

C.M. TECHNOLOGY

Designed and Manufactured in Australia

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PRODUCT SHORTFORM

Rev. B1

Tel: +61 (2) 9764 5655

DC-DC Converter



DD48 Series

The DD48 Series is a compact 48VDC Input to DC Converter.

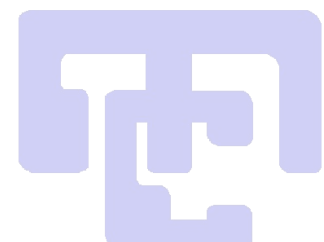
Available in 5V, 12V & 24V DC Output configurations.

- Panel Mount MIL-C rated connector
- Input Panel Mount Fuse
- 100% full load burn in tested
- Built-in Electromagnetic Interference filter
- Low ripple noise
- Overload/Overvoltage/Over temperature protection



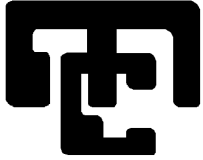
Available Configurations

| | |
|---------------|--------------------------------|
| DD485 | 48 V input, 5V @ 10 A output |
| DD4812 | 48 V input, 12V @ 4.2 A output |
| DD4824 | 48 V input, 24V @ 2.1 A output |

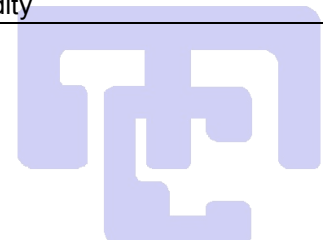


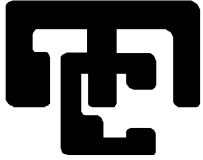
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Specifications for DD485 type:

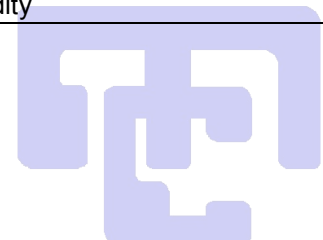
| | |
|---|--|
| Output DC Voltage | 5V |
| Output Rated Current | 10A |
| Current Range | 0-10A |
| Rated Power | 50W |
| Ripple & Noise (Maximum) | 100mVpeak-to-peak |
| Voltage Tolerance | ±2.0% |
| Line Regulation | ±0.5% |
| Load Regulation | ±0.5% |
| Setup, Rise Time | 2.5s |
| Hold up Time (Typical) | 50ms at full load |
| Input Voltage Range | 36-72V DC |
| Efficiency (Typical) | 76% |
| Overload Protection | 105-150% rated output power |
| Overvoltage Protection | 5.75 - 6.75V |
| EMS Immunity | EN61000-4-2,3,4,6,8, ENV50204, EN 55024, Heavy industrial, Criteria A |
| EMI Conduction & Radiation | EN55022 (CISPR22) Class B |
| Isolation Resistance | Input-Output, Input-Ground, Output-Ground: 100 MΩ/500V DC/25°C/70% Room Humidity |
| Withstand Voltage | Input-Output: 1.5KV DC, Input-Ground: 1.5KV DC, Output-Ground: 0.5KV DC |
| Safety Standards | Compliant with Low Voltage Directive (LVD) 2006/95/EC |
| MTBF | 368.5Khrs min. MIL-HDBK-217F (25°C) |
| Vibration | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axis |
| Working Temperature | -10°C - +60°C (No derating) |
| Working Humidity | 20% - 90% Room Humidity Non-condensing |
| Storage Temperature & Humidity | -20°C - +85°C, 10% ~ 95% Room Humidity |

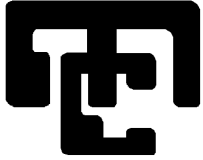




Specifications for DD4812 type:

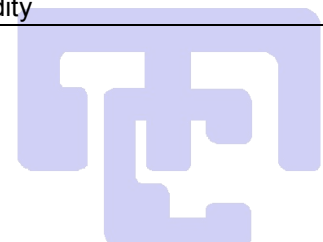
| | |
|--------------------------------|--|
| Output DC Voltage | 12V |
| Output Rated Current | 4.2A |
| Current Range | 0-4.2A |
| Rated Power | 50.4W |
| Ripple & Noise (Maximum) | 120mVpeak-to-peak |
| Voltage Tolerance | ±1.0% |
| Line Regulation | ±0.3% |
| Load Regulation | ±0.3% |
| Setup, Rise Time | 2.5s |
| Hold up Time (Typical) | 50ms at full load |
| Input Voltage Range | 36-72V DC |
| Efficiency (Typical) | 78% |
| Overload Protection | 105-150% rated output power |
| Overvoltage Protection | 16.8 - 20V |
| EMS Immunity | EN61000-4-2,3,4,6,8, ENV50204, EN 55024, Heavy industrial, Criteria A |
| EMI Conduction & Radiation | EN55022 (CISPR22) Class B |
| Isolation Resistance | Input-Output, Input-Ground, Output-Ground: 100 MΩ/500V DC/25°C/70% Room Humidity |
| Withstand Voltage | Input-Output: 1.5KV DC, Input-Ground: 1.5KV DC, Output-Ground: 0.5KV DC |
| Safety Standards | Compliant with Low Voltage Directive (LVD) 2006/95/EC |
| MTBF | 368.5Khrs min. MIL-HDBK-217F (25°C) |
| Vibration | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axis |
| Working Temperature | -10°C - +60°C (No derating) |
| Working Humidity | 20% - 90% Room Humidity Non-condensing |
| Storage Temperature & Humidity | -20°C - +85°C, 10% ~ 95% Room Humidity |

