

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



Output Continued		
Ripple and noise: 5 Hz - 20 MHz (see note 1)	3.3 V and 5 V	75 mV pk-pk, 20 mV rms
	12V and 15 V	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 Vds transmission line drop compensation

EMC Characteristics		
Conducted emissions: (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: (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	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

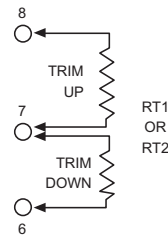
Thermal performance:	Operating case temp.	-40 °C to +100 °C
	Non-operating	-55 °C to +125 °C
Altitude:	Operating	10,000 feet max.
	Non-operating	40,000 feet max.
Vibration:	5 - 500 Hz	2.4 G rms (approx.)

## 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.



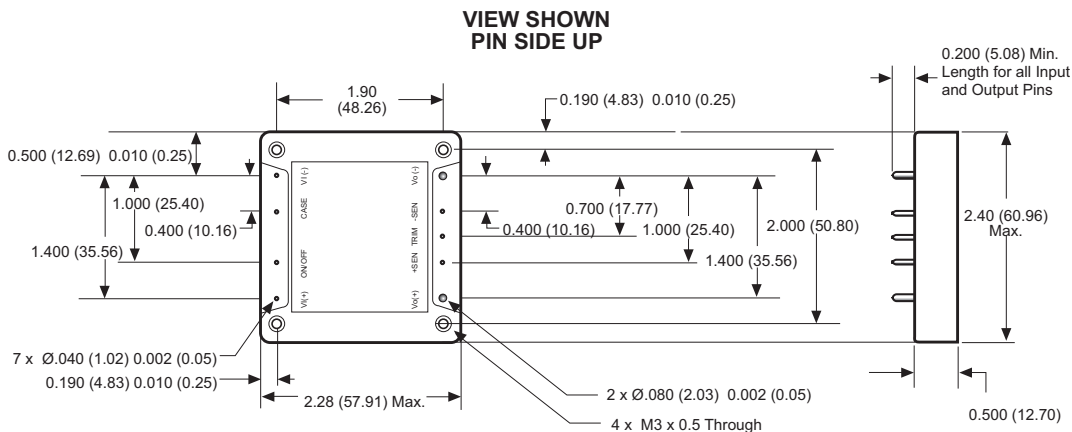
### Pin Connections

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  $di/dt = 0.1$  A/1  $\mu$ s,  $V_{in} = 48$  Vdc,  $T_c = 25$  °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 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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