48V, 6A DC Output (288W) Rectifier Module
- IP65 Enclosure for Outdoor Applications
- Easy Installation w/Quick-Mount Brackets
- High Efficiency (>91% at 50%~100% Load)
- Free-Air Convection Cooling up to +50°C
- Designed for High Reliability
- Complies with FCC Part 15 (Class B Emissions)
- International Safety Approvals (pending)

**INPUT SPECIFICATIONS:**

**VOLTAGE**
85VAC ~ 132VAC

**FREQUENCY**
45Hz ~ 63 Hz

**INRUSH**
≤ 25A @ 120VAC Full Load

**CURRENT**
≤ 5A @ 230VAC (Max Continuous)

**LEAKAGE**
< 3.5mA @ 132VAC

**EFFICIENCY**
> 91% typical @ ≥ 50% Load (pending verif.)

**HOLD-UP**
20ms minimum @ 120VAC

**HARMONICS**
EN61000-3-2 Class D (>0.99PF; > 50% load)

**OUTPUT SPECIFICATIONS:**

**OUTPUT VOLTAGE**
48Vdc (typical)

**OUTPUT CURRENT**
6A (max, continuous)

**LINE REGULATION**
± 1.0%, across full input range

**LOAD REGULATION**
± 3.0%, across full load range

**RIPPLE**
≤ 100mV p-p; ≤ 10mVrms (20MHz BW)

**OUTPUT ADJUSTMENT**
tbd

**EMISSION**
tbd

**RECOVERY**
tbd

**OVER-CURRENT**
110% ~ 160% (8.5A ~ 9.6A); Auto-Recovery

**OVP Shutdown:**
110% ~ 140% (Auto- Restart)

**Over-Temp Shutdown:**
80°C ± 10°C (Auto- Restart @ 50°C) - see Thermal Guard drawing

**GENERAL SPECIFICATIONS:**

**OPERATING TEMPERATURE**
-30°C to +50°C (Full Power)

**OPERATING HUMIDITY**
5% ~ 95% (non-condensing)

**STORAGE**
-40°C to +85°C; 5% ~ 95% RH (non-condensing)

**COOLING**
Free-Air Convection (no fans; fully enclosed, IP65)

**VIBRATION**
10-55Hz, 2G, 3Min Period, 60 min each (3 axes)

**SHOCK**
20G Peak Acceleration

**RELIABILITY**
368K Hours @ 50°C (per MIL STD 217F)

**SIZE (WxDxH)**
174mm x 76mm x 429.5mm

**WEIGHT**
4.7kg (10.3 lbs)

**EMISSIONS:**

**FCC Part 15 Class B (Conducted)**
EN61000-4-2, 4KV Contact / 8KV Air

**RADIATED SUSCEPTIBILITY**
EN61000-4-3, 26MHz-2000MHz, 10V/m, 80%AM

**EFT/BURSTS**
EN61000-4-4, 2KV

**SURGES**
EN61000-4-5, 2KV Earth, 1KV Line-Line

**CONDUCTED IMMUNITY**
EN61000-4-6, 150kHz-800MHz, 10Vrms, 80%AM

**VOLTAGE DIPS**
EN61000-4-10, 95% Dip, 10ms / 30% Dip, 500ms

**VOLTAGE INTERRUPTIONS**
EN61000-4-11, 95% reduction, 5ms

**FLUCTUATIONS & FLICKER**
EN61000-3-3

**SAFETY STANDARDS: (Approvals Pending)**

UL/UL
Designed to Meet IEC/UL 60950-1 (pending)

CE MARK
Designed to Meet Low Voltage Directive (pending)
**MECHANICAL OUTLINE DRAWING:**

(Units in mm)

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Connectors

**AC Input Connector**

<table>
<thead>
<tr>
<th>Port name</th>
<th>Manufacturer / Part#</th>
<th>Pin Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>DDK / WEBR1303MS-D</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pin 1 L1(L)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pin 2 L2(N)</td>
</tr>
</tbody>
</table>

**DC Output Connector**

<table>
<thead>
<tr>
<th>Port name</th>
<th>Manufacturer / Part#</th>
<th>Pin Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC-48V</td>
<td>Souriau / UTG012E4P97</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pin 1 (+), non ground</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pin 3 (-), non ground</td>
</tr>
</tbody>
</table>

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[See Top Mounting Bracket drawing for details]

[See Bottom Mounting Bracket drawing for details]
THERMAL GUARD LOCATION (for Over-Temperature Protection)

(Units in mm)
Figure 1. Efficiency measured at 120V AC input and 25°C ambient.

Figure 2. Ripple and Noise measured at 120V AC input, Full Load (6A), and 25°C ambient.