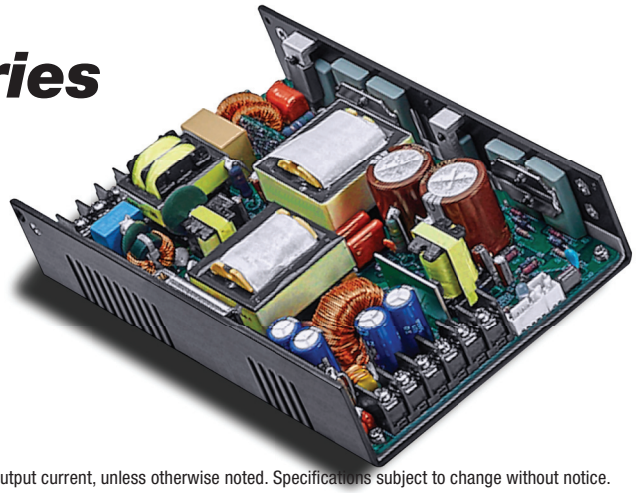
MPU-600C Series

Single Output 600W Power Factor Corrected AC/DC Power Supplies



Key Features:

- Compact 600W Supply
- PFC to EN 61000-3-2 “D”
- EN 60950 Approved (UL)
- CE Certified
- FCC Class B Emissions
- Universal AC Input
- 3 Packaging Options
- 900W Peak Power

PFC ACTIVE

RoHS

Electrical Specifications

Specifications typical @ +25°C, nominal input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range	Universal	90		264	VAC
Input Frequency		47		63	Hz
Input Current, Full Load	90 VAC		8.5		A
Inrush Current, Cold Start	230 VAC			70	A
Leakage Current	264 VAC			3.5	mA
Power Factor Correction	Meets EN61000-3-2 Class D				
Input Protection	T10A/250V Fuse Inserted In Primary				
Input Undervoltage Protection	Under 80 VAC (±10 VAC) Unit Shuts Down; Unit Recovers Over 90 VAC				

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Adjustment	By Trim Pot, U-Channel Model Only		±5.0		%
Output Regulation, See Note 1			±1.0		%
Hold Time	115 VAC, 75% Load	16			mSec
Ripple & Noise (20 MHz), See Note 2	See Model Selection Guide				
Overload Protection	Foldback Circuit, Autorecovery	110		140	%
Over Voltage Protection	>130% of Rated Output Voltage. Recycle AC Input.				
Over Temperature Protection	Autorecovery	+105	+110	+115	°C
Temperature Coefficient			±0.04		%/°C
Transient Recovery Time, See Note 4	50% Load Change		2.5		mS
Transient Response Deviation			5.0		%
Overshoot/Undershoot	At Turn On/Off			±5.0	%
Turn On Delay	115 VAC			2.0	S
Output Short Circuit	Continuous With Autorecovery				

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage, See Note 5	Input - Output	3,000			VAC
	Input - FG (Frame Ground)	1,500			
	Primary - Core	1,500			
Switching Frequency	Fixed		28		kHz

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	0	+25	+50	°C
Storage Temperature Range		-20		+80	°C
Cooling	See Model Selection Guide				
Operating Humidity	RH, Non-condensing			90	%

EMI Characteristics

Parameter	Standard	Criteria	Level
Radiated Emissions	EN 55022		B
Conducted Emissions	EN 55022		B
ESD	EN 61000-4-2	A	±4 kV Contact
RS	EN 61000-4-3	A	3V/m
EFT	EN 61000-4-4	A	±1 kV
Surge	EN 61000-4-5	A	±1 kV (L-L), ±2 kV (L-G)
CS	EN 61000-4-6	A	3V/rms
PFM	EN 61000-4-8	A	1A/m
Voltage Dips	EN 61000-4-11	A	>95% 10 mS, 30% 500 mS
		B	>95%, 500 mS

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 30°C, Gnd Benign	100			kHours
Safety Standards	UL 60950, EN 60950				
Vibration	Sinusoidal 5~50 Hz, Acceleration ±7.35 m/s² on X, Y & Z Axis				

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292 Page Street
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Stoughton, MA 02072
USA

T: (781) 344-8226
F: (781) 344-8481
E: sales@micropowerdirect.com
W: www.micropowerdirect.com

Model Selection Guide

www.micropowerdirect.com

Model Number	Output Voltage (VDC)		Output Current With 25 CFM (Max A)	Max. Output Power (W)	Ripple & Noise (% p-p)	Efficiency (%)
	PreSet	Range				
MPU-600CS-12YYZ	12 VDC	11.0 - 13.0	50.00	600	±1%	80%
MPU-600CS-24YYZ	24 VDC	22.0 - 25.0	25.00	600	±1%	80%
MPU-600CS-48YYZ	48 VDC	41.0 - 50.0	12.50	600	±1%	80%

