN 61000-6-4 EN 55022 class B
Evacuation	acc. to EN 54-4 EN 12101-10 class A, part 10: power supplies. CE CPD: PLN-24CH12: 0333-CPD-075381-1 PRS-48CH12: 0333-CPD-075383-1
Immunity	acc. to EN 55130-1/2
Emission	acc. to EN 55103-4

Region	Certification
Europe	CPD

Installation/configuration notes

- 6 main outputs, 40 A (32 A GG fuse) per output.
- 3 auxiliary outputs, 5 A (5 AT fuse) per output.
- The maximum total back-up current is 150 A (9 outputs).
- The maximum charger output current to the battery and outputs combined is 12 A.

Parts included

Quantity	Component
1	PLN-24CH12 24 V Battery Charger or PRS-48CH12 48 V Battery Charger
1	Mains plug
1	Installation and User Instructions
1	Temperature sensor with cable

Technical specifications

Electrical

Mains power supply	
Voltage	195 to 264 VAC, 50 to 60Hz
Input current (PLN-24CH12)	2 A
Input current (PRS-48CH12)	4 A
Power consumption (PLN-24CH12)	380 W maximum
Power consumption (PRS-48CH12)	760 W maximum

Performance (PLN-24CH12)

Voltage min.	21.6 VDC (auto shutdown)
Voltage max.	28.5 VDC

Performance (PRS-48CH12)

Voltage min.	43.2 VDC (auto shutdown)
Voltage max.	56.9 VDC

Performance (PLN-24CH12 and PRS-48CH12)

Max. charge current	12 A
Max. system current (Ib)	150 A

Main outputs (6 x)

Voltage	24 or 48 VDC (battery voltage)
Current	40 A

Auxiliary outputs (3 x)

Voltage	24 or 48 VDC (battery voltage)
Current	5 A

Fault outputs (3 x)

Rating	24 V/1 A, 120VAC/500 mA voltage free
Contacts	Normally energized (failsafe)

Mechanical

Dimensions (H x W x D)	88 x 430 x 260 mm (19" wide, 2U high)
Input connections (connect to battery)	Screw terminal
Output connections (connect to system)	10 x pluggable screw connector
Weight	Approx. 6 kg

Mounting	19" rack
Color	Charcoal with silver

Environmental

Operating temperature	-5 °C to +45 °C (23 °F to +113 °F)
Storage temperature	-25 °C to +85 °C (-13 °F to +185 °F)
Relative humidity	<95% (operating and storage)

Ordering information

PLN-24CH12 24 V Battery Charger

Charges lead-acid batteries and simultaneously provides 24 V.

Order number **PLN-24CH12**

PRS-48CH12 48 V Battery Charger

Charges lead-acid batteries and simultaneously provides 48 V.

Order number **PRS-48CH12**

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