BXA40 Series

Triple output

ARTESYN TECHNOLOGIES

- **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.

CE (LVD) VDE

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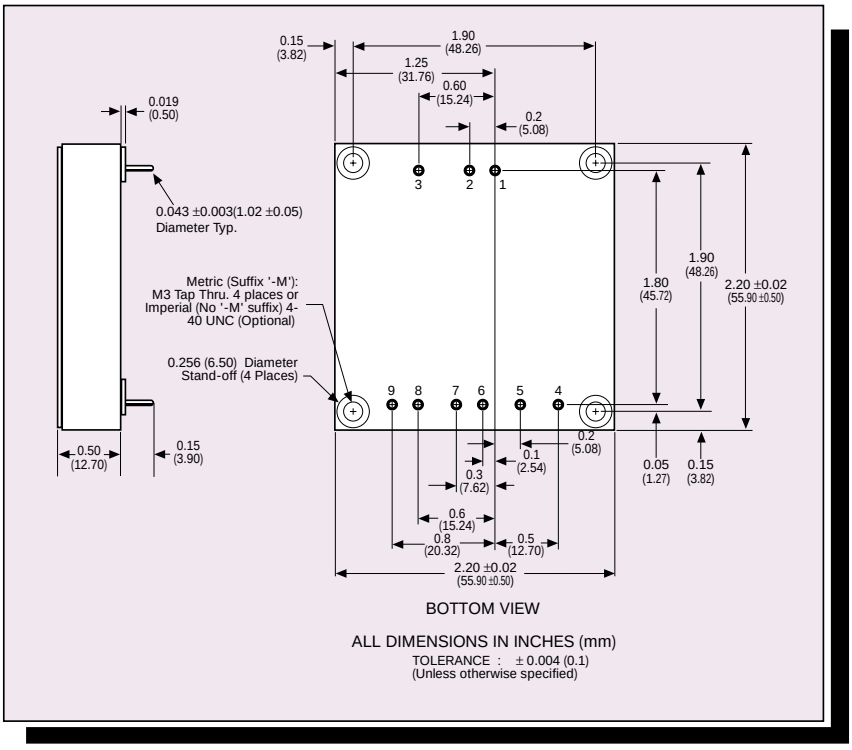
For the most current data and application support visit www.artesyn.com/powergroup/products.htm

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

1 Nominal line, at no load.
2 Nominal line to high line, nominal line to low line.
3 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.
4 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%.
5 Short circuit protection, ≤ 1 minute on auxiliary outputs.
6 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.
7 Reverse voltage protection, refer to BXA40 Design Note 101.
8 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.
9 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.
10 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.
11 A top mounted heatsink kit is available for the BXA40. The heatsink may be oriented parallel to or perpendicular to the direction of the pins, thus providing optimum flexibility for cooling requirements. The order number for the top mounted heatsink kit with metric screws is '**NFC40-HTSK-T**'. The order number for the top mounted heatsink kit with imperial screws is '**NFC40-HTSK-T-I**'.

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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