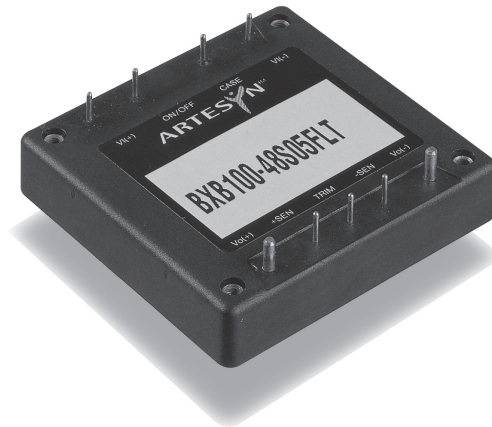


## BXB100 Series Single output

**Total Power:** 66 - 100 W  
**Input Voltage:** 18 - 36 V  
36 - 75 V  
**# of Outputs:** Single



## Special Features

- Industry standard footprint
- High power density (36.5 W/in<sup>3</sup>)
- MTBF >1.4 million hours (Bellcore 332)
- Input voltage to ETS300-132-2
- Adjustable output voltage
- No minimum load required
- Separate case ground pin
- Undervoltage lockout (UVLO)
- UL, VDE and CSA safety approvals
- 2 year warranty

## Safety

VDE0805/EN60950/IEC950

UL1950

CSA C22.2 No. 950

## Electrical Specifications

| Input   |  |  |
|---|--|--|
| Input voltage range:                              | 24 Vin nominal<br>48 Vin nominal   | 18 - 36 Vdc<br>36 - 75 Vdc                   |
| Input current:                                    | No load<br>Remote OFF  | 100 mA max.<br>20 mA max.                    |
| Input current (max.):<br>(See note 4)             | 48 V models  | 4 A max. @ Io max.<br>and Vin = 0 to 75 V    |
| Input reflected ripple:                           | (See note 6)   | 5 mA pk-pk                                   |
| Active low remote ON/OFF:<br>Logic compatibility: |  | (See note 7)<br>Open collector ref to -input |
| ON:   |  | 1.2 Vdc max.                                 |
| OFF:  |  | Open circuit                                 |
| Undervoltage lockout:                             | 24 Vin: power-up<br>24 Vin: power-down<br>48 Vin: power-up<br>48 Vin: power-down | 17 V<br>16 V<br>34 V<br>32.5 V               |
| Start-up time:<br>(see note 8)                    | Power up<br>Remote ON/OFF  | 20 ms<br>20 ms                               |
| Output  |  |  |
| Voltage adjustability:                            |  | 60% to 110%                                  |
| Setpoint 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:                                 | 3.3 V and 5 V<br>5 Hz - 20 MHz (see note 1)                                      | 75 mV pk-pk,<br>20 mV rms                    |
|   | 12V and 15 V   | 100 mV pk-pk,<br>30 mV rms                   |



| Output Continued                                |               |  |
|---|---------------|--|
| Ripple and noise:<br>5 Hz - 20 MHz (see note 1) | 3.3 V and 5 V | 75 mV pk-pk,<br>20 mV rms                                  |
|   | 12V and 15 V  | 100 mV pk-pk,<br>30 mV rms                                 |
| Temperature coefficient:                        |               | ±0.01% / °C  |
| Transient response:<br>(see note 2)             |               | ±2.0% max. deviation<br>170 µs recovery<br>to within ±1.0% |
| Remote Sense:                                   |               | 0.5 Vds transmission<br>line drop compensation             |

| EMC Charateristics                   |                      |         |
|--------------------------------------|----------------------|---------|
| Conducted emissions:<br>(see note 3) | EN55022 (See note 3) | Level A |
|                                      | FCC part 15          | Level A |
|                                      | EN55022, CISPR22     | Level A |

| General Specifications                   |                                      |   |
|--|--------------------------------------|---|
| Efficiency:                              |                                      | See table   |
| Isolation voltage:                       | Input/case                           | 1500 Vdc  |
|  | Input/output                         | 1500 Vdc  |
|  | Output/case                          | 1500 Vdc  |
| Switching frequency:                     | Fixed                                | 500 kHz typ.  |
| Approvals and standards:<br>(see note 5) |                                      | VDE0805, EN60950, IEC950<br>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                         | 1,400,000 hours                                       |
|  | MIL-HDBK-217F                        | 580,000 hours min.                                    |
|  | @ 40 °C, 100% load                   |   |

