

# BXB75 Series

## Dual output

- Flexible dual output unit
- 15 A maximum per channel
- Industry standard footprint
- MTBF >2 million hours (Bellcore 332)
- Input voltage to ETS300-132-2
- Adjustable output voltage
- 2:1 input range
- Undervoltage lockout (UVLO)
- UL, VDE and CSA safety approvals
- Available RoHS compliant



2 YEAR WARRANTY

The BXB75 Dual is a high power density dc-dc converter packaged in the industry standard footprint (2.40 x 2.28 x 0.50 inches). With no minimum load requirements, either output can supply its maximum current, or both channels can support any combination of loading to a total of 60/75 W of output power. Suitable for a wide range of applications in nearly any industry, the BXB75 Dual was designed with communication and distributed power applications in mind. Aluminum baseplate technology with four threaded inserts makes heatsink attachment and optimum thermal management easy. The BXB75 Dual series is approved to IEC950 by UL, CSA and VDE.

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

### SPECIFICATIONS

#### OUTPUT SPECIFICATIONS

Voltage adjustability	Each output	±5.0%
Set point accuracy		±2.0%
Line regulation		±0.25%
Load regulation		±0.50%
Minimum load	(See Note 14)	1 A
Undershoot		None
Ripple and noise 5 Hz to 20 MHz	Each output (See Note 1)	100 mV pk-pk, 40m V rms max.
Temperature coefficient		±0.01%/°C
Transient response (See Note 2)		±2.0% max. deviation 300 µs recovery to within ±1.0%
Remote sense		None

#### INPUT SPECIFICATIONS

Input voltage range	48 Vin nominal	36-75 Vdc
Input current	No load Remote OFF	150 mA max. 25 mA max.
Input current (max.) (See Note 4)	3.3/2.5 V 5/3.3 V	2.5 A max. @ lo max. and Vin = 0 to 75 V 3.5 A max. @ lo max. and Vin = 0 to 75 V
Input reflected ripple	(See Note 6)	20 mA pk-pk
Active low remote ON/OFF Logic compatibility ON OFF		(See Note 7) Ref. to -input CMOS/TTL 1.2 Vdc max. 3.5 Vdc min. or open circuit
Undervoltage lockout		30 V typ.
Start-up time (See Note 8)	Power up Remote ON/OFF	10 ms max. 2.5 ms max.

#### EMC CHARACTERISTICS

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

#### GENERAL SPECIFICATIONS

Efficiency		See table
Isolation voltage (See Note 13)	Input/case Input/output Output/case	1000 Vdc 1500 Vdc 1500 Vdc
Switching frequency	Fixed	400 kHz
Approvals and standards		VDE0805, EN60950, IEC950 UL1950, CSA C22.2 No. 950
Case material		Aluminum baseplate with plastic case
Material flammability		UL94V-0
Weight		127 g (4.5 oz)
MTBF	Bellcore 332 (calculated)	>2,000,000 hours

#### ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Operating case temp. Non-operating	-40 °C to +100 °C -50 °C to +110 °C
Altitude	Operating Non-operating	10,000 feet max. 40,000 feet max.
Vibration	5 Hz to 500 Hz	2.4G rms (approx.)

# BXB75 Series

## Dual output

DC-DC CONVERTERS | 60-75 W Wide Input DC-DC Converters

2

For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE		OUTPUT CURRENT (MIN.) <sup>(14)</sup>	OUTPUT CURRENT (MAX.) <sup>(12)</sup>	TYPICAL EFFICIENCY	REGULATION		MODEL NUMBER (7, 15)
			OP1	OP2				LINE	LOAD	
60 W	36-75 Vdc	4.0/3.0 Vdc	3.3 V	2.5 V	1 A	15 A	74% <sup>(10)</sup>	±0.25%	±0.50%	BXB75-48D3V32V5FLJ
75 W	36-75 Vdc	6.0/4.0 Vdc	5 V	3.3 V	1 A	15 A	82% <sup>(9)</sup>	±0.25%	±0.50%	BXB75-48D05-3V3FLJ

### Notes

- Measured with 10  $\mu$ F tantalum capacitor and 0.1  $\mu$ F ceramic capacitor across output.
- $di/dt = 1 \text{ A}/1 \mu\text{s}$ ,  $V_{in} = 48 \text{ Vdc}$ ,  $T_c = 25 \text{ }^\circ\text{C}$ , 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.
- Units should be characterised within systems. External components required.
- Input fusing is recommended based on surge current and maximum input current.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- Simulated source impedance of 12  $\mu$ H.
- The BXB75 series feature 'Active Low' Remote ON/OFF as standard. An 'Active High' Remote ON/OFF version is also available. To order the 'Active High' version of the BXB75-48D05-3V3FLJ replace the letter **L** towards the end of the part number with the letter **H**, i.e. BXB75-48D05-3V3FHJ.
- Start-up in resistive load.
- 5 V at 15 A.
- Measured with 15 A load on 3.3 V output and 5 A load on 2.5 V output.
- Numbers in brackets refer to output 1.
- Combined maximum output current that may be drawn from both channels simultaneously is 20 A (i.e. current from OP1 + current from OP2).
- Connect input to case when performing hipot test from output to case.
- 1 A minimum load required on the higher voltage output.
- 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.

### PROTECTION

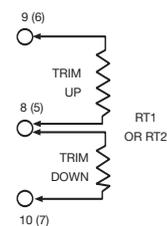
Short circuit	5/3.3 V	Continuous, 25 A max. auto restart
	3.3/2.5 V	
Input surge	100 Vdc for one second max. non repetitive	
Reverse voltage (See Note 4)	Yes, up to 17 A with source impedance of 5 $\Omega$	
Oversvoltage	Latching, 120% Vout	
Undervoltage	Non-latching	
Thermal	110 $^\circ\text{C}$ baseplate, automatic recovery	

### TELECOM SPECIFICATION

Central office interface A	ETS300-132-2
----------------------------	--------------

### EXTERNAL OUTPUT TRIMMING (11)

Output can be externally trimmed by using the method shown.



PIN CONNECTIONS	
PIN NUMBER	FUNCTION
1	- Vin
2	Case
3	Remote ON/OFF
4	+ Vin
5	OP1 Trim
6	OP1 Return
7	OP1
8	OP2 Trim
9	OP2 Return
10	OP2

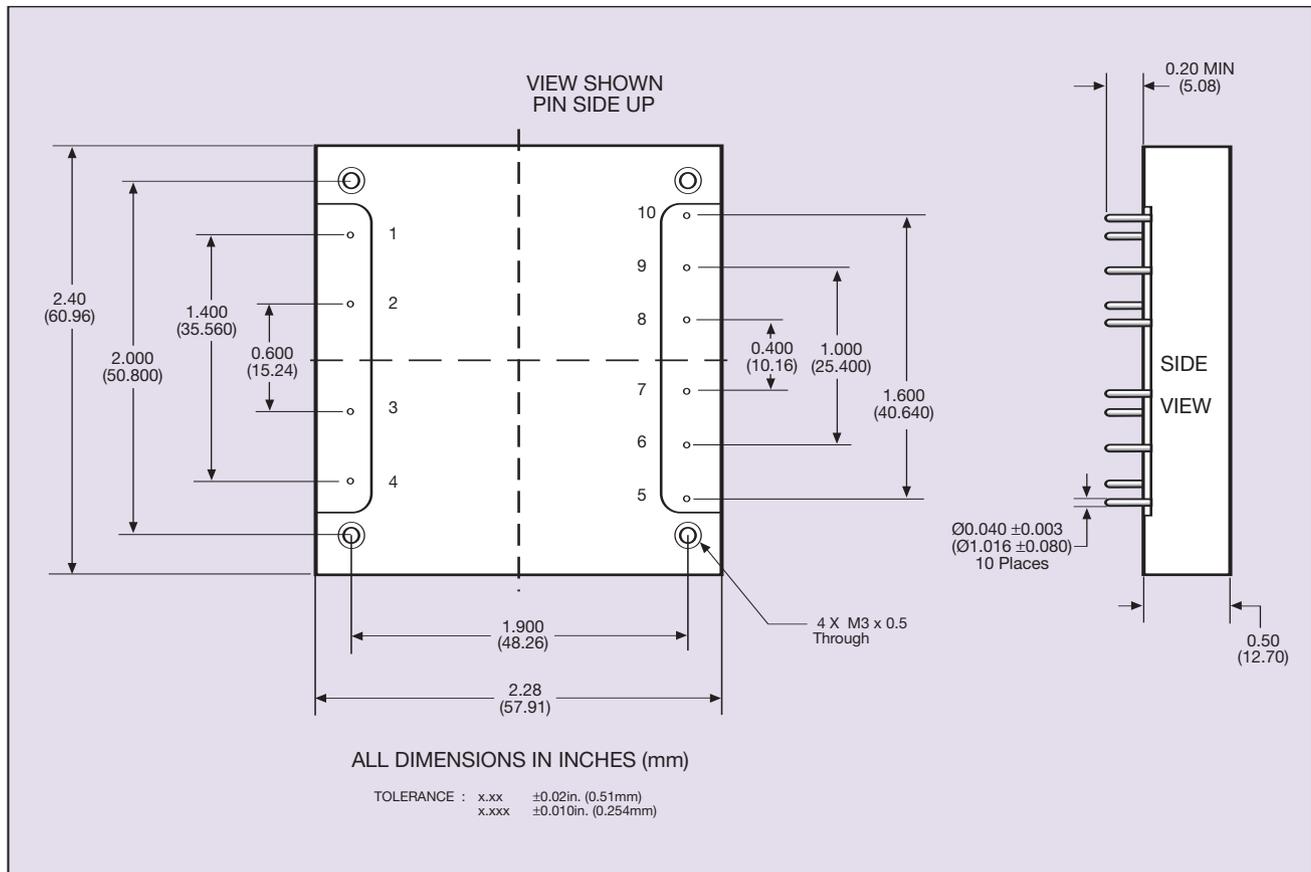
# BXB75 Series

Dual output

DC/DC CONVERTERS 60-75 W Wide Input DC/DC Converters

3

For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)



### International Safety Standard Approvals

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

UL  
UL1950 File No. E136005

SF  
CSA C22.2 No. 950 File No. LR41062C

Datasheet © Artesyn Technologies® 2006

The information and specifications contained in this datasheet are believed to be correct at time of publication. However, Artesyn Technologies accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.