Rev.03.08.07
bxb75s

BXB75 Series
Single output

Total Power: 50 - 75W
Input Voltage: 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 BXB75 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 BXB75 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 BXB75 series is approved to IEC950 by UL, CSA and VDE.

Safety

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

UL1950 File No. E136005

CSA C22.2 No. 950
File No. LR41062C

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Specifications

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

OUTPUT SPECIFICATIONS

Voltage adjustability		60% to 110%
Set point accuracy		±1.0%
Line regulation	Low line to high line	±0.05%
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 (5 Hz to 20 MHz) (See Note 1)	3.3 V and 5 V 12 V	75 mV pk-pk, 20 mV rms 100 mV pk-pk, 30 mV rms
Temperature coefficient		±0.01%/°C
Transient response (See Note 2)		±2.0% max. deviation 170 µs recovery to within ±1.0%
Remote sense		0.5 Vdc transmission line drop compensation

INPUT SPECIFICATIONS

Input voltage range	48 Vin nominal	36-75 Vdc
Input current	No load Remote OFF	100 mA max. 20 mA max.
Input current (max.) (See Note 4)		3.5 A max. @ Io max. and Vin = 0-75 V
Input reflected ripple	(See Note 6)	5 mA pk-pk
Active low remote ON/OFF Logic compatibility ON OFF	(See Note 7)	Open collector ref to -input 1.2 Vdc max. Open circuit

INPUT SPECIFICATIONS (continued)

Undervoltage lockout	48 Vin: power up 48 Vin: power down	34 V 32.5 V
Start-up time (See Note 8)	Power up Remote ON/OFF	20 ms 20 ms

EMC CHARACTERISTICS

Conducted emissions (See Note 3)	Bellcore 1089 FCC part 15 EN55022, CISPR22	Level A Level A Level A

GENERAL SPECIFICATIONS

Efficiency		See table
Isolation voltage	Input/case Input/output Output/case	1500 Vdc 1500 Vdc 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
Material flammability		UL94V-0
Weight		110 g (3.88 oz)
MTBF	Bellcore 332 MIL-HDBK-217F @ 40 °C, 100% full load	1,400,000 hours min. 580,000 hours min.

ENVIRONMENTAL SPECIFICATIONS

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

Specifications Contd.

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER (7, 9,10)
							LINE	LOAD	
50 W	36-75 Vdc	4.3 Vdc	3.3 V	0 A	15 A	79%	±0.05%	±0.1%	BXB75-48S3V3FLTJ
75 W	36-75 Vdc	6.5 Vdc	5 V	0 A	15 A	83%	±0.05%	±0.1%	BXB75-48S05FLTJ
75 W	36-75 Vdc	14.5 Vdc	12 V	0 A	6.25 A	84%	±0.05%	±0.1%	BXB75-48S12FLTJ

Notes

1 Measured with 10 µF tantalum capacitor and 1 µF ceramic capacitor across output.
2 di/dt = 0.1 A/1 µs, Vin = 48 Vdc, Tc = 25 °C, load change = 0.5 Io max. to 0.75 Io max. and 0.75 Io max. to 0.5 Io 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 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. **BXB75-48S05FHTJ**. 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 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

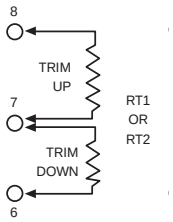
Central office interface A	ETS300-132-2

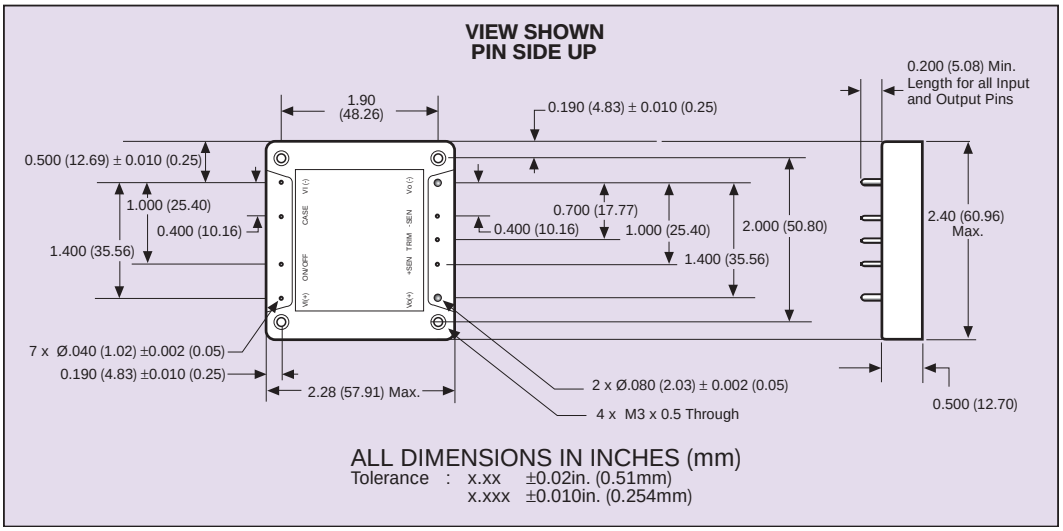
PIN CONNECTIONS

PIN NUMBER	FUNCTION
1	+ Vin
2	Remote ON/OFF
3	Case
4	- Vin
5	- Vout
6	- Sense
7	Trim
8	+ Sense
9	+ Vout

EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method shown.





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

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