

## KEY FEATURES

- Input under Voltage Protection
- Over Current Protection (Hiccup Mode)
- Short Circuit Protection (Hiccup Mode)
- Over Voltage Protection (Hiccup Mode)
- Over Temperature Protection (Self-recovery)
- Remote ON/OFF Control
- Remote Sense
- Output Voltage Trim
- Negative Logic : BR360-3.3S and BR360-12S
- Positive Logic : BR360-48S
- UL60950-1 and CSA C22.2 No. 60950-1-07
- Meet UL94V-0 Flammability Requirements
- RoHS6 Compliant
- Size: 2.4 x 2.28 x 0.5 Inches
- 3-Years Product Warranty

## DESCRIPTION

The BR360 series DC-DC converter are high-efficiency and power density standard 1/2 brick isolated models. This series contain 6 modules, output power from 100W to 360W, output voltage covering 3.3V, 5V, 12V and 48V four levels. All models support primary ON/OFF control, remote Sense and Trim function. This series which conform to the RoHS6 requirement can be used in the fields of communication, data transmission and distributed power supply system.



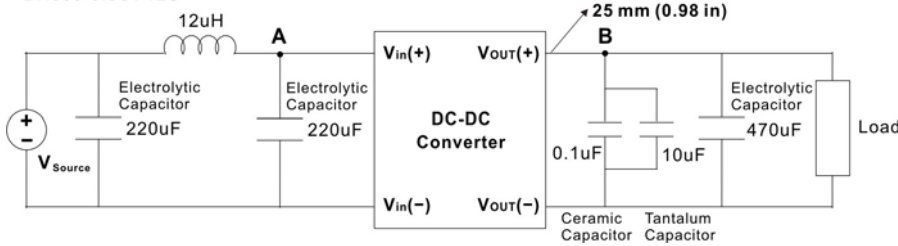
## ELECTRICAL SPECIFICATIONS

Conditions: TA = 25°C (77°F), Airflow = 1.0 m/s (200 LFM), Vin = 48 V, Vout = 12 V, unless otherwise specified.

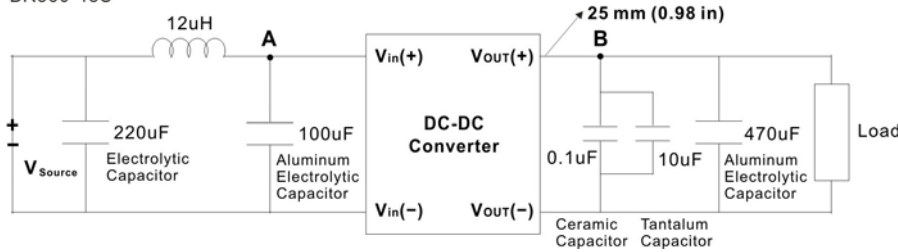
Model No.	BR360-3.3S		BR360-12S	BR360-48S	
Max Output Wattage (W)	198W		360W	153.6W	
Input	Voltage (V.DC.)		48V (36~75V)		
	Current (A) (max)		7.5A (Vin = 0 - 75 V; Iout = 60 A)	11A (Vin = 36 V; Iout = 30 A)	5.5A (Vin = 36 V; Iout = 3.2 A)
	No-Load Loss (W) (typ.)		4W	4.3W	1.2W
Output	Voltage Set Point (V.DC.)		3.3V	12V	48V
	Current (A) (max.)		60A	30A	3.2A
	Line Regulation (LL-HL) (typ.)		±0.2%	0.3%	±1%
	Load Regulation (0-100%) (typ.)		±0.3%	0.5%	±1%
	Ripple & Noise (peak to peak) (typ.) (Oscilloscope Bandwidth:20 MHz)		150 mV	300 mV	300 mV
	Efficiency (typ.) (Vin = 48 V; TA=25°C (77°F))	100% Load	92%	94.8%	93%
		50% Load	93%	95.6%	92.5%
20% Load		90%	92.9%	89.5%	
Protection	Over Power Protection		Hiccup mode		
	Over Current Protection		Hiccup mode		
	Over Voltage Protection		3.8~5V Hiccup mode	14~16.5V Hiccup mode	53~59V Hiccup mode
	Short Circuit Protection (max.)		Hiccup mode		
	Over Temperature Protection		Threshold:105~130°C / Hysteresis:5°C (min.) Self-recovery (The values are obtained by measuring the temperature of the PCB bottom near the thermal resistor.)		
Isolation	Voltage (V.DC.)		1500 VDC (Basic Isolation and Functional Isolation)		
Environment	Operating Temperature		-40°C...+85°C		
	Storage Temperature		-55°C...+125°C		
	Temperature Coefficient (max.)		0.02 % Vout / °C (TA = -40°C to +85°C (-40°F to +185°F))		
	Humidity		95% RH		
	MTBF		1.5 Million Hours (Airflow = 1.5 m/s (300 LFM); TA = 40°C (104°F); 80% load; Telcordia SR332 Method 1 case 3)		
Safety	Agency Approvals		CE, UL, TUV		
EMC	EMI (Conducted & Radiated Emission)		UL60950-1 and IEC/EN60950 Class B Requirements in FCC and EN55022 (After Connecting to an External Filtering Circuit)		
Physical	Dimension (L x W x H)		2.4 x 2.28 x 0.5 Inches ( 61.0 x 57.9 x 13.0 mm ) Tolerance ±0.5 mm		
	Weight		100 g	67.6 g	82 g
Other	Remote	Low level (V.DC.)	-0.7~-1.2V	-2~-0.8V	-0.7~-1.2V
	On/Off Voltage	High level (V.DC.)	3.5~12V	3.5~18V	3.5~12V
	On/Off Current	Low level (mA) (max.)	1mA		

