



PHI-CON

# 6W DC-DC Converter P6Y-Series

- Wide 2:1 input range
- Up to 3500 V<sub>DC</sub> isolation
- Continuous short circuit protection
- None conductive plastic case



## 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>				
P6Y1205S	9...18	5.0	1200	77
P6Y1209S	9...18	9.0	667	75
P6Y1212S	9...18	12.0	500	80
P6Y1215S	9...18	15.0	400	80
P6Y1224S	9...18	24.0	250	80
P6Y2405S	18...36	5.0	1200	80
P6Y2409S	18...36	9.0	667	83
P6Y2412S	18...36	12.0	500	83
P6Y2415S	18...36	15.0	400	83
P6Y2424S	18...36	24.0	250	83
P6Y483R3S	36...72	3.3	1400	75
P6Y4805S	36...72	5.0	1200	80
P6Y4809S	36...72	9.0	667	83
P6Y4812S	36...72	12.0	500	83
P6Y4815S	36...72	15.0	400	83
P6Y4824S	36...72	24.0	250	83
<b>Dual output</b>				
P6Y1205D	9...18	±5.0	±600	77
P6Y1209D	9...18	±9.0	±334	75
P6Y1212D	9...18	±12.0	±250	80
P6Y1215D	9...18	±15.0	±200	80
P6Y1224D	9...18	±24.0	±125	80
P6Y2405D	18...36	±5.0	±600	80
P6Y2409D	18...36	±9.0	±334	83
P6Y2412D	18...36	±12.0	±250	83
P6Y2415D	18...36	±15.0	±200	83
P6Y2424D	18...36	±24.0	±125	83
P6Y4805D	36...72	±5.0	±600	80
P6Y4809D	36...72	±9.0	±334	83
P6Y4812D	36...72	±12.0	±250	83
P6Y4815D	36...72	±15.0	±200	82
P6Y4824D	36...72	±24.0	±125	82

Input voltage range reach from 4.5V to 72V and the output voltage range reach from 3.3V to 24V  
 Suffix: "H" for 3.5kV isolation voltage

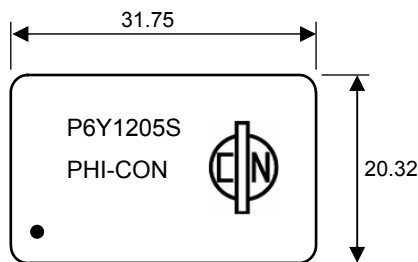
# 6W DC-DC Converter P6Y-Series

## Specifications

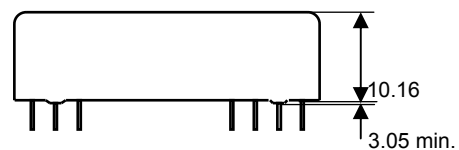
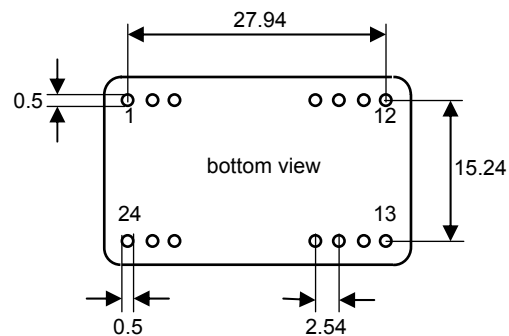
<b>Input</b>	
Voltage range	12 V <sub>DC</sub> , 9...18 V <sub>DC</sub> 24 V <sub>DC</sub> , 18...36 V <sub>DC</sub> 48 V <sub>DC</sub> , 36...72 V <sub>DC</sub>
Filter	Pi Network
<b>Isolation:</b>	
Rated voltage	1500 V <sub>DC</sub> , Standard 3500 V <sub>DC</sub> , Suffix "H"
Resistance	10 <sup>9</sup> Ω
Capacitance	390 pF, typ.
<b>Output</b>	
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

<b>General</b>	
Efficiency	74% to 83%
Switching frequency	100 kHz...400 kHz
<b>Environmental</b>	
Operating temperature (ambient)	-40 °C to +71 °C
Case temperature	100 °C max.
Storage temperature	-40 °C to +125 °C
Derating	None required
Humidity	Up to 90%, None condensing
Cooling	Free-air convection
<b>Physical</b>	
Dimensions	31.75x20.32x10.16 mm
Weight	17 g plastic standard, 19 g metal suffix "M"
Case material	None conductive plastic

## Dimensions



All dimensions in mm  
Tolerance ±0.25 mm



## Pin connections

Pin	1.5kV version		3.5kV version	
	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: 2.06 f