

# BXA40 Series

## Triple output

- Meets telecom power supply interface standard ETS300-132-2
- EN60950, CSA950 and UL1950 safety approvals
- EN61000-4-2, -3, -4, -5, -6 immunity compliant
- Fixed frequency operation at 400kHz
- MTBF in excess of 500,000 hours
- Basic insulation system with 1500V isolation
- Pin-compatible with NFC40 Series

The BXA40-48T05-12-M provides 40 Watts of output power, 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 a wide input voltage range, of 36-75VDC, and is available with a 5/±12V triple output. The BXA40 series is designed to meet ETSI telecoms interface standard ETS300-132-2. With safety approval to IEC950 and basic insulation, the 48VDC model is ideal for telecommunications applications. Other features include low output ripple, overvoltage protection, short circuit protection and remote enable.



2 YEAR WARRANTY

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

### SPECIFICATIONS

#### OUTPUT SPECIFICATIONS

Line regulation (See Note 2)	Main output Auxiliary output	±0.5% ±2.0%
Load regulation (See Note 3)	Main output Auxiliary output	±1.0% ±3.0% typ., ±5.0% max.
Load cross regulation (See Note 4)	Main output Aux. output	±1.0% ±3.0% typ., ±5.0% max.
Ripple and noise (20MHz bandwidth)	Main output Auxiliary output	50mV pk-pk, 20mV rms 100mV pk-pk, 20mV rms
Temperature coefficient		±0.02%/°C
Overvoltage protection transorbs fitted	Main output Auxiliary outputs	6.8V (nom.) 16/20V (nom.)
Short circuit protection (See Note 5)	Main output Auxiliary output	11A 5A
Transient response	25% to 100% load	4.0%
Voltage accuracy	Main output Auxiliary output	±1.0% ±3.0%
Minimum Load	Main output Auxiliary outputs	0.6A 0.03A/0.04A

#### INPUT SPECIFICATIONS

Input voltage range	48Vin nominal	36 to 75VDC
Reverse voltage protection	External fuse	(See Note 7)
Max. input rise and fall time		5V/ms ETS300-132
Start-up time		30ms typ.
Remote ON/OFF Logic compatibility ON OFF		CMOS/TTL Open-circuit <1VDC

#### EMC CHARACTERISTICS

Conducted emissions	EN55022, FCC part 15, (See Notes 6, 9)	Level B
Radiated emissions	EN55022, FCC part 15	Level A
ESD air	EN61000-4-2, level 3	Perf. criteria 1
ESD contact	EN61000-4-2, level 4	Perf. criteria 1
Surge	EN61000-4-5, level 3	Perf. criteria 1
Fast transients	EN61000-4-4, level 3	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		83%
Isolation voltage	Input/output Basic insulation, input/case	1500VDC 1500VDC
Switching frequency	Fixed	400kHz (typical)
Approvals and standards (pending)		EN60950, UL1950 CSA C22.2 No. 950
Case material		Aluminum substrate with plastic case
Material flammability		UL94V-0
Weight		85g typ. (3.0oz)
MTBF	MIL-HDBK-217F	500,000 hours
Size		2.2 x 2.2 x 0.5 inches 55.9 x 55.9 x 12.7 mm

#### ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Baseplate operating temperature Non-operating	-40°C to +105°C -55°C to +105°C
Thermal impedance (See Note 8)	No air flow, no heatsink No air flow, with heatsink	8.5°C/W 7.2°C/W

