

CXA10

Single output

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

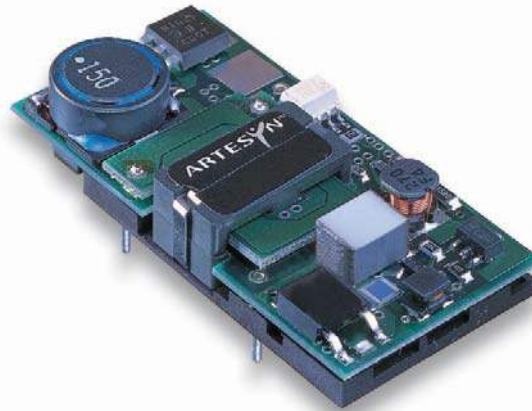
Special Features

- 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



Rev.12.04.07
cxa10
1 of 4

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.



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 | ±0.1% |
| | Dual negatives | ±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 | 30 mV pk-pk |
| | All others | 60 mV pk-pk |
| | All models | 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 | (See Note 5) | 94% |
| UVLO turn OFF voltage | (See Note 5) | 86% |
| Remote ON/OFF Logic compatibility | (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

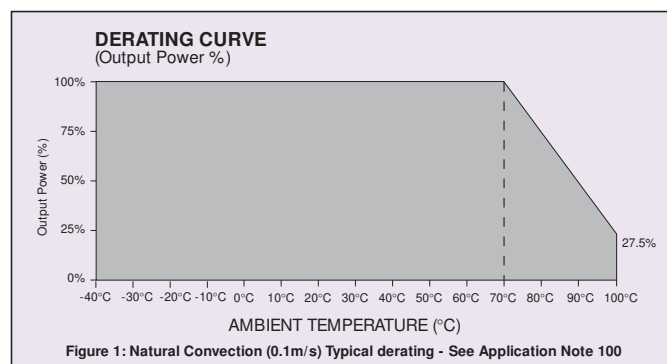
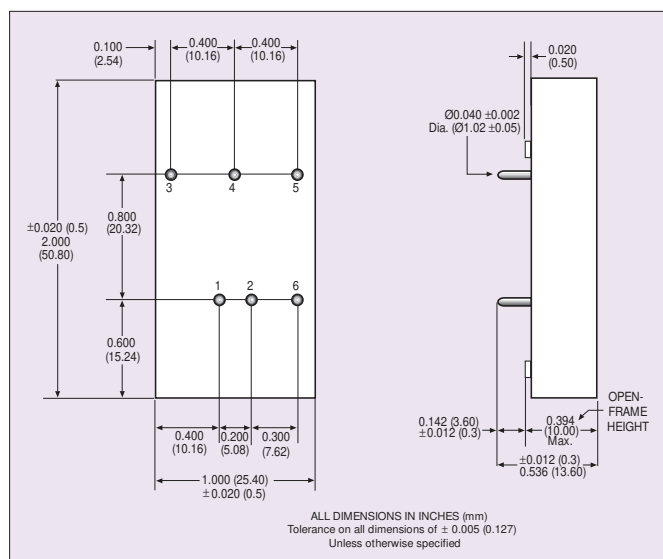
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|--------------------------------------|--|--|
| Thermal performance | Operating ambient temperature | -40 °C to +70 °C, See curves |
| | Non-operating | -55 °C to +105 °C |
| ETS 300 019-2-3 | | Classes T3.1 to T3.5 |
| Air temperature | Low: IEC 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

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



| 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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