

AC/DC Front End

3000 Watts CFP3K Series

XPIQ inc.

Intelligent Design Quality Product



- Hot Swap N + 1 Redundant
- Single Phase or Three Phase Input
- Power Factor Correction
- Overvoltage, Overcurrent and Thermal Protection
- Visual LED Indicators
- 19" 3U High Rack Available
- International Safety Approvals

Specification

Input

- Input Voltage • 180-264 VAC
- Input Frequency • 47-63 Hz
- Inrush Current • 50 A max
- Input Current • 20 A at 180 VAC full load single phase, 11 A/phase at 180 VAC full load 3 phase
- Remote On/Off • On = TTL high or open, Off = TTL low
- Input Fusing • 25 A internal for 1 phase, 15 A for 3 phase
- Transient Protection • MOV and Gas Tube

Output

- Output Voltage • +48 VDC nominal
- Output Power Good • TTL high = power good
TTL low = output out of limits
- Minimum Load • No minimum load required
- Output Voltage Range • +43.2 to +52.8 VDC via trim pot
- Margining • High: +51.75 to +53.85 VDC
Low: +42.35 to 44.15 VDC
- Line/Load Regulation • ±0.5% using remote sense,
±5% for 5 V stand by
- Ripple & Noise • 480 mV pk-pk maximum
- Transient Response • 3% max deviation 0.50ms μ s recovery time for a 25% load change
- Start-up Time • 2 seconds max
- Hold Up Time • >16 ms at 230 VAC minimum
- Output Rise Time • 250 ms
- Overshoot/Undershoot • 1% at turn on/off
- Temperature Coefficient • 0.02%/°C
- Overvoltage Protection • +55 to +63 VDC
Reset by cycling input power

- Current Limit Protection • 110-140% V1, 5VSB <2.5 A latches off after 2 seconds
- Overtemperature Protection • Shutdown at +95 °C with auto reset

General

- Efficiency • 89% typical at 230 VAC
- Power Factor • 0.99 for 1 phase input, 0.95 for 3 phase input
- MTBF • 300,000 hrs per Bellcore-std
- LED Indicators • DC Good: Green LED;
Temperature OK Green LED; and AC Good: Amber LED
- Size • 5.0" x 5.0" x 12.12" not including handle
- Weight • 10.75 pounds

Environmental

- Operating Temperature • 0 °C to +50 °C, derate linearly 2.2%/°C to +65 °C
- Cooling • Internal ball bearing fan
- Shock & Vibration • MIL STD-810F NEBS Compliant to Bellcore GR 63 Core

EMC & Safety

- Safety Approvals • UL1950, CSA 22.2 No. 650 EN60950 & CE Mark LVD Meets EN61000-3-2, -3, CISPR22 and FCC Part 15 Class A Bellcore GR-1089-Core
- EMI/EMC

