CXA10 Series

Single and dual output

- **4:1 input voltage range**
- **Approved to EN60950, UL1950, CSA C22.2 No. 950**
- **Operating ambient temperature of -40°C to +70°C in still air**
- **High demonstrated reliability with conservative component deratings**
- **Complies with ETS 300 019-1-3/2-3**
- **Complies with ETS 300 132-2 input voltage and current requirements**
- **Fully compliant with ETS 300 386-1**
- **Pin compatible with NFC10 and BXA10 series**
- **Basic insulation system (input to output)**

The CXA10 series comprising of five different models delivers single and dual output voltages covering 3.3V, 5V, 12V, ±5V, ±12 and ±15V. The series has a wide 4:1 input voltage range of 18 to 75VDC. The CXA10 has been designed as a competitive open-frame alternative for the communications market. The product is supplied in the industry standard footprint of 2.0 x 1.0 x 0.394 inches. Other product features include overvoltage protection, short circuit protection and remote on/off. All components are placed in a fully automated environment. Planar magnetics are used in the design to improve the reliability and reduce the profile of the DC/DC converter. The series has full international safety approval to EN60950 and UL1950 reducing system compliance costs, and it has a basic insulation system from input to output making it suitable for a wide variety of applications.



(LVD)

2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Voltage accuracy		±1.0%
Line regulation (LL to HL)	Singles/dual positives Dual negatives	±0.1% ±0.2%
Load regulation (not incl. cross reg.)	Full load to minimum load	±0.15%
Min. load	All outputs	10%
Ripple and noise 20MHz bandwidth	3.3V and 5.0V All others All models	30mV pk-pk 60mV pk-pk 12mV rms
Temperature coefficient		±0.01%/°C
Overvoltage protection	Clamp type	(See table and Notes 3, 4)
Short circuit protection Short <20mΩ	Hiccup	Continuous auto. recovery
Transient response	Min. load to FL	±1.0%
Load cross regulation	Min. load to FL (See Note 1)	±5.0%

INPUT SPECIFICATIONS

Input voltage range	48Vin nominal	18 to 75VDC
Input fuse	(See Note 10)	1.5A HRC
Max. input rise and fall time	48V ETS300 132-2	5V/ms
UVLO turn ON voltage UVLO turn OFF voltage	(See Note 5) (See Note 5)	94% 86%
Remote ON/OFF Logic compatibility ON OFF		(See Note 7) CMOS/TTL/Open Collector Open circuit <1VDC

EMC CHARACTERISTICS

ETS 300 386-1 table 5		
Conducted emissions	EN55022 (See Note 6) EN55022, external filter, VDE0878, 48V models	Level A Level B
Radiated emissions	See Application Note 100	
ESD air	EN61000-4-2, level 3	
ESD contact	EN61000-4-2, level 4	
Surge (500V)	EN61000-4-5, level 3, 4	
Fast transients	EN61000-4-4, level 3, 4	
Radiated immunity	EN61000-4-3, level 3	
Conducted immunity	EN61000-4-6, level 3	

GENERAL SPECIFICATIONS

Efficiency		See table
Isolation voltage	Input/output test voltage	1500VDC
Switching frequency	Fixed	400kHz
Approvals and standards (See Notes 7,8,9,10,11)		EN60950, UL1950 CSA C22.2 No. 950
Material flammability		UL94V-0
Weight		12g (0.42 oz)
MTBF (Representative model 48S05 @ 48Vin)	MIL-HDBK-217F Parts stress method Ground Benign @ 25°C	456,621 hours

ENVIRONMENTAL SPECIFICATIONS

Thermal performance	Operating ambient temperature Non-operating	-40°C to +70°C, See curves -55°C to +105°C
ETS 300 019-2-3		Classes T3.1 to T3.5
Air temperature	Low: IEC 68-2-1 High: IEC 68-2-2 Change: IEC 68-2-14	-40°C +70°C -40°C to +70°C
Relative humidity	IEC 68-2-56 IEC 68-2-30	10% to 100% RH Condensation
Vibration, Class 3M5 9 to 200Hz 1g	IEC68-2-6 MIL-STD-202F	2 to 9Hz, 3mm disp. Method 204 cond. A
Shock, Class 3M5	IEC-68-2-29 MIL-STD-202F	Method 213B cond. A

