

Data Sheet

Total Output Power: 1050 Watts
+3.3 or 5.0 Vdc Standby Output
Wide Range Input Voltage:
 90 - 264 Vac

SPECIAL FEATURES

- Active power factor correction
- EN61000-3-2 harmonic compliance
- Inrush control
- 1U X 2U form factor
- 19.0 W/in³
- +12 Vdc output
- Available in +3.3 V and +5.0 V standby output versions
- No minimum load required
- Hot plug operation
- N + 1 redundant
- Internal OR'ing fets
- Active current sharing (10 - 100% load)
- Built-in cooling fan (40 mm x 28 mm)
- I²C communication interface bus
- PMBus compliant
- EEPROM for FRU data
- Amber/green bi-color LED status
- Internal fan speed control
- Fan fail tach output signal
- Full digital control
- Two-year warranty

SAFETY

- UL/cUL 60950 (UL Recognized)
- NEMKO+ CB report EN60950
- EN60950
- CE mark
- China CCC



Electrical Specifications

| Input | |
|-----------------------|--|
| Input range | 180 - 264 (1050 W) 90 - 264 (1050 W) |
| Frequency | 47 - 63 Hz, single phase AC |
| Inrush current | 40 Apk maximum inrush current |
| Efficiency | > 92% typical at high line 50% load (Climate Saver Gold) |
| Conducted EMI | FCC Subpart J EN55022 Class B |
| Radiated EMI | FCC Subpart J EN55022 Class B |
| Power factor | 0.99 typical |
| Leakage current | 1.40 mA @ 240 Vac |
| Hold up time | 12 ms minimum |
| Output | |
| Main DC voltage | +12 V @ 87 A |
| Standby | +3.3 Vsb @ 4 A (5 V @ 2.5 A available)* |
| Adjustment range | ± 5% on +12V only using I ² C |
| Regulation | +12 Vdc; +5%/-5% +3.3 Vsb; +5%/-5% |
| Overcurrent | +12 Vdc; latches off if overcurrent lasts over 1 second, otherwise it is auto recovery (See Table 1 next page) +3.3 Vsb, 6 A max (hiccup mode) |
| Overvoltage | +12 Vdc; 13.2 - 14.4 Vdc +3.3 Vsb; 3.76 - 4.30 Vdc |
| Undervoltage | +12 Vdc; 9 - 10.8 V (latch off) |
| Turn-on delay | 2 second max, 5 - 50 mS, monotonic rise |
| Main output rise time | 5 - 50 mS, monotonic rise |

*20 W standby available with derated efficiency

Logic Control

| | |
|-------------------------|--|
| PS_SEATED (A4) | TTL logic LOW if power supply is seated into system connector. This is a short pin. A logic HIGH if the PSU is removed |
| PWR GOOD (C3) | Active TTL high when output is within regulation limits. |
| AC OK (B1) | A low logic level if the input voltage is within allowable limits. A TTL logic HIGH level, and a 5mS early warning signal before 12.0 V DC output loss of regulation. |
| PS_INHIBIT/PS_KILL (B4) | This signal is connected to a short pin on the PSU When left open power supply operation will be inhibited. When the power supply is inserted into the system, this pin will be pull low by the system and turn the power supply on only after all other power supply pins have seated. |
| PS ON (A1) | The output will be enabled when this signal is pulled low, below 0.8 V outputs disabled when pin is driven high or left open. |

Environmental Specifications

| | |
|---|---|
| Operating temperature | -10 °C to 50 °C ; 50% power derating at 70 °C |
| Storage temperature | -40 °C to +85 °C |
| Altitude, operating | 10,000 ft |
| Electromagnetic susceptibility/Input transients | -EN61000-3-2, -3-3 -EN61000-4-2, 4.3, 4-4, -4-5, 4-11 -EN55024:1998 |
| RoHS & lead-free compliant | No tantalum caps. |
| Humidity | 20 to 90% RH, non-condensing |
| Shock and vibration specifications | Standard operating/non-operating random shock/vibration |
| MTBF (Demonstrated) | 500K Hrs at full load, 40 °C |

