PHB50 Series

25-50W SINGLE OUTPUT DC/DC INDUSTRIAL

Features

- **25W/50W isolated output**
- **Efficiency to 85%**
- **300KHz switching frequency**
- **2:1 Input range**
- **Regulated outputs**
- **Continuous short circuit protection**
- **Five-sided metal case**
- **Industry standard half-brick package**

Specifications

INPUT

Voltage range	12V: 9-18V. 24V: 18-36V. 48V: 36-75V.
Undervoltage lockout	12Vin power up: 8.8V. 12Vin power down: 8V. 24Vin power up: 17V. 24Vin power down: 16V. 48Vin power up: 34V. 48Vin power down: 32.5V
Positive logic remote	ON/OFF[4] input filter PI type.

OUTPUT

Voltage accuracy	±1% max.
Transient response	<500µsec, 25% step load change.
Exteranl trim adj. range	±10%.
Ripple and noise 20MHz BW	2.5V & 3.3V & 5V: 20mV RMS, max. 75mV pk-pk, max. 12V & 15V: 30mV RMS, max. 100mV pk-pk, max. 24V: 100mV RMS, max. 240mV pk-pk, max.
Temperature coefficient	±0.03%/°C.
Short circuit protection	Continuous.
Line regulation[1]	±0.2% max.
Load regulation[2]	±0.2% max.
Overvoltage prot. trip range	115-140%, % Vo nom.
Current limit	110%-150% nominal output.

ENVIRONMENTAL

Operating temperature	–40°C to +100°C.
Storage temperature	–55°C to +105°C.
Thermal shutdown	100°C typ, case temp.

GENERAL

Efficiency	See table.
Isolation voltage	1500VDC min. input-output. 1500VDC min. input-case. 1500VDC min. output-case.
Isolation resistance	10^7 ohm min.
Switching frequency	(12/24)Vin: 400KHz, typ. 48Vin: 300KHz, typ.
Dimensions	57.9 x 61.0 x 12.7 mm.
Case material	Aluminum.

STANDARDS

Safety standard	Designed to meet UL1950.
CE mark	Yes.

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
Logic module ON — Open circuit
Logic module OFF — <0.8Vdc
4. Suffix "N" to the model number with negative logic remote ON/OFF.

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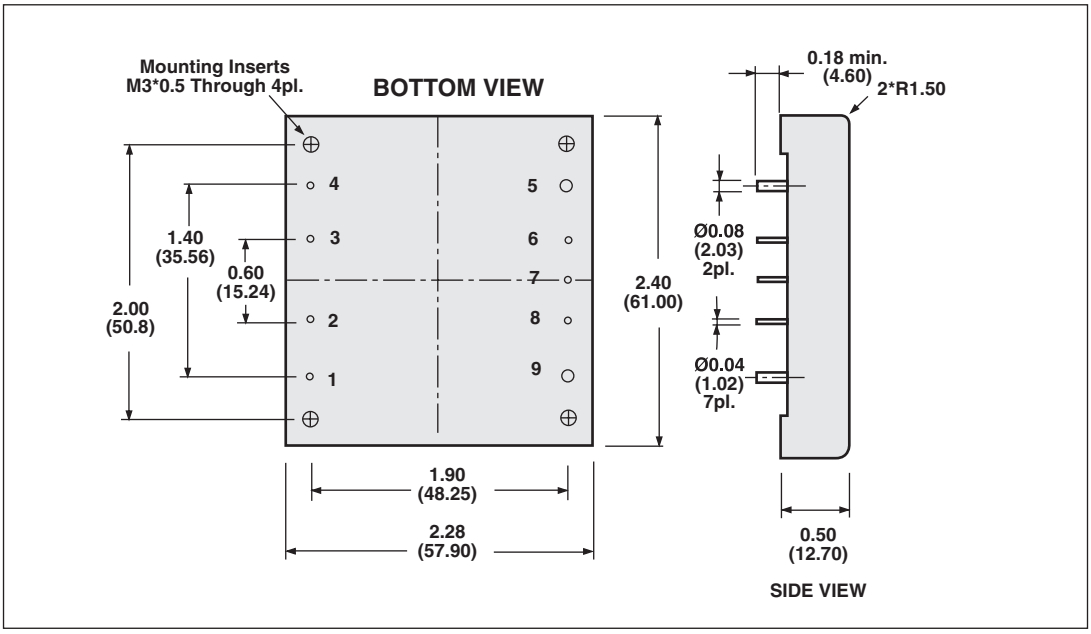
MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT NO LOAD	INPUT CURRENT FULL LOAD	EFF	CASE
PHB50-12S05	9-18 VDC	2.5 VDC	10 A	50 mA	2740mA	76%	HB
PHB50-12S33	9-18 VDC	3.3 VDC	10 A	50 mA	3525mA	78%	HB
PHB50-12S05	9-18 VDC	5.0 VDC	10 A	50 mA	5145mA	81%	HB
PHB50-12S12	9-18 VDC	12.0 VDC	4.16 A	50 mA	4950mA	84%	HB
PHB50-12S15	9-18 VDC	15.0 VDC	3.33 A	50 mA	4950mA	84%	HB
PHB50-12S24	9-18 VDC	24.0 VDC	2.08 A	50 mA	4950mA	84%	HB
PHB50-24S25	18-36 VDC	2.5 VDC	10 A	50 mA	1353mA	77%	HB
PHB50-24S33	18-36 VDC	3.3 VDC	10 A	50 mA	1740mA	79%	HB
PHB50-24S05	18-36 VDC	5.0 VDC	10 A	50 mA	2540mA	82%	HB
PHB50-24S12	18-36 VDC	12.0 VDC	4.16 A	50 mA	2450mA	85%	HB
PHB50-24S15	18-36 VDC	15.0 VDC	3.33 A	50 mA	2450mA	85%	HB
PHB50-24S24	18-36 VDC	24.0 VDC	2.08 A	50 mA	2419mA	86%	HB
PHB50-24S25	18-36 VDC	2.5 VDC	10 A	50 mA	676mA	77%	HB
PHB50-48S33	18-36 VDC	3.3 VDC	10 A	50 mA	870mA	79%	HB
PHB50-48S05	36-75 VDC	5.0 VDC	10 A	50 mA	1250A	83%	HB
PHB50-48S12	36-75 VDC	12.0 VDC	4.16 A	50 mA	1220mA	85%	HB
PHB50-48S15	36-75 VDC	15.0 VDC	3.33 A	50 mA	1220mA	85%	HB
PHB50-48S24	36-75 VDC	24.0 VDC	2.08 A	50 mA	1209mA	86%	HB



PIN CONNECTION

PIN	FUNCTION
1	+Vin
2	ON/OFF
3	CASE
4	–Vin
5	–Vout
6	Sense
7	Trim
8	+Sense
9	+Vout