ARTESYN™
TECHNOLOGIES

BXA75 SERIES

Single output

[2 YEAR WARRANTY]

CE (LVD)

- **3.5 x 2.4 x 0.5 inch package with stand-offs**
- **19 Watts/in³ power density**
- **Efficiency up to 87%**
- **CISPR 22 and EN55022 conducted emissions level A**
- **UL, VDE and CSA safety approvals**
- **Indefinite short circuit protection**
- **Baseplate operating temperature range of –25°C to +85°C**

The BXA75 series are high density DC/DC converters ideally suited for a wide variety of communications, industrial, computer and distributed power applications. With up to 80 Watts of power in a 3.5 x 2.4 x 0.5 inch package and efficiencies as high as 87%, the BXA75 can address a host of demanding power requirements, offering a wide input range of 36-75VDC with industry standard outputs of 3.3V, 5V, 12V and 15V. Approval to EN60950 and EN41003 coupled with conducted emissions compliance to CISPR 22, FCC and EN55022 level A, facilitate easy and cost effective design-in for communications systems. The demands of industrial systems are met by a baseplate operating temperature range of –25°C to 85°C, overvoltage, overtemperature and short circuit protection, along with tight load and line regulation and output ripple as low as 15mV rms. Other standard features include remote enable, remote sense and external trim.

SPECIFICATION

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

OUTPUT SPECIFICATIONS		
Voltage adjustability	3.3V and 15V 5V and 12V	+10%, -3.0% +10%, -5.0%
Voltage accuracy		±0.5%
Remote sense		0.5V line drop compensation
Total error band	See Note 2	±2.0%
Line regulation	Typical	±0.15%
Load regulation	Typical	±0.3%
Ripple and noise	5Hz-20MHz, See Note 3 No external capacitor	50mV pk-pk 15mV rms max. 100mV pk-pk, 25mV rms max.
Transient response (75% to 100% load step)		±4.0% max. dev. 100µs recovery to within 1% Vo
Temperature coefficient		±0.02%/°C Max.
Overvoltage protection	See Note 5	Yes, see table
Short circuit protection		Continuous automatic recovery
INPUT SPECIFICATIONS		
Input voltage range		36 to 75VDC
Input filter	See Note 4	Yes
Remote ON/OFF Logic compatibility ON OFF Shutdown idle current	(Ref. to -Vin)	 CMOS/TTL >3.5VDC or open circuit <0.8VDC Less than 50mA

EMC CHARACTERISTICS		
Conducted noise Surge susceptibility	EN55022, FCC, Note 4 100V	Level A No damage
GENERAL SPECIFICATIONS		
Efficiency		See table
Isolation voltage		1500VDC
Switching frequency		500kHz ±5.0%
Approvals and standards	Safety	VDE0805, EN60950 IEC950, UL1950 CSA C22.2 No. 950
Case material		Plastic with aluminum baseplate
Material flammability		UL94V-0
Weight		160g (5.65oz)
MTBF	Bellcore, 25°C baseplate	2,600,000 hours minimum
ENVIRONMENTAL SPECIFICATIONS		
Thermal performance See Note 6	Operating, See curves Non-operating Over temperature shutdown	-25°C to +85°C –55°C to +125°C 115°C internal temperature auto. recovery
Altitude	Operating Non operating	10,000 feet max. 40,000 feet max.
Vibration	5Hz to 500Hz	2.4G RMS (approx.)