Ordering Information

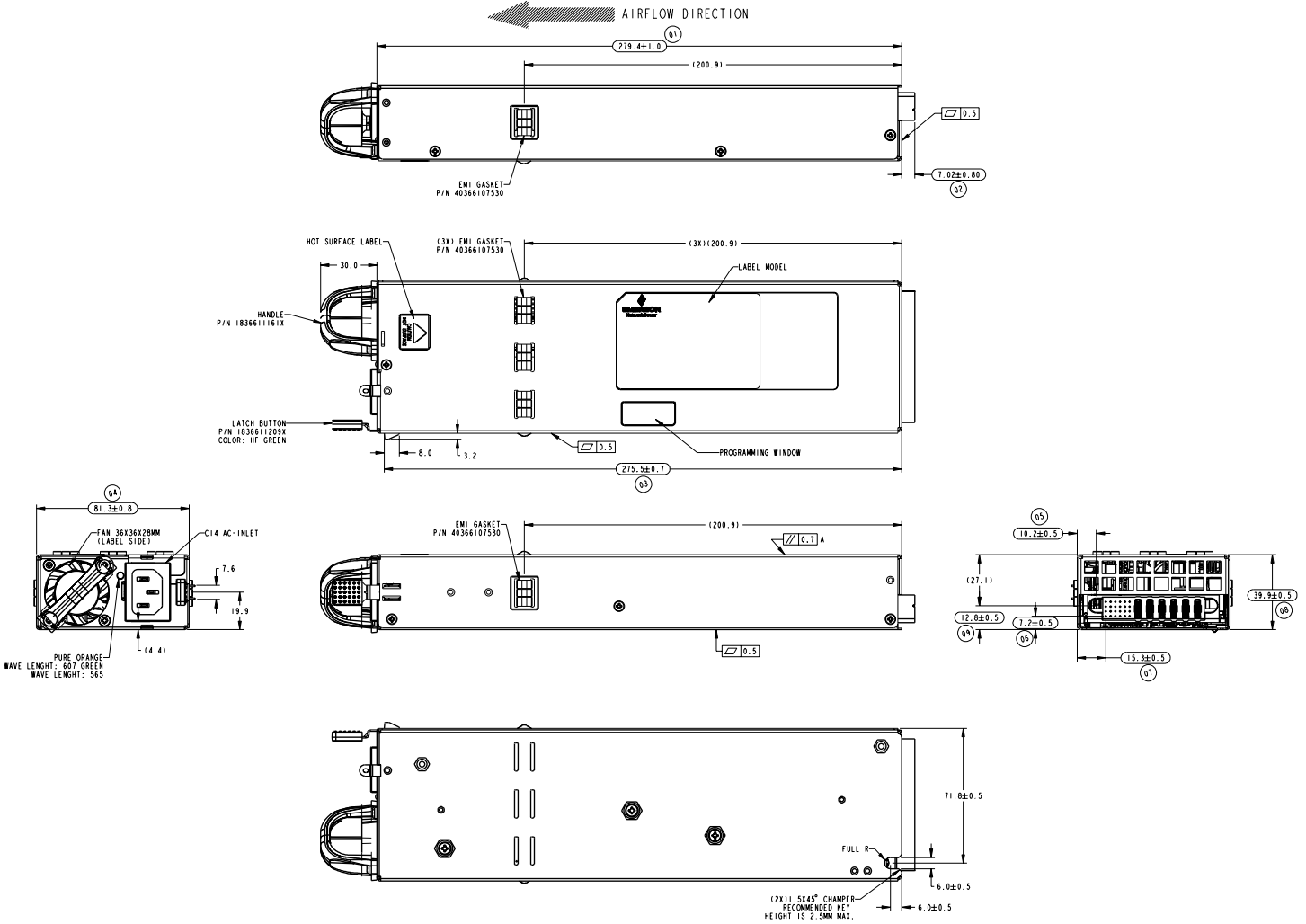
| Model Number | Nominal Output Voltage Set Point | Set Point Tolerance | Total Regulation | Minimum Current | Maximum Current | Output Ripple P/P | Over Current | Standby** | Air Flow |
|--------------|----------------------------------|---------------------|------------------|-----------------|-----------------|-------------------|-------------------|---------------|----------|
| DS1050-3 | 12.0 Vdc | ±0.2% | ±5% | 0 A | 87 A | 120 mV | 102.7 A - 128.4 A | 3.3 V @ 4 A | STD |
| DS1050-3-001 | 12.0 Vdc | ±0.2% | ±5% | 0 A | 87 A | 120 mV | 102.7 A - 128.4 A | 3.3 V @ 4 A | REV |
| DS1050-3-002 | 12.0 Vdc | ±0.2% | ±5% | 0 A | 87 A | 120 mV | 102.7 A - 128.4 A | 5.0 V @ 2.5 A | STD |
| DS1050-3-003 | 12.0 Vdc | ±0.2% | ±5% | 0 A | 87 A | 120 mV | 102.7 A - 128.4 A | 5.0 V @ 2.5 A | REV |

