



## RECTIFIER

### PSR327

In: 230 VAC

Out: 220 VDC (2.7 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 PSR327 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 (216 V/50 A).

#### APPLICATIONS





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



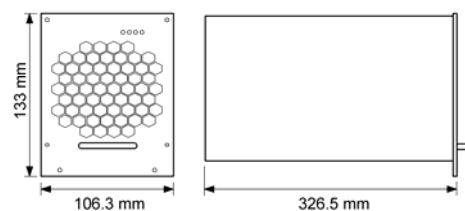
# TECHNICAL DATA

|   |   |
|---|---|
| <b>Type</b>   | <b>PSR327/220-12.5</b>  |
| Article code  | 101-027-188.00  |
| Nominal input voltage                               | 230 VAC $\pm 20$ %  |
| Nominal input current                               | 12.9 AAC  |
| Input frequency range                               | 16% to 60 Hz (+5 %)   |
| Power factor  | >0.99 at Pnom >50 %   |
| Total harmonic distortion                           | <5 %  |
| Efficiency  | $\geq 91$ %   |
| Internal input fusing                               | 16 A (6.3 x 32 mm)  |
| Nominal output voltage                              | 216 VDC   |
| Nominal output current @ 216V                       | 12.5 ADC  |
| Nominal output power                                | 2.7 kW  |
| Charge characteristic                               | IV characteristic according to DIN41772/DIN41773; power limited                         |
| Adjustable output voltage range                     | 170 - 295 VDC   |
| Default value of the charging voltage (factory set) | 245.2 VDC (2.27 V/cell; lead acid battery); by CAN dongle settable for NiCd batteries   |
| Output over voltage Vo> (factory set)               | 270 VDC (2.5 V/cell; lead acid battery); by CAN dongle settable for NiCd batteries      |
| Voltage ripple                                      | $\leq 200$ mVpp   |
| Dynamic accuracy of the charging voltage            | <3 % Vnom at load changes between 10 % - 90 % - 10 % Inom; transient time $\leq 1.5$ ms |
| Short circuit protection                            | Continuous short circuit proof; 1x Inom   |
| Parallel operation                                  | Yes; current sharing $\leq 10$ % Inom   |
| Internal decoupling at the output                   | Yes, in the positive output line  |
| Internal output fuse                                | 20 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                          | $\leq 1500$ 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   |
| Electrical connector                                | AC input, DC output and signalization: DIN41612-M-connector                             |

## OPTIONS

| Article code        | View  | Designation  |
|---------------------|---|--|
| 102-327-318.HV01    |  | Assembly set 19" sub rack 3U incl. backplane for 3 pcs. rectifiers PSR327/220 V and 1pcs. DC controller UPC3-220 V; connection board DCC-CB1 included in delivery. |
| 102-327-408.HV01    |  | Assembly set 19" sub rack 3U incl. backplane for 4 pcs. rectifiers PSR327/220 V  |
| 301-003-898.02      |  | Monitoring, controlling and signalling unit (DC controller) UPC3-220 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



DS\_PSR327\_220V\_2009\_E\_R02 - Subject to change without notice - Eltek Valere Industrial GmbH

**Eltek Valere Industrial GmbH**  
Schillerstrasse 16  
D-32052 Herford  
Tel: +49 52 21 17 08 200  
info.industrial@eltekvalere.com  
www.eltekvalere.com

**Finland**  
Eltek Energy Oy  
Tel: +35 820 779 88 20

**France**  
Eltek - SFEE SA  
Tel: +33 562 340 930

**Germany**  
Eltek Valere Industrial GmbH  
Tel: +49 52 21 17 08 200  
Eltek Valere Deutschl. GmbH  
Tel: +49 694 2002 0

**Norway**  
Eltek Valere AS  
Tel: +47 32 20 32 00

**Poland**  
Eltek Polska Sp. z o.o.  
Tel: +48 914 852 440

**Russia**  
OOO Eltek St. Petersburg  
Tel: +78 123 321 117  
**Slovakia**  
Eltek Energy Slovakia s.r.o.  
Tel: +42 144 520 1607

**Spain**  
Eltek Energia S.A.  
Tel: +34 914 920 660

**Sweden**  
Eltek Energy AB  
Tel: +46 862 664 20

**United Kingdom**  
Eltek Energy (UK) Ltd  
Tel: +44 144 22 193 55

**Australia**  
Eltek Pacific Pty Ltd  
Tel: +61 294 794 200

**Bangladesh**  
Eltek Energy Pte Ltd  
Tel: +88 017 2097 097

**India**  
Eltek SGS Pvt Ltd  
Tel: +91 124 221 00 18

**Malaysia**  
Eltek Energy (M)Sdn Bhd  
Tel: +60 179 815 866/74 552

**Pakistan**  
Eltek Energy AS Pakistan  
Tel: +92 512 853 149

**Philippines**  
Eltek Energy Incorporated  
Tel: +63 291 063 55

**Singapore**  
Eltek Energy Pte Ltd  
Tel: +65 773 23 26

**Thailand**  
Eltek Energy Incorp 2005 Ltd  
Tel: +66 294 369 05

**UAE**  
Eltek Middle East  
Tel: +97 148 871 176

**China**  
Eltek Energy Technology Ltd  
Tel: +86 769 226 511 08

**Hong Kong**  
Eltek Energy Ltd  
Tel: +85 228 982 689

**Brazil**  
Eltek Sistemas de Energia  
Tel: +55 116 487 56 56

**Colombia**  
Eltek Energy LLC  
Tel: +57 162 216 91

**USA**  
Eltek Energy LLC  
Tel: +18 154 599 100

**Mexico**  
Eltek Energy International  
Tel: +52 55 53 74 1842

**Peru**  
Eltek Energy de Peru SRL  
Tel: +51 142 192 71