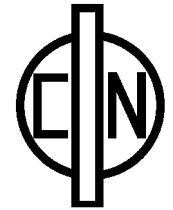


8W DC-DC Converter P8B-Series



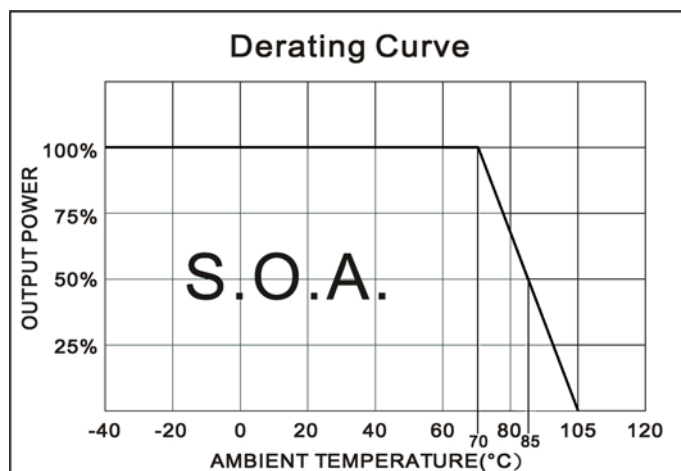
PHI-CON

- Wide 4:1 Input Range
- 1600 V_{DC} Isolation
- MTBF >1 MHours
- Continuous Short Circuit Protection
- Over Load Protection
- Over Voltage Protection
- Efficiency up to 87%
- <15 mA no load Input Current
- Wide Operation Temperature Range -40...85°C
- On / Off Remote Control Input
- Soft Start



Model selection guide

Typ	Input voltage range [V _{DC}]	Input current		Output voltage [V _{DC}]	Output current min / max [mA]	Efficiency typ. [%]	Capacitor load max. [μF]
		no load [mA]	full load [mA]				
Single output							
P8B243R3S	9...36	10	335	3.3	0...2000	83	1200
P8B2405S	9...36	10	365	5.0	0...1500	86	1200
P8B2412S	9...36	15	385	12.0	0...665	87	270
P8B2415S	9...36	15	385	15.0	0...535	87	180
P8B483R3S	18...75	10	170	3.3	0...2000	82	1200
P8B4805S	18...75	10	185	5.0	0...1500	86	1200
P8B4812S	18...75	10	195	12.0	0...665	87	270
P8B4815S	18...75	10	195	15.0	0...535	87	180
Dual output							
P8B2405D	9...36	10	400	±5.0	±800	84	2 x 820
P8B2412D	9...36	15	390	±12.0	±335	86	2 x 120
P8B2415D	9...36	15	385	±15.0	±265	87	2 x 100
P8B4805D	18...75	10	200	±5.0	±800	84	2 x 820
P8B4812D	18...75	10	195	±12.0	±335	87	2 x 120
P8B4815D	18...75	10	195	±15.0	±265	87	2 x 100

