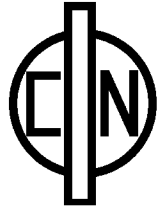


15W DC-DC Converter P15D-Series



PHI-CON

- Efficiency up to 92 %
- Wide 2:1 input range
- 1500 V_{DC} isolation
- Continuous short circuit protection
- Five – sided continuous shield
- Standard package 2" x 1" x 0.4"



Model selection guide

| Typ | Input nominal voltage [V _{DC}] | Output voltage [V _{DC}] | Output current [mA] | Efficiency typ. [%] |
|----------------------|---|--------------------------------------|------------------------|------------------------|
| Single output | | | | |
| P15D123R3S | 9...18 | 3.3 | 3000 | 83 |
| P15D1205S | 9...18 | 5.0 | 3000 | 83 |
| P15D127R2S | 9...18 | 7.2 | 2083 | 83 |
| P15D1209S | 9...18 | 9.0 | 1667 | 84 |
| P15D1212S | 9...18 | 12.0 | 1250 | 85 |
| P15D1215S | 9...18 | 15.0 | 1000 | 85 |
| P15D1218S | 9...18 | 18.0 | 833 | 86 |
| P15D1224S | 9...18 | 24.0 | 625 | 86 |
| P15D243R3S | 18...36 | 3.3 | 3000 | 84 |
| P15D2405S | 18...36 | 5.0 | 3000 | 85 |
| P15D247R2S | 18...36 | 7.2 | 2083 | 86 |
| P15D2409S | 18...36 | 9.0 | 1667 | 87 |
| P15D2412S | 18...36 | 12.0 | 1250 | 88 |
| P15D2415S | 18...36 | 15.0 | 1000 | 88 |
| P15D2418S | 18...36 | 18.0 | 833 | 89 |
| P15D2424S | 18...36 | 24.0 | 625 | 90 |
| P15D483R3S | 36...72 | 3.3 | 3000 | 85 |
| P15D4805S | 36...72 | 5.0 | 3000 | 86 |
| P15D487R2S | 36...72 | 7.2 | 2083 | 86 |
| P15D4809S | 36...72 | 9.0 | 1667 | 87 |
| P15D4812S | 36...72 | 12.0 | 1250 | 89 |
| P15D4815S | 36...72 | 15.0 | 1000 | 89 |
| P15D4818S | 36...72 | 18.0 | 833 | 90 |
| P15D4824S | 36...72 | 24.0 | 625 | 92 |
| Dual output | | | | |
| P15D123R3D | 9...18 | ±3.3 | ±1500 | 83 |
| P15D1205D | 9...18 | ±5.0 | ±1500 | 83 |
| P15D127R2D | 9...18 | ±7.2 | ±1042 | 83 |
| P15D1209D | 9...18 | ±9.0 | ±833 | 84 |
| P15D1212D | 9...18 | ±12.0 | ±625 | 85 |
| P15D1215D | 9...18 | ±15.0 | ±500 | 85 |
| P15D1218D | 9...18 | ±18.0 | ±417 | 86 |
| P15D1224D | 9...18 | ±24.0 | ±312 | 86 |
| P15D243R3D | 18...36 | ±3.3 | ±1500 | 83 |
| P15D2405D | 18...36 | ±5.0 | ±1500 | 85 |
| P15D247R2D | 18...36 | ±7.2 | ±1042 | 86 |
| P15D2409D | 18...36 | ±9.0 | ±833 | 87 |
| P15D2412D | 18...36 | ±12.0 | ±625 | 88 |
| P15D2415D | 18...36 | ±15.0 | ±500 | 88 |
| P15D2418D | 18...36 | ±18.0 | ±417 | 89 |
| P15D2424D | 18...36 | ±24.0 | ±312 | 90 |
| P15D483R3D | 36...72 | ±3.3 | ±1500 | 84 |
| P15D4805D | 36...72 | ±5.0 | ±1500 | 86 |
| P15D487R2D | 36...72 | ±7.2 | ±1042 | 86 |
| P15D4809D | 36...72 | ±9.0 | ±833 | 87 |
| P15D4812D | 36...72 | ±12.0 | ±625 | 89 |
| P15D4815D | 36...72 | ±15.0 | ±500 | 89 |
| P15D4818D | 36...72 | ±18.0 | ±417 | 89 |
| P15D4824D | 36...72 | ±24.0 | ±312 | 90 |

