power-one®
Changing the Shape of Power

Features

- Three-phase Ac input
- High efficiency: 90% at full load
- 11.8 Watts/cubic inch power density
- Power factor corrected
- No minimum load required
- Single-wire current sharing
- Current limit and over-voltage protection
- Full power up to 50º C
- Compact size: 5” x 5” x 17”
- LED supply status indicators
- TUV, cTUVus & CB report

Model Number	Output Rating
FE5A-1D-0	12V/400A
FE5A-1E-0	15V/330A
FE5A-1F-0	24V/208A
FE5A-1G-0	28V/180A
FE5A-1H-0	36V/140A
FE5A-1J-0	48V/104A
Options O = M (Output power good – TTL high); N (Power fail – TTL high); R (Reverse airflow)	

Description

The ultra-compact FE5A Series Front-End Power Supply provides a single isolated output of up to 5000-Watts with inputs ranging from 365 Vac to 528 Vac, 3 phase, and can handle frequencies from 47 Hz to 63 Hz. Designed for high current applications requiring a compact size. The FE5A series operates either as a standalone unit or as part of rack-mounted power systems. The supply provides true front-end capability to automatic test equipment, telecom, data communications, and other distributed power designs.

Input Specifications

Input voltage range: 380 to 498 Vac, 480 Vac Nominal, Three Phase, 47 to 63 Hz.

Power Factor: >0.95 at full load and nominal line
Inrush Current: 40 A peak hot and cold start
Input Protection: 15A internal fuse per line is provided

Signals and Controls

LED Output Good Indicator: Front panel green LED indicates power supply is good; amber indicates fault.
LED AC Good Indicator: Front panel green LED indicates Ac input voltage is present and above minimum level.
Output Good Signal*: TTL compatible signal, normally high. Goes low when power supply is out of specified range.
Power Fail Signal*: TTL compatible signal, normally high (indicating Vin is present and above minimum level).
Enable*: Normally TTL High, drive low to enable.

*All interface signals are TTL compatible

Output Specifications

Output Power: 5000 W maximum
Output Voltage & Current Ratings: See chart shown above
Overshoot/Undershoot: Less than 1% at turn-on or turn-off. Less than 2% for 50% to 100% load step.
Start-Up Time: Less than 3 seconds
Efficiency: 90% typical measured at full load, nominal input
Hold-up Time: 20 ms minimum at full load and low line
Overcurrent Protection: Set to 105-130% of full rated load with automatic recovery
Overtemperature Protection: Automatic shutdown with auto recovery.
Remote Sense: Compensates for voltage drop of up to 0.5 V to the load. Shorted sense lead protection.
Overvoltage Protection: Set at 120%-130% of nominal; reset by cycling input power.
Output Noise and Ripple: PARD: 1% of output voltage measured at 20 Mhz bandwidth.
Single Wire Current Share: 5% full load rating
Load Regulation: 0.5% with remote sense, 2% without
Line Regulation: 0.2% over entire operating range
Minimum Load: No minimum load required

Safety & Environmental

Temperature Range:
Operating: 0 to 50°C
Storage: -40°C to +85°C
Operating Humidity: Maximum 95% RH non-condensing
Operating Altitude: 10,000 feet
Non-operating Altitude: 40,000 feet
Temperature Coefficient: 0.01% per °C within rated load
Safety Agency Compliance: TUV, cTUVus & CB report
EMI: Meets EN55022, Class A
Harmonic Suppression: Meets EN6100-3-2
Input Transient Protection:
Electrostatic Discharge: EN61000-4-2, Criteria B
Radiated, Radio-Frequency, Electromagnetic Field: EN61000-4-3, Criteria A
Electrical Fast Transients/Burst: EN61000-4-4, Criteria B
Voltage Fluctuations and Flickers: EN61000-3-3, Criteria B
Surge Test: EN61000-4-5, Criteria B
Conducted Immunity: EN61000-4-6, Criteria A

Safety & Environmental (continued)

