

350/420 Watts

MFA Hotswap Front End



- 1U x 2U Distributed Power Hotswap Front-End
- Power Density up to 8.26 W/in³
- Power Fail, DC OK & Active Current Share
- 5 V Standby Outputs
- 3 Year Warranty

Specification

Input

Input Voltage	• 85-264 VAC (derate output power 10% below 90 VAC)
Input Frequency	• 47-63 Hz
Input Current	• Typically 3.6 A at 115 VAC & 1.8 A at 230 VAC
Inrush Current	• <60 A max at 230 VAC cold start at 25 °C
Power Factor	• >0.9
Earth Leakage Current	• Typically 1 mA at 230 VAC/50 Hz, 0.5 mA at 115 VAC/60 Hz
Input Protection	• T6.3 A/250 V fuse in line

Output

Output Voltage	• See tables
Output Voltage Trim	• ±10%
Initial Set Accuracy	• V1 ±1%, V3 ±3%
Minimum Load	• No minimum load required
Start Up Delay	• 2 s maximum, typically 1 s
Hold Up Time	• 16 ms minimum at 90 VAC full load
Drift	• ±0.2% after 20 min warm-up
Line Regulation	• ±0.5% max
Load Regulation	• ±1.0%, 0-100% load
Over/Undershoot	• <1% maximum
Transient Response	• <4% max deviation, with 50-75-50% load step. Recovery to within 1% <500 µs
Ripple & Noise	• 1% pk-pk, 20 MHz bandwidth
Overvoltage Protection	• 115-140% Vnom (on V1 only)
Overtemperature Protection	• Thermal sensor under PCB shuts unit down typically >+75 °C, restarts after cool- ing
Overload Protection	• 110-140%, I nom V1
Short Circuit Protection	• Continuous trip and restart (hiccup mode)
Temperature Coefficient	• 0.05%/°C
Remote Sense	• Compensates for 0.5 V total voltage drop
Remote On/Off	• Short circuit or TTL Low turns PSU off, can also be configured as enable
Current Share	• Up to 3 supplies can be connected in parallel, derate total output current to 90%

General

Efficiency	• Typically 86%
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground 100 VDC Output to Ground
Switching Frequency	• PFC 62 kHz typical, Main converter 157 kHz, typical
Power Density	• 6.76 W/in ³ (MFA350), 8.26 W/in ³ (MFA420)
Signals	• Power Fail - open collector, transistor off for AC good, ≥5 ms warning of loss of output. DC OK - open collector, transistor off for DC good
MTBF	• 460 kHrs to MIL-HDBK-217F, notice 2, at +25 °C, GB, typical

