

# RECTIFIER

## PSS

**Input Voltage 230V AC**  
**Output Voltage 24/48/60/108/216V DC**  
**Rated Output Power 1800/3000W**



*A combination of modern AC to DC switching power conversion technology and a flexible 19" compatible mechanic like the PSS gives a wide range advantages and makes it suitable in many applications.*

*These power supplies are designed for a wide range of applications such as:*

- ◆ power supply for all medium to high power DC loads
- ◆ rectifiers in DC systems with battery backup
- ◆ telecommunication
- ◆ railroad signalling systems
- ◆ industrial control systems
- ◆ low-voltage switchgear supplies
- ◆ charging and buffering of stationary batteries in electrical power plants

*The combination of an active power factor correction unit and a soft-switching DC to DC-converter provides a wide input voltage range, high efficiency, small dimensions, and low weight.*

*The input current is sinusoidal with power factor 1.*

*A constant voltage and current control circuit performs correction of output voltage deviations due to input voltage or load transients within less than 1.5msec and permits constant current operation down to continuous short circuit.*

*A microcontroller unit with two control keys and digital displays on the front panel provides continuous monitoring of input and output voltage, output current, and temperature, and offers easy adjustment and programming of output parameters and monitoring thresholds.*

**These units are available for delivery as DC/DC converters with input voltages of 110 and 220VDC too!**

- ➔ Sinusoidal input current
- ➔ Flexible 19"-system, "Hot-Plug-In"
- ➔ Outstanding dynamic performance and high overall efficiency
- ➔ Temperature compensation of charge voltage
- ➔ Digital displays for output voltage, current, and adjustment values
- ➔ CAN-bus interface

## Type list

Type	Article number	Nominal output voltage (VDC)	Nominal output current (ADC)	Dimensions W/H/D (mm)	Weight (kg)
PSS18/24-40	20-1001	24	40,0	141/262/285	8,5
PSS18/48-30	20-1003	48	30,0	141/262/285	8,5
PSS18/60-25	20-1004	60	25,0	141/262/285	8,5
PSS18/108-13,4	20-1005	108	13,4	141/262/285	8,5
PSS18/216-6,7	20-1006	216	6,7	141/262/285	8,5
PSS30/24-80	20-1011	24	80,0	141/262/405	11,5
PSS30/48-50	20-1012	48	50,0	141/262/405	11,5
PSS30/60-40	20-1013	60	40,0	141/262/405	11,5
PSS30/108-22,3	20-1014	108	22,3	141/262/405	11,5
PSS30/216-11,1	20-1015	216	11,1	141/262/405	11,5

# Technical Specifications

## AC input

Input Voltage	230 V AC +15/-20%
Input Frequency	47-63 Hz
Input Current	16A (PSS18) / 25A(PSS30) for 10 msec
Fusing	2-pole MCB B10A (PSS18)/B16A (PSS30)
Power Factor	>0,99
Overall Efficiency	>=91%

## DC Output

Output Voltage	according to type list
Charge Characteristic	CV/CC-characteristic according DIN 41772/ DIN 41773, 3 characteristics adjustable; float charge / boost charge / battery test (1,7 - 2,5V/cell)
Output Current	according to type list
Dynamic Deviation	< 3 % Vnom for load transients between 10 % - 90 % - 10 % Inenn (regulation time < 1,5 msec)
Short Circuit Protection	continuous short circuit proof, 1 x Inom
Parallel Operation	unlimited quantity, load sharing appr. 10 %
Voltage Ripple	< 20 mVpp
Psophometric Ripple	< 1,0 mV (24V-rectifier), < 1,8 mV (48 and 60V-rectifier)

## Ambient Conditions

Ambient Temperature	-10°C to +45°C, -10°C to +40° C at cabinet mounting
Climatic Conditions	IEC 721-3-3
Humidity Class	F
Altitude	<= 1000 m a.s.l.
Noise Level	< 30 dB(A) in 1m distance

## Mechanical Construction

Construction	1/3-19"-cassette for mounting in subracks according to DIN41 494, front side connectors
Dimensions, Weight	according to type list
Cooling	natural cooling (PSS18), speed controlled fan cooling (PSS30)
Protection Class	1 according to EN 60950 (electr.) / IP20 (mech.)
Surface	front panel: powder coating RAL 7032; constructive parts: anodized

## Compliances

Certification	CE-mark
Safety	EN 60950, VDE0100 part 410, VDE 0110, EN 50178, EN 60146
EMC	EN 55022 class B, EN 61000-4 part 2-5

## Standard Equipment

Monitoring	<ul style="list-style-type: none"><li>- mains monitoring (green LED)</li><li>- output voltage "Vo1/Vo2", (green LED)</li><li>- output voltage low "Vo&lt;", (green LED)</li><li>- output voltage high "Vo&gt;", (red LED)</li><li>- constant current operation "Io" (yellow LED)</li><li>- overtemperature "Alarm" (red LED)</li></ul>
Digital Displays	Uo, Io and adjustment values for monitoring
Relay Contacts/External Functions	<ul style="list-style-type: none"><li>- relay contact "General Fault" and "Uo&lt;"</li><li>- active current sharing</li><li>- boost charge and battery test function</li><li>- temperature compensation of charge voltage</li><li>- external sense links for output voltage; remote ON/OFF</li><li>- optocoupler signal "Vo O.K.", "Mains O.K." and constant current operation</li></ul>
Microprocessor controlling	programmable monitoring functions, device parameters with front keys and digital displays
Communication	CAN-bus interface for communication with central monitoring unit (MU1000C; optional)