

SERIES: PSE-1800 | **DESCRIPTION:** AC-DC HOT-SWAP POWER SUPPLY

FEATURES

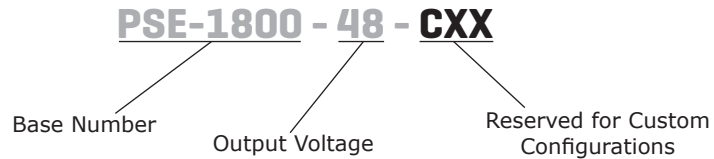
- up to 1800 W continuous power
- 1U package
- I²C communication for monitoring and control
- redundant (N+1) operation
- blind mate connections for hot-swap
- power factor correction
- 3.3 Vdc (0.5A) standby voltage
- DROOP current sharing
- single I/O connector for AC input, DC output & signals
- remote on/off control, power good signal



| MODEL | output voltage | output current max | output power ^{1,2} max | ripple and noise max | efficiency ³ typ |
|-------------|----------------|--------------------|---------------------------------|----------------------|-----------------------------|
| | (Vdc) | (A) | (W) | (mVp-p) | (%) |
| PSE-1800-48 | 48 | 37.5 | 1800 | 480 | 85 |

Notes: 1. At 90~180 Vac input, maximum of 1000 W.
 2. At 180~264 Vac input, maximum of 1800 W.
 3. At 90 Vac input.

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|-------------------------|--|------|------|----------|--------|
| voltage | | 90 | | 264 | Vac |
| frequency | | 50 | | 60 | Hz |
| current | at 90 Vac, full load | | | 11 | A |
| inrush current | half cycle, cold start, 25°C at 115 Vac, 60 Hz at 230 Vac, 50 Hz | | | 20 40 | A A |
| leakage current | | | | 1.5 | mArms |
| power factor correction | | 0.95 | 0.98 | | |

OUTPUT - V1 (MAIN OUTPUT)

| parameter | conditions/description | min | typ | max | units |
|--------------------|---|----------|-----|-----|----------|
| regulation | | | ±3 | | % |
| transient response | 25% step load, recovery to 1% within 1 ms, slew rate 1 A/μs | | | 3 | % |
| hold-up time | at full load in redundant operation | 12 20 | | | ms 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 | | | | 50 | mVp-p |
| regulation | | | ±5 | | % |

STATUS & CONTROL

| parameter | conditions/description | min | typ | max | units |
|----------------------------|---|-----|-----|-----|-------|
| I ² C interface | SCL 1000 kHz clock rate SDA data line | | | | |
| remote sense | main ooutput | | | | |
| remote enable | "active low" enables main output, last-mate / first-break enable pin | | | | |
| current share | droop share | | | | |
| 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 V2 | 110 | | 60 120 | Vdc % |
| over current protection | followed by 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 EN60950-1, CE (LVD) | | | | |
| emissions | FCC 15 Sub Part J, Class A, EN55022 Class A, VCCI Class A | | | | |
| harmonic compliance | EN61000-3-2 Class A | | | | |
| surges (mains) | IEC/EN 61000-4-5 | | | | |
| voltage dips/interruptions | IEC/EN 61000-4-11 | | | | |

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

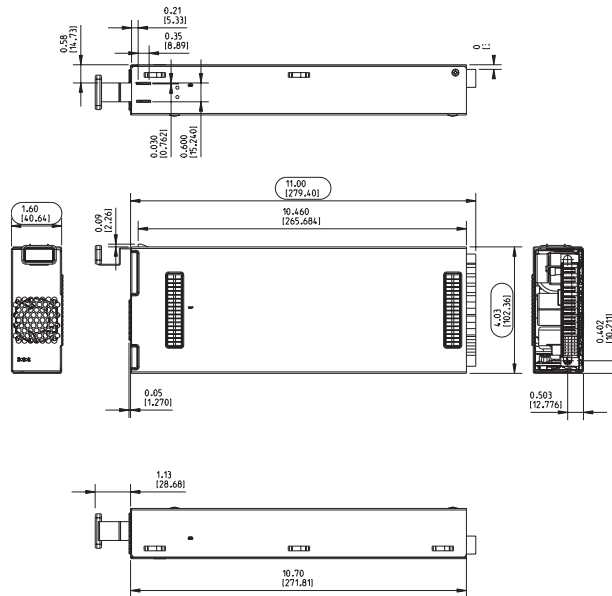
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 55 | °C |
| storage temperature | | -40 | | 85 | °C |

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|--------------------------|--|-----|-----|-----|--------|
| dimensions | 11.00 x 4.00 x 1.60 (279.4 x 101.6 x 40.6 mm) | | | | inches |
| cooling / airflow | internal high performance 38 mm fan, air inlet at face; exhaust at connector | | | | |
| input / output connector | FCI P/N 51939-531LF mates with FCI 51915-299LF | | | | |
| 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 |
| P1 | No Blade | A1 | +V Sense | B1 | ISHARE | C1 | -V Sense | D1 | Reserved |
| P2 | +48 V | A2 | V Pgm | B2 | I ² C Address A0 | C2 | I ² C Address A1 | D2 | I ² C Address A2 |
| P3 | +48 V | A3 | Reserved | B3 | Reserved | C3 | Reserved | D3 | Reserved |
| P4 | No Blade | A4 | AC_OK_L | B4 | DC_OK_L | C4 | PS_Present_L | D4 | OTP_OK_L |
| P5 | -48 V | A5 | Signal Return | B5 | I ² C SCL | C5 | I ² C SDA | D5 | +3.3 VSB |
| P6 | -48 V | A6 | -3.3 VSB | B6 | Reserved | C6 | Reserved | D6 | Remote_On_L (short pin) |
| P7 | Earth | -- | -- | -- | -- | -- | -- | -- | -- |
| P8 | Neutral | -- | -- | -- | -- | -- | -- | -- | -- |
| P9 | Line | -- | -- | -- | -- | -- | -- | -- | -- |

REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 05/07/2015 |

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



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