30W Ultra Slim Step Shape DIN Rail

HDR-30 series

Features
- Ultra slim design with 35mm(2SU) width
- Universal input 85~264VAC(277VAC operational)
- No load power consumption<0.3W
- Isolation class II
- Pass LPS (Limited power source)
- DC output voltage adjustable
- Protections : Short circuit / Overload / Over voltage
- Cooling by free air convection (working temperature:-30~+70°C)
- DIN rail TS-35/7.5 or 15 mountable
- Over voltage category III
- LED indicator for power on
- 3 years warranty

Applications
- Household control system
- Building automation
- Industrial control system
- Factory automation
- Electro-mechanical apparatus

Description
HDR-30 is one economical ultra slim 30W DIN rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 35mm(2SU) in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 85VAC to 264VAC(277VAC operational) and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.
HDR-30 is designed with plastic housing that it can effectively prevent user from electric hazards. With working efficiency up to 90%, the entire series can operate at the ambient temperature between -30°C and 70°C under air convection. It is equipped with constant current mode for overload protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for home automations and industrial control apparatus (IEC60950-1, UL508, UL60950-1, EN61558-2-16) make HDR-30 a very competitive power supply solution for household and industrial applications.

Model Encoding
HDR - 30 - [12]

Output voltage
Rated wattage
Series name

LPS (Limited power source)
UL508
EN61558
UL60950-1
IEC60950-1

Cooling by free air convection (working temperature:-30~+70°C)

