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BXA30 Series

Triple output

- Pin-compatible with BXA15 series
- Designed to meet telecom power supply interface standard ETS300-132-2
- UL, CSA and VDE approvals
- VDE0878 and EN55022 conducted emissions level A
- EN61000-4-2, -3, -4, -5, -6 immunity compliant
- Fixed frequency operation at 350kHz
- MTBF in excess of 7,005,000 hours (demonstrated)
- Basic insulation system



The BXA30 triple output Series, comprising 2 different models, has been conceived as an applications-specific range of DC/DC converters, specifically addressing telecommunications, industrial electronics, test equipment, mobile telecommunications and distributed power applications. The series offers two wide input voltage ranges, 18-36VDC and 36-75VDC. Designed to meet ETSI telecoms interface standards ETS300-132-2 and BTR2511, together with internal filtering to EN55022 level A, safety approval to EN60950 and UL1950, and basic insulation of 1500VDC, the 48VDC model is ideal for telecommunications applications. The 24V model is particularly suited to industrial, mobile telecom and test equipment applications, featuring EN61000-4-2, -3, -4, -5 and -6 immunity compliant. Other features include low output ripple, overvoltage protection, short circuit protection, remote enable.



2 YEAR WARRANTY

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

OUTPUT SPECIFICATIONS

Output power	30W	
Line regulation (See Note 1)	Main output	±0.5%
	Auxiliary output	±2.0%
Load regulation (See Note 2)	Main output	±1.0%
	Auxiliary output	±3.0%
Ripple and noise (20MHz bandwidth)	Main output	75mV pk-pk 15mV rms
	Auxiliary outputs	100mV pk-pk 20mV rms
Temperature coefficient	±0.02%/°C	
Overvoltage protection	Transient, all outputs	135% V _{out} init.
Short circuit protection	All outputs (See BXA15/30 Design Note 101)	Yes
Transient response	25% to 100% load, all outputs	10%
Voltage accuracy	Main output	±1.5%
	Auxiliary output	±3.0%
Load cross regulation	20% to 100% load	
	Main: output	1.0%
	Auxiliary: output	10%
	50% to 100% load, main, >20% aux.	
	Main output	1.0%
	Auxiliary output	4.0%
Minimum load (See Note 10)	Main output for auxiliary regulation	≥10%

INPUT SPECIFICATIONS

Input voltage range	24V _{in} nominal 48V _{in} nominal	18 to 36VDC 36 to 75VDC
Reverse voltage prot.	(See Note 6)	Yes
Max. input rise and fall time	48V	5V/ms ETS300-132
Remote ON/OFF Logic compatibility	ON OFF	CMOS/TTL Open circuit <1VDC

EMC CHARACTERISTICS

Conducted emissions	EN55022, FCC part 15 (Note 3)	Level A
	EN55022, FCC part 15 (Note 4)	Level B
	VDE0878 (Note 3) (48V)	Level A
Radiated emissions	EN55022, FCC part 15	Level A
ESD air	EN61000-4-2, level 3	Perf. criteria 2
ESD contact	EN61000-4-2, level 4	Perf. criteria 2
Surge	EN61000-4-5, level 3	Perf. criteria 2
Fast transients	EN61000-4-4, level 3	Perf. criteria 2
Radiated immunity	EN61000-4-3, level 3	Perf. criteria 2
Conducted immunity	EN61000-4-6, level 3	Perf. criteria 2

GENERAL SPECIFICATIONS

Efficiency	See table	
Isolation voltage	Input/output	1500VDC
Basic insulation	Input/case, 48V models	1500VDC
Switching frequency	Fixed	350kHz, nom.
Approvals and standards (See Note 11)	VDE0805, EN60950 EN41003, IEC950, UL1950 CSA C22.2 No. 950	
Case material	Aluminum substrate with plastic case	
Material flammability	UL94V-0	
Weight	130g (4.6oz)	
MTBF (See Note 9)	Demonstrated @25°C	7,005,000 hours

ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Baseplate operating temperature, (See Notes 5, 7)	-25°C to +100°C
	Non-operating	-55°C to +100°C
Thermal impedance	Free air convection, baseplate to air	6.5°C/W
	With heatsink (See Note 7)	5.2°C/W

BXA30 Series

Triple output

DC/DC CONVERTERS

30W Wide Input DC/DC Converters

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For the most current data and application support visit www.artesyn.com/powergroup/products.htm

