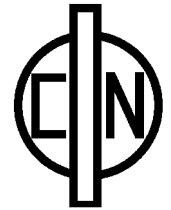


2W DC-DC Converter P2Z-Series



PHI-CON

- 14 Pin DIL
- Low ripple and noise
- MTBF > 1.2 MHours
- Up to 6000 V_{DC} isolation



Model selection guide

Typ	Input voltage range [V _{DC}]	Output voltage [V _{DC}]	Output current [mA]	Efficiency typ. [%]	Capacitive Load max. [μF]
Single output					
P2Z3R312DS	2.97...3.63	12.0	167	72	470
P2Z0505DS	4.5...5.5	5.0	400	79	470
P2Z0509DS	4.5...5.5	9.0	222	84	470
P2Z0512DS	4.5...5.5	12.0	167	86	470
P2Z0515DS	4.5...5.5	15.0	133	84	470
P2Z0524DS	4.5...5.5	24.0	83	85	470
P2Z1205DS	10.8...13.2	5.0	400	79	470
P2Z1209DS	10.8...13.2	9.0	222	84	470
P2Z1212DS	10.8...13.2	12.0	167	86	470
P2Z1215DS	10.8...13.2	15.0	133	85	470
P2Z1224DS	10.8...13.2	24.0	83	84	470
P2Z2405DS	21.6...26.4	5.0	400	82	470
P2Z2409DS	21.6...26.4	9.0	222	84	470
P2Z2412DS	21.6...26.4	12.0	167	88	470
P2Z2415DS	21.6...26.4	15.0	133	85	470
P2Z2424DS	21.6...26.4	24.0	83	86	470
Dual output					
P2Z0505D	4.5...5.5	±5.0	±200	73	2 x 390
P2Z0509D	4.5...5.5	±9.0	±111	78	2 x 390
P2Z0512D	4.5...5.5	±12.0	±84	80	2 x 390
P2Z0515D	4.5...5.5	±15.0	±67	82	2 x 390
P2Z0524D	4.5...5.5	±24.0	±42	81	2 x 390
P2Z1205D	10.8...13.2	±5.0	±200	75	2 x 390
P2Z1209D	10.8...13.2	±9.0	±111	81	2 x 390
P2Z1212D	10.8...13.2	±12.0	±84	83	2 x 390
P2Z1215D	10.8...13.2	±15.0	±67	85	2 x 390
P2Z1224D	10.8...13.2	±24.0	±42	86	2 x 390
P2Z2405D	21.6...26.4	±5.0	±200	77	2 x 390
P2Z247R2D	21.6...26.4	±7.2	±139	78	2 x 390
P2Z2409D	21.6...26.4	±9.0	±111	83	2 x 390
P2Z2412D	21.6...26.4	±12.0	±84	84	2 x 390
P2Z2415D	21.6...26.4	±15.0	±67	85	2 x 390
P2Z2424D	21.6...26.4	±24.0	±42	88	2 x 390

Suffix: "H" for 3kV, "H2" for 2kV, "H4" for 4kV, "H5" for 5.2kV, "H6" for 6kV isolation voltage

2W DC-DC Converter P2Z-Series

Model selection guide

Typ	Input voltage range [V _{DC}]	Output 1		Output 2		Efficiency typ. [%]
		Voltage [V _{DC}]	Current [mA]	Voltage [V _{DC}]	Current [mA]	
Dual isolated outputs with different voltages						
P2Z053R3D01	4.5...5.5	5.0	200	3.3	200	77
P2Z057R2D01	4.5...5.5	5.0	200	7.2	139	77
P2Z0509D01	4.5...5.5	5.0	200	9.0	111	77
P2Z0512D01	4.5...5.5	5.0	200	12.0	84	80
P2Z0515D01	4.5...5.5	5.0	200	15.0	67	80
P2Z123R3D01	10.8...13.2	5.0	200	3.3	200	77
P2Z127R2D01	10.8...13.2	5.0	200	7.2	139	77
P2Z1209D01	10.8...13.2	5.0	200	9.0	111	77
P2Z1212D01	10.8...13.2	5.0	200	12.0	84	80
P2Z1215D01	10.8...13.2	5.0	200	15.0	67	80
P2Z243R3D01	21.6...26.4	5.0	200	3.3	200	77
P2Z247R2D01	21.6...26.4	5.0	200	7.2	139	77
P2Z2409D01	21.6...26.4	5.0	200	9.0	111	77
P2Z2412D01	21.6...26.4	5.0	200	12.0	84	80
P2Z2415D01	21.6...26.4	5.0	200	15.0	67	80
Dual isolated outputs						
P2Z053R3D02	4.5...5.5	5.0	200	5.0	200	78
P2Z057R2D02	4.5...5.5	9.0	111	9.0	111	78
P2Z0509D02	4.5...5.5	12.0	84	12.0	84	82
P2Z0515D02	4.5...5.5	15.0	67	15.0	67	82
P2Z123R3D02	10.8...13.2	5.0	200	5.0	200	78
P2Z127R2D02	10.8...13.2	9.0	111	9.0	111	78
P2Z1209D02	10.8...13.2	12.0	84	12.0	84	82
P2Z1215D02	10.8...13.2	15.0	67	15.0	67	82
P2Z243R3D02	21.6...26.4	5.0	200	5.0	200	78
P2Z247R2D02	21.6...26.4	9.0	111	9.0	111	78
P2Z2409D02	21.6...26.4	12.0	84	12.0	84	82
P2Z2415D02	21.6...26.4	15.0	67	15.0	67	82

