

BXB150 Series

Single output

DC-DC CONVERTERS

100-150 W Wide Input DC-DC Converters

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- 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



The BXB150 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 BXB150 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 BXB150 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 | 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 | |
| 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 (continued)

| | | |
|----------------------------|--|----------------------------------|
| Undervoltage lockout | 24 Vin: power up 24 Vin: power down 48 Vin: power up 48 Vin: power down | 17 V 16.3 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% FL | 1,400,000 hours 580,000 hours min. |

ENVIRONMENTAL SPECIFICATIONS

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

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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.) | OUTPUT CURRENT (MAX.) | EFFICIENCY (TYP.) | REGULATION LINE | REGULATION LOAD | MODEL NUMBER (7,9,10) |
|---------------------|---------------|----------|----------------|-----------------------|-----------------------|-------------------|-----------------|-----------------|-----------------------|
| 100 W | 18-36 Vdc | 4.3 Vdc | 3.3 V | 0 A | 30 A | 77% | $\pm 0.05\%$ | $\pm 0.1\%$ | BXB150-24S3V3FLTJ |
| 100 W | 36-75 Vdc | 4.3 Vdc | 3.3 V | 0 A | 30 A | 79% | $\pm 0.05\%$ | $\pm 0.1\%$ | BXB150-48S3V3FLTJ |
| 150 W | 36-75 Vdc | 6.5 Vdc | 5 V | 0 A | 30 A | 84% | $\pm 0.05\%$ | $\pm 0.1\%$ | BXB150-48S05FLTJ |
| 150 W | 36-75 Vdc | 14.5 Vdc | 12 V | 0 A | 12.5 A | 84% | $\pm 0.05\%$ | $\pm 0.1\%$ | BXB150-48S12FLTJ |
| 150 W | 36-75 Vdc | 17.5 Vdc | 15 V | 0 A | 10 A | 88% | $\pm 0.05\%$ | $\pm 0.1\%$ | BXB150-48S15FLTJ |

Notes

- 1 Measured with 10 μ F tantalum capacitor and 1 μ F ceramic capacitor across output.
- 2 $dI/dt = 0.1 A/1 \mu s$, $V_{in} = 48$ Vdc, $T_c = 25^\circ C$, 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.
- 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 μ H. 12 μ H inductor in series with $+V_{in}$.
- 7 Active high remote ON/OFF option is available (standard product is active low), designate with the suffix 'FHT' e.g. **BXB150-48S05FHTJ**. 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.

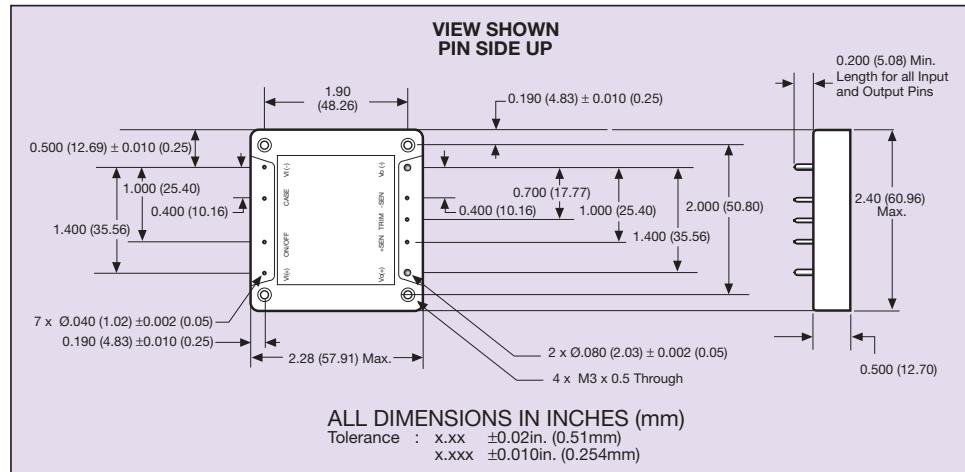
International Safety Standard Approvals

 VDE0805/EN60950/IEC950 File No. 10401-3336-1095
Licence No. 40012035

 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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