ELTEK VALERE
always on

RECTIFIER
PSR312

In: 230 VAC
Out: 24 VDC (1.2 kW)

KEY FEATURES

- **Single-phase module 1/4 x 19", 3U with sinusoidal input current (PFC)**
- **Very wide input frequency range**
- **Input overvoltage protection**
- **"Hot plug-in" design with backplane connection**
- **High power density**
- **CAN-Bus interface**
- **Integrated decoupling from the DC bus**
- **Front-to-rear airflow with temperature-controlled fan cooling**
- **Suitable for Pb and NiCd batteries**

PRODUCT DESCRIPTION

Power supply modules of series PSR312 are compact battery charging rectifiers with an optimized switching principle and therefore with very high power density. The rectifier can be used in all DC applications with or without back-up battery.

Due to the modular concept and high scalability the user is able to equip the power supply with additional modules according to his actual power profile. The chargers are very user friendly and can be swapped and upgraded during operation.

The devices get their operation parameters via the system wide CAN communication bus. After a successful login a central monitoring unit controls and monitors the devices. In case of CAN-Bus interruption the modules operate continuously with internal default values. The current sharing between the rectifier modules operates independent of the CAN communication bus.
Up to four modules can be integrated in a 19" sub rack with 3U (24 V/200 A).

APPLICATIONS

DC power supply facilities with or without back-up battery in all areas of industry, power generation and power distribution.

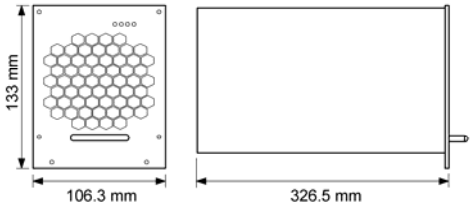
TECHNICAL DATA

Type	PSR312/24-50
Article code	101-012-148.00
Nominal input voltage	230 VAC ±20 %
Nominal input current	5.8 AAC
Input frequency range	16⅔ to 60 Hz (+5 %)
Power factor	>0.99 at Pnom >50 %
Total harmonic distortion	<5 %
Efficiency	≥88 %
Internal input fusing	16 A (6.3 x 32 mm)
Nominal output voltage	24 VDC
Nominal output current @ 24 V	50 ADC
Nominal output power	1.2 kW
Charge characteristic	IV characteristic according to DIN41772/DIN41773; power limited
Adjustable output voltage range	21 - 33 VDC
Default value of the charging voltage (factory set)	27.24 VDC (2.27 V/cell; lead acid battery); by CAN dongle settable for NiCd batteries
Output over voltage Vo> (factory set)	30 VDC (2.5 V/cell; lead acid battery); by CAN dongle settable for NiCd batteries
Voltage ripple / psophometric acc. to CCITT-A	≤20 mVpp / ≤1.2 mV
Dynamic accuracy of the charging voltage	<3 % Vnom at load changes between 10 % - 90 % - 10 % Inom; transient time ≤1.5 ms
Short circuit protection	continuous short circuit proof; 1 x Inom
Parallel operation	Yes; current sharing ≤10 % Inom
Internal decoupling at the output	Yes; active, low-loss decoupling circuit in the negative output line
Internal output fuse	80 A
LED signalling	Operation (green), Vo OK (green), Vo> (red), Alarm (red)
Main processor	16Bit Fujitsu
Isolated signalling contacts	"General fault"; relay COM/NO/NC, maximum contact load: 60 VDC/500 mA
Communications interface	CAN-Bus, proprietary protocol
Ambient temperature	Operation: -20 °C to +55 °C, storage: -40 °C to +85 °C
Cooling	Fan cooling (temperature-controlled, r.p.m.-monitored)
Climatic conditions	according to IEC 721-3-3 class 3K3/3Z1/3B1/3C2/3S2/3M2
Max. installation altitude	≤ 1500 m
Audible noise	<45 dB (A)
Type of construction	1/4 x 19", 3U
Dimensions (W/H/D)	106.3/133/326.5 mm
Weight	approx. 3.9 kg
Type of enclosure / Protection class	IP20 (front panel) / 1
Colour	Front panel: RAL 7035, neutral, black print RAL 9005
CE conformity	yes
Compliance to safety standards	EN60950-1; VDE0100 T410; VDE0110; EN50178; EN60146
Compliance to EMC standards	EN55022/24 (ITE), class "A"; EN61000-4 T2-5
Connections	AC input, DC output and signalization: DIN41612-M-connector

OPTIONS

Article code	View	Designation
102-327-318.LV01		Assembly set 19" sub rack 3U incl. backplane for 3 pcs. rectifiers PSR312/24 V and 1pcs. DC controller UPC3-24 V; connection board DCC-CB1 included in delivery.
102-327-408.LV01		Assembly set 19" sub rack 3U incl. backplane for 4 pcs. rectifiers PSR312/24 V
301-003-498.02		Monitoring, controlling and signalling unit (DC controller) UPC3-24 V
302-DCC-CB1.00		Connection board, necessary to connect all measuring, control and signalling wires over the sub rack to the UPC3 (MSTB screw terminals) (Spare part)
881-MEC-BPL.03.21.B		Cover plate (with handle) to cover not used PSR slots, 1/4 x 19", 3U; RAL 7035
880-CAN-DNG.00		CAN dongle, supplied by CAN-Bus, 12V, incl. software

DIMENSIONS



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