

## CXA10 Single output

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

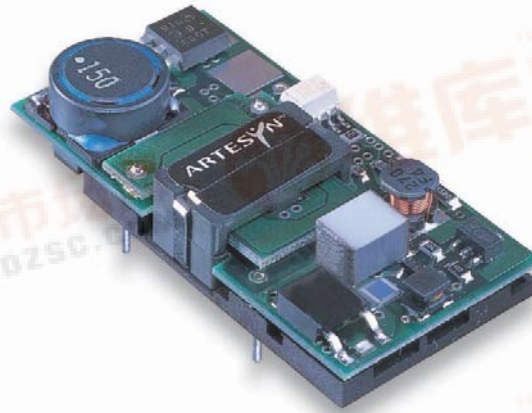
### Special Features

- 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

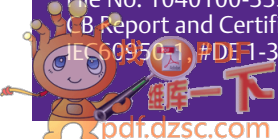
### Safety

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  
IEC 60950-1 #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,  $\pm 5$  V,  $\pm 12$  V and  $\pm 15$  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<br>Dual negatives    | ±0.1%<br>±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<br>All others<br>All models | 30 mV pk-pk<br>60 mV pk-pk<br>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)<br>CMOS/TTL/Open Collector<br>Open circuit | <1 Vdc    |

| EMC CHARACTERISTICS   |   |                    |
|-----------------------|---|--------------------|
| ETS 300 386-1 table 5 |   |                    |
| Conducted emissions   | EN55022 (See Note 6)<br>EN55022, external filter,<br>VDE0878, 48 V models | Level A<br>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<br>CSA C22.2 No. 950 |
| Material flammability                           |   | UL94V-0                              |
| Weight  |   | 12 g (0.42 oz)                       |
| MTBF (Representative model 48S05J @ 48 Vin)     | MIL-HDBK-217F<br>Parts stress method<br>Ground Benign @ 25 °C | 456,621 hours                        |

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

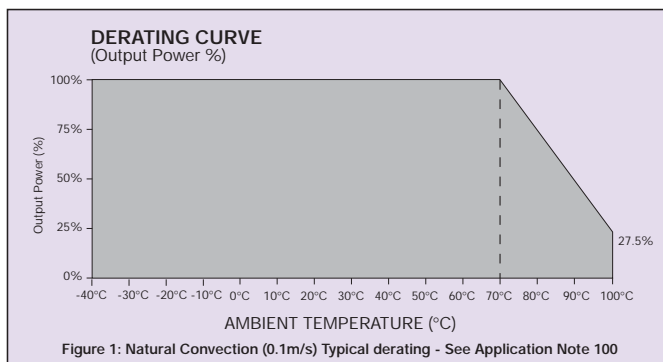
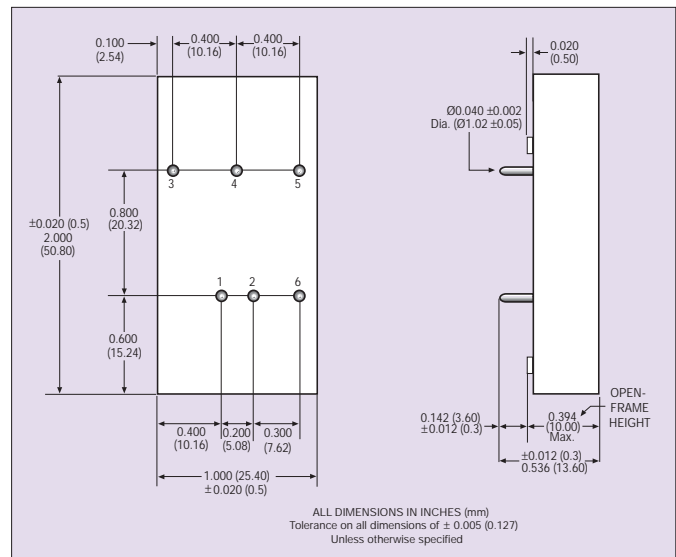
# Specifications Contd.

Rev.12.04.07  
cxa10  
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| 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 µF 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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