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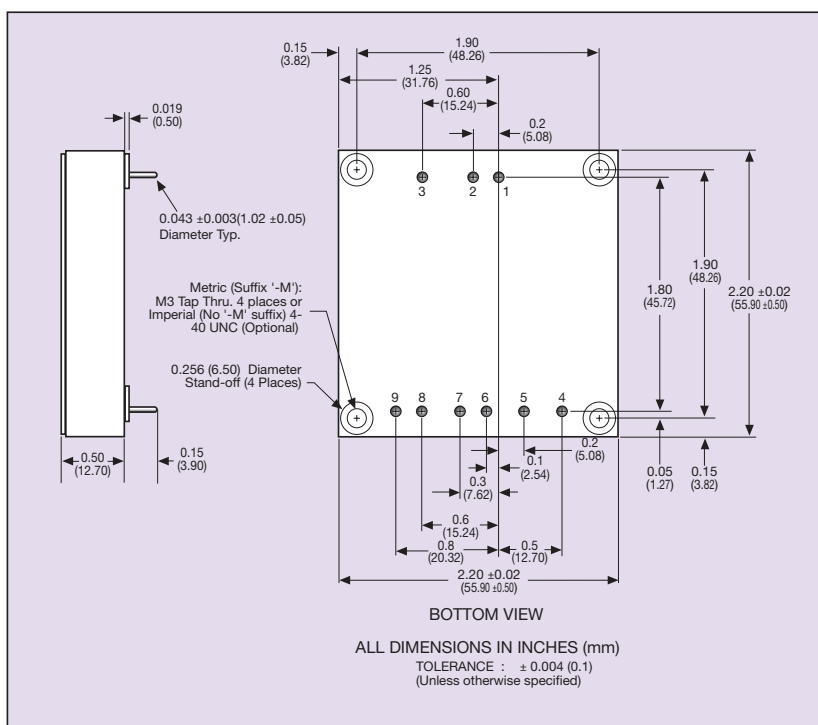
For the most current data and application support visit [www.artesyn.com/powergroup/products.htm](http://www.artesyn.com/powergroup/products.htm)

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT (MAX.)	INPUT CURRENT (1)	TYPICAL EFFICIENCY	MODEL NUMBER (10)
36-75VDC	5V/±12V	6A/±0.4A	30mA	83%	BXA40-48T05-12-M

### Notes

- Nominal line, at no load.
- Nominal line to high line, nominal line to low line.
- Load regulation:  
Main output (V1): 25 to 100% with 25% to 100% balanced on auxiliaries.  
Auxiliary outputs (V2 and V3): 25% to 100% balanced on all outputs.
- Cross regulation:  
Main output 100% load, auxiliary 100%, other auxiliary 25% to 100%.  
Auxiliary outputs (V2 and V3): main output 100% load, auxiliary 100%, other auxiliary 25% to 100% or main output 25%, auxiliary 25%, other auxiliary 25% to 100%.
- Short circuit protection, ≤ 1 minute on auxiliary outputs.
- For EMI compliance to EN55022 level B please consult factory for details.  
For EMI compliance to EN55022 level A, refer to BXA40 Design Note 101.
- Reverse voltage protection, refer to BXA40 Design Note 101.
- The maximum operating ambient temperature, without derating depends on internal power dissipation and module efficiency and cooling method. Download BXA40 Design Note 101 which provides detailed thermal calculations and design-in hints from the Artesyn website.
- It is suggested that an external filter capacitor be used. A 4μF (or greater) film capacitor such as: ITW Paktron Capstick series, part number 405K100CS4 4μF/100V is recommended, if filtering is not used. See BXA40 Design Note 101.
- The unit with the suffix '-M' at the end of the model number is offered as standard with metric threaded inserts (M3). To order a unit with imperial threaded inserts (4-40 UNC) please remove the suffix '-M' from the model number. These inserts are used for bolting the unit to a PCB and/or fixing heatsinks.

PIN CONNECTIONS	
PIN NUMBER	TRIPLE OUTPUT
1	+ Input
2	- Input
3	Control
4	+ Output (V2)
5	Common
6	- Output (V3)
7	+ Output (V1)
8	- Output (V1)
9	No Connection



### International Safety Standard Approvals

VDE0805/EN60950/IEC950 File No. 14501-3336-7009  
Licence No. 6296

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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