CUI INC®



# **SERIES:** PSE-600 | **DESCRIPTION:** AC-DC HOT-SWAP POWER SUPPLY

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## FEATURES

- up to 600 W continuous power
- 1U x 2U form factor
- $I^2C$ communication for monitoring and control
- redundant (N+1) operation
- blind mate connections for hot-swap
- power factor correction
- 3.3 Vdc (0.5 A) standby voltage
- DROOP current sharing or forced current sharing (optional)
- single I/O connector for AC input, DC output and signals
- remote on/off control, power good signal
- efficiency up to 90%

## MODEL

| MODEL | output voltage (Vdc) | output current max (A) | output power max (W) | ripple and noise max (mVp-p) | efficiency[1] typ (%) |
|---|---|---|---|---|---|
| PSE-600-48 | 48 | 12.5 | 600 | 480 | 90 |

Notes: 1. At 230 Vac input.

## PART NUMBER KEY

**PSE-600 - 48 - CXX**

Base Number

Output Voltage

Reserved for Custom Configurations

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## INPUT

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| voltage | | 90 | | 264 | Vac |
| frequency | | 50 | | 60 | Hz |
| current | at 90 Vac, full load | | | 8.25 | A |
| inrush current | half cycle, cold start, 25°C<br>at 115 Vac, 60 Hz<br>at 230 Vac, 50 Hz | | | <br>20<br>40 | <br>A<br>A |
| leakage current | | | | 1.5 | mArms |
| power factor correction | | 0.95 | 0.98 | | |

## OUTPUT - V1 (MAIN OUTPUT)

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| total regulation | | | ±3 | | % |
| transient response | 25% step load, 1A/µs slew rate, recovery to 1% within 1 ms | | | 3 | % |
| hold-up time | at full load<br>in redundant operation | 12<br>20 | | | ms<br>ms |

## OUTPUT - V2 (STANDBY OUTPUT)

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| output voltage | | | 3.3 | | Vdc |
| output current | | 0 | | 0.5 | A |
| ripple and noise | | | | 33 | mVp-p |
| total regulation | | | ±2.5 | | % |

## STATUS & CONTROL

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| $I^2C$ interface | SCL 100 kHz clock rate, SDA data line | | | | |
| remote sense | main output | | | | |
| remote enable | "active low" enables main output, last-mate/ first-break enable pin | | | | |
| current share | droop share; active current share option | | | | |
| status | AC OK, DC OK and OTP_OK (open collector, active "low" = OK); and PS_PRESENT | | | | |
| LED indicator | AC OK & DC OK indicators | | | | |

## PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| over voltage protection | V1<br>V2 | | <br>115 | 60<br> | Vdc<br>% |
| over current protection | latching, shutdown after 2 s | | | 120 | % |
| over temperature protection | output shut down, auto recovery | | | | |

## SAFETY & COMPLIANCE

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| safety approvals | cTUVus UL60950-1, CE (LVD) | | | | |
| emissions | FCC 15 Sub Part J, Class A, EN55022 Class A | | | | |
| harmonic compliance | EN61000-3-2 Class A | | | | |
| surges (mains) | IEC/EN 61000-4-5 | | | | |
| voltage dips/interruptions | IEC/EN 61000-4-11 | | | | |

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## SAFETY & COMPLIANCE (CONTINUED)

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| MTBF | as per Telcordia SR332, 40°C, full load | 500,000 | | | hours |
| RoHS | 2011/65/EU | | | | |

## ENVIRONMENTAL

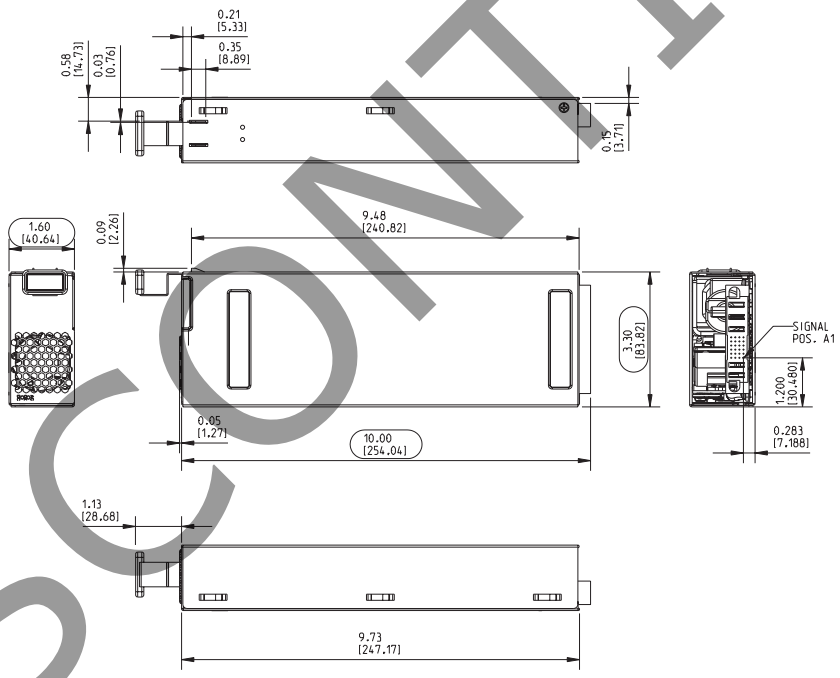
| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| operating temperature | | 0 | | 55 | °C |
| storage temperature | | -40 | | 85 | °C |

## MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| dimensions | 10.00 x 3.30 x 1.60 (254 x 83.8 x 40.6 mm) | | | | inches |
| cooling / airflow | integral high performance 38 mm fan, inlet at face; exhaust at connector | | | | |
| input / output connector | FCI P/N 51939-420LF<br>mates with FCI P/N 51915-192LF | | | | |
| hot-swap capability | fully hot-swappable, blind mate connector | | | | |

## MECHANICAL DRAWING

units: inches [mm]
tolerance:
X.XX ±0.02 [0.50]
X.XXX ±0.010 [0.25]




| INPUT/OUTPUT CONNECTOR | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pins | Function | Pins | Function | Pins | Function | Pins | Function | Pins | Function | Pins | Function | Pins | Function |
| P1 | +48 V | A1 | +V1 Sense | A2 | EEPROM A0 | A3[1] | N/C | A4 | AC OK | A5 | Signal Return | A6 | +3.3 VSB Return |
| P2 | -48 V | B1 | -V1 Sense | B2 | EEPROM A1 | B3[1] | N/C | B4 | DC OK | B5 | EEPROM Clock SCL | B6 | Reserved |
| P3 | FG | C1 | ISHARE | C2 | EEPROM A2 | C3[1] | N/C | C4 | PS_PRESENT | C5 | EEPROM Data (SDA) | C6 | Reserved |
| P4 | AC Neutral | D1 | Reserved | D2 | N/C | D3[1] | N/C | D4 | OTP OK | D5 | +3.3 VSB | D6 | Enable (short pin) |
| P5 | AC Line | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

Note: 1. POE Isolation Barrier - No traces to be routed between these pins and any others.

## REVISION HISTORY

| rev. | description | date |
|---|---|---|
| 1.0 | initial release | 05/06/2015 |

The revision history provided is for informational purposes only and is believed to be accurate.

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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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