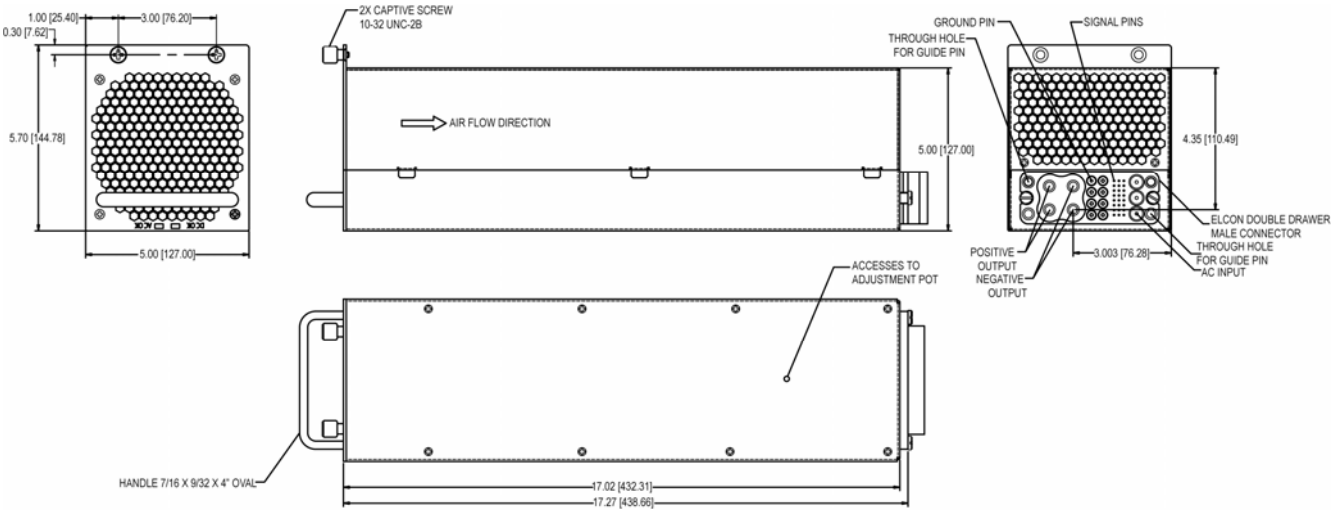
Dielectric Withstand:
Input-to-ground: 2121 Vdc
Input-to-output: 4242 Vdc
Output-to-case: 50 Vdc
Ac Leakage Current: 2mA maximum at 480 Vac, 60 Hz

Mechanical Specifications

Size: 5" H x 5" W x 17" D
Input/Output Connector: Elcon Double Drawer male connector
Mating Connector: Elcon Double Drawer female connector
MTBF: 100,000 hours calculated at 50°C, Bellcore Standard
Warranty: Two years from date of shipment, standard product only

Specifications are subject to change without notice.

Outline Drawing and Dimensions



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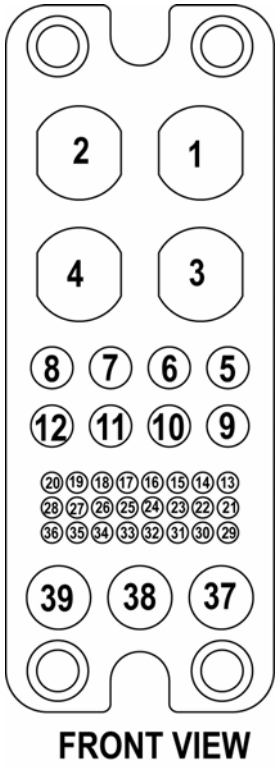
Connector Pin Descriptions



Pin Number	Signal Name
1	Output (+)
2	Output (+)
3	Output (-)
4	Output (-)
9	Chassis Ground
17	I_Share_M
18	Remote Sense S+
19	DC_Enable (See Note 1)
20	PF_HI (See Note 2)
26	Remote Sense S-
27	Logic_Rtn
28	Pwr_OK (See Note 3)
37	Input Line A
38	Input Line B
39	Input Line C

Notes
1. To turn on output, short Dc-Enable pin # 19 to Logic_Rtn, Pin #27 and short pin 29 to pin 21
2. Ac Good: PF_Hi Pin #20 ref. to Logic_Rtn Pin #27
3. Output Good: Pwr_OK Hi Pin #28 ref. to Logic_Rtn Pin #27