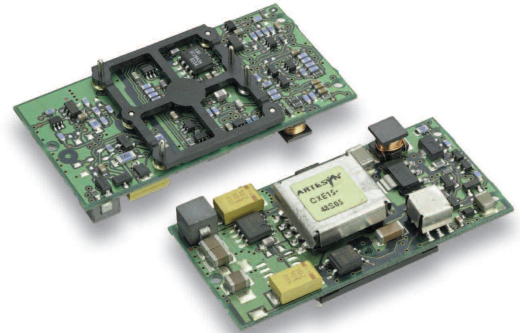


CXE15 Series

Single output

- High efficiency topology, 87% typical at 5 V
- Industry standard footprint
- Wide operating temperature, up to and exceeding 65 °C (natural convection)
- 90% to 110% output trim
- No minimum load
- Overvoltage protection
- Remote ON/OFF control
- Available RoHS compliant



The CXE15 is a new high efficiency open frame isolated 15 Watt converter series in an industry standard footprint. The CXE15 features an input voltage range of 33 Vdc to 75 Vdc and are available in output voltages of 5 V and 3.3 V. The output voltage on each model is adjustable from 90% to 110% of the nominal value. Typical efficiencies for the models are 87% for the 5 V and 86% for the 3.3 V. The CXE15 series also has a remote ON/OFF capability with active high or active low logic. Overcurrent and overvoltage protection features are included as standard. With full international safety approval including EN60950 and cUL1950, the CXE15 reduces compliance costs and time to market.



2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

| | | |
|-----------------------|------------------------|--|
| Voltage adjustability | | 90% to 110% |
| Total error band | (See Note 11) | ±3.5% max. |
| Line regulation | Low line to high line | 0.1% max. |
| Load regulation | Full load to min. load | 0.5% max. |
| Minimum load | | 0% |
| Overshoot | | None |
| Undershoot | | None |
| Ripple and noise | 5 Hz to 20 MHz | 70 mV pk-pk 20 mV rms |
| Transient response | (See Note 2) | 100 mV 400 µs recovery to typ. deviation within total error band |

INPUT SPECIFICATIONS

| | | |
|---------------------------|---------------------------|--|
| Input voltage range | 48 Vin nominal | 33-75 Vdc |
| Input current | No load Remote OFF | 35 mA max. 25 mA max. |
| Input current (max.) | (See Note 4) | 0.55 A max. @ Io max. and Vin = 33-75 Vdc |
| Input reflected ripple | (See Note 6) | 5 mA (pk-pk) typ. |
| Active high remote ON/OFF | | (See Note 10) |
| Logic compatibility | | Open collector ref to -input |
| ON | | Open circuit or >2 Vdc |
| OFF | | <1.2 Vdc |
| Undervoltage lockout | Power up Power down | 33 V (typ.) 30 V (typ.) |
| Start-up time | Power up Remote ON/OFF | 1.5 ms (typ.) 2.5 ms (typ.) |

EMC CHARACTERISTICS

| | | |
|--------------------------|----------------------------------|-------------------|
| Conducted emissions | EN55022 (See Note 3) | Level A |
| | EN55022 (See Note 3) | Level B |
| Radiated emissions | EN55022 (See Longform datasheet) | Level B |
| Immunity: | | |
| ESD air | EN61000-4-2 | 8 kV, 15 kV |
| ESD contact | EN61000-4-2 | 6 kV, 8 kV |
| Radiated field enclosure | EN61000-4-3 | 10 V/m |
| Conducted (dc power) | EN61000-4-6 | 10 V |
| Conducted (signal) | EN61000-4-6 | 10 V (See Note 8) |
| Input transients | ETS 300 132-2, ETR 283 | |

GENERAL SPECIFICATIONS

| | | |
|-------------------------|--|--------------------------------------|
| Efficiency | | See table |
| Operational insulation | Input/output | 1500 Vdc |
| Switching frequency | Fixed | 265 kHz typ. |
| Approvals and standards | | UL/cUL1950, EN60950 TÜV Rheinland |
| (See Note 5) | | |
| Material flammability | | UL94V-0 |
| Weight | | 12 g (0.42 oz) |
| MTBF | MIL-HDBK-217F | 3,628,000 hours |
| Representative model: | 48S05J @ 48 Vin, 40 °C, 100% load ground benign | |
| | BELLCORE 332 | >1,500,000 hours |

ENVIRONMENTAL SPECIFICATIONS

| | | |
|---------------------|-------------------------------|-------------------|
| Thermal performance | Operating ambient temperature | -40 °C to +65 °C |
| (See Note 9) | Non-operating | -40 °C to +120 °C |

CXE15 Series

Single output

DC-DC CONVERTERS | 15 W High Efficiency DC-DC Converters

2

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

| OUTPUT POWER (MAX.) | INPUT VOLTAGE | OVP | OUTPUT VOLTAGE | OUTPUT CURRENT (MIN.) | OUTPUT CURRENT (MAX.) | EFFICIENCY (TYP.) | REGULATION | | MODEL NUMBER ^(10,12) |
|---------------------|---------------|-------|----------------|-----------------------|-----------------------|-------------------|------------|------|---------------------------------|
| | | | | | | | LINE | LOAD | |
| 15 W | 33-75 Vdc | 4 Vdc | 3.3 V | 0 A | 4.5 A | 86% | 0.1% | 0.5% | CXE15-48S3V3-SJ |
| 15 W | 33-75 Vdc | 6 Vdc | 5 V | 0 A | 3 A | 87% | 0.1% | 0.5% | CXE15-48S05J |

