

# 15W DC-DC Converter P15D-Series



PHI-CON

- Efficiency up to 92 %
- Wide 2:1 input range
- 1500 V<sub>DC</sub> 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 <sub>DC</sub> ]	Output voltage [V <sub>DC</sub> ]	Output current [mA]	Efficiency typ. [%]
<b>Single output</b>				
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
<b>Dual output</b>				
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

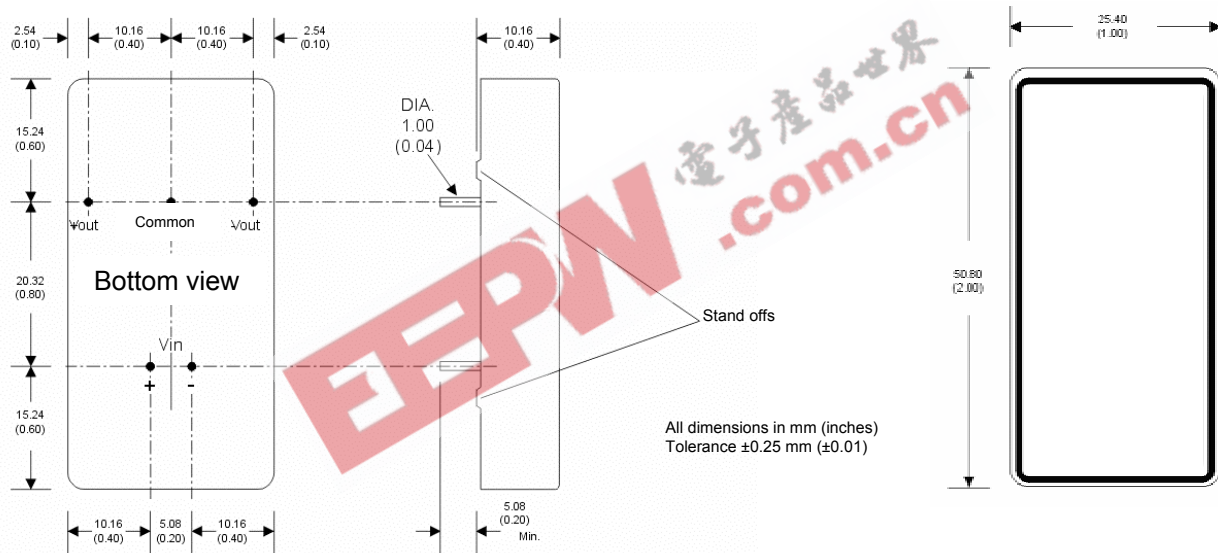
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## Specifications

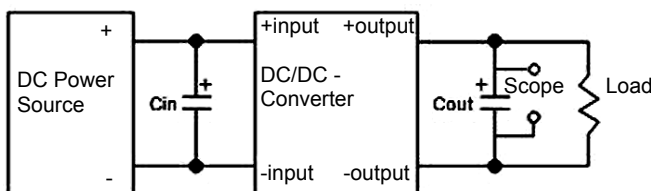
<b>Input</b>	
Voltage range	12 V <sub>DC</sub> , 9...18 V <sub>DC</sub> 24 V <sub>DC</sub> , 18...36 V <sub>DC</sub> 48 V <sub>DC</sub> , 36...72 V <sub>DC</sub>
Filter	Capacitors
<b>Isolation:</b>	
Rated voltage	1500 V <sub>DC</sub>
Resistance	10 <sup>9</sup> Ω
Capacitance	500 pF, typ.
<b>Output</b>	
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

<b>General</b>	
Efficiency	83..92 %
Switching frequency	200 kHz, typ.
<b>Environmental</b>	
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
<b>Physical</b>	
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.

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