

# BXF300 SERIES

Single output



- Industry standard footprint
- Adjustable output voltage with output currents of 60A
- No minimum load required
- 2:1 input range for battery powered applications
- Undervoltage lockout (UVLO)
- Overvoltage and overcurrent protection
- Synchronizable and parallelable with load sharing
- Overtemperature and short circuit protection
- Current monitor and power good signal
- Remote ON/OFF

BXF300 Series high power density DC/DC converters can provide up to 60A output current and have an industry-standard footprint, measuring just 2.40 x 4.60 x 0.52 inches. The converters are equally suitable for new designs or as replacement power sources in existing equipment. The series includes models with output voltages as low as 1.5V. BXF300 Series converters are designed specifically for redundant and distributed power systems in the computer and telecommunications sectors, but their feature-rich specifications make them suitable for a very wide range of applications. Using Bellcore 332, the MTBF is over 1,000,000 hours. Aluminium baseplate technology and four threaded M3 inserts make heatsink attachment and thermal management easy. The BXF300 Series is approved by UL, CSA and VDE.

[ 2 YEAR WARRANTY ]

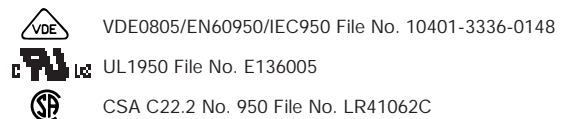


## SPECIFICATION All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS		
Voltage adjustability	Model specific	
Set point accuracy	±0.5% typ., ±1.6% max.	
Line regulation	Low line to high line	±0.10% typ.
Load regulation	Full load to min. load	±0.15% typ.
Minimum load	0%	
Overshoot	0V	
Undershoot	At turn-on and turn-off	0V
Ripple and noise	5Hz to 20MHz (See Note 1)	20mV
Temperature coefficient	±0.01%/°C	
Transient response	Recovery time (See Note 2)	500µs
	Peak deviation	500mV
Remote sense	0.5VDC transmission line drop compensation	
INPUT SPECIFICATIONS		
Input voltage range	48Vin nominal	36 to 75VDC
Input current	No load	100mA max.
	Remote OFF	20mA max.
Input current (max.)	(See Note 3)	9A max.
Input reflected ripple	(See Note 5)	26mA pk-pk
Active low remote ON/OFF	(See Note 7)	
Logic compatibility		
ON	1.2VDC max.	
OFF	Open circuit	
Undervoltage lockout	48Vin: power up	34.8V
	48Vin: power down	33.1V
Start-up time (See Note 6)	Power up	15ms
	Remote ON/OFF	13ms

EMC CHARACTERISTICS		
Conducted emissions (See Note 8)	Bellcore 332 FCC part 15 EN55022, CISPR22	Level A Level A Level A
GENERAL SPECIFICATIONS		
Efficiency	See table	
Isolation voltage	Input/case Input/output Output/case	1500VDC 1500VDC 1500VDC
Switching frequency	Fixed	850kHz typ.
Approvals and standards (See Note 4)	VDE0805, EN60950, IEC950 UL1950, CSA C22.2 No. 950	
Case material	Aluminium baseplate and plastic casing	
Material flammability	UL94V-0	
Weight	200g (7.06oz)	
MTBF	Bellcore 332 MIL-HDBK-217F @ 40°C, 100% FL	>1,000,000 hours >200,000 hours
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	5Hz to 500Hz	2.4G rms (approx.)

### International Safety Standard Approvals



# 90 to 198 Watt Wide input DC/DC converters

OUTPUT POWER (MAX.)	INPUT VOLTAGE	OVP	OUTPUT VOLTAGE	INPUT CURRENT (MAX. LOAD)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION		MODEL NUMBER <sup>(7)</sup>
							LINE	LOAD	
198W	48VDC	3.80VDC	3.3V	5.2A	60A	79%	±0.10%	±0.15%	BXF300-48S3V3L
150W	48VDC	2.88VDC	2.5V	4.1A	60A	77%	±0.10%	±0.15%	BXF300-48S2V5L
120W	48VDC	2.30VDC	2.0V	3.3A	60A	74%	±0.10%	±0.15%	BXF300-48S2V0L
108W	48VDC	2.07VDC	1.8V	3.2A	60A	72%	±0.10%	±0.15%	BXF300-48S1V8L
90W	48VDC	1.73VDC	1.5V	3.2A	60A	69.5%	±0.10%	±0.15%	BXF300-48S1V5L

## Notes

- Measured with 10µF tantalum capacitor and 1µF ceramic capacitor across the output.
- $I_{out} = I_{nom}$ ;  $\Delta I_{out} = \pm 25\% I_{out} (max)$ ,  $di/dt = 1A/\mu s$ .
- Input fusing is required based on surge 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.
- Input reflected ripple current test set-up uses a Pi filter; 220µF, 12µH, 100µF.
- Start-up into resistive load.
- Active high remote on/off is available (standard product is active low), designate with the suffix 'H' e.g. **BXF300-48S3V3H**.
- Units should be characterised within systems. External components and filtering required.

PROTECTION	
Short circuit protection	Continuous, automatic recovery
Overvoltage protection	Latching
Undervoltage protection	Non-latching
Thermal protection	110°C baseplate, automatic recovery
TELECOM SPECIFICATIONS	
Central office interface A	ETS300-132-2

PIN CONNECTIONS	
PIN NUMBER	FEATURE
1	Power Good
2	Current Monitor
3	Parallel
4	Trim Adjust
5	+ Sense
6	- Sense

EXTERNAL OUTPUT TRIMMING
Output can be externally trimmed by using the method shown below.

# 90 to 198 Watt Wide Input DC/DC converters

## Mechanical notes

- 1 All dimensions in INCHES (mm).
- 2 Tolerance: x.xx ±0.02in. (0.51mm).  
x.xxx ±0.010in. (0.254mm).

