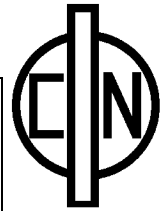


# 20W DC-DC Converter P20B-Series



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 2" 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>				
P20B123R3S	9...18	3.3	4000	83
P20B1205S	9...18	5.0	4000	85
P20B127R2S	9...18	7.2	2778	85
P20B1209S	9...18	9.0	2222	85
P20B1212S	9...18	12.0	1666	87
P20B1215S	9...18	15.0	1333	87
P20B1218S	9...18	18.0	1111	87
P20B1224S	9...18	24.0	833	88
P20B243R3S	18...36	3.3	4000	84
P20B2405S	18...36	5.0	4000	86
P20B247R2S	18...36	7.2	2778	86
P20B2409S	18...36	9.0	2222	87
P20B2412S	18...36	12.0	1666	88
P20B2415S	18...36	15.0	1333	88
P20B2418S	18...36	18.0	1111	88
P20B2424S	18...36	24.0	833	89
P20B483R3S	36...72	3.3	4000	83
P20B4805S	36...72	5.0	4000	86
P20B487R2S	36...72	7.2	2778	87
P20B4809S	36...72	9.0	2222	87
P20B4812S	36...72	12.0	1666	89
P20B4815S	36...72	15.0	1333	89
P20B4818S	36...72	18.0	1111	90
P20B4824S	36...72	24.0	833	91
<b>Dual output</b>				
P20B123R3D	9...18	±3.3	±2000	83
P20B1205D	9...18	±5.0	±2000	85
P20B127R2D	9...18	±7.2	±1389	85
P20B1209D	9...18	±9.0	±1111	85
P20B1212D	9...18	±12.0	±833	87
P20B1215D	9...18	±15.0	±666	87
P20B1218D	9...18	±18.0	±556	88
P20B1224D	9...18	±24.0	±416	88
P20B243R3D	18...36	±3.3	±2000	83
P20B2405D	18...36	±5.0	±2000	86
P20B247R2D	18...36	±7.2	±1389	86
P20B2409D	18...36	±9.0	±1111	87
P20B2412D	18...36	±12.0	±833	88
P20B2415D	18...36	±15.0	±666	88
P20B2418D	18...36	±18.0	±556	88
P20B2424D	18...36	±24.0	±416	89
P20B483R3D	36...72	±3.3	±2000	85
P20B4805D	36...72	±5.0	±2000	86
P20B487R2D	36...72	±7.2	±1389	86
P20B4809D	36...72	±9.0	±1111	87
P20B4812D	36...72	±12.0	±833	89
P20B4815D	36...72	±15.0	±666	89
P20B4818D	36...72	±18.0	±556	90
P20B4824D	36...72	±24.0	±416	91

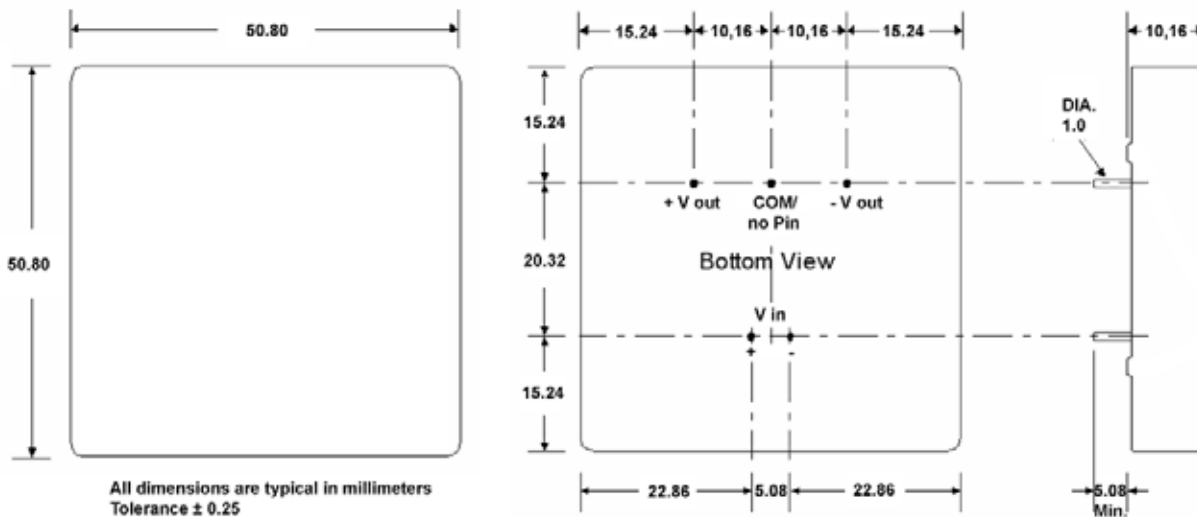
# 20W DC-DC Converter P20B-Series

## Specifications

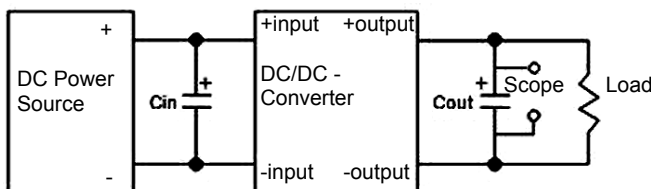
<b>Input</b>	
Voltage range	12 V <sub>DC</sub> , 9...18 V <sub>DC</sub> 24 V <sub>DC</sub> , 18...36 V <sub>DC</sub> 48 V <sub>DC</sub> , 36...72 V <sub>DC</sub>
Filter	Capacitors
<b>Isolation:</b>	
Rated voltage	1500 V <sub>DC</sub>
Resistance	10 <sup>9</sup> Ω
Capacitance	500 pF, typ.
<b>Output</b>	
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..91 %
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 50.80 x 10.16 mm
Weight	60 g
Case material	Nickel-coated copper metal

## Dimensions



## Output ripple and noise reduction



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