

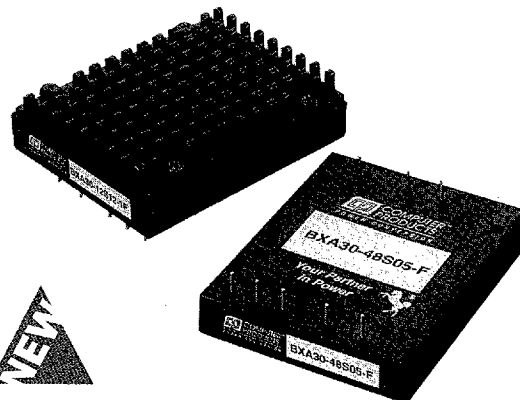
BXA30 SERIES

Single, dual and triple output

Recommended for new design-ins

- Designed to meet telecom power supply interface standard prETS300-132
- Designed to meet EN60950 2nd Ed., UL1950, EN41003, UL1459 2nd Ed., CSA950
- Internal implementation of VDE0878-A and EN55022-A
- Noise immunity to EN61000-4-2, -4, -5
- Fixed frequency operation at 350kHz
- MTBF in excess of 750,000 hours (BELLCORE)
- Pin-compatible with WR30 and WR-U Series

The BXA30 Series, comprising 16 different models, has been conceived as an applications-specific range of DC/DC converters, targeted specifically at the telecommunications, industrial electronics, test equipment, mobile telecommunications and distributed power markets. The series offers three wide input voltage ranges, 9-18VDC, 18-36VDC and 36-75VDC, and is available in single, dual and triple output versions. Designed to meet ETSI telecoms interface standards prETS300-132 and BTR2511, together with internal filtering to EN55022-A, safety



2 YEAR WARRANTY

CE (LVD)
(48V models)

approval to EN60950, UL1950 and CSA, and isolation of 1500VDC, the 48VDC models are ideal for telecommunications applications.

The 12V and 24V models are particularly suited to industrial, mobile telecom and test equipment applications, featuring EN61000-4-2, EN61000-4-4 and EN61000-4-5 noise immunity compliance. Other features include low output ripple, overvoltage protection, indefinite short circuit protection, remote enable and remote sense.

SPECIFICATION

ALL SPECIFICATIONS ARE TYPICAL AT NOMINAL INPUT, FULL LOAD AND 25°C UNLESS OTHERWISE STATED

OUTPUT SPECIFICATIONS		
Voltage adjustability	Singles	±10%
Line regulation	LL-HL (Single/Dual) (Triple)	±0.2%/±0.4% ±0.5% main ±1.0% aux.
Load regulation	FL-NL (Single/Dual) (Triple)	±0.2%/±0.4% ±1.0% main ±2.0% aux.
Ripple and noise 20MHz bandwidth	3.3V 5.0V All others All models	60mV pk-pk 50mV pk-pk 100mV pk-pk 20mV rms
Temperature coefficient		±0.02%/°C
Overvoltage protection	Transient	135% Vout
Short circuit protection	Singles Duals/Triples (single short) Duals/Triples (dual short)	Indefinite See BXA15 and BXA30 Design Note 100 Indefinite
Transient response	25% to 100% load(Singles/Duals) (Triples)	4.0% 10%
Voltage accuracy		±1.5%
Load cross regulation	Dual output 30% - 100% output variation	3.0%
INPUT SPECIFICATIONS		
Input voltage range	12Vin nominal 24Vin nominal 48Vin nominal	9-18VDC 18-36VDC 36-75VDC
Reverse voltage protection	See Note 7	Yes
Max. input rise and fall time	48V	5V/ms pr ETS300-132
Remote ON/OFF Logic compatibility		CMOS/TTL Open circuit <1VDC

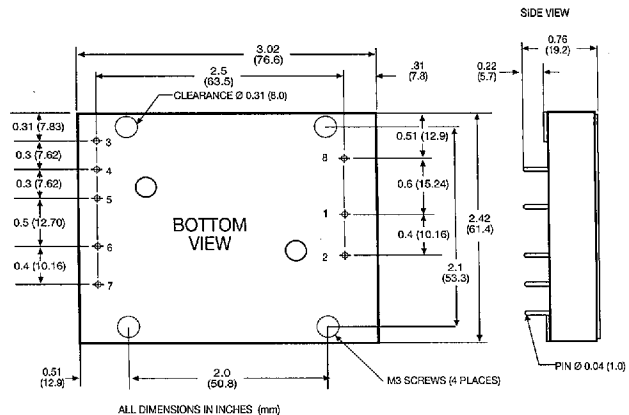
ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS		
Conducted noise	Internal filter option, 48V models, Note 4 External circuit, Note 5	EN55022-A VDE0878-A EN55022-B
Electrostatic discharge		EN61000-4-2
Input transients - bursts		EN61000-4-4
Input transients - surge		EN61000-4-5
Input transients	48V models, prETS300-132	200V for 100ms
GENERAL SPECIFICATIONS		
Efficiency		See table
Isolation voltage	Input/output input/case, 48V models	1500VDC 1500VDC
Switching frequency	Fixed	350kHz
Approvals and standards (pending)	Safety	EN60950, EN41003 UL1950, UL1459 2nd Ed. CSA950
Case material		Aluminum substrate with plastic case
Material flammability		UL94V-0
Weight		120g (4.24oz)
MTBF	BELLCORE, TR-NWT-332 HRD4	750,000 hours 2,500,000 hours
ENVIRONMENTAL SPECIFICATIONS		
Thermal performance	Baseplate operating temperature, See Notes 6 and 8 Non-operating	-25°C to +100°C -55°C to +100°C
Thermal impedance	Free air convection, baseplate to air With heatsink, see Note 8	6.5°C/W 5.2°C/W