Models with other output voltage levels are available (i.e. 15 VDC, 36 VDC, etc) Contact the factory for details at: **sales@micropowerdirect.com**

Notes:

1. Output regulation includes line & load.
2. Ripple & noise is measured from 10 Hz to 20 MHz. Connection to the unit is made with a 0.1 µF ceramic capacitor & a 22 µF electrolytic capacitor connected in parallel.
3. A 1% minimum load is required to maintain regulation & ripple specifications.
4. Transient recovery is measured to within a 1% error band for a load step change of 50% to 100%.
5. Isolation specifications are production HI-Pot tested for 3 seconds.
6. The full output range (see table) is covered in the safety agency certification. Standard models are factory set to the Preset voltage, but may be set to other levels within the range without affecting the agency certification. For more information, contact the factory.
7. Output power is given for the factory preset voltage. The maximum continuous output power level is 600W with 25 CFM airflow. All models provide a peak power level of 900W for a maximum duration of 500 µS. For more information, contact the factory.
8. Each unit includes an input fuse (250V/10A). Since this fuse is not field replaceable, it is recommended that an external fuse of the same size be used on the input of the power supply for protection.
9. The Fan Drive output (at connector CN4) provides 12V/300 mA to drive an external fan.

Model Number

MPU-600CS-XXYYZ

Mechanical Configuration
U = U-Chassis

Approval Level
C (or Blank) = EN 60950

Outputs
S = Single
D = Dual

Output Voltage Selection

Output Connector
A = Molex
T = Terminal Block

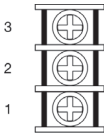
Input Connector
A = Molex
T = Terminal Block
P = IEC320 (E Case Only)

Case Options (If Available)
Blank = No Fan
E = End Fan
F = Top Fan

Connections

Input Connector (CN1):

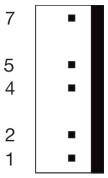
- Terminal Block:
  Howder HD-121-3P: M3.5 Screws
  3 terminals, 9.5 mm Centers



Pin	Function
1	Field Ground
2	AC-Line
3	AC Neutral

Input Connector (CN1):

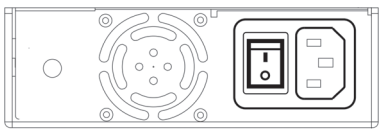
- Molex Mating Part No:
  Molex 09-91-7000 or equivalent
  (7 pins, two pins removed)



Pin	Function
1	Field Ground
2	Field Ground
3	Missing
4	AC-Line
5	AC-Line
6	Missing
7	AC-Neutral

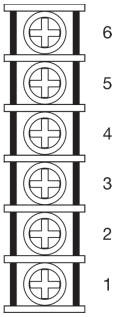
Input Connector (CN1):

- IEC320 or equivalent
  Available on "End Fan" models only



Output Connector (CN2):

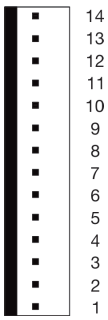
- Terminal Block:
  Howder HD-121-6P: M3.5 Screws
  6 terminals, 9.5 mm Centers



Pin	Function
1	+VOUT
2	+VOUT
3	+VOUT
4	-VOUT
5	-VOUT
6	-VOUT

Output Connector (CN2):

- Molex Mating Part No:
  Molex 09-50-3141 or equivalent



Pin	Function
1	+VOUT
2	+VOUT
3	+VOUT
4	+VOUT
5	+VOUT
6	+VOUT
7	+VOUT
8	-VOUT
9	-VOUT
10	-VOUT
11	-VOUT
12	-VOUT
13	-VOUT
14	-VOUT

Logic Signal Connector (CN3):

- Mating Part No:
  JST XHP-5 or equivalent
  (CHYAO SHIUNN JS-1001-05)



Pin	Function
1	- Remote Sense
2	+ Remote Sense
3	Remote On/Off
4	Common
5	Power Good

Interface Signals

Power Supply On	Bi-color LED Is green for "power on"; orange when protection enabled
Remote Sense	Compensates for up to a 0.5V line drop
Power Good Signal	Goes TTL high 100 to 500 mS after regulation. Goes low at least 1 mS before the loss of regulation. Will sink 100 mA.
Remote On/Off	A TTL low signal inhibits the output. Hiccup mode.