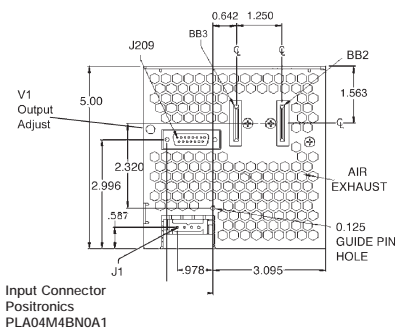
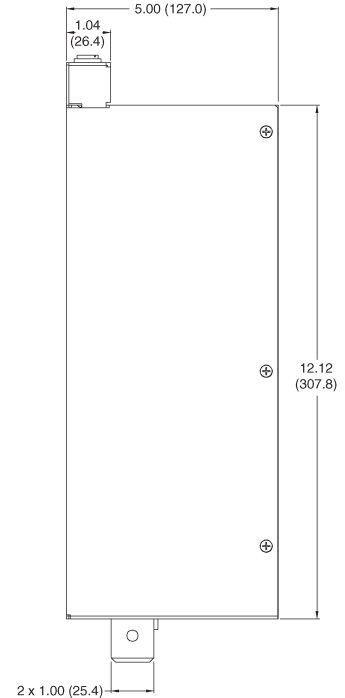
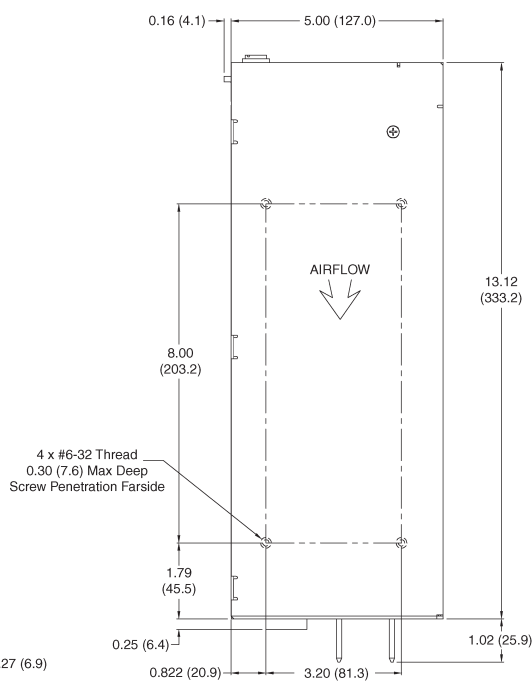
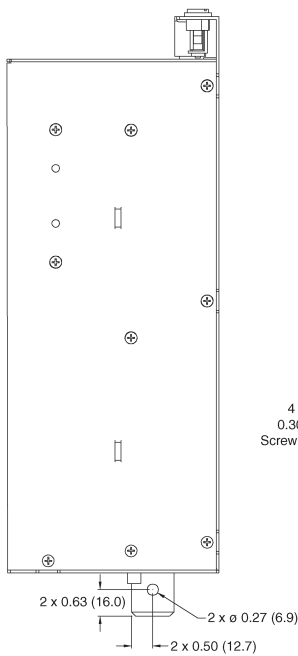
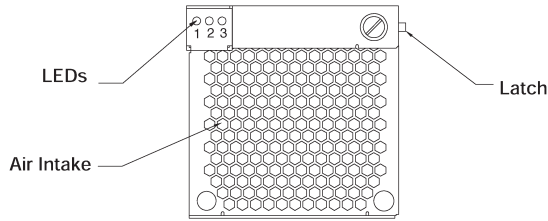
OUTPUT VOLTAGE & CURRENT RATINGS

CFP3K

| Input | Output Voltage V1 | Output Current | Standby Output | Output Power | Model Number |
|--------------|-------------------|----------------|----------------|--------------|----------------|
| Single Phase | +48 VDC | 62 A | 5.0 V/0.5 A | 3,000 W | CFP3KPS48FE |
| Three Phase | +48 VDC | 62 A | 5.0 V/0.5 A | 3,000 W | CFP3KPS48FE-3P |

Mechanical Details Module

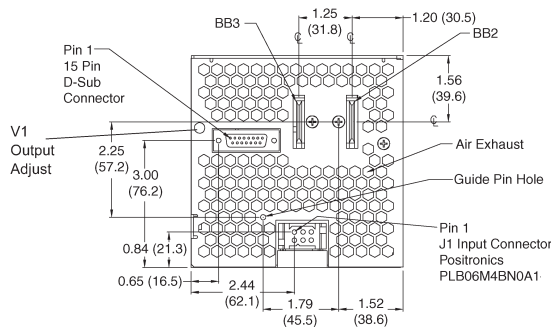
- LEDs
 1. AC Good
 2. Temp OK
 3. DC Good



