

## BXB150 Series Single output

**Total Power:** 150 W  
**Input Voltage:** 18 - 36 Vdc  
36 - 75 Vdc  
**# of Outputs:** Single



## Special Features

- Industry standard footprint
- MTBF >1.4 million hours (Bellcore 332)
- Input voltage to ETS300-132-2
- Adjustable output voltage
- No minimum load required
- Separate case ground pin
- 2:1 input range for battery powered applications
- Undervoltage lockout (UVLO)
- UL, VDE and CSA safety approvals
- Available RoHS compliant
- 2 year warranty

## Safety

VDE0805/EN60950/IEC950

UL1950

CSA C22.2 No. 950

## Electrical Specifications

### Output

Voltage adjustability:		60% to 110%
Setpoint accuracy:		±1.0%
Line regulation	Low line to high line	±0.5%
Load regulation	Full load to min. load	±0.10%
Minimum load		0 %
Overshoot	At turn on and turn-off	None
Undershoot		None
Ripple and noise	3.3 V and 5 V	75 mV pk-pk, 20 mV rms
	5 Hz - 20 MHz (see note 1)	100 mV pk-pk, 30 mV rms
	12V and 15 V	
Temperature coefficient		±0.01% / °C
Transient response (see note 2)		±2.0% max. deviation 170 µsrecovery to within ±1.0%
Remote sense		0.5 Vdc transmission line drop compensation



Input		
Input voltage range	24 Vin nominal	18 - 36 Vdc
	48 Vin nominal	36 - 75 Vdc
Input current	No load	130 mA max.
	Remote OFF	20 mA max.
Input current (max.) (See note 4)	24 Vin	9.0 A max. @ Io max. and Vin = 0 to 75 V
	48 Vin	6.5 A max. @ Io max. and Vin = 0 to 75 V
Input reflected ripple	(See note 6)	5 mA pk-pk
Active low remote ON/OFF	(See note 7)	
Logic compatibility		Open collector ref to -input
ON		1.2 Vdc max.
OFF		Open circuit
Undervoltage lockout:	24 Vin: power-up	17 V
	24 Vin: power-down	16.3 V
	48 Vin: power-up	34 V
	48 Vin: power-down	32.5 V
Startup time (see note 8)	Power-up	20 ms
	Remote ON/OFF	20 ms

EMC Characteristics		
Conducted emissions (see note 3)	Bellcore 1089	Level A
	FCC part 15	Level A
	EN55022, CISPR22	Level A

General Specifications		
Efficiency		See table
Isolation voltage	Input/case	1500 Vdc
	Input/output	1500 Vdc
	Output/case	1500 Vdc
Switching frequency	Fixed	500 kHz typ.
Approvals and standards (see note 5)		VDE0805, EN60950, IEC950 UL1950, CSa c22.2 No. 950
Case material	Aluminum baseplate with plastic case	
Weight		110 g (3.88 oz)
MTBF	Bellcore 332 MIL-HDBK-217F @ 40 °C, 100% FL	1,400,000 hours 580,000 hours min.

## Environmental Specifications

Thermal performance	Operating case temp.	-40 °C to +100 °C
	Non-operating	-55 °C to +125 °C
Altitude	Operating	10,000 feet max.
	Non-operating	40,000 feet max.
Vibration	5 - 500 Hz	2.4 G rms (approx.)

Protection		
Short-circuit	Continuous, automatic recovery	
Overvoltage	Non-latching	
Undervoltage	Non-latching	
Thermal	110 °C baseplate, automataic recovery	

Telecom Specifications	
Central office interface A	ETS300-132-2

## Ordering Information

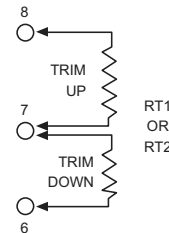
Output Power (Max.)	Input Voltage	OVP	Output Voltage	Output Current (Min.)	Output Current (Max.)	Efficiency (Typ.)	Regulation		Model Number
							Line	Load	
100 W	18 - 36 Vdc	4.3 Vdc	3.3 V	0 A	30 A	77%	±0.05%	±0.1%	BXB150-24S3V3FLTJ
100 W	36 - 75 Vdc	4.3 Vdc	3.3 V	0 A	30 A	79%	±0.05%	±0.1%	BXB150-48S3V3FLTJ
150 W	36 - 75 Vdc	6.5 Vdc	5 V	0 A	30 A	84%	±0.05%	±0.1%	BXB150-48S05FLTJ
150 W	36 - 75 Vdc	14.5 Vdc	12 V	0 A	12.5 A	84%	±0.05%	±0.1%	BXB150-48S12FLTJ
150 W	36 - 75 Vdc	17.5 Vdc	15 V	0 A	10 A	88%	±0.05%	±0.1%	BXB150-48S15FLTJ

