


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

**FEATURES**

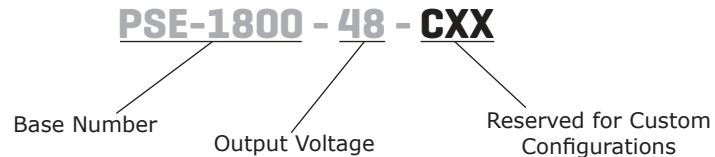
- up to 1800 W continuous power
- 1U package
- I<sup>2</sup>C communication for monitoring and control
- redundant (N+1) operation
- blind mate connections for hot-swap
- power factor correction
- 3.3 Vdc (0.5A) standby voltage
- DROOP current sharing
- single I/O connector for AC input, DC output & signals
- remote on/off control, power good signal



| MODEL       | output voltage | output current | output power <sup>1,2</sup> | ripple and noise | efficiency <sup>3</sup> |
|-------------|----------------|----------------|-----------------------------|------------------|-------------------------|
|             | (Vdc)          | max (A)        | max (W)                     | max (mVp-p)      | typ (%)                 |
| 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<br>at 115 Vac, 60 Hz<br>at 230 Vac, 50 Hz |      |      | 20<br>40 | 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    |
|--------------------|---|----------|-----|-----|----------|
| 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<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 |                        |     |     | 50  | mVp-p |
| regulation       |                        |     | ±5  |     | %     |

## STATUS & CONTROL

| parameter                  | conditions/description  | min | typ | max | units |
|----------------------------|---|-----|-----|-----|-------|
| I <sup>2</sup> 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<br>V2                                | 110 |     | 60<br>120 | Vdc<br>% |
| 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**

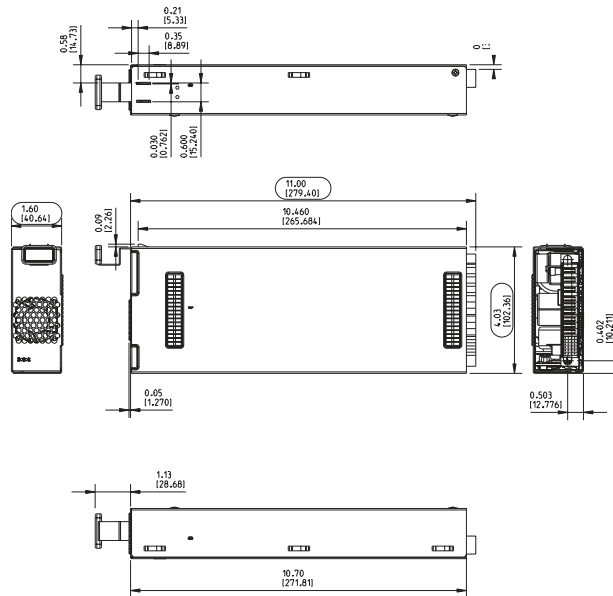
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 55  | °C    |
| storage temperature   |                        | -40 |     | 85  | °C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

**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<br>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 <sup>2</sup> C Address A0 | C2   | I <sup>2</sup> C Address A1 | D2   | I <sup>2</sup> 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 <sup>2</sup> C SCL        | C5   | I <sup>2</sup> C SDA        | D5   | +3.3 VSB                    |
| P6                       | -48 V    | A6   | -3.3 VSB      | B6   | Reserved                    | C6   | Reserved                    | D6   | Remote_On_L<br>(short pin)  |
| P7                       | Earth    | --   | --            | --   | --                          | --   | --                          | --   | --                          |
| P8                       | Neutral  | --   | --            | --   | --                          | --   | --                          | --   | --                          |
| P9                       | Line     | --   | --            | --   | --                          | --   | --                          | --   | --                          |

## REVISION HISTORY

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| 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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