Notes

- 1 Measured as per recommended set-up. See Application Note 116 for details.
- 2 $di/dt = 0.1 \text{ A}/\mu\text{s}$, $V_{in} = 48 \text{ Vdc}$, $T_c = 25 \text{ }^\circ\text{C}$, load change = 0.5 I_o max. to 0.75 I_o max. and 0.75 I_o max. to 0.5 I_o max.
- 3 The CXE15 meets level A and level B conducted emissions only with external components connected before the input pins to the converter. See Application Note 116 for details.
- 4 Recommended input fusing is a 2 A HRC 200 V rated fuse.
- 5 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 6 Measured with external filter. See Application Note 116 for details.
- 7 Start-up into resistive load.
- 8 Signal line assumed < 3 m in length.
- 9 Operating ambient temperatures are specified at natural convection. Higher operating temperatures are possible with increased airflow. See Application Note 116 for details.
- 10 Remote ON/OFF (pin 3) and Trim (pin 5) are currently available individually or together. The CXE-48S05J model includes pins 1, 2, 4, and 6. The CXE15-48S3V3-SJ features pin 3 with positive logic.
- 11 This parameter is calculated at worst case line, load, temperature and initial settings.
- 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.

PROTECTION

| | |
|---------------|--------------------|
| Short circuit | Continuous |
| Oversvoltage | Non-latching clamp |

TELECOM SPECIFICATION

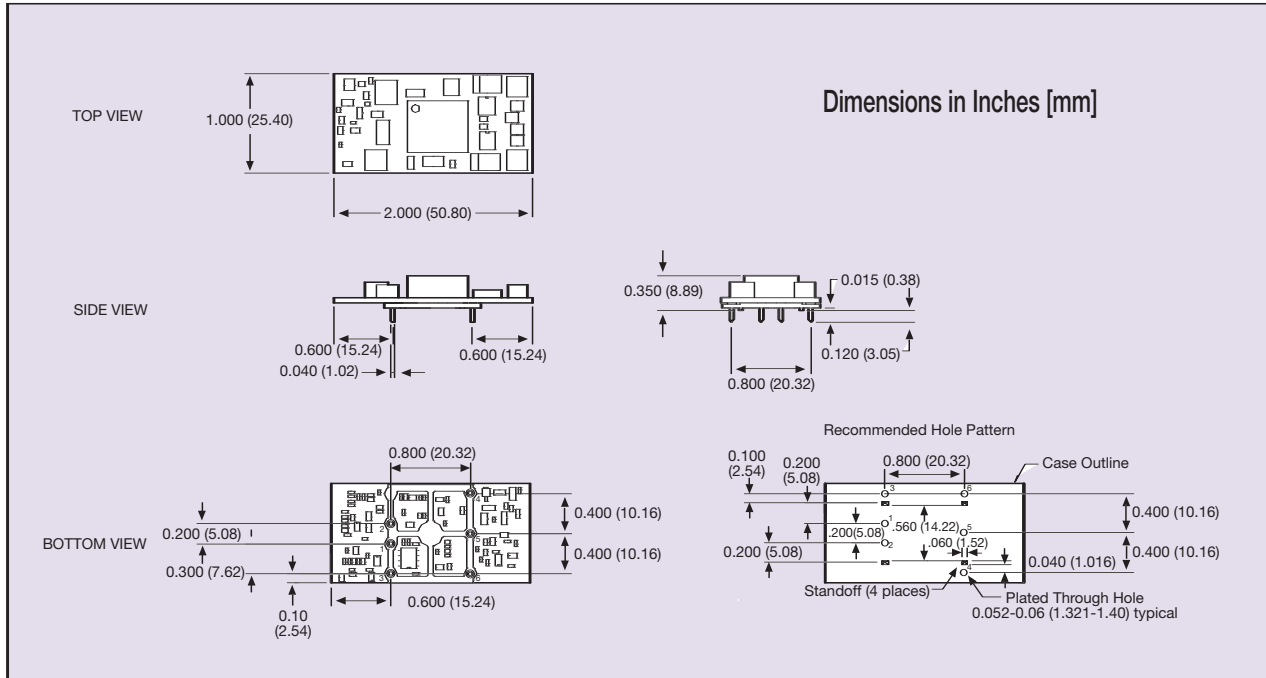
| | |
|----------------------------|--|
| Central office interface A | ETS300-132-2, input voltage and current requirements |
|----------------------------|--|

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

CXE15 Series

Single output

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



| PIN CONNECTIONS | |
|-----------------|----------------------|
| PIN NUMBER | FEATURE |
| 1 | Vin - |
| 2 | Vin + |
| 3 | On/Off (See Note 10) |
| 4 | Vout + |
| 5 | Trim (See Note 10) |
| 6 | Vout - |

International Safety Standard Approvals

UL ^{us} UL/cUL 1950 3rd edition. File No. E135734
TÜV TÜV Rheinland. Certificate No. R2074133
 File No. 10401-3336-0916

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