Environmental

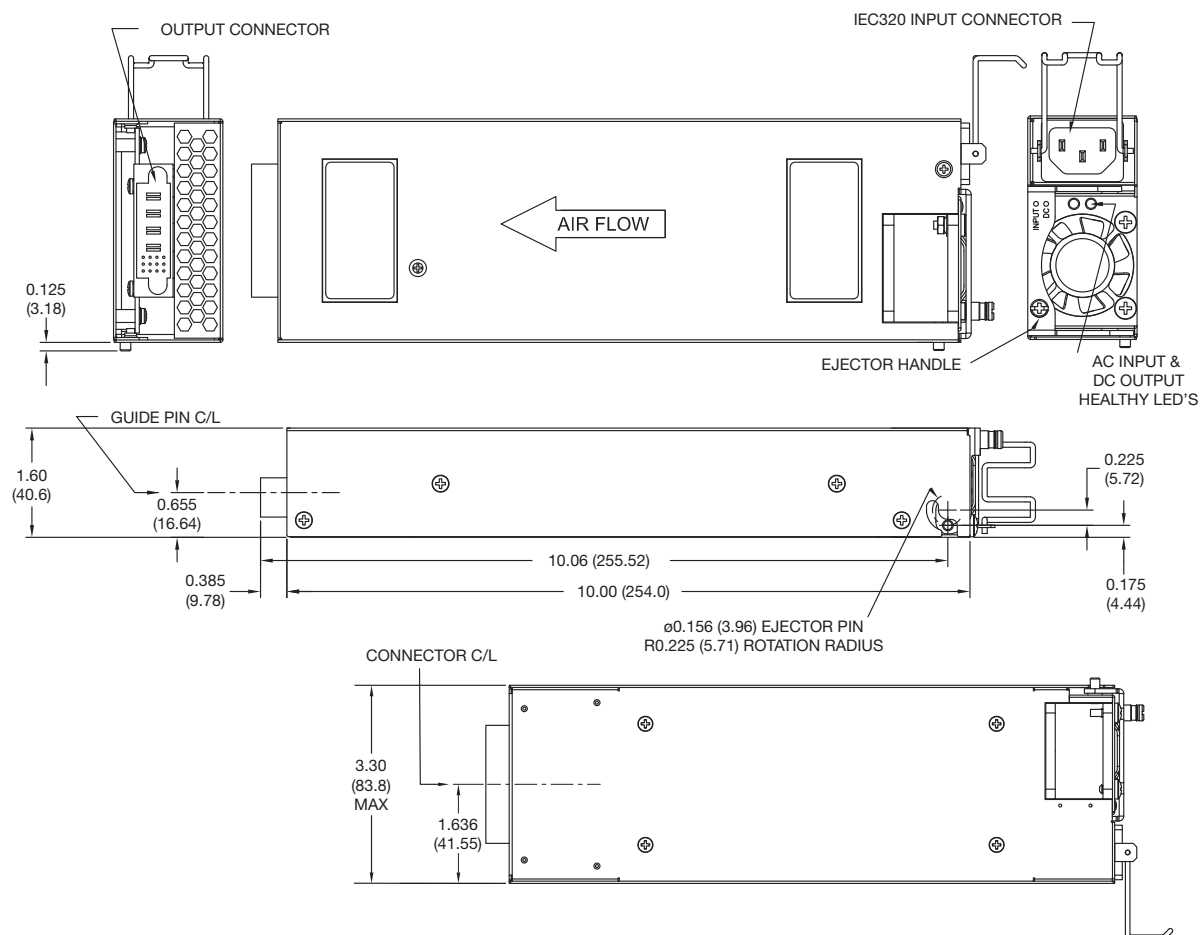
Operating Temperature	• -10 °C to +70 °C, derate linearly from +50 °C at 2.5%/°C to +70 °C
Cooling	• Integral fan
Operating Humidity	• 5-95% RH
Storage Temperature	• -20 °C to +85 °C
Operating Altitude	• 3000 m
Shock	• 30 g pk, half sine, 6 axes
Vibration	• Single axis 10-500 Hz at 2 g x 10 sweeps

EMC & Safety

Emissions	• EN55022, class B conducted, class A radiated
Harmonic Currents	• EN61000-3-2 class A EN61000-3-2 class C for loads ≥20%
Voltage Flicker	• EN61000-3-3
Radiated Immunity	• EN61000-4-3, level 3 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 3 Perf Criteria A
Surge	• EN61000-4-5, installation class 3 Perf Criteria A
Conducted Immunity	• EN61000-4-6, 10 V rms Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B
Safety Approvals	• CB Report, IEC60950-1, CSA22.2 No. 60950-1-05, UL60950-1, TUV EN60950-1/A11

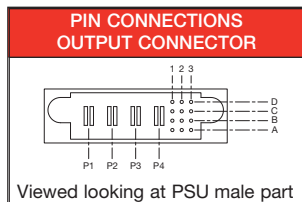
Output Voltage V1	Output Current	Standby Supply V3	Output Power	Model Number
12.0 VDC	29.0 A	5 V/0.3 A	350 W	MFA350PS12-H
24.0 VDC	14.5 A	5 V/0.3 A	350 W	MFA350PS24-H
48.0 VDC	7.3 A	5 V/0.3 A	352 W	MFA350PS48-H
12.0 VDC	35.0 A	5 V/0.3 A	434 W	MFA420PS12-H
24.0 VDC	17.5 A	5 V/0.3 A	434 W	MFA420PS24-H
48.0 VDC	8.8 A	5 V/0.3 A	436 W	MFA420PS48-H

Mechanical Details

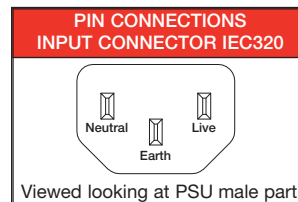


Pin Connections

PIN CON. OUTPUT CON. FCI 51732-035-LF	
A1	+Sense
A2	Not Used
A3	DC OK
B1	-Sense
B2	Not Used
B3	AC OK
C1	Current Share
C2	Not Used
C3	5 V Standby V3
D1	Not Used
D2	ROF (Inhibit/Enable)
D3	5 V Standby Return V3
P1	-V1
P2	-V1
P3	+V1
P4	+V1



Mating parts: FCI 51762-10401200AA-LF



Notes

- All dimensions in inches (mm).
- Weight: 2.65 lb (1202 g) approx
- Tolerance: .xx=±0.02 (±0.50); .xxx=±0.01 (±0.25)