

SERIES: PSE-1000 | **DESCRIPTION:** AC-DC HOT-SWAP POWER SUPPLY

FEATURES

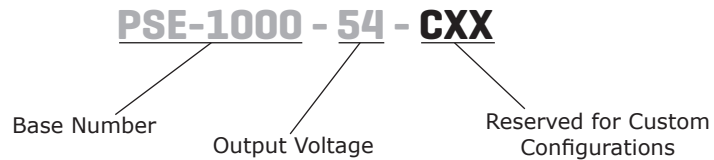
- up to 1000 W continuous power
- 1U x 2U package
- I²C communication for monitoring and control
- blind mate connections for hot-swap
- redundant (N+1) operation
- power factor correction
- 3.3 Vdc (0.5A) standby voltage
- DROOP current sharing or forced current sharing (optional)
- single I/O connector for AC input, DC output & signals
- remote on/off control, power good signal
- efficiency up to 90%



| MODEL | output voltage | output current max | output power max | ripple and noise max | efficiency ¹ |
|-------------|----------------|--------------------|------------------|----------------------|-------------------------|
| | (Vdc) | (A) | (W) | (mVp-p) | typ (%) |
| PSE-1000-54 | 54 | 18.50 | 1000 | 540 | 90 |

Notes: 1. At 230 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 | | | 13.2 | 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 |
|--------------------|---|----------|-----|-----|----------|
| total regulation | | | ±3 | | % |
| transient response | 25% step load, recovery to 1% within 1 ms, slew rate 1 A/μs | | | 3 | % |
| hold-up time | 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 | | | | 33 | mVp-p |
| total regulation | | | ±2.5 | | % |

STATUS & CONTROL

| parameter | conditions/description | min | typ | max | units |
|----------------------------|---|-----|-----|-----|-------|
| I ² C interface | SCL 100 kHz clock rate, SDA data line | | | | |
| remote sense | main output | | | | |
| remote enable | "active low" enable 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 V2 | | 115 | 60 | Vdc % |
| 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 | | | | |

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

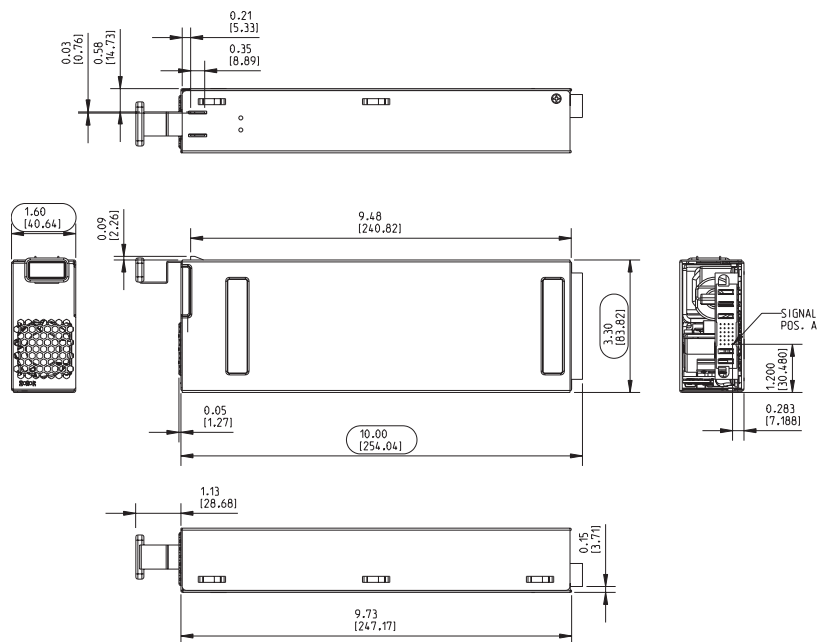
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 55 | °C |
| storage temperature | | -40 | | 85 | °C |

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|--------------------------|---|-----|-----|-----|--------|
| dimensions | 10.00 x 3.30 x 1.60 (254.0 x 83.8 x 40.6 mm) | | | | inches |
| cooling / airflow | integral high performance 38 mm fan air inlet at face; exhaust at connector | | | | |
| input / output connector | FCI P/N 51939-420LF mates with FCI P/N 51762-10602000AALF | | | | |
| 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 | +54 V | A1 | +V1 Sense | A2 | EEPROM A0 | A3 ¹ | N/C | A4 | AC OK | A5 | Signal Return | A6 | +3.3 VSB Return |
| P2 | -54 V | B1 | -V1 Sense | B2 | EEPROM A1 | B3 ¹ | N/C | B4 | DC OK | B5 | EEPROM Clock SCL | B6 | +3.3 VSB Adj. |
| P3 | FG | C1 | ISHARE | C2 | EEPROM A2 | C3 ¹ | N/C | C4 | PS_PRESENT | C5 | EEPROM Data (SDA) | C6 | Spare |
| P4 | AC Neutral | D1 | V Program | 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 |
| 1.01 | updated datasheet | 06/10/2016 |

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



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