


**SERIES:** PSE-850 | **DESCRIPTION:** AC-DC HOT-SWAP POWER SUPPLY

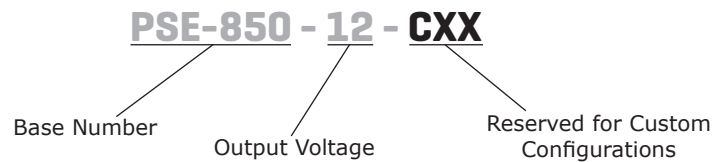
**FEATURES**

- up to 850 W continuous power
- 1U x 2U package
- I<sup>2</sup>C communication for monitoring and control
- front panel IEC-320/C14 inlet
- redundant (N+1) operation
- blind mate connections for hot-swap
- power factor correction
- 3.3 Vdc (1A) standby voltage
- DROOP current sharing
- remote on/off control, power good signal
- efficiency up to 89%



| MODEL      | output voltage | output current | output power | ripple and noise | efficiency <sup>1</sup> |
|------------|----------------|----------------|--------------|------------------|-------------------------|
|            | (Vdc)          | max (A)        | max (W)      | max (mVp-p)      | typ (%)                 |
| PSE-850-12 | 12             | 71             | 850          | 120              | 89                      |

Notes: 1. At 230 Vac input, 50% load.

**PART NUMBER KEY**


## INPUT

| parameter               | conditions/description       | min  | typ  | max | units |
|-------------------------|------------------------------|------|------|-----|-------|
| voltage                 |                              | 90   |      | 264 | Vac   |
| frequency               |                              | 50   |      | 60  | Hz    |
| current                 | at 90 Vac                    |      |      | 12  | A     |
| inrush current          | at 230 Vac, cold start, 25°C |      |      | 20  | A     |
| leakage current         |                              |      |      | 1.5 | mArms |
| power factor correction |                              | 0.95 | 0.99 |     |       |

## OUTPUT - V1 (MAIN OUTPUT)

| parameter          | conditions/description                    | min | typ | max | units |
|--------------------|---|-----|-----|-----|-------|
| total regulation   |   |     | ±3  |     | %     |
| transient response | 25% step load, recovery to 1% within 1 ms |     |     | 2   | %     |
| start-up time      | monotonic start-up <150 ms                |     |     | 5   | s     |
| hold-up time       | at 115 Vac, full load                     | 12  |     |     | ms    |

## OUTPUT - V2 (STANDBY OUTPUT)

| parameter        | conditions/description | min | typ | max | units |
|------------------|------------------------|-----|-----|-----|-------|
| output voltage   |                        |     | 3.3 |     | Vdc   |
| output current   |                        | 0   |     | 1   | A     |
| ripple and noise |                        |     |     | 50  | mVp-p |

## STATUS & CONTROL

| parameter                  | conditions/description  | min | typ | max | units |
|----------------------------|---|-----|-----|-----|-------|
| I <sup>2</sup> C interface |   |     |     |     |       |
| remote sense               | total drop (main output)  |     |     | 250 | mVdc  |
| remote ON/OFF              | logic level low to enable module  |     |     |     |       |
| current share              | slope share for main (single wire control),<br>±10% accuracy at >20% load<br>passive current share for V2 |     | 300 |     | mV    |
| parallel operation         | hot-swap, N+1 redundant   |     |     |     |       |
| redundant operation        | integral isolation devices  |     |     |     |       |
| PS present                 | referenced to logic return  |     |     |     |       |
| LED indicator              | AC OK: open collector type<br>DC OK: open collector type  |     |     |     |       |
| over temp. warning         | open collector type   |     |     |     |       |

## PROTECTIONS

| parameter                   | conditions/description                        | min | typ | max        | units      |
|-----------------------------|---|-----|-----|------------|------------|
| over voltage protection     | V1: latch off<br>V2: latch off                |     |     | 15<br>4    | Vdc<br>Vdc |
| over current protection     | V1: auto recovery<br>V2: zener diode/foldback | 110 |     | 135<br>3.5 | %<br>A     |
| over temperature protection | output shut down, auto recovery               |     |     |            |            |

## SAFETY & COMPLIANCE

| parameter           | conditions/description                      | min | typ | max | units |
|---------------------|---|-----|-----|-----|-------|
| safety approvals    | cTUVus UL60950-1 (pending), CE (pending)    |     |     |     |       |
| emissions           | FCC 15 Sub Part J, Class A, EN55022 Class A |     |     |     |       |
| harmonic compliance | EN61000-3-2:2009 Class A                    |     |     |     |       |

## SAFETY & COMPLIANCE (CONTINUED)

| parameter                  | conditions/description | min | typ | max | units |
|----------------------------|------------------------|-----|-----|-----|-------|
| surges (mains)             | IEC/EN 61000-4-5       |     |     |     |       |
| voltage dips/interruptions | IEC/EN 61000-4-11      |     |     |     |       |
| RoHS                       | 2011/65/EU             |     |     |     |       |