CXA10 Series

Single and dual output

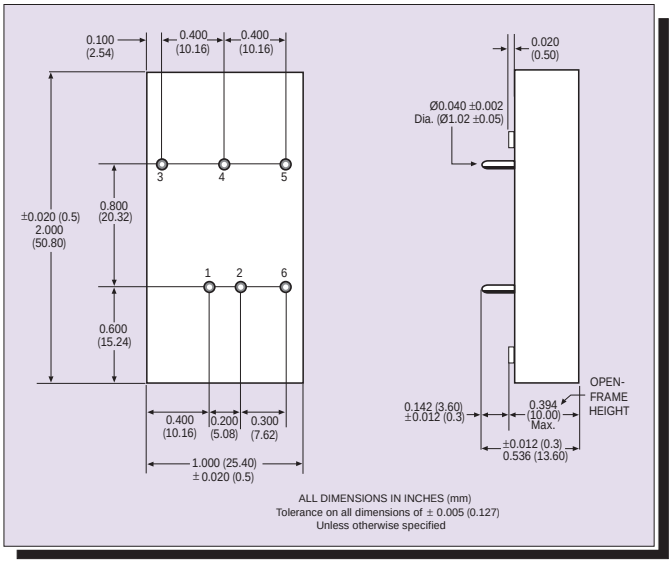
For the most current data and application support visit www.artesyn.com/powergroup/products.htm

INPUT VOLTAGE	OUTPUT VOLTAGE	OVERVOLTAGE PROTECTION (3,4)	OUTPUT CURRENT (MAX.) (9)	TYPICAL EFFICIENCY	MODEL NUMBER (7)
18-75VDC	3.3V	3.9V	2.4A	78%	CXA10-48S3V3
18-75VDC	5.0V	6.8V	2.0A	81%	CXA10-48S05
18-75VDC	12V	16V	0.83A	83%	CXA10-48S12
18-75VDC	±5V	±6.8V	1.0A	81%	CXA10-48D05
18-75VDC	±12V	±16V	0.41A	83%	CXA10-48D12
18-75VDC	±15V	±19V	0.33A	81%	CXA10-48D15

Notes

1 Negative output voltage deviation when positive load is changed.
2 Guaranteed minimum output voltage range.
3 TVS spec: See Application Note 100 on our web site.
4 On dual output models, OVP protection is on negative outputs only.
5 With respect to minimum input voltage.
6 With one external ITW Paktron 4.7µF film capacitor across the input.
7 For units with optional remote ON/OFF, please add the suffix '-S' to the model number, e.g. CXA10-48S05-S. Additional alphanumeric suffixes maybe added to indicate minor modifications not affecting the safety approvals.
8 Unit provides basic insulation up to the 75VDC maximum input voltage.
9 Maximum continuous output power not to exceed 10 Watts. 7.9 Watts for the 3V3 model.
10 User must provide 1.5A in line fuse in order to comply with safety approvals.
11 Maximum temperature on components Q100, CR101, CR102 not to exceed 120°C. See Application Note 100 for details.

CAUTION: Hazardous internal voltages and high temperatures. Ensure that unit is not user accessible.



PIN CONNECTIONS		
PIN NUMBER	SINGLE OUTPUT	DUAL OUTPUT
1	+ Input	+ Input
2	– Input	- Input
6 *	Remote ON/OFF	Remote ON/OFF
3	+ Output	+ Output
4	No Pin	Common
5	- Output	- Output

* Optional remote ON/OFF pin. Please add the suffix '-S' to the model number, e.g. CXA10-48S05-S (See Note 7).

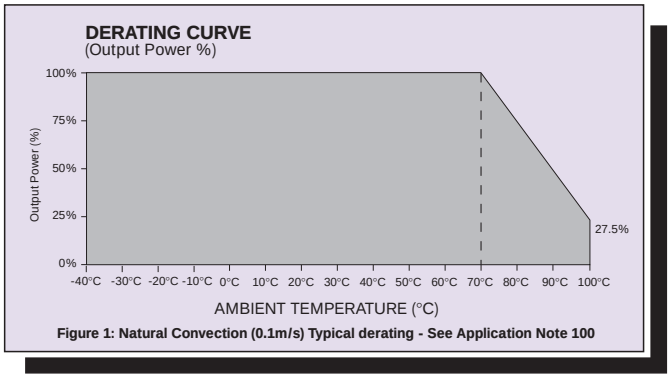


Figure 1: Natural Convection (0.1m/s) Typical derating - See Application Note 100

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