-30 ~ +70°C
30W Ultra Slim Step Shape DIN Rail

**HDR-30 series**

### SPECIFICATION

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HDR-30-5</th>
<th>HDR-30-12</th>
<th>HDR-30-15</th>
<th>HDR-30-24</th>
<th>HDR-30-48</th>
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<tbody>
<tr>
<td>DC VOLTAGE</td>
<td>5V</td>
<td>12V</td>
<td>15V</td>
<td>24V</td>
<td>48V</td>
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<tr>
<td>RATED CURRENT</td>
<td>3A</td>
<td>2A</td>
<td>2A</td>
<td>1.5A</td>
<td>0.75A</td>
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<tr>
<td>CURRENT RANGE</td>
<td>0 ~ 3A</td>
<td>0 ~ 2A</td>
<td>0 ~ 1.5A</td>
<td>0 ~ 0.75A</td>
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<tr>
<td>RATED POWER</td>
<td>15W</td>
<td>24W</td>
<td>30W</td>
<td>36W</td>
<td>36W</td>
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<tr>
<td>RIPPLE &amp; NOISE (max.) Note.2</td>
<td>80mVp-p</td>
<td>120mVp-p</td>
<td>120mVp-p</td>
<td>150mVp-p</td>
<td>240mVp-p</td>
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<tr>
<td>VOLTAGE ADJ. RANGE</td>
<td>4.5 ~ 5.5V</td>
<td>10.8 ~ 13.8V</td>
<td>13.5 ~ 18V</td>
<td>21.6 ~ 29V</td>
<td>43.2 ~ 55.2V</td>
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<tr>
<td>VOLTAGE TOLERANCE Note.3</td>
<td>±2.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
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<tr>
<td>LINE REGULATION</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
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<tr>
<td>LOAD REGULATION</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
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<tr>
<td>SETUP, RISE TIME</td>
<td>500ms, 50ms/230VAC</td>
<td>500ms, 50ms/115VAC at full load</td>
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<tr>
<td>HOLD UP TIME (Typ.)</td>
<td>30ms/230VAC</td>
<td>12ms/115VAC at full load</td>
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<tr>
<td>VOLTAGE RANGE</td>
<td>65 ~ 264VAC (277VAC operational)</td>
<td>120 ~ 370VAC (390VDC operational)</td>
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<tr>
<td>FREQUENCY RANGE</td>
<td>47 ~ 63Hz</td>
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<tr>
<td>EFFICIENCY (Typ.)</td>
<td>82%</td>
<td>88%</td>
<td>89%</td>
<td>89%</td>
<td>90%</td>
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<tr>
<td>AC CURRENT (Typ.)</td>
<td>0.88A/115VAC</td>
<td>0.48A/230VAC</td>
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<tr>
<td>INRUSH CURRENT (Typ.)</td>
<td>COLD START 25A/115VAC</td>
<td>45A/230VAC</td>
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<td>PROTECTION</td>
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<tr>
<td>OVERLOAD Note.4</td>
<td>105 ~ 160% rated output power</td>
<td></td>
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<tr>
<td>OVER VOLTAGE</td>
<td>5.75 ~ 7.5V</td>
<td>15 ~ 18V</td>
<td>18.8 ~ 22.5V</td>
<td>30 ~ 36V</td>
<td>57.6 ~ 67.2V</td>
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<tr>
<td>ENVIRONMENT</td>
<td></td>
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<tr>
<td>WORKING TEMP.</td>
<td>-30 ~ +70°C (Refer to &quot;Derating Curve&quot;)</td>
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<tr>
<td>WORKING HUMIDITY</td>
<td>20 ~ 90% RH non-condensing</td>
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<tr>
<td>STORAGE TEMP., HUMIDITY</td>
<td>-40 ~ +85°C, 10 ~ 95% RH non-condensing</td>
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<td>TEMP. COEFFICIENT</td>
<td>±0.03%/°C (0 ~ 55°C) RH non-condensing</td>
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<td>VIBRATION</td>
<td>10 ~ 500Hz, 2G 10min./cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6</td>
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<td>OPERATING ALTITUDE</td>
<td>2000 meters</td>
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<tr>
<td>OVER VOLTAGE CATEGORY</td>
<td>III: According to EN61558, EN50178,EN60664-1, EN62477-1; altitude up to 2000 meters</td>
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<td>SAFETY STANDARDS</td>
<td>UL60950-1, UL60891-1, UL1508, TUV-EN61558-2-16, IEC60950-1, EAC TP TC 004, BSMI CNS14336-1 aL, approved; Design refer to TUV EN60950-1</td>
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<td>WITHSTAND VOLTAGE</td>
<td>UP-O/P: 1000VAC</td>
<td>ISOLATION RESISTANCE</td>
<td>IP-O/P: 1000 Ohms / 500VDC / 25°C / 70% RH</td>
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<td>SAFETY &amp; EMC (Note 5)</td>
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<td>EMC EMISSION</td>
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<tr>
<td>Parameter</td>
<td>Standard</td>
<td>Test Level / Note</td>
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<tr>
<td>Conducted</td>
<td>EN55022(CISPR22), CNS13438</td>
<td>Class B</td>
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<tr>
<td>Radiated</td>
<td>EN55022(CISPR22), CNS13438</td>
<td>Class B</td>
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<td>Harmonic Current</td>
<td>EN61000-3-2</td>
<td>Class A</td>
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<td>Voltage Flicker</td>
<td>EN61000-3-3</td>
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<td>EMC IMMUNITY</td>
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<td>Parameter</td>
<td>Standard</td>
<td>Test Level / Note</td>
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<td>ESD</td>
<td>EN61000-4-2</td>
<td>Level 3, 8kV air; Level 2, 4kV contact, criteria A</td>
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<td>Radiated Susceptibility</td>
<td>EN61000-4-3</td>
<td>Level 3, criteria A</td>
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<td>EFT/Burst</td>
<td>EN61000-4-4</td>
<td>Level 3, criteria A</td>
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<td>Surge</td>
<td>EN61000-4-5</td>
<td>Level 4,2KV,L-N, criteria A</td>
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<td>Conducted</td>
<td>EN61000-4-6</td>
<td>Level 3, criteria A</td>
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<td>Magnetic Field</td>
<td>EN61000-4-8</td>
<td>Level 4, criteria A</td>
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<tr>
<td>Voltage Dips and interruptions</td>
<td>EN61000-4-11</td>
<td>&gt;95% dip 0.5 periods, 30% dip 5 periods, &gt;95% interruptions 250 periods</td>
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<tr>
<td>OTHERS</td>
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<tr>
<td>MTBF</td>
<td>968.1K hrs min. MIL-HDBK-217F (25°C)</td>
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<tr>
<td>DIMENSION</td>
<td>35°90°54.5mm (W<em>H</em>D)</td>
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<tr>
<td>PACKING</td>
<td>0.12Kg/6pcs/12.5Kg/1.04CUFT</td>
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<tr>
<td>NOTE</td>
<td></td>
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</tr>
<tr>
<td>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</td>
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<tr>
<td>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12&quot; twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</td>
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<tr>
<td>3. Tolerance : includes set up tolerance, line regulation and load regulation.</td>
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<tr>
<td>4. Constant current limiting operation within 50% ~100% rated output voltage; protection type for short circuit is hiccup mode it will recover automatically after fault condition is removed.</td>
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<tr>
<td>5. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to &quot;EMI testing of component power supplies.&quot; (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</td>
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<tr>
<td>6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</td>
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</tbody>
</table>
30W Ultra Slim Step Shape DIN Rail

**Block Diagram**

- Input (I/P)
- EMI Filter
- Rectifiers & Filter
- Power Switching
- Rectifiers & Filter
- O.L.P.
- Control
- Detection Circuit
- O.V.P.
- Output (+V, -V)

**Derating Curve**

- Load (%)
- Ambient Temperature (°C)

**Output Derating VS Input Voltage**

- Load (%)
- Input Voltage (VAC) 60Hz

File Name: HDR-30-SPEC 2018-01-12
**Mechanical Specification**

(Unit: mm, tolerance ± 0.5mm)

ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

<table>
<thead>
<tr>
<th>Terminal Pin No. Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pin No.</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

**Installation Manual**

Please refer to: http://www.meanwell.com/manual.html
We are here for you. Addresses and Contacts.

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