International Safety Standard Approvals

VDE0805/EN60950/IEC950 File No. 10401-3336-1073

UL1950 File No. E136005

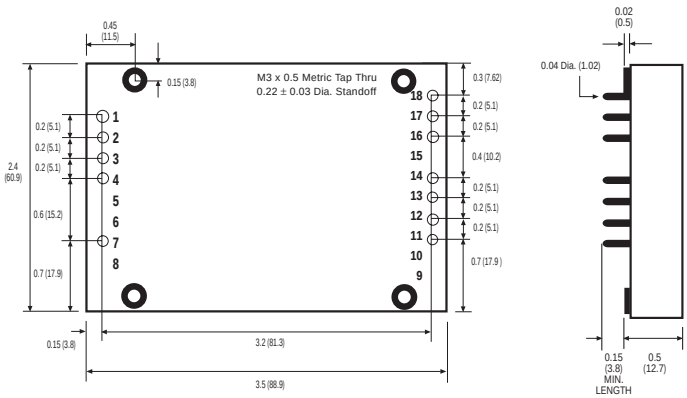
CSA C22.2 No. 950 File No. LR41062C

66 to 75 Watt
Wide input DC/DC converters

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	OVP (5)	INPUT CURRENT (1)	EFFICIENCY	REGULATION		MODEL NUMBER (6)
						LINE	LOAD	
36-75VDC	3.3V	20.0A	4VDC	2.18A	79%	±0.1%	±0.1%	BXA75-48S3V3
36-75VDC	5.0V	15.0A	6.2VDC	1.95A	83%	±0.1%	±0.1%	BXA75-48S05
36-75VDC	12.0V	6.3A	14VDC	1.85A	86%	±0.1%	±0.1%	BXA75-48S12
36-75VDC	15.0V	5.0A	18VDC	1.80A	87%	±0.1%	±0.1%	BXA75-48S15

Notes

1 At nominal input and output voltage and maximum load.
2 Total error band is defined as the static output regulation at 25°C including initial setting accuracy, input voltage within stated limits and output current within stated limit.
3 Measured with 10µF tantalum capacitor across output.
4 EMI measured on either line into a 50Ω LISN with 120µF electrolytic input capacitor.
5 Overvoltage limit may be tested by applying -5V to -15V to the trim pin 11 with respect to –sense pin 18.
6 To order optional standard heatsink, please add suffix '-1' to model number e.g. **BXA75-48S05-1**.



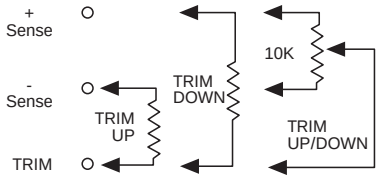
View from Underside (Pin Side)

ALL DIMENSIONS IN INCHES (mm)
All pins are in true position within .010 DIA. @ M.M.C.
Tolerance (inches) .XX = ± 0.02
.XXX = ± 0.005
Heatsink adds 0.74" to height of unit.

PIN CONNECTIONS			
PIN NUMBER	FUNCTION	PIN NUMBER	FUNCTION
1	– Vin	10	No Pin
2	– Vin	11	Trim
3	+ Vin	12	+ Sense
4	+ Vin	13	+ Vout
5	No Pin	14	+ Vout
6	No Pin	15	No Pin
7	Remote On/Off	16	– Vout
8	No Pin	17	– Vout
9	No Pin	18	– Sense

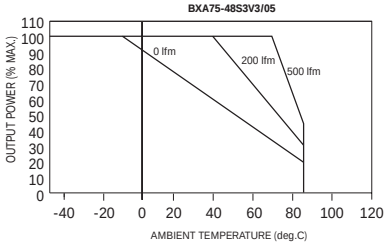
EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using either method shown below.

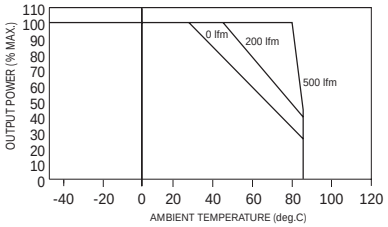


Temperature Derating Data

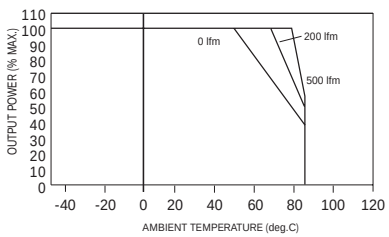
TEMPERATURE DERATING WITHOUT HEATSINK
BXA75-48S3V3/05



TEMPERATURE DERATING WITHOUT HEATSINK
BXA75-48S12/15



TEMPERATURE DERATING WITH HEATSINK
BXA75-48S3V3/05 (Note 6)



TEMPERATURE DERATING WITH HEATSINK
BXA75-48S12/15 (Note 6)