POWERLINE - DC/DC-Converter
M-Series, 20 Watt, Surface-Mount (Single Output)

Features

- Output Voltage Adjustment
- Output Overvoltage Protection
- High Efficiency to 88%
- Max. Operat. Temperature: 85°C
- Five-Sided Shield
- Undervoltage Lockout
- Remote On/Off Control
- Over Current Protection, unlimited Duration

Selection Guide

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Range (VDC)</th>
<th>Output Range (VDC)</th>
<th>Output Current (A)</th>
<th>Ripple &amp; Noise (mVp-p)</th>
<th>Max. Capacitor Load (µF)</th>
<th>Efficiency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP20-4820SM</td>
<td>36-75</td>
<td>2.0</td>
<td>4.00</td>
<td>50</td>
<td>1500</td>
<td>82</td>
</tr>
<tr>
<td>RP20-4833SM</td>
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<td>3.3</td>
<td>4.00</td>
<td>50</td>
<td>1500</td>
<td>84</td>
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<tr>
<td>RP20-4805SM</td>
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<td>75</td>
<td>1500</td>
<td>88</td>
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<tr>
<td>RP20-4812SM</td>
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<td>12.0</td>
<td>1.67</td>
<td>75</td>
<td>330</td>
<td>88</td>
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<tr>
<td>RP20-4815SM</td>
<td>36-75</td>
<td>15.0</td>
<td>1.33</td>
<td>75</td>
<td>330</td>
<td>88</td>
</tr>
</tbody>
</table>

Specifications (typical at nominal input and 25°C unless otherwise noted)

Input Voltage Range 48V Nominal 36-75VDC
Input Filter LC Type
Output Voltage Set-Point Accuracy ±1%
Ripple and Noise (20MHz BW) See table above
Line Regulation, HL-LL ±0.2%
Load Regulation (100% to 10% full load) ±0.5%
External Trim Adjustment Range ±10% typ.
Efficiency See Table
Temperature Coefficient ±0.02%/ºC
Short Circuit Protection Continuous, auto recovery
Transient Response Recovery Time (25% load step change) 500µs
Transient Voltage Peak Deviation 300mV, max.
Control Voltage (referenced to negative (-) input) CMOS, TTL
    Compatibility 4.8V min. or open
    On-Control 0.4V max. or short
Switching Frequency 300kHz, typ.
Isolation Voltage 1600VDC min.
Isolation Resistance 10kΩ min.
Operating Temperature Range -25ºC to +71ºC
    +85ºC (see Graph)
Case Temperature 100ºC max.
Storage Temperature Range -55ºC to +105ºC
Cooling Free-air convection
EMI / RFI Five-sided shield
Case Material Non-conductive black plastic
Dimensions 49.5 x 30.2 x 10 mm

www.coolpowersolutions.fi
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**Pin Connections**

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Function</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vo(+)</td>
<td>7</td>
<td>Turn-On Adjustment (optional)</td>
</tr>
<tr>
<td>2</td>
<td>Vo(–)</td>
<td>8</td>
<td>On/Off</td>
</tr>
<tr>
<td>3</td>
<td>N/C +</td>
<td>9</td>
<td>Sync (optional)</td>
</tr>
<tr>
<td>4</td>
<td>Trim</td>
<td>10</td>
<td>N/C +</td>
</tr>
<tr>
<td>5</td>
<td>N/C +</td>
<td>11</td>
<td>V1(–)</td>
</tr>
<tr>
<td>6</td>
<td>N/C +</td>
<td>12</td>
<td>V1(+)</td>
</tr>
</tbody>
</table>

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**Recommended Footprint Details**

*Caution: Care must be taken to ensure the board in the periphery of the footprint is flat.*

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**Package Style and Pinning (mm)**

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**Pin Pitch Tolerances:** x.x ±0.6 mm, x.xx ±0.4mm