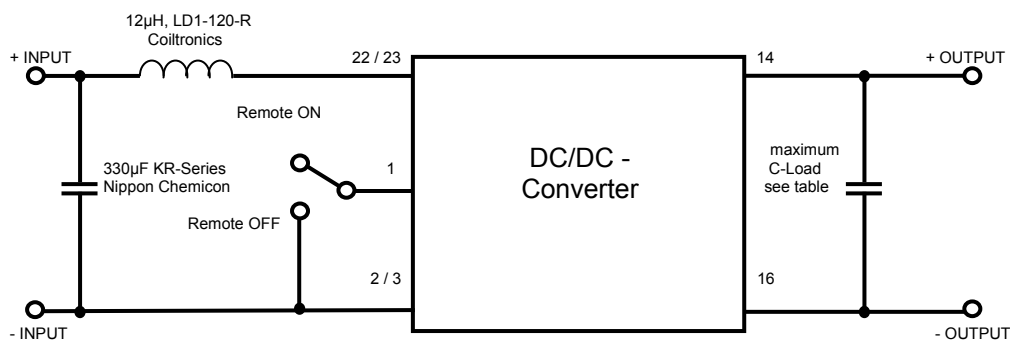


8W DC-DC Converter P8B-Series

Specifications

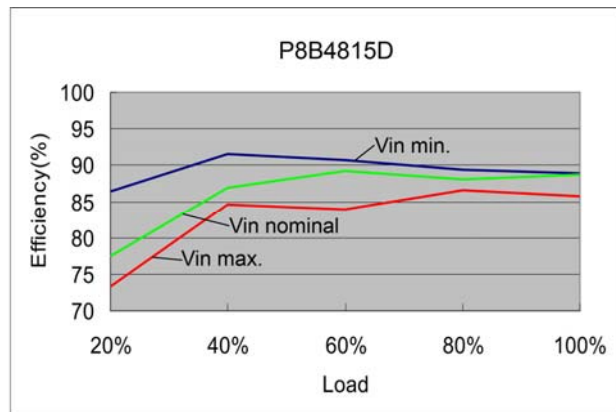
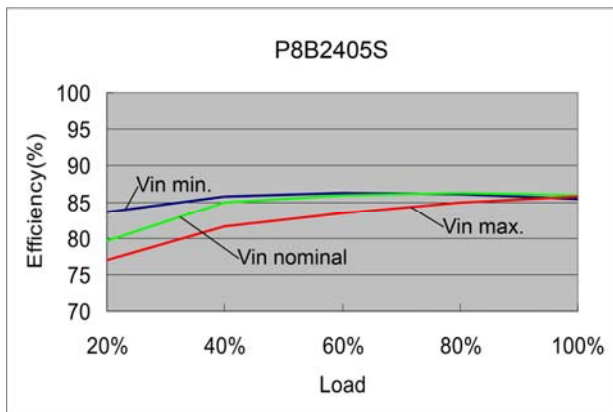
Input	
Filter	Pi Network
Start up time with R-load	20 ms typ.
Remote CTRL on/off, Pin1	On: 3...12 V or open input Off: 0...1.2 V Standby current 5mA typ
Isolation:	
Rated voltage (for 60 s)	1600 V _{DC} (flash tested 3s)
Resistance	10 ⁹ Ω
Capacitance	1500 pF, typ.
Output	
Voltage accuracy	± 1%, max.
Voltage balance (dual outputs)	± 1%
Temperature coefficient	± 0.02% / °C
Ripple and noise (at 20 MHz BW)	75 mVp-p, max.
Short circuit protection	Indefinite (hiccup), Automatic restart
Over load protection	150 % of I _{OUT} max.
Over voltage protection	
2.5 V, 3.3 V out type	3.9 V Z-diode clamping
(±) 5.0 V out type	6.2 V Z-diode clamping
(±) 12 V out type	(±)15 V Z-diode clamping
(±) 15 V out type	(±)18 V Z-diode clamping
Line voltage regulation	± 0.2 %, max.
Load regulation 0...100% load	single ± 0.5%, max. dual ± 1%, max.
Cross regulation @ dual output	± 5 %
Transient recovery time	250 μs typ.
Transient response drift @ 75%...50%...25% load	3 %

General	
Switching frequency	270 kHz
Safety Standard	IEC 60950-1:2001
Reliability calculated MTBF (MIL-HDBK-217F)	>1 Mhours @ 25°C
EMC Characteristics	
Radiated Emissions	EN55022 class A
Conducted Emissions	EN55022 class A
ESD	EN61000-4-2 Crit. B
RS	EN61000-4-3 Crit. A
EFT	EN61000-4-4 Crit. B
Surge	EN61000-4-5 Crit. B
CS	EN61000-4-6 Crit. A
PFMF	EN61000-4-8 Crit. A
Environmental	
Operating temperatur (ambient)	-40 °C to +85 °C See derating curve
Case temperature	105 °C max.
Storage temperature	-40 °C to +125 °C
Humidity	Up to 95 %, non-condensing
Cooling	Free-air convection
Physical	
Dimensions	31.75 x 20.32 x 10.16 mm
Weight	18 g
Case material	Nickel-coated copper metal
Potting material	Epoxy (UL94V-0 rated)
Absolute maximum ratings	
Pin soldering temperature 1.5mm distance from body	260°C for 10sec
Input peak voltage for 0.1s	-0.7 V _{DC} ...50 V _{DC} @ 24 V type -0.7 V _{DC} ...100 V _{DC} @ 48 V type

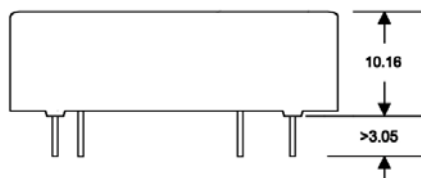
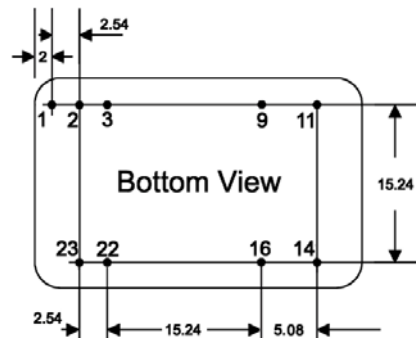
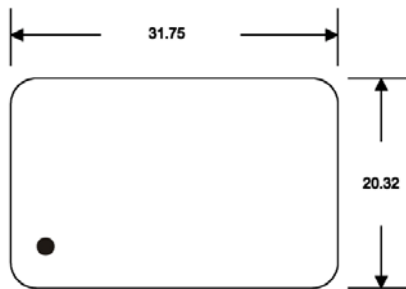


8W DC-DC Converter P8B-Series

Efficiency vs load



Dimensions



Notes: All dimensions are typical in millimeters

1. Pin diameter: 0.5 ± 0.05
2. Pin pitch tolerance: ± 0.35
3. Case Tolerance: ± 0.5

Pin connections

Pin	Single	Dual
1	Remote contr.	Remote contr.
2	-V Input	-V Input
3	-V Input	-V Input
9	Omitted	Common
11	N.C.	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+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: 2.10 f