## Notes

- 1 Measured with 10  $\mu$ F tantalum capacitor and 1  $\mu$ F ceramic capacitor across output.
- 2  $di/dt = 0.1 \text{ A}/1 \mu\text{s}$ ,  $V_{in} = 48 \text{ Vdc}$ ,  $T_c = 25 \text{ }^\circ\text{C}$ , load change = 0.5  $I_o$  max. to 0.75  $I_o$  max. and 0.75  $I_o$  max. to 0.5  $I_o$  max.
- 3 Units should be characterised within systems. External components required.
- 4 Input fusing is recommended based on surge current and maximum input current.
- 5 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 6 Simulated source impedance of 12  $\mu\text{H}$ . 12  $\mu\text{H}$  inductor in series with +Vin.
- 7 Active high remote ON/OFF option is available (standard product is active low), designate with the suffix 'FHT' e.g. **BXB150-48S05FHTJ**. Consult factory for further details and options.
- 8 Start-up into resistive load.
- 9 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant. TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
- 10 NOTICE: Some models do not support all options. Please contact your local sales representative or use the on-line model number search tool at <http://www.powerconversion.com> to find a suitable alternative.

## External Output Trimming

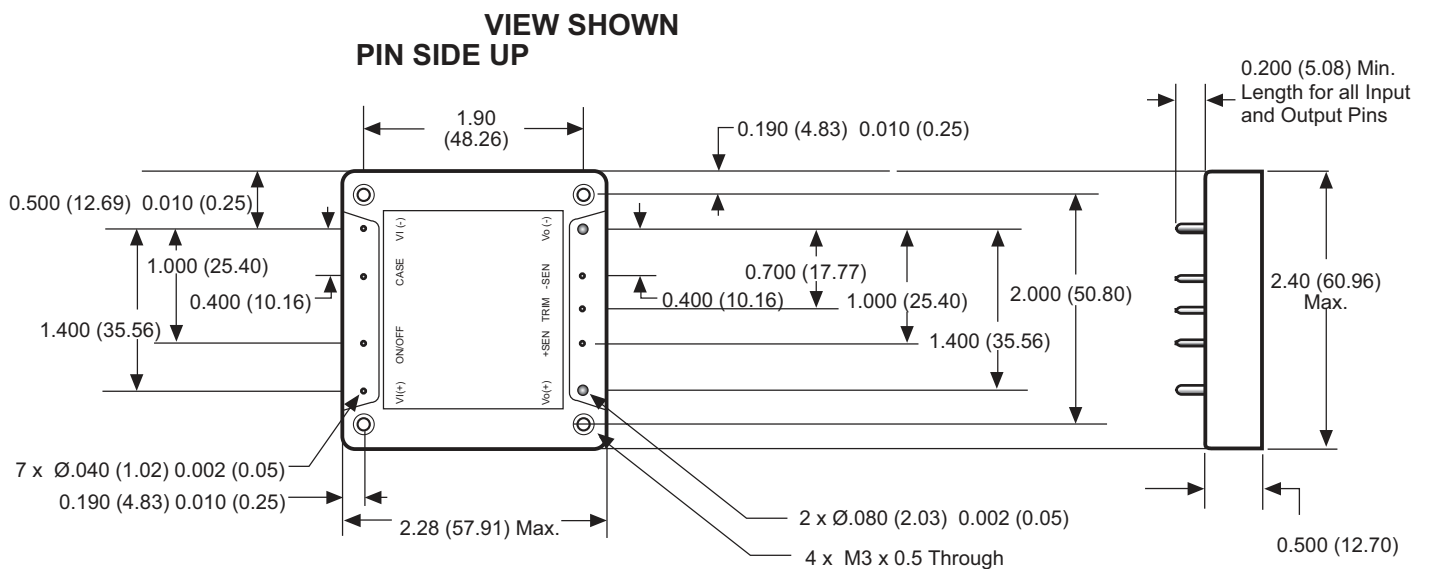
Output can be externally trimmed by using the method shown.



## Pin connections

Pin Number	Function
1	+Vin
2	Remote ON/OFF
3	Case
4	-Vin
5	-Vout
6	-Sense
7	Trim
8	+Sense
9	+Vout

## Mechanical Drawing



## ALL DIMENSIONS IN INCHES (mm)

Tolerance : x.xx 0.02in. (0.51mm)  
x.xxx 0.010in. (0.254mm)

### Americas

5810 Van Allen Way  
Carlsbad, CA 92008  
USA

Telephone: +1 (760) 930 4600  
Facsimile: +1 (760) 930 0698

### Europe (UK)

Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX  
United Kingdom

Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

### Asia (HK)

14/F, Lu Plaza  
2 Wing Yip Street  
Kwun Tong, Kowloon  
Hong Kong

Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

**[www.powerconversion.com](http://www.powerconversion.com)**  
**[techsupport.embeddedpower@emerson.com](mailto:techsupport.embeddedpower@emerson.com)**

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

**Emerson Network Power.**  
The global leader in enabling  
business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- **Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

**EmersonNetworkPower.com**

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.  
©2008 Emerson Electric Co.