Rev.03.08.07 bxb50s 1 of 4

BXB50 Series Single output

Total Power: 33 - 50W
Input Voltage: 18 - 36VDC
36 - 75VDC
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

The BXB50 Series are high power density dc-dc converters packaged in the industry standard footprint (2.40 x 2.28 x 0.50 inches) to give designers optimum choices when specifying for both new and replacement designs. Suitable for a wide range of applications in nearly any industry, the BXB50 was particularly designed with communication and distributed power applications in mind. Using Bellcore 332, the MTBF is greater than 1,400,000 hours. Aluminum baseplate technology with four threaded M3 inserts makes heatsink attachment and optimum thermal management easy. The BXB50 series are approved to IEC950 by UL, CSA and VDE.

Safety

VDE0805/EN60950/IEC950 File No. 10401-3336-0205 Licence No. 40012035

UL60950 File No. E136005

CSA C22.2 No. 950 File No. LR41062C





Specifications

Rev.03.08.07 bxb50s 2 of 4

All specifications are typical at nominal input, full load at 25°C unless otherwise stated.

OUTPUT SPECIFICATIONS			INPUT SPECIFICATIONS C	ONTINUED		
Voltage adjustability		60% to 110%	Undervoltage lockout	24 Vin: power up 24 Vin: power do		
Set point accuracy		±1.0%		48 Vin: power up 48 Vin: power do	34 V	
Line regulation	Low line to high li	ne ±0.05%	Start-up time	Power up	wn 32.5 v 20 ms	
Load regulation	Full load to min. lo	bad ±0.10%	(See Note 8)	Remote ON/OFF	20 ms	
Minimum load		0%	EMC CHARACTERISTICS			
Overshoot	At turn-on and tur	rn-off None	Conducted emissions	Bellcore 1089	Level A	
Undershoot		None	(See Note 3)	FCC part 15 EN55022, CISPR2	Level A Level A	
Ripple and noise	3.3 V and 5 V	75 mV pk-pk, 20 mV rms	GENERAL SPECIFICATION	IS		
(5 Hz to 20 MHz) (See Note 1)	12 V and 15 V	100 mV pk-pk,	Efficiency		See table	
		30 mV rms	Isolation voltage	Input/case	1500 Vdc	
Temperature coefficient		±0.01%/°C		Input/output Output/case	1500 Vdc 1500 Vdc	
Transient response (See Note 2)		±2.0% max. deviation 170 μs recovery	Switching frequency	Fixed	500 kHz typ.	
		to within ±1.0%	Approvals and	VDE0805, EN60950, IEC950		
Remote sense		0.5 Vdc transmission line drop compensation	standards (See Note 5)	UL1950, CSA C22.2 No. 950 Aluminum baseplate with plastic case		
INPUT SPECIFICATIONS		inic drop compensation	Case material	Aluminum b	' '	
	24Vin nominal	18-36 Vdc	Material flammability		UL94V-0	
Input voltage range	48Vin nominal	36-75 Vdc	Weight		110 g (3.88 oz)	
Input current	No load	100 mA max.	MTBF	Bellcore 332 MIL-HDBK-217F	1,400,000 hours 580,000 hours	
	Remote OFF	20 mA max.		@ 40 °C, 100% lo		
Input current (max.) (See Note 4)	48 V models	3.5 A max. @ lo max. and Vin = 0 to 75 V	ENVIRONMENTAL SPECIF	FICATIONS		
Input reflected ripple	(See Note 6)	5 mA pk-pk	Thermal performance	Operating case to Non-operating	emp40 °C to +100 °C -55 °C to +125 °C	
Active low remote ON/OFF Logic compatibility ON		pen collector ref to -input 1.2 Vdc max.	Altitude	Operating Non-operating	10,000 feet max. 40,000 feet max.	
OFF		Open circuit	Vibration	5-500 Hz	2.4 G rms (approx.)	

Specifications Contd.

Rev.03.08.07 bxb50s 3 of 4

OUTPUT POWER	INPUT OVP OUTPUT CURRENT CURRENT EFFICIEN	EFFICIENCY	EIENCY REGULATION		MODEL				
(MAX.)	VOLTAGE	0	VOLTAGE	(MIN.)	(MAX.)	(TYP.)	LINE	LOAD	NUMBER (7,9,10)
33 W	18-36 Vdc	4.3 Vdc	3.3 V	0 A	10 A	76%	±0.05%	±0.10%	BXB50-24S3V3FLTJ
50 W	18-36 Vdc	14.5 Vdc	12 V	0 A	4.16 A	83%	±0.05%	±0.10%	BXB50-24S12FLTJ
50 W	18-36 Vdc	17.5 Vdc	15 V	0 A	3.33 A	83%	±0.05%	±0.10%	BXB50-24S15FLTJ
33 W	36-75 Vdc	4.3 Vdc	3.3 V	0 A	10 A	77%	±0.05%	±0.10%	BXB50-48S3V3FLTJ
50 W	36-75 Vdc	6.5 Vdc	5 V	0 A	10 A	82%	±0.05%	±0.10%	BXB50-48S05FLTJ
50 W	36-75 Vdc	14.5 Vdc	12 V	0 A	4.16 A	84%	±0.05%	±0.10%	BXB50-48S12FLTJ

Notes

- 1 Measured with 10 μ F tantalum capacitor and 1 μ F ceramic capacitor across output.
- 2 di/dt = 0.1 A/1 μ s, Vin = 48 Vdc, Tc = 25 °C, load change = 0.5 lo max. to 0.75 lo max. and 0.75 lo max. to 0.5 lo max.
- Units should be characterised within systems. External components required.
 Input fusing is recommended based on surge current and maximum input
- 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 μH. 12 μH 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. BXB50-48S05FHTJ. Consult factory for further details and options.
- 8 Start-up into resistive load.
- 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.
 NOTICE: Some models do not support all options. Please contact your local
- 10 NOTICE: Some models do not support all options. Please contact your loca Artesyn representative or use the on-line model number search tool at http://www.artesyn.com/powergroup/products.htm to find a suitable alternative

PROTECTION

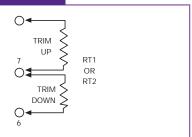
Short circuit	Continuous, automatic recovery
Overvoltage	Non-latching
Undervoltage	Non-latching
Thermal	110 °C baseplate, automatic recovery

TELECOM SPECIFICATION

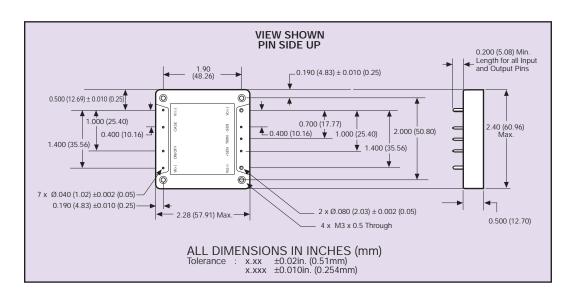
Central office interface A ETS300-132-2

EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method shown.



Rev.03.08.07 bxb50s 4 of 4



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			

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)

16th - 17th Floors, 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

technicalsupport@powerconversion.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 Power
- Inbound Power
- Integrated Cabinet Solutions
- Outside Plant
- Precision Cooling
- Site Monitoring and Services

EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co. ©2007 Emerson Electric Co.