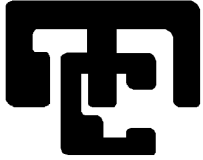




Specifications for DD4824 type:

| | |
|--------------------------------|--|
| Output DC Voltage | 24V |
| Output Rated Current | 2.1A |
| Current Range | 0-2.1A |
| Rated Power | 50.4W |
| Ripple & Noise (Maximum) | 150mVpeak-to-peak |
| Voltage Tolerance | ±1.0% |
| Line Regulation | ±0.2% |
| Load Regulation | ±0.2% |
| Setup, Rise Time | 2.5s |
| Hold up Time (Typical) | 50ms at full load |
| Input Voltage Range | 36-72V DC |
| Efficiency (Typical) | 83% |
| Overload Protection | 105-150% rated output power |
| Overvoltage Protection | 31.5 - 37.5V |
| EMS Immunity | EN61000-4-2,3,4,6,8, ENV50204, EN 55024, Heavy industrial, Criteria A |
| EMI Conduction & Radiation | EN55022 (CISPR22) Class B |
| Isolation Resistance | Input-Output, Input-Ground, Output-Ground: 100 MΩ/500V DC/25°C/70% Room Humidity |
| Withstand Voltage | Input-Output: 1.5KV DC, Input-Ground: 1.5KV DC, Output-Ground: 0.5KV DC |
| Safety Standards | Compliant with Low Voltage Directive (LVD) 2006/95/EC |
| MTBF | 368.5Khrs min. MIL-HDBK-217F (25°C) |
| Vibration | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axis |
| Working Temperature | -10°C - +60°C (No derating) |
| Working Humidity | 20% - 90% Room Humidity Non-condensing |
| Storage Temperature & Humidity | -20°C - +85°C, 10% ~ 95% Room Humidity |




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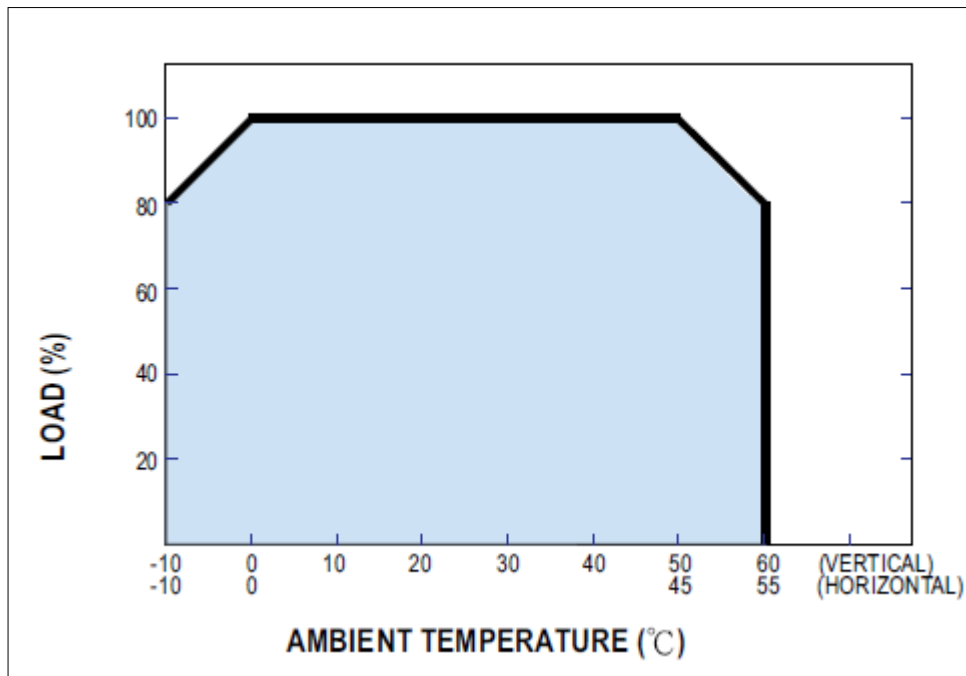
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Overview:

The DD48 Series has been designed to suit the unique requirements of DC-DC converters utilised in industrial applications.

The DD48 Series has been designed for DC supplies ranging from 36 to 72 volts.

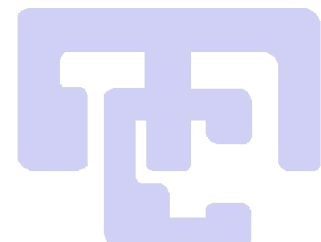


Derating Curve

Manufactured using switchmode electronics, the DD48 series is designed for a high energy efficiency of >76%. This relatively high efficiency allows convection cooling with a maximum 60°C ambient working temperature. Our high quality components are housed in a brushed stainless steel and extruded construction specifically designed for industrial applications.

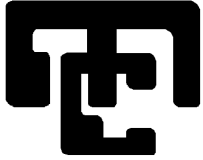
The finished DC-DC converters are all burnt in at full load to provoke any infant mortality failures, with some products held on long term burn-in.

The DD48 Series is compliant with the Australian C-Tick Standard.



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Dimensions:

