

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



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.

2 YEAR WARRANTY

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. @ Io max. and Vin = 0 to 75 V 3.5 A max. @ Io 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. | -40 °C to +100 °C |
| | Non-operating | -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

For the most current data and application support visit www.artesyn.com/powergroup/products.htm

| OUTPUT POWER (MAX.) | INPUT VOLTAGE | OVP | OUTPUT VOLTAGE | | OUTPUT CURRENT (MIN.) ⁽¹⁴⁾ | OUTPUT CURRENT (MAX.) ⁽¹²⁾ | 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% ⁽¹⁰⁾ | ±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% ⁽⁹⁾ | ±0.25% | ±0.50% | BXB75-48D05-3V3FLJ |

Notes

- Measured with 10 μ F tantalum capacitor and 0.1 μ F ceramic capacitor across output.
- $di/dt = 1 \text{ A}/1 \mu\text{s}$, $V_{in} = 48 \text{ Vdc}$, $T_c = 25^\circ\text{C}$, 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 μ 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

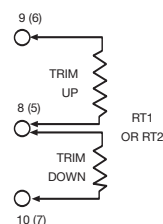
| | | |
|------------------------------|---|------------------------------------|
| Short circuit | 5/3.3 V | Continuous, 25 A max. auto restart |
| | 3.3/2.5 V | Continuous, 32 A max. auto restart |
| Input surge | 100 Vdc for one second max. non repetitive | |
| Reverse voltage (See Note 4) | Yes, up to 17 A with source impedance of 5 Ω | |
| Overvoltage | Latching, 120% V_{out} | |
| 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 | - V_{in} |
| 2 | Case |
| 3 | Remote ON/OFF |
| 4 | + V_{in} |
| 5 | OP1 Trim |
| 6 | OP1 Return |
| 7 | OP1 |
| 8 | OP2 Trim |
| 9 | OP2 Return |
| 10 | OP2 |

