

# BXA3 Series

Single and dual output

- 3 Watts in DIL Package
- Wide input ranges 9-18V, 18-36V, 36-75V
- EN55022 conducted emissions level A (optional)
- Continuous short circuit protection
- Operating temperature range -25°C to +105°C
- Input voltage range to ETS300-132-2
- UL, VDE and CSA safety approvals



The BXA3 Series of DC/DC converters is designed to offer the optimum cost/benefit power solution for a wide variety of applications including public and private telecommunications, industrial systems and process and test equipment. The series consists of 12 models with input voltages of 9-18VDC, 18-36VDC and 36-75VDC, and offers standard output voltages of 5V, 12V and 15V in both single and dual output configurations. Continuous short circuit protection, overvoltage protection, 60mV output ripple and EN55022 level A conducted noise compliance minimize design-in time, cost and eliminate the need for external components.



2 YEAR WARRANTY

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

## SPECIFICATIONS

### OUTPUT SPECIFICATIONS

Voltage accuracy		±1.0%
Line regulation	LL to HL, all outputs	±2.5%
Load regulation	Full load to no load	±2.5%
Ripple and noise (5Hz to 20MHz)	+5V output	60mV pk-pk, max., 15mV rms
	All others	100mV pk-pk, max., 15mV rms
Temperature coefficient		±0.02%/°C, max.
Over voltage protection	Clamp diode	135% Vout
Short circuit protection		Continuous automatic recovery

### INPUT SPECIFICATIONS

Input voltage range	12VDC	9 to 18VDC
	24VDC	18 to 36VDC
	48VDC	36 to 75VDC
Input filter	Suffix '-F' (See Note 5)	Pi type
Reverse voltage protection	(See Note 7)	Yes
Max. input rise and fall time	Output remains within specification	5V/ms

### EMC CHARACTERISTICS

Conducted emissions	EN55022, FCC part 15 Suffix '-F' versions (See Notes 5, 6)	Level A
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### GENERAL SPECIFICATIONS

Efficiency	See table	68% typical
Isolation voltage	Input/output	500VDC
Switching frequency	Variable	200kHz to 1MHz
Approvals and standards	VDE0805, EN60950, IEC950 UL1950, CSA C22.2 No. 950	
Case material	Non-conductive black plastic	
Material flammability	UL94V-0 min.	
Weight	15g (0.53oz)	
MTBF	MIL-HDBK-217F	800,000 hours

### ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Operating ambient (See derating curve)	-25°C to +105°C
	Non-operating amb	-40°C to +105°C
	Cooling	Free air convection cooled
Relative humidity	Non-condensing	5% to 95% RH
Altitude	Operating	10,000 feet max.
	Non operating	40,000 feet max.
Vibration	5Hz to 500Hz	2.5G rms (approx.)

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INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (1)	INPUT CURRENT (2)	TYPICAL EFFICIENCY	REGULATION		MODEL NUMBER (5)
					LINE (3)	LOAD (4)	
9-18VDC	5.0V	500mA	285mA	74%	±2.5%	±2.5%	BXA3-12S05
9-18VDC	12.0V	250mA	335mA	75%	±2.5%	±2.5%	BXA3-12S12
9-18VDC	±5.0V	±250mA	285mA	75%	±2.5%	±2.5%	BXA3-12D05
9-18VDC	±12.0V	±125mA	335mA	75%	±2.5%	±2.5%	BXA3-12D12
9-18VDC	±15.0V	±100mA	335mA	75%	±2.5%	±2.5%	BXA3-12D15
18-36VDC	12.0V	250mA	165mA	76%	±2.5%	±2.5%	BXA3-24S12
18-36VDC	15.0V	200mA	165mA	76%	±2.5%	±2.5%	BXA3-24S15
18-36VDC	±12.0V	±125mA	165mA	76%	±2.5%	±2.5%	BXA3-24D12
18-36VDC	±15.0V	±100mA	165mA	76%	±2.5%	±2.5%	BXA3-24D15
36-75VDC	±5.0V	±250mA	83mA	76%	±2.5%	±2.5%	BXA3-48D05
36-75VDC	±12.0V	±125mA	83mA	76%	±2.5%	±2.5%	BXA3-48D12
36-75VDC	±15.0V	±100mA	83mA	76%	±2.5%	±2.5%	BXA3-48D15

## Notes

- 1 Maximum.
- 2 Maximum figure at full load (nominal).
- 3 Low line to high line.
- 4 Full load to no load.
- 5 An optional internal filter is available. When the filter is added, the BXA3 will meet VDE0871-A, VDE0878-A and EN55022-A. Add the suffix '-F' to the model number, e.g. **BXA3-12D12-F**.
- 6 Conducted noise filtering to EN55022 level B may be accomplished by putting the following capacitors across the input pins.

