Rev.03.07.07
bxa10
1 of 4

BXA10 Series
Single and dual output

Total Power: 8 - 10W
Input Voltage: 9 - 18VDC
18 - 75VDC
# of Outputs: Single

Special Features

- 1 x 2 x 0.395 inch package with stand-offs
- 13.3 Watts/in3 power density
- CISPR22 and EN55022 conducted emission level A
- UL, CSA and VDE approvals (48V input only)
- Continuous short circuit protection
- Optional remote ON/OFF
- Available RoHS compliant
- 2 year warranty

The BXA10 series of dc-dc converters, comprising 7 different models, is designed for a wide range of applications including communications, industrial systems and mobile battery powered systems. Packing up to 10 Watts of power into a 2 x 1 x 0.395 inch package, with efficiencies as high as 85%, the BXA10 has wide input ranges of 9 Vdc to 18 Vdc and 18 Vdc to 75 Vdc, and is available in single and dual output versions. Isolation of 1500 Vdc, approval to EN60950 2nd edition, coupled with reduced conducted noise for simplified compliance to FCC Part 15 level A and EN55022 level A, make the BXA10 ideal for telecommunications and distributed power applications. Other features include overvoltage protection, continuous short circuit protection with automatic recovery and remote on/off, all of which minimize the need for external circuitry and make the BXA10 a recommended component in distributed power systems.

Safety

VDE0805/EN60950/IEC950
File No. 10401-3336-0084
Licence No. 1812

UL1950 File No. E174104

CSA C22.2 No. 950
File No. LR41062C

ARTESYN

EMERSON
Network Power

Specifications

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

OUTPUT SPECIFICATIONS

Line regulation	LL to HL, single output LL to HL, dual output	±0.2% ±0.2%
Load regulation	10% to 100% FL (See Note 4)	±0.5%
Minimum load	48 V models 12 V models	10% full load No minimum load
Overshoot	At start-up	10% max.
Ripple and noise (See Note 2)	5 Hz to 20 MHz	100 mV pk-pk, max. 20 mV rms
Transient response	25% load step	±2.0% max. dev., 250 µs recovery to within ±1.0%
Temperature coefficient		±0.02%/°C max.
Overvoltage protection	Clamp type	See table
Short circuit protection	Hiccup	Continuous automatic recovery

INPUT SPECIFICATIONS

Input voltage range	12 Vdc (See Note 6) 48 Vdc	9-18 Vdc 18-75 Vdc
Input filter		Pi type
Start up surge current	Resistive load	1.5 A max.
Remote ON/OFF ON (See Note 3) OFF OFF idle current		Open collector compatible High impedance >400 kΩ Low impedance <1.0 kΩ <1.5 mA
Start-up time		1.6 s, max.

EMC CHARACTERISTICS

Conducted emissions	EN55022, FCC (See Note 8)	Level A
ESD air	EN61000-4-2, level 2	Perf. criteria 1
ESD contact	EN61000-4-2, level 3	Perf. criteria 1
Surge	EN61000-4-5, level 2	Perf. criteria 1
Fast transients	EN61000-4-4, level 2	Perf. criteria 1
Radiated immunity	EN61000-4-3, level 3	Perf. criteria 1
Conducted immunity	EN61000-4-6, level 3	Perf. criteria 1

GENERAL SPECIFICATIONS

Efficiency		See table
Isolation voltage	Input/output Input or output to case	1500 Vdc 1000 Vdc
Switching frequency	Fixed	400 kHz
Approvals and standards	Safety	VDE0805, EN60950, IEC950 UL1950, CSA C22.2 No. 950
Case material		Black coated, six-sided metal case
Material flammability		UL94V-0
Weight		20 g (0.71 oz)
MTBF	MIL-HDBK-217F Bellcore	519,000 hours >2 million hours

ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Operating ambient (See derating curve) Non-operating amb. Case Derating Cooling	-25 °C to +71 °C -55 °C to +125 °C +110 °C max. See derating curve Free air convection cooled
Relative humidity	Non-condensing	5% to 95% RH
Altitude	Operating Non operating	10,000 feet max. 40,000 feet max.
Vibration	5-500 MHz	2.5 G rms (approx.)

Specifications Contd.

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT (1)	TYPICAL EFFICIENCY	OVP	REGULATION (Typ.)		MODEL NUMBER (3,9,10)
						LINE	LOAD	
9-18 Vdc	5 V	2 A	1.1 A	81%	6.2 Vdc	±0.2%	±0.5%	BXA10-12S05J
9-18 Vdc	15 V	0.67 A	1.05 A	85%	18 Vdc	±0.2%	±0.5%	BXA10-12S15J
9-18 Vdc	±5 V	±1 A	1.05 A	81%	12 Vdc	±0.2%	±0.5%	BXA10-12D05J
18-75 Vdc	5 V	2 A	0.26 A	82%	6.8 Vdc	±0.2%	±0.5%	BXA10-48S05J
18-75 Vdc	±5 V	±1 A	0.26 A	82%	12 Vdc	±0.2%	±0.5%	BXA10-48D05J
18-75 Vdc	±12 V	±0.416 A	0.25 A	84%	30 Vdc	±0.2%	±0.5%	BXA10-48D12J
18-75 Vdc	±15 V	±0.333 A	0.25 A	84%	36 Vdc	±0.2%	0.5%	BXA10-48D15J