30 Watt Wide input DC/DC converters

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MAX.)	INPUT CURRENT (I)	TYPICAL EFFICIENCY	REGULATION		MODEL NUMBER
					LINE (2)	LOAD (3)	
9-18VDC	5.0V	5.0A	100mA	80%	±0.2%	±0.2%	BXA30-12S05
9-18VDC	12.0V	2.5A	100mA	84%	±0.2%	±0.2%	BXA30-12S12
9-18VDC	15.0V	2.0A	100mA	86%	±0.2%	±0.2%	BXA30-12S15
9-18VDC	±12.0V	±1.25A	100mA	84%	±0.4%	±0.4%	BXA30-12D12
18-36VDC	5.0V	5.0A	60mA	80%	±0.2%	±0.2%	BXA30-24S05
18-36VDC	12.0V	2.5A	60mA	84%	±0.2%	±0.2%	BXA30-24S12
18-36VDC	15.0V	2.0A	60mA	86%	±0.2%	±0.2%	BXA30-24S15
18-36VDC	±12.0V	±1.25A	60mA	84%	±0.4%	±0.4%	BXA30-24D12
18-36VDC	±15.0V	±1.0A	60mA	86%	±0.4%	±0.4%	BXA30-24D15
18-36VDC	5/±12.0V	3/±0.625A	70mA	81%	0.5%	1%	BXA30-24T05-12
18-36VDC	5/±15.0V	3/±0.5A	70mA	83%	0.5%	1%	BXA30-24T05-15
36-75VDC	3.3V	6.0A	30mA	75%	±0.2%	±0.2%	BXA30-48S3V3/6
36-75VDC	5.0V	5.0A	30mA	80%	±0.2%	±0.2%	BXA30-48S05
36-75VDC	12.0V	2.5A	30mA	85%	±0.2%	±0.2%	BXA30-48S12
36-75VDC	15.0V	2.0A	30mA	87%	±0.2%	±0.2%	BXA30-48S15
36-75VDC	±5.0V	±2.5A	30mA	80%	±0.4%	±0.4%	BXA30-48D05
36-75VDC	±12.0V	±1.25A	30mA	84%	±0.4%	±0.4%	BXA30-48D12
36-75VDC	±15.0V	±1.0A	30mA	86%	±0.4%	±0.4%	BXA30-48D15
36-75VDC	5/±12.0V	3/±0.625A	40mA	81%	0.5%	1%	BXA30-48T05-12
36-75VDC	5/±15.0V	3/±0.5A	40mA	83%	0.5%	1%	BXA30-48T05-15

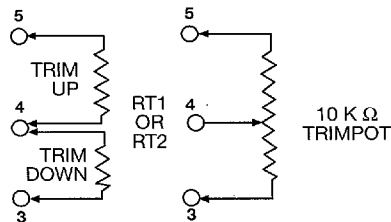
Notes

- Nominal, at no load.
- Low line to high line.
- Full load to no-load. For duals, 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. **Example: BXA30-48S12-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.
Example: BXA30-48S15-1
- Reverse voltage protection can be implemented by putting a slow blow fuse on the positive input rail. Rate the fuse for 48VDC at 1.5A; 24 VDC at 3A; 12VDC at 6A.
- The maximum operating ambient temperature, without derating depends on internal power dissipation and hence efficiency and cooling method. BXA15 and BXA30 Design Note 100 provides detailed thermal calculations and design-in hints.
- Contact your local distributor or Computer Products for BXA15 and BXA30 Design Note 100.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.



EXTERNAL OUTPUT TRIMMING

Single output models can be externally trimmed by ±10% using either method shown below.



PIN CONNECTIONS

PIN NUMBER	SINGLE OUTPUT	DUAL OUTPUT	TRIPLE OUTPUT
1	+ Vin	+ Vin	+ Vin
2	- Vin	- Vin	- Vin
3	+ Sense	+ Vout	+ Auxiliary Output
4	Trim	Common	Output Common
5	- Sense	- Vout	- Auxiliary Output
6	+ Vout	No Pin	+ Main Output
7	- Vout	No Pin	N/C
8	Remote On/Off	Remote On/Off	Remote On/Off