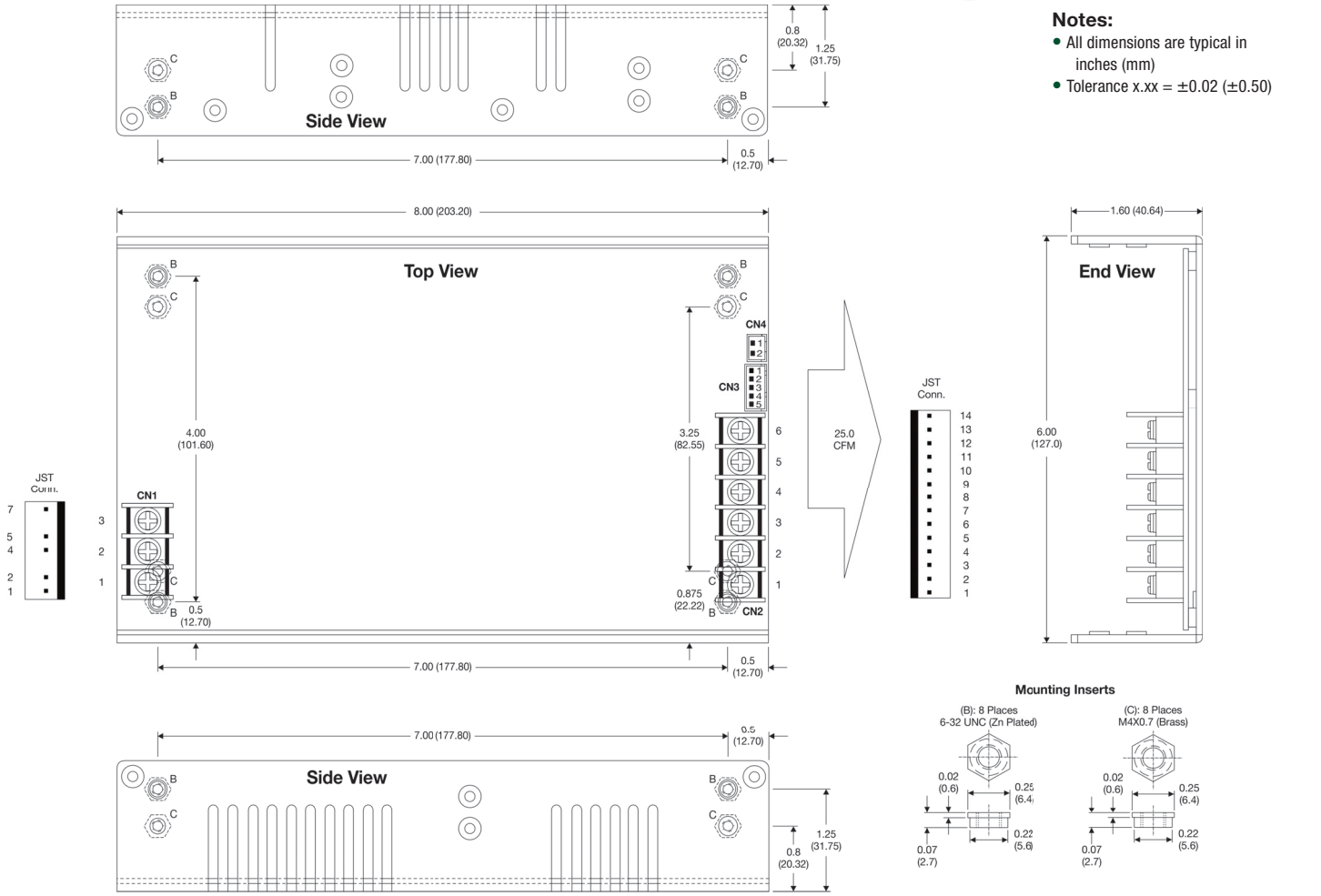
Fan Driver Connector (CN4):

- Mating Part No:
  JST XHP-2 or equivalent
  (CHYAO SHIUNN JS-2001-2)