12VDC	5µF ceramic X7R dielectric type
24VDC	3µF ceramic X7R dielectric type
48VDC	1µF ceramic X7R dielectric type
- 7 Reverse voltage protection can be implemented by putting a fast blow fuse on the positive input rail. Rate the fuse for 250mA at 48VDC input, 500mA at 24VDC input and 1000mA at 12VDC input.

## International Safety Standard Approvals

 VDE0805/EN60950/IEC950 Licence No. 5856

 UL1950 File No. E136005

 CSA C22.2 No. 950 File No. LR41062C

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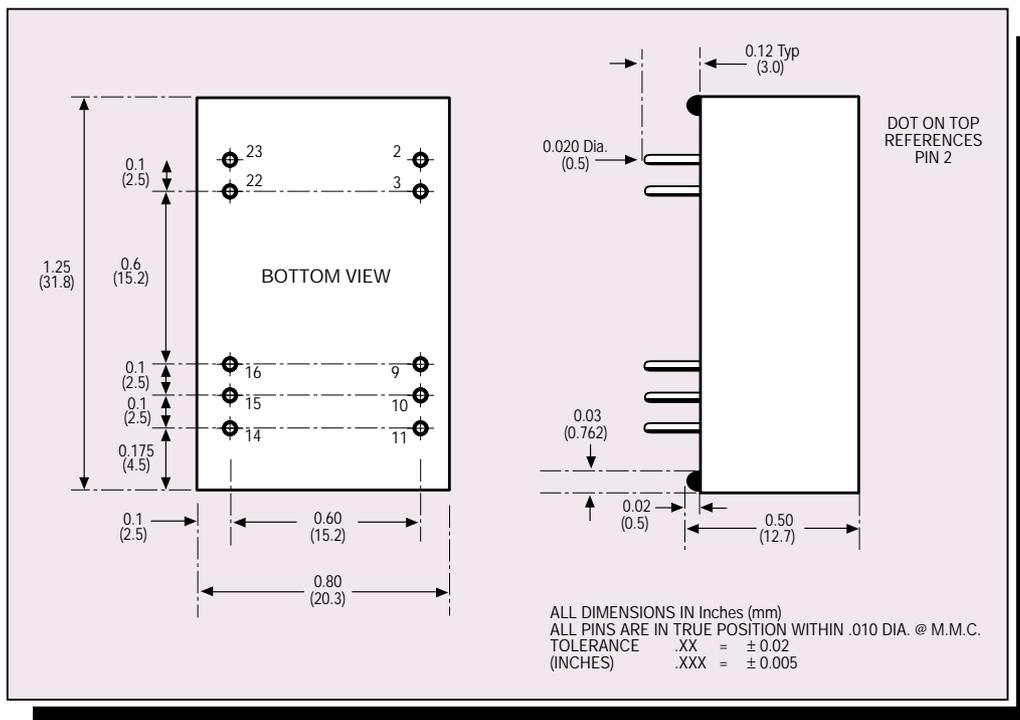
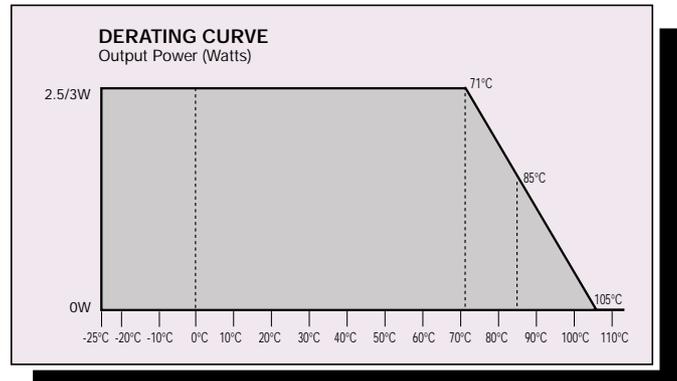
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DC/DC CONVERTERS | 3W Wide Input DC/DC Converters

3

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PIN CONNECTIONS		
PIN NUMBER	SINGLE OUTPUT	DUAL OUTPUT
2	-Vin	-Vin
3	-Vin	-Vin
22	+Vin	+Vin
23	+Vin	+Vin
9	No Pin	Common
10	No Pin	No Pin
11	No Connection	-Vout
14	+Vout	+Vout
15	No Pin	No Pin
16	-Vout	Common



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