ARTESYN TECHNOLOGIES

BXB75 SERIES

Single output



- **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**

[2 YEAR WARRANTY]

CE (LVD) VDE

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.

SPECIFICATION

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 (5Hz to 20MHz) (See Note 1)	3.3V and 5V 12V and 15V	75mV pk-pk, 20mV rms 100mV pk-pk, 30mV rms
Temperature coefficient		±0.01%/°C
Transient response (See Note 2)		±2.0% max. deviation 170µs recovery to within ±1.0%
Remote sense		0.5VDC transmission line drop compensation

INPUT SPECIFICATIONS		
Input voltage range	24Vin nominal 48Vin nominal	18 to 36VDC 36 to 75VDC
Input current	No load Remote OFF	100mA max. 20mA max.
Input current (max.) (See Note 4)	48V models	3.5A max. @ Io max. and Vin = 0 to 75V
Input reflected ripple	(See Note 6)	5mA pk-pk
Active low remote ON/OFF Logic compatibility ON OFF		(See Note 7) Open collector ref to -input 1.2VDC max. Open circuit

INPUT SPECIFICATIONS CONTINUED		
Undervoltage lockout	24Vin: power up 24Vin: power down 48Vin: power up 48Vin: power down	17V 16V 34V 32.5V
Start-up time (See Note 8)	Power up Remote ON/OFF	20ms 20ms

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	1500VDC 1500VDC 1500VDC
Switching frequency	Fixed	500kHz 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		110g (3.88oz)
MTBF	Bellcore 332 MIL-HDBK-217F @ 40°C, 100% full 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	5Hz to 500Hz	2.4G rms (approx.)

50 to 75 Watt
Wide input DC/DC converters

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE	OUTPUT CURRENT (MIN.)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER (7)
							LINE	LOAD	
50W	18-36VDC	4.3VDC	3.3V	0A	15A	78%	±0.05%	±0.1%	BXB75-24S3V3FLT
75W	18-36VDC	6.5VDC	5V	0A	15A	82%	±0.05%	±0.1%	BXB75-24S05FLT
75W	18-36VDC	14.5VDC	12V	0A	6.25A	83%	±0.05%	±0.1%	BXB75-24S12FLT
75W	18-36VDC	17.5VDC	15V	0A	5.0A	84%	±0.05%	±0.1%	BXB75-24S15FLT
50W	36-75VDC	4.3VDC	3.3V	0A	15A	79%	±0.05%	±0.1%	BXB75-48S3V3FLT
75W	36-75VDC	6.5VDC	5V	0A	15A	83%	±0.05%	±0.1%	BXB75-48S05FLT
75W	36-75VDC	14.5VDC	12V	0A	6.25A	84%	±0.05%	±0.1%	BXB75-48S12FLT
75W	36-75VDC	17.5VDC	15V	0A	5.0A	85%	±0.05%	±0.1%	BXB75-48S15FLT

Notes

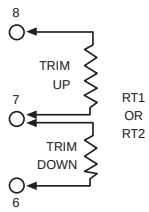
1 Measured with 10µF tantalum capacitor and 1µF ceramic capacitor across output.
2 di/dt = 0.1A/1µs, Vin = 48VDC, Tc = 25°C, load change = 0.5 lo max. to 0.75 lo max. and 0.75 lo max. to 0.5 lo max.
3 Units should be characterised within systems. External components required.
4 Input fusing is recommended 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 12µH. 12µH 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. **BXB75-48S05FHT**. Consult factory for further details and options.
8 Start-up into resistive load.

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

TELECOM SPECIFICATIONS	
Central office interface A	ETS300-132-2

EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method shown below.



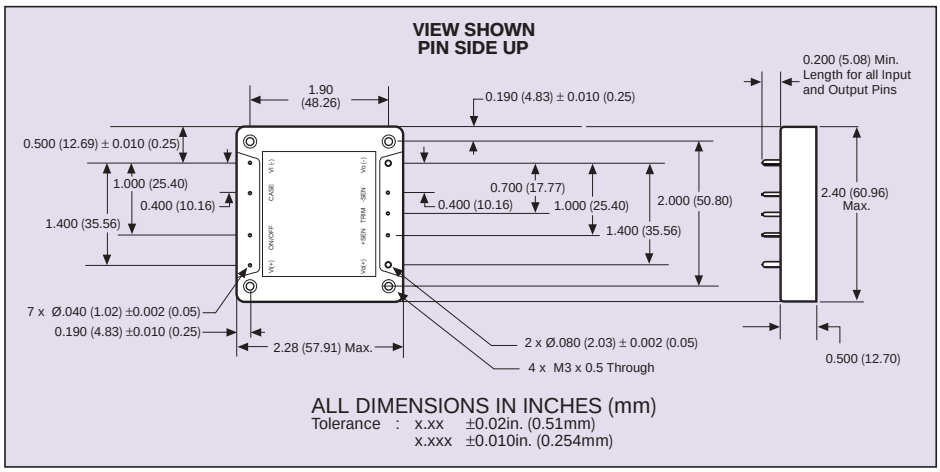
International Safety Standard Approvals

VDE0805/EN60950/IEC950 File No. 10401-3336-1095

UL1950 File No. E136005

CSA C22.2 No. 950 File No. LR41062C

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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