

PR BX

POWERBOX Industrial Line
PHB100 Series
66-100W 2:1 Single Output
DC/DC Converter

Features

50-100W isolated output

Half brick package

Regulated outputs

Efficiency to 89%

500kHz switching frequency

Five-sided shield metal case

Continuous short circuit protection

RoHS compliant

Input

Voltage range	24V: 18-36V
	48V: 36-75V

Undervoltage lockout	24Vin power up: 17V, power down: 16V
	48Vin power up: 34V, power down: 32.5V

Positive logic remote ON/OFF^{3,4}

Input filter	PI type
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Output

Voltage accuracy	±1.0% max.
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Transient response	<500µsec, 25% step load change
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Exteranl trim adj. range	±10%
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Ripple and noise	3.3V & 5V: 40mV RMS, max.
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20MHz BW	100mV pk-pk, max.
	12V & 15V: 60mV RMS, max. 150mV pk-pk, max.
	24V: 100mV RMS, max. 240mV pk-pk, max.

Temperature coefficient	±0.03%/°C
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Short circuit protection Continuous

Line regulation ¹	±0.2% max.
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Load regulation ²	±0.2% max.
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Overvoltage protection 115-140%, % Vo nom.

trip range

Current limit	110%-140% nominal output
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Environmental

Operating temperature	-40°C to +100°C
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Storage temperature	-40°C to +105°C
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Thermal shutdown	100°C typ, case temp
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General

Efficiency	See table
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Isolation voltage	1500VDC min. input-output
	1500VDC min. input-case
	1500VDC min. output-case

Isolation resistance	10 ⁷ ohm min.
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Switching frequency	500KHz, typ.
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Dimensions	57.9 x 61.0 x 12.7 mm
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Case material	Aluminum
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Weight	95g
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Standards

Safety standards	UL60950-1 approval
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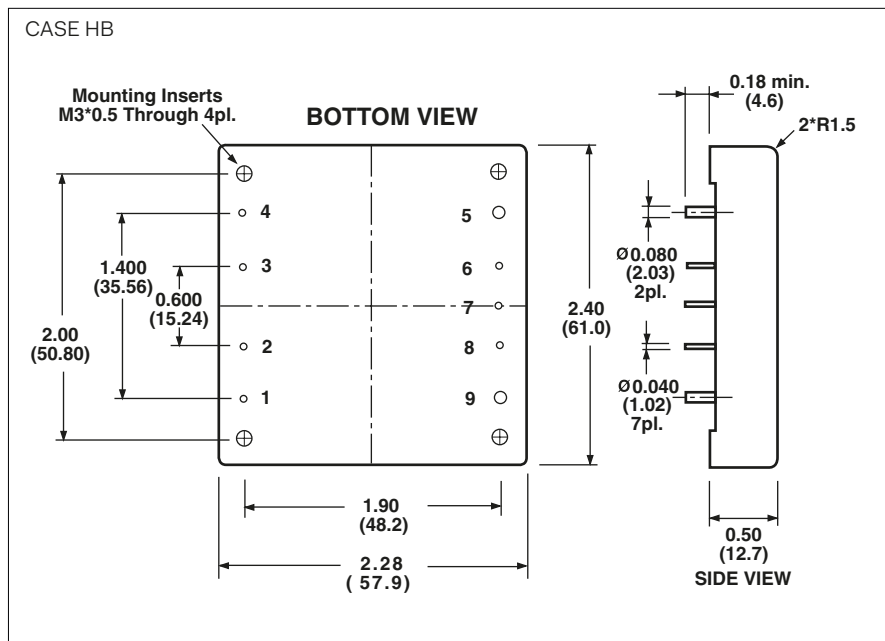
Note:

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Logic compatibility Open collector ref, to -Input.
Module ON Open circuit
Module OF <0.8Vdc
4. Suffix "N" to the model number with negative logic remote ON/OFF.

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Model Number	Input Voltage	Output Voltage	Output Current	Input Current		Efficiency
				No Load	Full Load	
PHB100-24S33	18-36 VDC	3.3 VDC	20 A	50 mA	3313 mA	83%
PHB100-24S05	18-36 VDC	5.0 VDC	20 A	50mA	4960 mA	84%
PHB100-24S12	18-36 VDC	12.0 VDC	8.3 A	50 mA	4770 mA	87%
PHB100-24S15	18-36 VDC	15.0 VDC	6.7 A	50 mA	4758 mA	88%
PHB100-24S24	18-36 VDC	24.0 VDC	4.17 A	50mA	4793 mA	87%
PHB100-48S33	36-75 VDC	3.3 VDC	20 A	50 mA	1676 mA	82%
PHB100-48S05	36-75 VDC	5.0 VDC	20 A	50 mA	2422 mA	86%
PHB100-48S12	36-75 VDC	12.0 VDC	8.3 A	50 mA	2331 mA	89%
PHB100-48S15	36-75 VDC	15.0 VDC	6.7 A	50 mA	2352 mA	89%
PHB100-48S24	36-75 VDC	24.0 VDC	4.17 A	50 mA	2369 mA	88%

Mechanical



Pin Connection

Pin	Function
1	+V Input
2	ON/OFF
3	CASE
4	-V Input
5	-V Output
6	-Sense
7	Trim
8	+Sense
9	+V Output

Specifications are subject to change without notice.