Three Phase Input

Input Connector
 Positronics
 PLA04M4BN0A1

Input Mating Connector is:
 Positronics PLA04F8000
 with FC114N2 pins



Single Phase Input

Input Mating Connector is:
 Positronics PLB06F0000
 with FC114N2 pins

Module Connector Pin Charts

OUTPUT (BUS BAR) Mating Connector is Elcon 538-17-00100

| Bus Bar | Function |
|---------|----------|
| BB2 | V1 |
| BB3 | RTN |

INPUT CONNECTOR

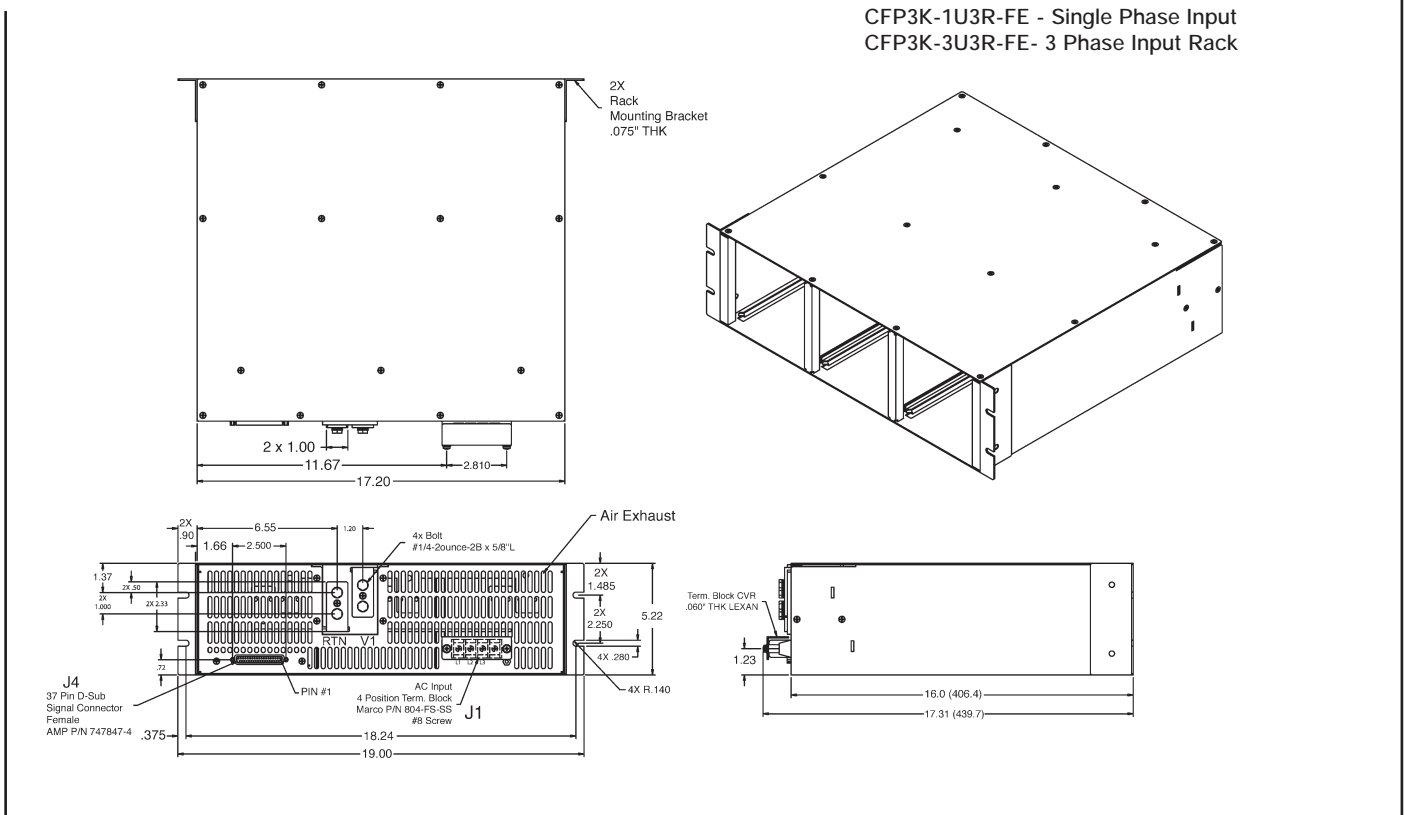
| Connector No. | Single Phase | | Three Phase | |
|---------------|--------------|----------------|-------------|----------------|
| | Pin No. | Function | Pin No. | Function |
| J1 | 1,4 | Chassis Ground | 1 | Line 1 |
| J1 | 2,5 | Line (L) | 2 | Line 2 |
| J1 | 3,6 | Neutral | 3 | Line 3 |
| | | | 4 | Chassis Ground |

