Embedded Power for
Business-Critical Continuity

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

ARTESYN

EMERSON
Network Power

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 and 15 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	24Vin nominal 48Vin nominal	18-36 Vdc 36-75 Vdc
Input current	No load Remote OFF	100 mA max. 20 mA max.
Input current (max.) (See Note 4)	48 V models	3.5 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 Logic compatibility ON OFF	(See Note 7)	Open collector ref to -input 1.2 Vdc max. Open circuit

INPUT SPECIFICATIONS CONTINUED

Undervoltage lockout	24 Vin: power up 24 Vin: power down 48 Vin: power up 48 Vin: power down	17 V 16 V 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% load	1,400,000 hours 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	
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 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. **BXB50-48S05FHTJ**. 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

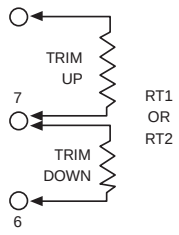
Short circuit	Continuous, automatic recovery
Overvoltage	Non-latching
Undervoltage	Non-latching
Thermal	110 °C baseplate, automatic recovery

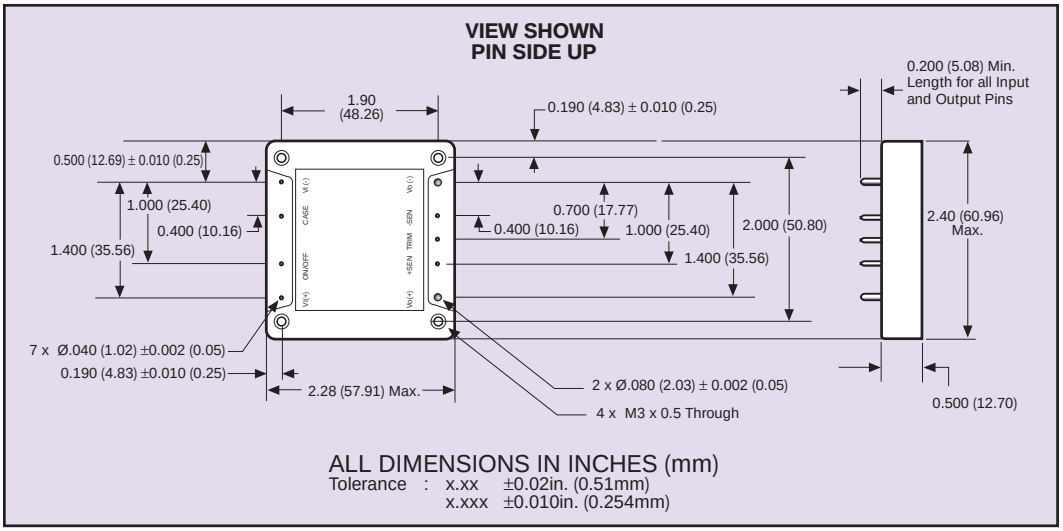
TELECOM SPECIFICATION

Central office interface A	ETS300-132-2

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

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