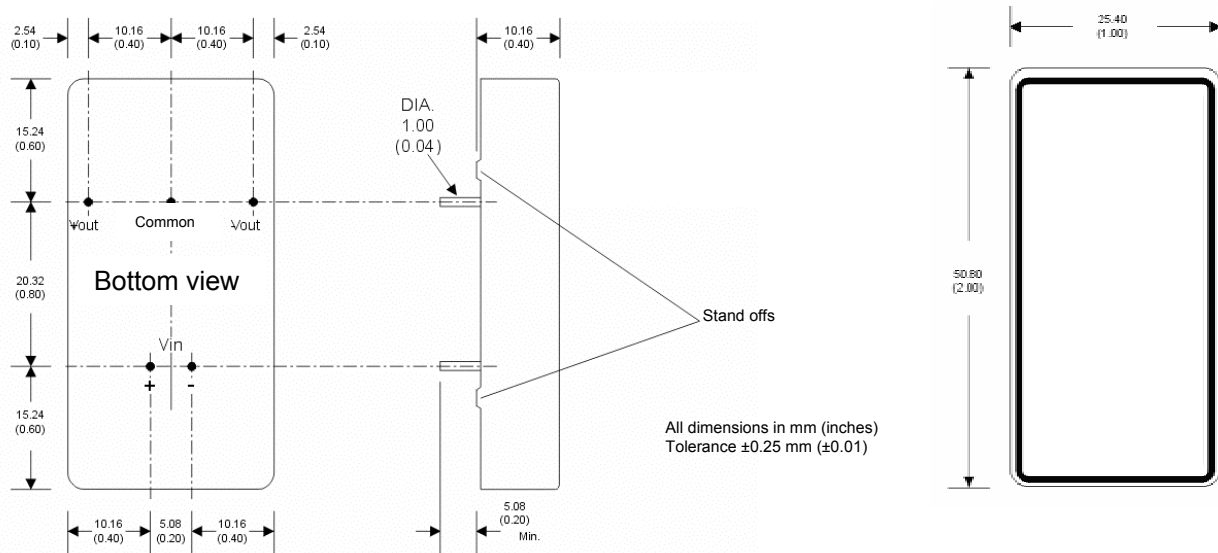
15W DC-DC Converter P15D-Series

Specifications

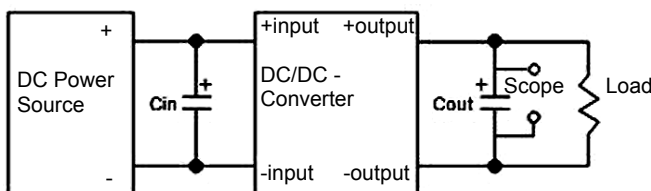
| Input | |
|---------------------------------|---|
| Voltage range | 12 V _{DC} , 9...18 V _{DC} 24 V _{DC} , 18...36 V _{DC} 48 V _{DC} , 36...72 V _{DC} |
| Filter | Capacitors |
| Isolation: | |
| Rated voltage | 1500 V _{DC} |
| Resistance | 10 ⁹ Ω |
| Capacitance | 500 pF, typ. |
| Output | |
| Voltage accuracy | ± 1%, max |
| Voltage balance (dual outputs) | ± 1% |
| Ripple and noise (at 20 MHz BW) | 100 mVp-p, max |
| Short circuit protection | Continuous |
| Over load protection | 130 %, typ. |
| Short circuit restart | Automatic |
| Line voltage regulation | ± 0.5%, max. |
| Load voltage regulation | ± 0.5%, max. |
| Temperature coefficient | ± 0.02% / °C |

| General | |
|--------------------------------|----------------------------|
| Efficiency | 83..92 % |
| Switching frequency | 200 kHz, typ. |
| Environmental | |
| Operating temperatur (ambient) | -40 °C to +85 °C |
| Case temperature | 100 °C, max. |
| Storage temperature | -40 °C to +125 °C |
| Derating | None required |
| Humidity | Up to 90%, non-condensing |
| Cooling | Free-air convection |
| Physical | |
| Dimensions | 50.80 x 25.40 x 10.16 mm |
| Weight | 46.0 g |
| Case material | Nickel-coated copper metal |

Dimensions



Output ripple and noise reduction



To reduce ripple and noise, it is recommended to use 1µF ceramic and a 10µF electrolytic capacitors to the output

Life Support Policy: HY-LINE does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

Rev: 6 / 05f