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MAX.)	OUTPUT CURRENT (MIN.)	INPUT CURRENT NO LOAD	TYPICAL EFFICIENCY	MODEL NUMBER ^(3,5)
18-36VDC	5±15VDC	3±0.5A	0.3±0.05A	70mA rms	81%	BXA30-24T05-15
36-75VDC	5±12VDC	3±0.625A	0.3±0.062A	40mA rms	83%	BXA30-48T05-12




Notes

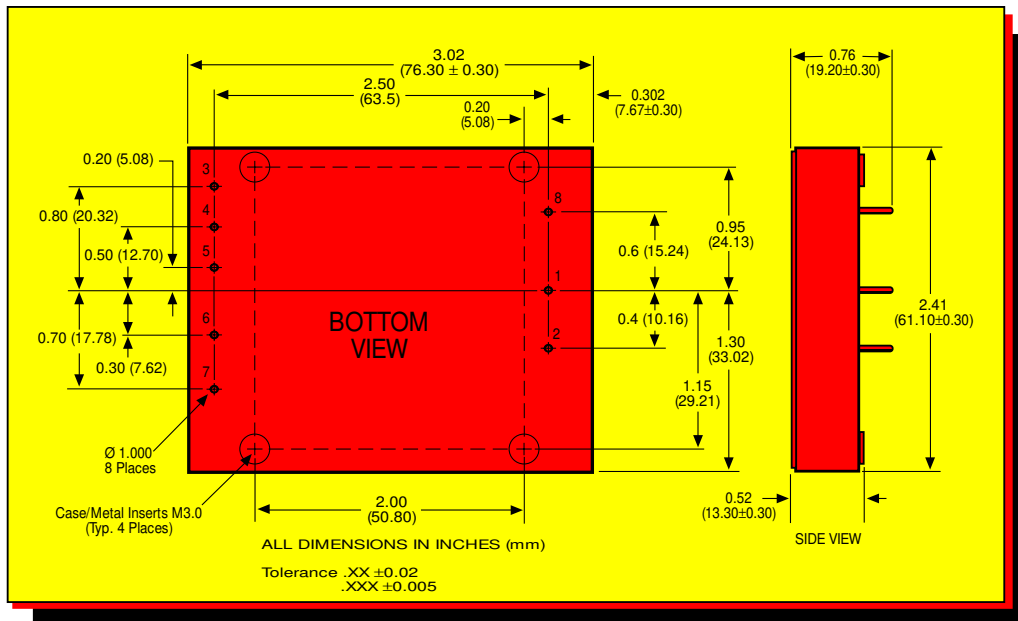
- Nominal line to high line. Nominal line to low line.
- 20% FL to full load. The value stated is for balanced loads.
- An optional internal filter is available, which will meet VDE0871 level A, VDE0878 level A and EN55022 level A. Add the suffix '-F' to the model number, e.g. **BXA30-48T05-12-F**. See BXA15 and BXA30 Design Note 100.
- For conducted noise operation of the BXA30 to VDE0871, VDE0878 and EN55022 level B, see BXA15 and BXA30 Design Note 100.
- For extended operating temperature, include the heatsink option, '-1' in the model number. Maximum heatsink height is 12.5mm, e.g. **BXA30-48T05-12-1**.
- Reverse voltage protection can be implemented by putting a slow blow fuse on the negative input rail. Rate the fuse for 100VDC at 1.5A for the 48V model and 50VDC at 3A for the 24V model.
- The maximum operating ambient temperature, without derating depends on internal power dissipation and cooling method. BXA15 and BXA30 Design Note 100 provides detailed thermal calculations and design-in details.
- Visit the Artesyn website to download a copy of Design Note 100.
- Test results to-date are 1,590,000 hours @46°C. The MTBF figure shown includes a calculated acceleration factor of 4.1 based on an activation energy of -0.55 eV.
- The load on the main output must exceed 10% to ensure operation of the unit to specification.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.

PIN CONNECTIONS

PIN NUMBER	TRIPLE OUTPUT
1	+ Vin
2	- Vin
3	+ Auxiliary Output
4	Output Common
5	- Auxiliary Output
6	+ Main Output
7	No Connection
8	Remote On/Off

International Safety Standard Approvals

-  VDE0805/EN60950/IEC950 File No. 14501-3336-7006
 Licence No. 6231
 UL1950 File No. E174104
 CSA C22.2 No. 950 File No. LR41062C



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Please consult our website for the following items: ✓ Design Note

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