Dual separate converter only 1000V isolation voltage

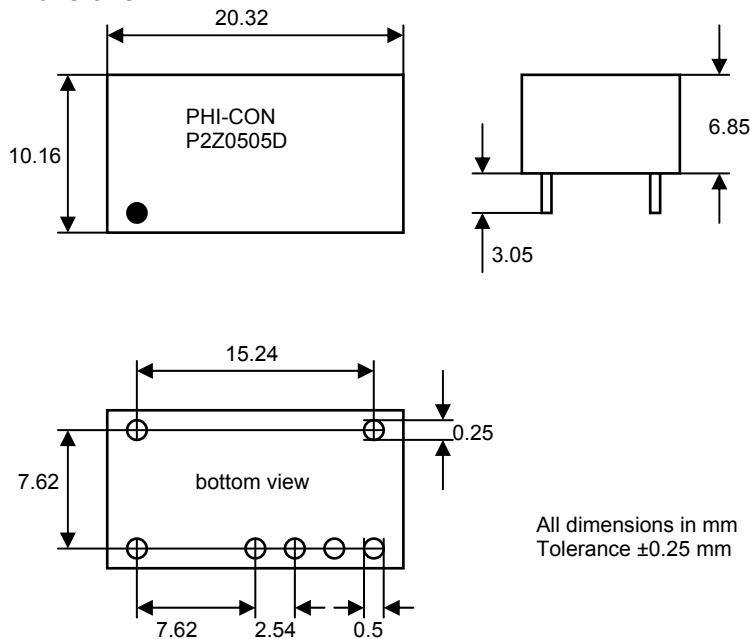
2W DC-DC Converter P2Z-Series

Specifications

Input	
Voltage range	± 10%
Filter	Capacitors
Isolation:	
Rated voltage	1000 V _{DC} Standard see suffix note on table
Resistance	10 ⁹ Ω
Capacitance	60 pF, typ.
Output	
Voltage accuracy	± 3%, max.
Voltage balance (dual outputs)	± 1%
Ripple and noise (at 20 MHz BW)	75 mVp-p, max.
Short circuit protection	Momentary
Line voltage regulation	± 1.2% / 1.0% of V _{in}
Load voltage regulation	± 8%, Load@20...100%
Temperature coefficient	± 0.02% / °C

General	
Efficiency	72% to 86%
Switching frequency	125 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	DIL 20.32 x 10.16 x 6.85 mm
Weight	2.5 g
Case material	non-conductive black plastic
For V _{IN} 48V series add a capacitor with 4μ7...47μF in the input!	

Dimensions



Pin connections

Pin	Standard		3kV _{DC}		Dual isolated outputs
	Single	Dual	Single	Dual	
1	-V Input	-V Input	-V Input	-V Input	-V Input
7	NC	NC	NC	NC	NC
8	Omitted	Common	+V Output	+V Output	-V ₂ Output
9	+V Output	+V Output	Omitted	Common	+V ₂ Output
10	Omitted	Omitted	-V Output	-V Output	-V ₁ Output
11	-V Output	-V Output	Omitted	Omitted	+V ₁ Output
14	+V Input	+V Input	+V Input	+V Input	+V Input

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: 8.09 f