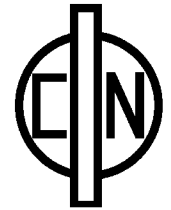


2W DC-DC Converter P2D-Series



PHI-CON

- Wide 2:1 input range
- Full SMD technology
- Up to 3500 V_{DC} isolation
- MTBF > 1.1 MHours
- Continuous short circuit protection
- Low profile metal package available
- Mobile / battery driven applications
- Distributed power networks
- Data communications equipments,
Telecommunication instruments
Process / machine control equipments



Model selection guide

Type	Input voltage range [V _{DC}]	Output voltage [V _{DC}]	Output current [mA]	Efficiency typ. [%]
Single output				
P2D1205S2	9...18	5.0	400	75
P2D1209S2	9...18	9.0	223	78
P2D1212S2	9...18	12.0	167	78
P2D1215S2	9...18	15.0	134	78
P2D1224S2	9...18	24.0	84	79
P2D2405S2	18...36	5.0	400	78
P2D2409S2	18...36	9.0	223	80
P2D2412S2	18...36	12.0	167	79
P2D2415S2	18...36	15.0	134	78
P2D2424S2	18...36	24.0	84	80
P2D4805S2	36...72	5.0	400	75
P2D4809S2	36...72	9.0	223	78
P2D4812S2	36...72	12.0	167	79
P2D4815S2	36...72	15.0	134	80
P2D4824S2	36...72	24.0	84	80
Dual output				
P2D1205D2	9...18	±5.0	±200	74
P2D1209D2	9...18	±9.0	±112	74
P2D1212D2	9...18	±12.0	±83	76
P2D1215D2	9...18	±15.0	±67	77
P2D1224D2	9...18	±24.0	±42	76
P2D2405D2	18...36	±5.0	±200	75
P2D2409D2	18...36	±9.0	±112	75
P2D2412D2	18...36	±12.0	±83	79
P2D2415D2	18...36	±15.0	±67	79
P2D2424D2	18...36	±24.0	±42	78
P2D4805D2	36...72	±5.0	±200	74
P2D4809D2	36...72	±9.0	±112	75
P2D4812D2	36...72	±12.0	±83	78
P2D4815D2	36...72	±15.0	±67	78
P2D4824D2	36...72	±24.0	±42	79

The output voltage range reach from 3.3V to 24V
Suffix: "H" for 3.5kV isolation voltage

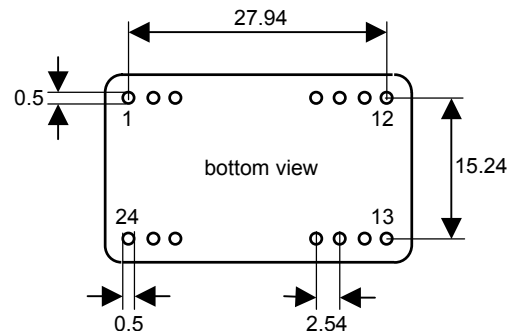
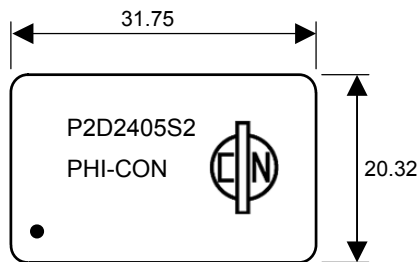
2W DC-DC Converter P2D-Series

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	Pi Network
Isolation:	
Rated voltage	1500 V _{DC} , Standard 3500 V _{DC} , Suffix "H"
Resistance	10 ⁹ Ω
Capacitance	390 pF, typ.
Output	
Voltage accuracy	± 1%, max.
Voltage balance (dual outputs)	± 1%
Ripple and noise (at 20 MHz BW)	60 mVp-p, max.
Short circuit protection	Continuous
Short circuit restart	Automatic
Line voltage regulation	± 0.5%, max.
Load voltage regulation	± 0.5%, max.
Temperature coefficient	± 0.02% / °C

General	
Efficiency	74% to 80%
Switching frequency	260 kHz, typ.
Environmental	
Operating temperature (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	31.75 x 20.32 x 10.16 mm
Weight	16.3 g metal, standard, 14.5 g plastic suffix "P"
Case material	Standard, nickel-coated copper metal

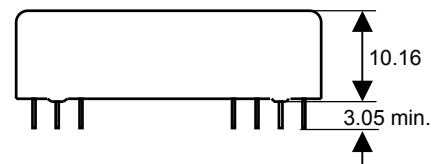
Dimensions



All dimensions in mm
Tolerance ±0.25 mm

Pin connections

Pin	Standard		3.5 kV _{DC}	
	Single	Dual	Single	Dual
1	+V Input	+V Input	Omitted	Omitted
2	N.C.	-V Output	-V Input	-V Input
3	N.C.	Common	-V Input	-V Input
9	Omitted	Omitted	Omitted	Common
10	-V Output	Common	Omitted	Omitted
11	+V Output	+V Output	N.C.	-V Output
12	-V Input	-V Input	Omitted	Omitted
13	-V Input	-V Input	Omitted	Omitted
14	+V Output	+V Output	+V Output	+V Output
15	-V Output	Common	Omitted	Omitted
16	Omitted	Omitted	-V Output	Common
22	N.C.	Common	+V Input	+V Input
23	N.C.	-V Output	+V Input	+V Input
24	+V Input	+V Input	Omitted	Omitted



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: 5.05 f