*Overcurrent latches off if overcurrent lasts over 1 seconds, otherwise it is auto recovery.

** 3.3 V standby can operate at 6 A, but overall unit efficiency will fall slightly below Gold Standard.

Mechanical Drawing

| Condition | LED Status |
|---|----------------|
| Standby - ON; Main output - OFF; AC PRESENT | Blinking green |
| Standby - ON; Main output - ON | Solid green |
| Main output OCP, UVP, OVP | Blinking Amber |
| FAN_FAULT; OTP; Standby OCP/UVP | Amber |



DC Output Connector Pinout Assignment

Male connector as viewed from the rear of the supply:

| | | | | | | | | | | | |
|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
| D1 | D2 | D3 | D4 | D5 | D6 | PB1 | PB2 | PB3 | PB4 | PB5 | PB6 |
| C1 | C2 | C3 | C4 | C5 | C6 | | | | | | |
| B1 | B2 | B3 | B4 | B5 | B6 | | | | | | |
| A1 | A2 | A3 | A4 | A5 | A6 | | | | | | |

P1 - Power Supply Side

| | |
|---|--|
| 1 | FCI Power Blade 51721 series 51721-10002406AA |
| 2 | Molex Power Connector SD-87667 series 87667-7002 |

Mating Connector (System Side)

| | |
|---|--|
| 1 | FCI Power Blade 51741-10002406CC Strait Pins |
| 2 | FCI Power Blade 51761-10002406AALF Right Angle |

Pin Assignments

| Pin | Signal Name |
|------|---------------------------------|
| PB 1 | Main output return |
| PB 2 | Main output return |
| PB 3 | Main output return |
| PB 4 | + Main output |
| PB 5 | + Main output |
| PB 6 | + Main output |
| A1 | PS_ON |
| A2 | Main output remote sense return |
| A3 | Spare |
| A4 | PS_SEATED (Power Supply Seated) |
| A5 | STANDBY |
| A6 | STANDBY RETURN |
| B1 | AC_OK (AC Input Present) |
| B2 | Main output remote sense |
| B3 | Main output current share |
| B4 | PS_INHIBIT/PS_Kill |
| B5 | STANDBY |
| B6 | STANDBY RETURN |

Pin Assignments

| Pin | Signal Name |
|-----|--|
| C1 | SDA (I ² C Data Signal) |
| C2 | SCL (I ² C Clock Signal)* |
| C3 | POWER GOOD |
| C4 | Spare |
| C5 | STANDBY |
| C6 | STANDBY RETURN |
| D1 | A0 (I ² C Address BIT 0 Signal) |
| D2 | A1 (I ² C Address BIT 1 Signal) |
| D3 | S_INT (Alarm) |
| D4 | STANDBY RMT SENSE |
| D5 | STANDBY |
| D6 | STANDBY RETURN |

*Supports I²C standard mode (100 kHz) only

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