Notes

1 At nominal input and output voltage and maximum load.
2 Output ripple can be reduced to <50 mV with the addition of a 33 µF, 25 V, AVX-TPS (or equivalent) tantalum capacitor. Consult factory for further information.
3 For units with optional remote ON/OFF, please add the suffix '-S' to the model number: e.g. **BXA10-48S05-SJ**. Maximum open pin voltage 14 Vdc.
4 Assumes balanced loads on dual output models.
5 High impedance source/long input power cable may necessitate the introduction of an input filter.
6 Typical 9 Vdc to 18 Vdc model start-up voltage is 9 V. Maximum start-up voltage is 9.5 V (>0 °C) or 9.7 V (<0 °C).
7 It is recommended that an IEC127, 250 V, fast blow fuse is used rated at 4 A for nominal 12 V models and 2 A for 48 V models.
8 To achieve compliance to EN55022-A and FCC part 15 Class A, external capacitors of the following values are needed:

Model	C1*	C2	C3
BXA10-12xxxx	10 µF film, 25 V	0.22 µF film	0.22 µF film
BXA10-48xxxx	10 µF film, 100 V	0.22 µF film	0.22 µF film

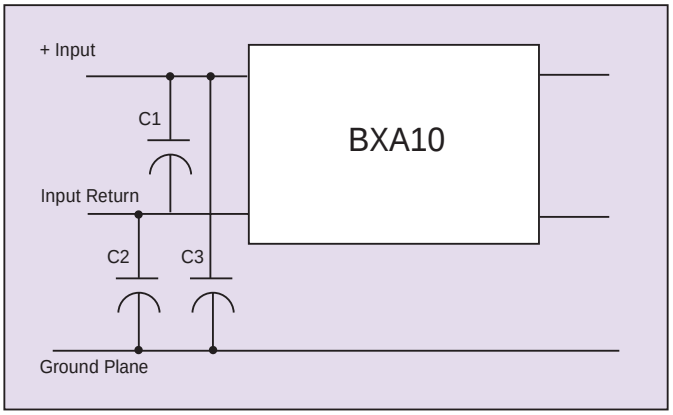
(C2, C3 voltage rating application dependent)
* Siemens P.N. B32512-J1106-J or equivalent.

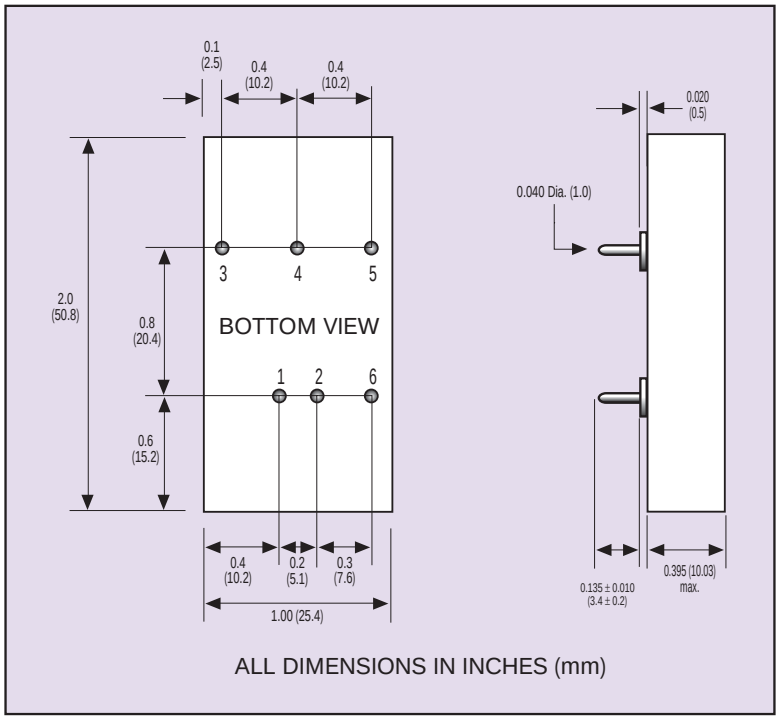
9 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant. TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
10 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at http://www.artesyn.com/powergroup/products.htm to find a suitable alternative.

Please check with your local representative or the Model Search Tool for the latest available product codes.

PIN CONNECTIONS		
PIN NUMBER	SINGLE OUTPUT	DUAL OUTPUT
1	+Vin	+ Vin
2	– Vin	– Vin
3	+ Vout	+ Vout
4	No Pin	Common
5	– Vout	– Vout
6*	Remote ON/OFF	Remote ON/OFF

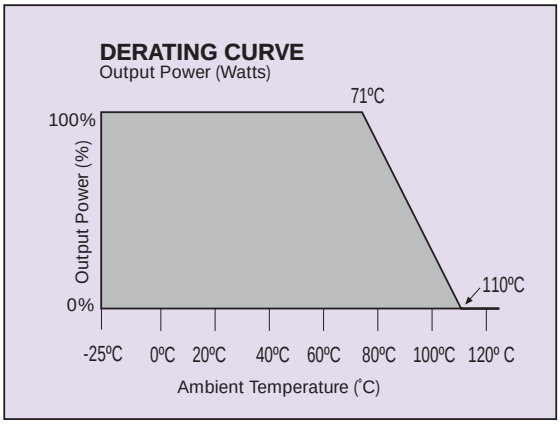
* Optional remote ON/OFF pin. Add Suffix '-S' to the model number (Note 3).





Mechanical Notes

A Recommended PCB hole diameter is 0.052 inches (1.32 mm).
B All pins are in true position within 0.010 inches (0.25 mm).
C Tolerance (inches): .XX = ±0.02
XXX = ±0.005



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