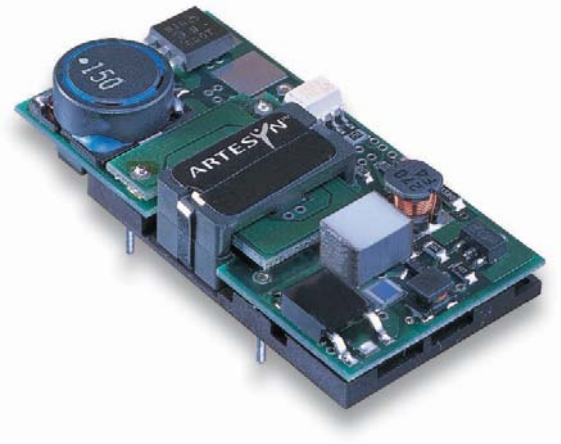
CXA10
Single output



Total Power: 10W
Input Voltage: 18 - 75VDC
# of Outputs: Single

Special Features

- 4:1 input voltage range
- 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)
- 2 year warranty

Safety

UL/cUL CAN/CSA 22.2
No. 60950-00 : UL 60950-1
File No. E132002

VDE Certificate No.112607.
File No. 1040100-3336-0136
CB Report and Certificate to
IEC60950-1, #DE 1-30686

The CXA10 series comprising of five different models delivers single and dual output voltages covering 3.3 V, 5 V, 12 V, ±5 V, ±12 V and ±15 V. The series has a wide 4:1 input voltage range of 18Vdc to 75 Vdc. 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 approvals reducing system compliance costs, and it has a basic insulation system from input to output making it suitable for a wide variety of applications.

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Specifications

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

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 20 MHz bandwidth	3.3 V and 5.0 V All others All models	30 mV pk-pk 60 mV pk-pk 12 mV rms
Temperature coefficient		±0.01%/°C
Overvoltage protection	Clamp type	(See table and Notes 3, 4)
Short circuit protection Short <20 mΩ	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	48 Vin nominal	18-75 Vdc
Input fuse	(See Note 10)	1.5 A HRC
Max. input rise and fall time	48 V ETS300 132-2	5 V/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 <1 Vdc

EMC CHARACTERISTICS

ETS 300 386-1 table 5		
Conducted emissions	EN55022 (See Note 6) EN55022, external filter, VDE0878, 48 V 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 (500 V)	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	1500 Vdc
Switching frequency	Fixed	400 kHz
Approvals and standards (See Notes 7,8,9,10,11)		EN60950, UL1950 CSA C22.2 No. 950
Material flammability		UL94V-0
Weight		12 g (0.42 oz)
MTBF (Representative model 48S05J @ 48 Vin)	MIL-HDBK-217F Parts stress method Ground Benign @ 25 °C	456,621 hours

ENVIRONMENTAL SPECIFICATIONS

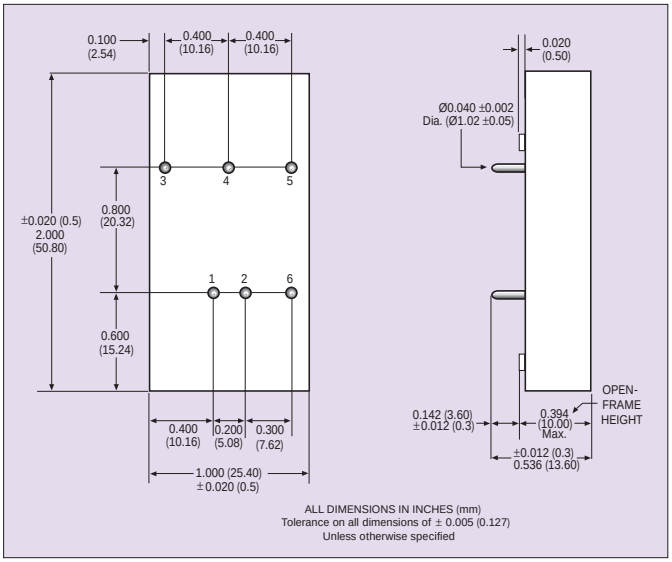
Thermal performance	Operating ambient temperature Non-operating	-40 °C to +70 °C, See curves -55 °C to +105 °C
ETS 300 019-2-3		Classes T3.1 to T3.5
Air temperature	Low: IEC 68-2-1 High: IEC 68-2-2 Change: IEC 68-2-14	-40 °C +70 °C -40°C to +70 °C
Relative humidity	IEC 68-2-56 IEC 68-2-30	10% to 100%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

Specifications Contd.

INPUT VOLTAGE	OUTPUT VOLTAGE	OVERVOLTAGE PROTECTION (3,4)	OUTPUT CURRENT (MAX.) (9)	TYPICAL EFFICIENCY	MODEL NUMBER (7,12,13)
18-75 Vdc	3.3 V	3.9 V	2.4 A	78%	CXA10-48S3V3J
18-75 Vdc	5 V	6.8 V	2 A	81%	CXA10-48S05J
18-75 Vdc	12 V	16 V	0.83 A	83%	CXA10-48S12J
18-75 Vdc	±5 V	±6.8 V	1 A	81%	CXA10-48D05J
18-75 Vdc	±12 V	±16 V	0.41 A	83%	CXA10-48D12J
18-75 Vdc	±15 V	±19 V	0.33 A	81%	CXA10-48D15J

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 4.7 µF 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-SJ. Additional alphanumeric suffixes maybe added to indicate minor modifications not affecting the safety approvals.
8 Unit provides basic insulation up to the 75 Vdc maximum input voltage.
9 Maximum continuous output power not to exceed 10 Watts. 7.9 Watts for the 3V3 model.
10 User must provide 1.5 A 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.
12 The 'J' suffix indicates that these parts are Pb-free (RoHS 6/6) compliant. TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
13 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at http://www.artesyn.com/powergroup/products.htm to find a suitable alternative.



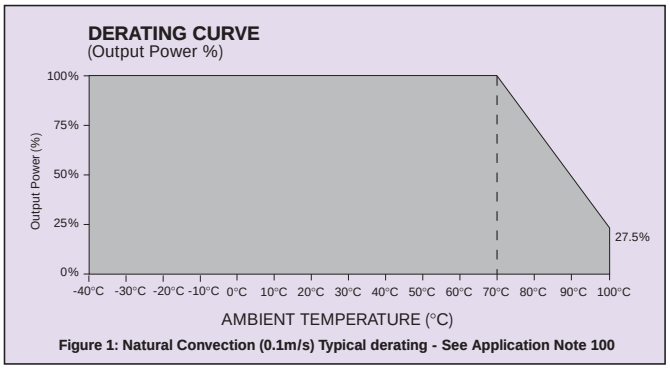


Figure 1: Natural Convection (0.1m/s) Typical derating - See Application Note 100

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-SJ (See Note 7).

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

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