**NOTE**

BR360-3.3S / 12S

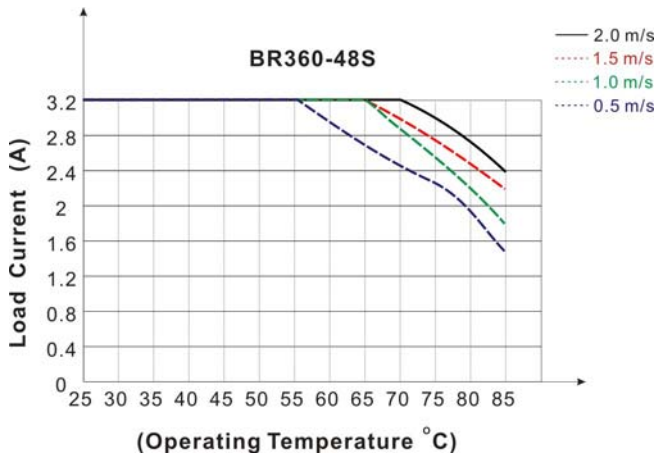
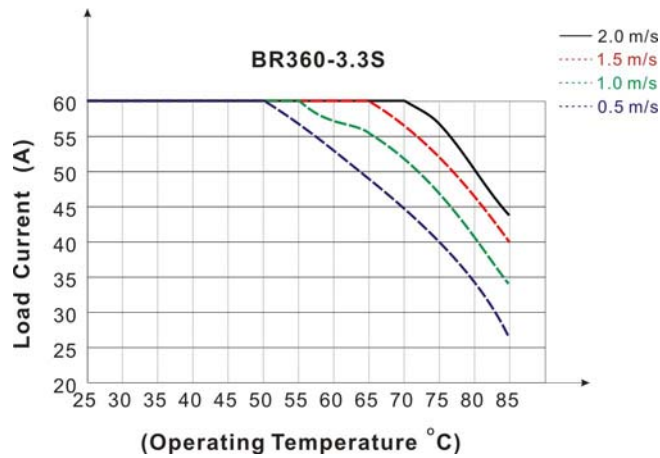
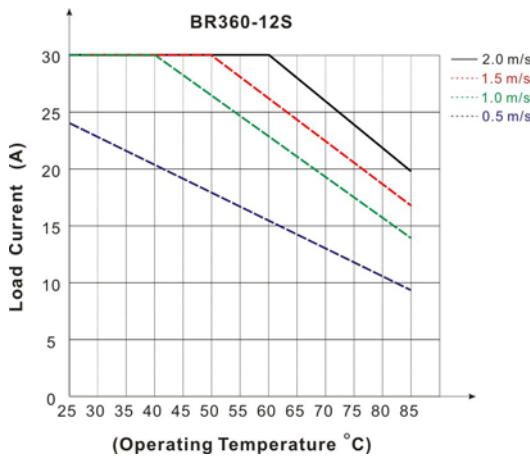