## ENVIRONMENTAL

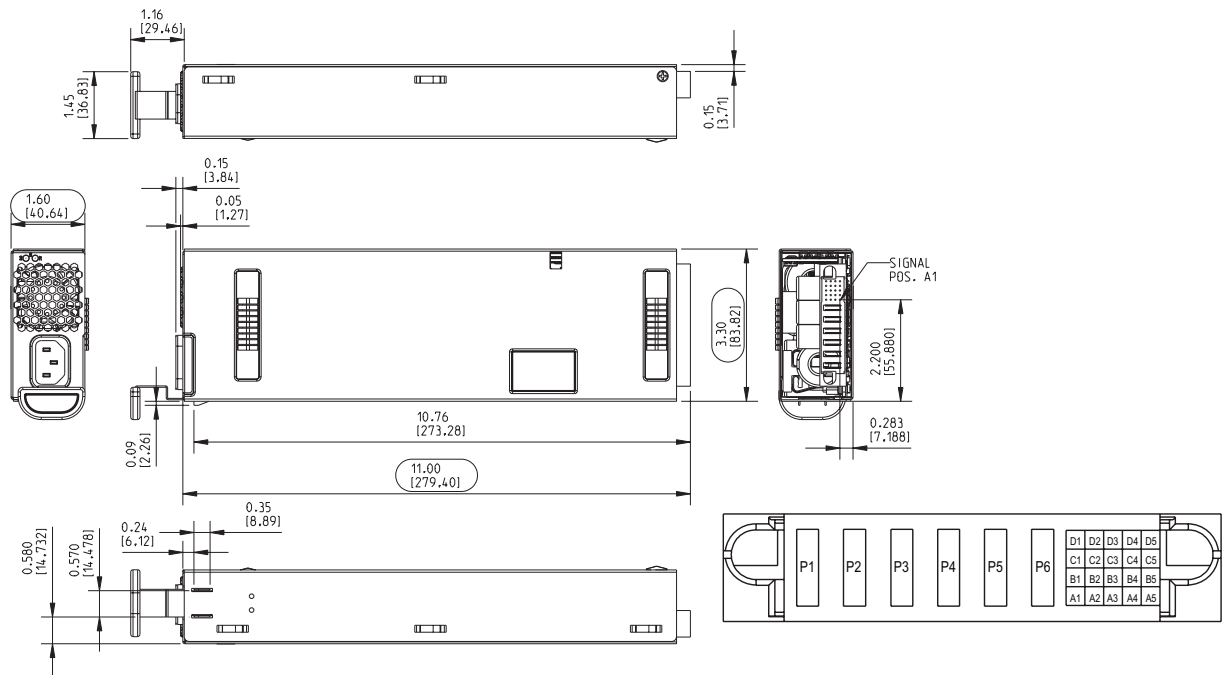
| parameter             | conditions/description          | min | typ | max | units |
|-----------------------|---------------------------------|-----|-----|-----|-------|
| operating temperature | at 90~132 Vac<br>at 180~264 Vac | 0   |     | 45  | °C    |
| storage temperature   |                                 | -40 |     | 85  | °C    |

## MECHANICAL

| parameter         | conditions/description   | min | typ | max | units  |
|-------------------|--|-----|-----|-----|--------|
| dimensions        | 11.00 x 3.30 x 1.60 (279.4 x 83.8 x 40.6 mm)   |     |     |     | inches |
| cooling / airflow | air flow from internal ball bearing fan, faceplate to DC connector directional airflow |     |     |     |        |
| AC input          | IEC320/C14   |     |     |     |        |
| DC output         | FCI P/N 51732-020LF<br>mates with FCI P/N 51762-10602000AALF                           |     |     |     |        |

## MECHANICAL DRAWING

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



**DC OUTPUT/SIGNAL CONNECTOR**

| Pins | Function | Pins | Function       | Pins | Function               | Pins | Function      | Pins | Function       |
|------|----------|------|----------------|------|------------------------|------|---------------|------|----------------|
| P1   | +12 V    | A1   | Remote Enable  | B1   | A0 (I <sup>2</sup> C)  | C1   | +12 V Sense   | D1   | OTP & Fan Fail |
| P2   | +12 V    | A2   | +3.3 VSB       | B2   | A1 (I <sup>2</sup> C)  | C2   | Sense Return  | D2   | Reserved       |
| P3   | +12 V    | A3   | 3.3 VSB Return | B3   | A2 (I <sup>2</sup> C)  | C3   | N/A           | D3   | Signal Return  |
| P4   | -12 V    | A4   | AC OK          | B4   | SDA (I <sup>2</sup> C) | C4   | N/A           | D4   | DC OK          |
| P5   | -12 V    | A5   | N/C            | B5   | SCL (I <sup>2</sup> C) | C5   | Current Share | D5   | PS Present     |
| P6   | -12 V    | --   | --             | --   | --                     | --   | --            | --   | --             |

## REVISION HISTORY

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| 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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