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

| Telecom Specifications      |  |              |
|-----------------------------|--|--------------|
| Central office interface A: |  | ETS300-132-2 |

## Environmental Specifications

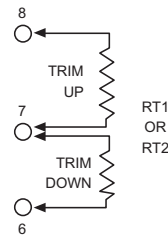
|                      |                      |                     |
|----------------------|----------------------|---------------------|
| Thermal performance: | Operating case temp. | -40 °C to +100 °C   |
|                      | Non-operating        | -55 °C to +125 °C   |
| Altitude:         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

## Ordering Information

| Output Power (Max.) | Input Voltage | OVP      | Output Voltage | Output Current (Min.) | Output Current (Max.) | Efficiency (Typ.) | Regulation |       | Model Number     |
|---------------------|---------------|----------|----------------|-----------------------|-----------------------|-------------------|------------|-------|------------------|
|                     |               |          |                |                       |                       |                   | Line       | Load  |                  |
| 100 W               | 18 - 36 Vdc   | 14.5 Vdc | 12 V           | 0 A                   | 8.33 A                | 85%               | ±0.05%     | ±0.1% | BXB100-24S12FLTJ |
| 100 W               | 36 - 75 Vdc   | 6.5 Vdc  | 5 V            | 0 A                   | 20 A                  | 83%               | ±0.05%     | ±0.1% | BXB100-48S05FLTJ |
| 100 W               | 36 - 75 Vdc   | 14.5 Vdc | 12 V           | 0 A                   | 8.33 A                | 86%               | ±0.05%     | ±0.1% | BXB100-48S12FLTJ |

### External Output Trimming

Output can be externally trimmed by using the method shown.



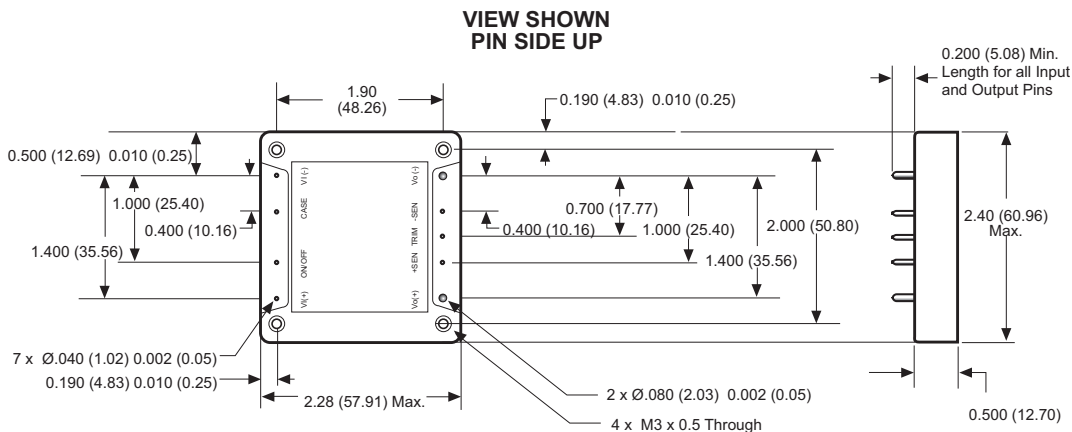
### Pin Connections

| Pin Number | Function      |
|------------|---------------|
| 1          | +Vin          |
| 2          | Remote ON/OFF |
| 3          | Case          |
| 4          | -Vin          |
| 5          | -Vout         |
| 6          | -Sense        |
| 7          | Trim          |
| 8          | +Sense        |
| 9          | +Vout         |

### Notes

- 1 Measured with 10  $\mu$ F tantalum capacitor and 1  $\mu$ F ceramic capacitor across output.
- 2  $di/dt = 0.1 \text{ A}/1 \mu\text{s}$ ,  $V_{in} = 48 \text{ Vdc}$ ,  $T_c = 25 \text{ }^\circ\text{C}$ , 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 12  $\mu$ H. 12  $\mu$ H 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. **BXB100-48S05FHTJ**. Consult factory for further details and options.
- 8 Start-up into resistive load.
- 9 "J" suffix designation for RoHS 6/6.

## Mechanical Drawing



ALL DIMENSIONS IN INCHES (mm)  
Tolerance : x.xx 0.02in. (0.51mm)  
x.xxx 0.010in. (0.254mm)

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