

5W DC-DC Converter P5U-Series



- Wide 2:1 input range
- Up to 3500 V_{DC} isolation
- Continuous short circuit protection
- 24 Pin DIL Package
- Regulated



Model selection guide

Typ	Input voltage range [V _{DC}]	Output voltage [V _{DC}]	Output current [mA]	Efficiency typ. [%]
Single output				
P5U1205S	9...18	5.0	1000	77
P5U1209S	9...18	9.0	560	80
P5U1212S	9...18	12.0	420	80
P5U1215S	9...18	15.0	330	80
P5U1224S	9...18	24.0	210	80
P5U2405S	18...36	5.0	1000	78
P5U2409S	18...36	9.0	560	82
P5U2412S	18...36	12.0	420	82
P5U2415S	18...36	15.0	330	82
P5U2424S	18...36	24.0	210	82
P5U4805S	36...72	5.0	1000	80
P5U4809S	36...72	9.0	560	82
P5U4812S	36...72	12.0	420	82
P5U4815S	36...72	15.0	330	82
P5U4824S	36...72	24.0	210	82
Dual output				
P5U1205D	9...18	±5.0	±500	77
P5U1209D	9...18	±9.0	±280	80
P5U1212D	9...18	±12.0	±210	80
P5U1215D	9...18	±15.0	±170	80
P5U1224D	9...18	±24.0	±105	80
P5U2405D	18...36	±5.0	±500	78
P5U2409D	18...36	±9.0	±280	82
P5U2412D	18...36	±12.0	±210	82
P5U2415D	18...36	±15.0	±170	82
P5U2424D	18...36	±24.0	±105	82
P5U4805D	36...72	±5.0	±500	80
P5U4809D	36...72	±9.0	±280	82
P5U4812D	36...72	±12.0	±210	82
P5U4815D	36...72	±15.0	±170	80
P5U4824D	36...72	±24.0	±105	80

Input voltage range reach from 9V to 72V and the output voltage range reach from 3.3V to 24V
 Suffix: "H" for 3.5kV isolation voltage

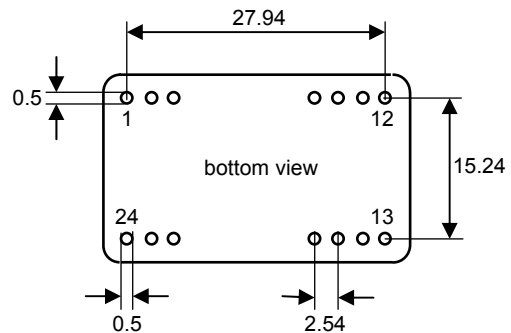
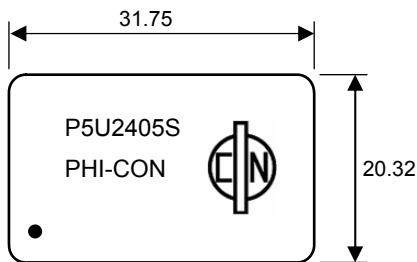
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Specifications

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	77% to 82%
Switching frequency	100...400 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	31.75 x 20.32 x 10.16 mm
Weight	15 g

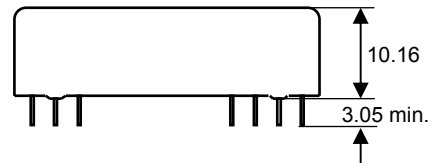
Dimensions



All dimensions in mm
Tolerance ±0.25 mm

Pin connections

Pin	Standard		3.5 kV _{DC}	
	Single	Dual	Single	Dual
1	Omitted	Omitted	Omitted	Omitted
2	-V Input	-V Input	-V Input	-V Input
3	-V Input	-V Input	-V Input	-V Input
9	Omitted	Common	Omitted	Common
10	Omitted	Omitted	Omitted	Omitted
11	N.C.	-V Output	N.C.	-V Output
12	Omitted	Omitted	Omitted	Omitted
13	Omitted	Omitted	Omitted	Omitted
14	+V Output	+V Output	+V Output	+V Output
15	Omitted	Omitted	Omitted	Omitted
16	-V Output	Common	-V Output	Common
22	+V Input	+V Input	+V Input	+V Input
23	+V Input	+V Input	+V Input	+V Input
24	Omitted	Omitted	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: 09.06f