# 1200 S - Series

**1200 W SWITCHED MODE DC POWER SUPPLY**

<table>
<thead>
<tr>
<th>Models</th>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200 S 24</td>
<td>12-15 V</td>
<td>60 A</td>
</tr>
<tr>
<td></td>
<td>24 V</td>
<td>50 A</td>
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<tr>
<td></td>
<td>30 V</td>
<td>40 A</td>
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<tr>
<td>1200 S 48</td>
<td>24 - 30 V</td>
<td>30 A</td>
</tr>
<tr>
<td></td>
<td>48 V</td>
<td>25 A</td>
</tr>
<tr>
<td></td>
<td>60 V</td>
<td>20 A</td>
</tr>
</tbody>
</table>

## Features:
- Very high reliability, MTBF 500,000 hrs
- Natural convection cooling
- High efficiency 89%
- Under-voltage alarm contact
- Low output ripple, 7 mV rms
- Low inrush current
- Short circuit protected
- Analog programmable
- Build-in diode for redundant parallel operating
- No RFI problems, RFI filters in output and input
Specifications:

- **Input voltage**: AC 198-264 V 48-62 Hz 8.2 Arms
  - fuse 15 A, crest factor 2.2
  - AC 99-132 V 48-62 Hz 16.4 Arms
  - fuse 25 A
- **Insulation**
  - Input / output: 3750 V rms (1 min)
  - Input / case: 2500 V rms (1 min)
  - Output / case: 500 V DC
- **Inrush current**: Limited by 39 Ohm (shorted after startup)
- **Line distortion**: Kep low by large low frequency choke input
- **Power factor**: 0.72 at 230 V AC input and full load.
- **Safety**
  - EN 60950 / EN 61010
  - SELV / PELV (for 1200 S 24 only)
- **EMC**
  - EN 61204-3 Power Supply Standard
  - EN 61000-6-3 Emission (EN 55022B)
  - EN 61000-6-2 Immunity
- **VDE0160 impulse test**: Input with stands non periodic impulse 2.3 Øn 0.3 ms of VDE0160 class 1
- **Parallel operation**: For safe parallel operation put current operation limit switch at 'LO' (max. 1100 W)
- **Redundant parallel**: Use R+ connection via build-in Schottky diode to separate the outputs, put current limit at 'LO'. Do not use remote sensing.

- **Under voltage alarm contact**: changes over when output voltage drops to 10% below the set value. Contact rating 100 mA / 30 V.
- **Remote control**: Is possible with a 10 kΩ potmeter.
- **Remote programming**: Output voltage is programmable with 2-5 V, corresponding with 12-30 V (24-60 V).
  - Programming speed is 100 ms from 12-30 V (24-60 V) at max. current. Programming input is not isolated (connected to output).
- **Remote sensing**: max. 3 V per load lead. However, the sum of voltage across load + leads cannot exceed 30 V (60 V). With parallel operation remote sensing is not recommended.
- **Remote on/off**: By 5 V, optocoupler isolated.
- **Ambient temperature**
  - Storage: -40 to + 85 °C
  - Operating: -20 to + 50 °C mounted vertically
  - -20 to + 40 °C mounted horizontally
- **Output voltage**: Screwdriver adjustable with 10 turn potmeter at the rear side.
  - Also programmable by 2-5 V
  - 89% at 230 V AC input.
  - 5.10⁻⁵ per °C
  - 3.10⁻⁴ during 8 hrs under constant conditions, after 1 hr warm up.
- **Regulation**
  - Load 0 - 100%
  - Line 198 - 264 V
  - Ripple + noise (BW = 20 MHz)
  - Output imp.
  - Recovery time
  - Hold-up time
  - Series operation
  - Better than 10 mV
  - Better than 5 mV
  - Max. 7 mV, 20 mV pp
  - Less than 0.05 Ohm up to 100kHz
  - 0.3 milliseconds to recover within 100 mV after 50 to 100% load step. Max deviation 300 mV.
  - 15 ms at 115 or 230 V AC input and full load. 30 ms at half load.
  - Up to 500 V total Voltage.
- **Current limit**: Can be put on HI or LO with a switch on the front panel. From 30 V to 18 V (60 to 36 V) the current limit follows more or less a constant power curve. Below 18 V (36 V) it resembles a constant current curve.
- Dim and weight:
  - Height: 88 mm
  - Width: 433 mm
  - Depth: 385 mm
  - Weight: 11 kg

- 19" rack adapter:
  Although vertical mounting is preferred for optimal cooling, the unit can also be mounted horizontally in a 19" rack (2 U).
  The current limit switch has to be put on 'LO' (max. 1100W). When forced air cooling is used, the full 1200 W can be be taken continuously (limit on 'HI').

- Ambient temperature:
  - Storage: -40 to +85 °C
  - Operating:
    - mounted vertically: -20 to +50 °C
    - mounted horizontally: -20 to +40 °C

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Cover of connection panel.

Two ways of vertical mounting.

Bracket H88 for vertical wall mounting.
(4 pcs required)

Bracket H88 with handle for 19" rack mounting
(2 pcs required)

Bracket H114 for vertical wall mounting.
(4 pcs required)