Pin	Function
1	Minus
2	Plus

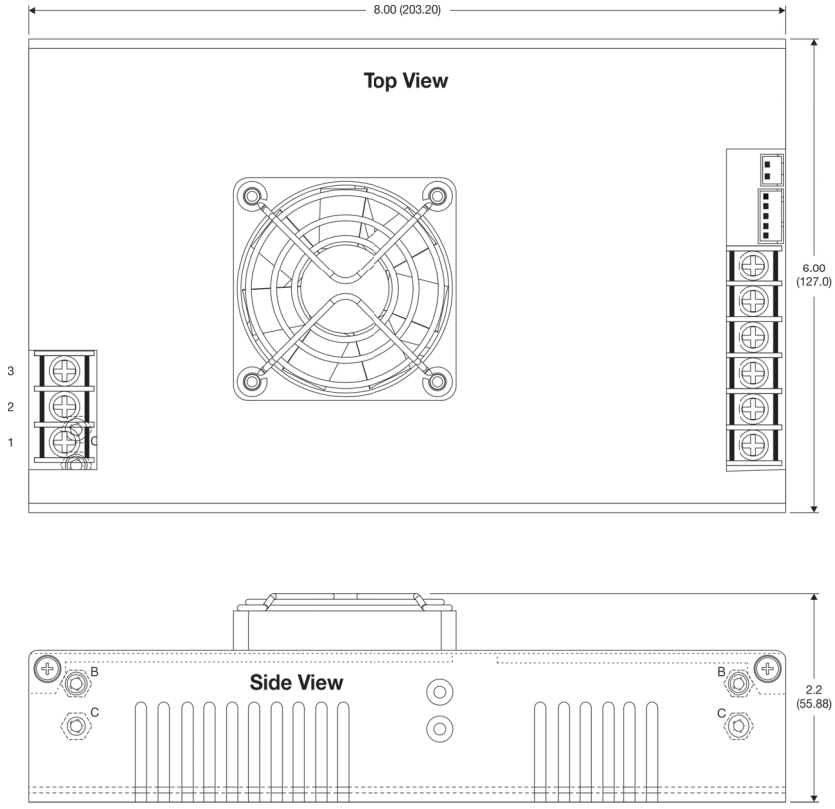
Mechanical Dimensions



Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)

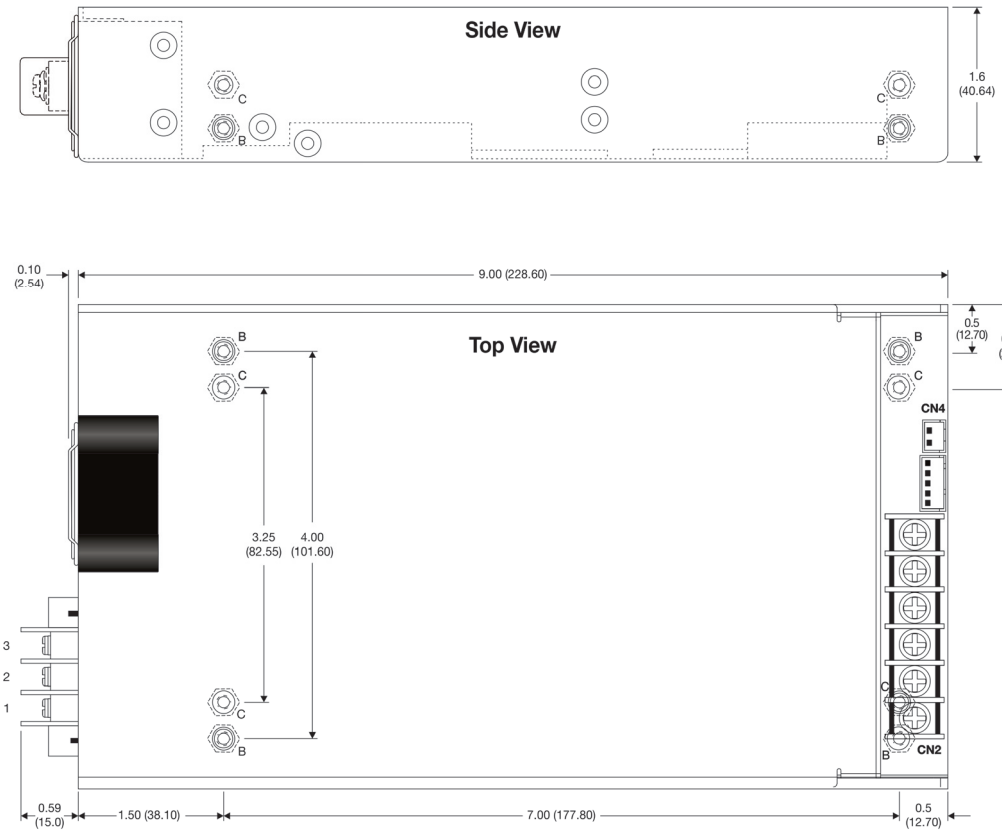
Mechanical Dimensions, Top Fan "F" Models



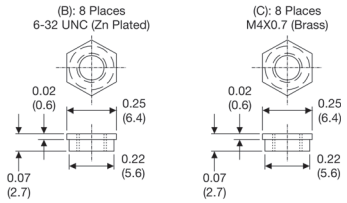
Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)

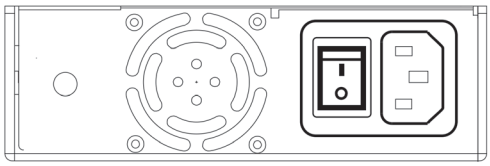
Mechanical Dimensions, End Fan "E" Models



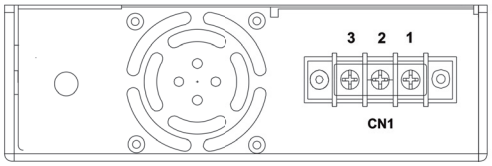
Mounting Inserts



Back Panel - IEC 320



Back Panel - Terminal Strip



Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)