SIGNAL CONNECTOR Mating Connector is Amp 205205-3 with 205090-1 pins

| Connector No. | Pin No. | Function |
|---------------|---------|-------------------|
| J209 | 1 | 5 vbs |
| J209 | 2 | 5 vsb rtn |
| J209 | 3 | Module Present |
| J209 | 4 | PGood |
| J209 | 5 | On/Off |
| J209 | 6 | I share |
| J209 | 7 | Mod-Ena |
| J209 | 8 | OVP test point |
| J209 | 9 | Ac fail |
| J209 | 10 | Margin 1 |
| J209 | 11 | V1 Sense |
| J209 | 12 | Not Used |
| J209 | 13 | Temp. Ok |
| J209 | 14 | RS (Return Sense) |
| J209 | 15 | N/C |

Rack Mechanical Details

CFP3K-1U3R-FE - Single Phase Input
CFP3K-3U3R-FE- 3 Phase Input Rack



Rack System Connector Pin Charts

| SIGNAL CONNECTOR | | |
|------------------|---------|-----------|
| Connector No. | Pin No. | Function |
| J4 | 1 | 5vsbrtn |
| J4 | 2 | Temp.Ok1 |
| J4 | 3 | PGood1 |
| J4 | 4 | ACFail |
| J4 | 5 | Present 1 |
| J4 | 6 | On/Off1 |
| J4 | 7 | 5vsbrtn |
| J4 | 8 | Temp.Ok2 |
| J4 | 9 | PGood2 |
| J4 | 10 | ACFail2 |
| J4 | 11 | Present2 |
| J4 | 12 | On/Off2 |
| J4 | 13 | 5vsbrtn |
| J4 | 14 | Temp.Ok3 |
| J4 | 15 | PGood3 |
| J4 | 16 | ACFail3 |
| J4 | 17 | Present3 |
| J4 | 18 | On/Off3 |
| J4 | 19 | N/U |
| J4 | 20 | N/U |
| J4 | 21 | N/U |
| J4 | 22 | N/U |
| J4 | 23 | N/U |
| J4 | 24 | N/U |
| J4 | 25 | V1 Sen+ |
| J4 | 26 | Sen - |
| J4 | 27 | Margin 1 |
| J4 | 28 | Margin 2 |
| J4 | 29 | N/U |
| J4 | 30 | I-Share |
| J4 | 31 | RTN |
| J4 | 32 | N/U |
| J4 | 33 | 5vsbrtn |
| J4 | 34 | 5vsbrtn |
| J4 | 35 | 5Vsb |
| J4 | 36 | 5Vsb |
| J4 | 37 | N/U |

| INPUT CONNECTOR - SINGLE PHASE MODEL CFP3K-1U3R-FE | | |
|--|---------|----------------|
| Connector No. | Pin No. | Function |
| J1 | 1 | Chassis Ground |
| J1 | 2 | Line (L) |
| J1 | 3 | Neutral (N) |

| INPUT CONNECTOR - THREE PHASE MODEL CFP3K-3U3R-FE | | |
|---|---------|----------------|
| Connector No. | Pin No. | Function |
| J1 | 1 | Phase 1 |
| J1 | 2 | Phase 2 |
| J1 | 3 | Phase 3 |
| J1 | 4 | Chassis Ground |