BR360-48S



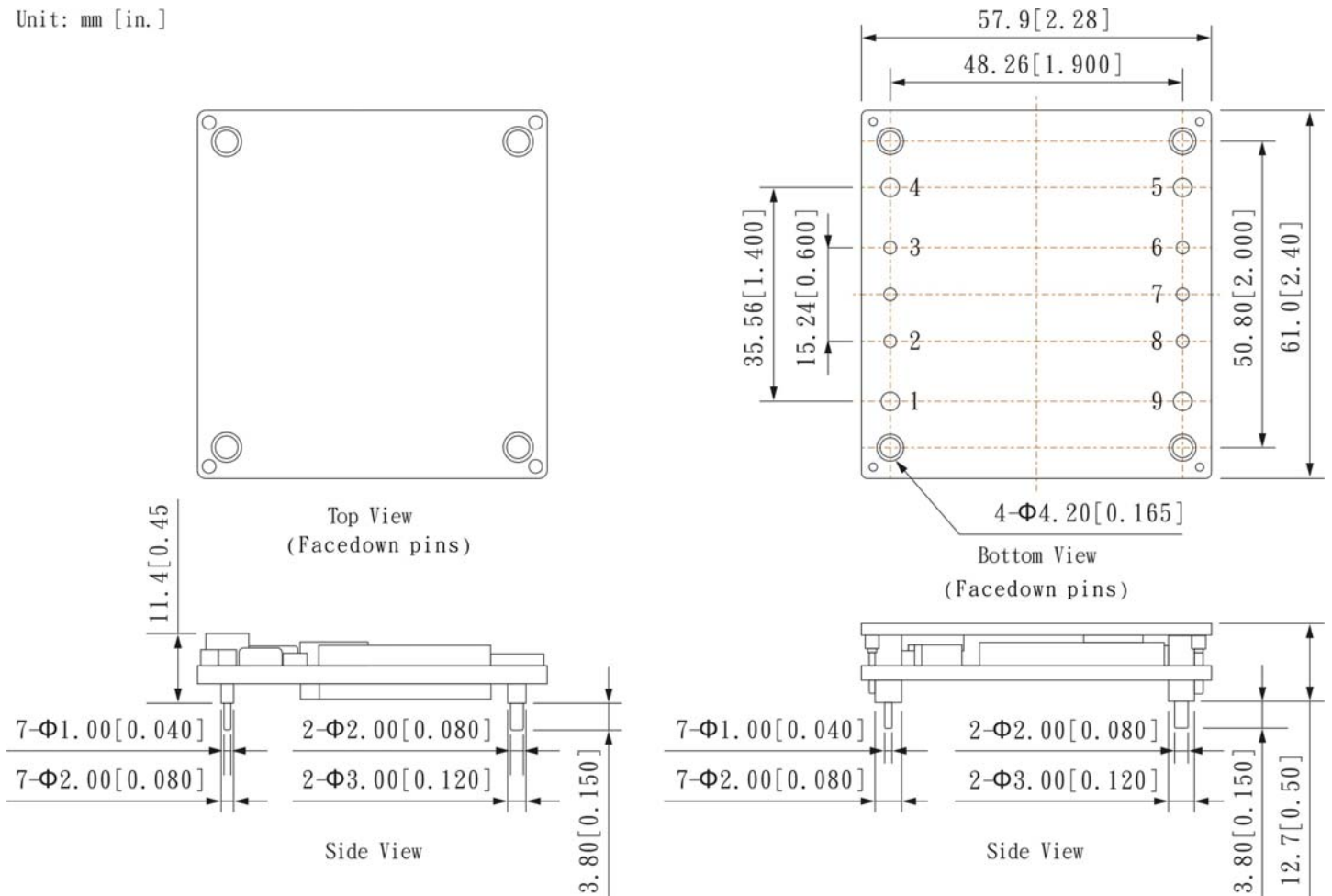
1. During the test of input reflected ripple current, the input terminal must be connected to a 12uH inductor and a 220uF electrolytic capacitor.
2. Point B, which is for testing the output voltage ripple, is 25 mm (0.98 in.) away from the Vout(+) pin.

**DERATING**



**MECHANICAL DIMENSION**

Unit: mm [in.]



PIN#	3.3S	48S
	12S	
1	+DC IN	+DC IN
2	ON / OFF CTL	ON / OFF CTL
3	NC	CASE
4	-DC IN	-DC IN
5	-DC OUT	-DC OUT
6	-Sense	-Sense
7	Trim	Trim
8	+Sense	+Sense
9	+DC OUT	+DC OUT

**DIMENSIONS TOLERANCE**

.x	± 0.2 mm (0.007 in)
.xx	± 0.13 mm (0.005 in)