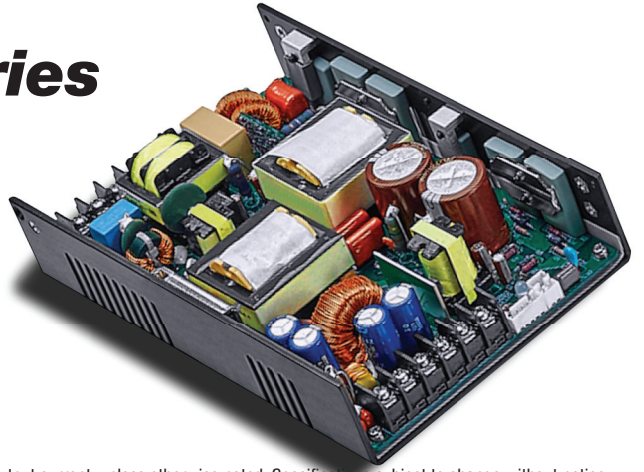


# MPU-600C Series

## 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



### MicroPower Direct

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### 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/s <sup>2</sup> on X, Y & Z Axis					

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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](mailto:sales@micropowerdirect.com)

**Notes:**

- Output regulation includes line & load.
- 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.
- A 1% minimum load is required to maintain regulation & ripple specifications.
- Transient recovery is measured to within a 1% error band for a load step change of 50% to 100%.
- Isolation specifications are production HI-Pot tested for 3 seconds.
- 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.
- 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.
- 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.
- 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

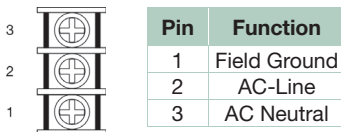
**Input Connector**  
A = Molex  
T = Terminal Block  
P = IEC320 (E Case Only)

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

**Connections**

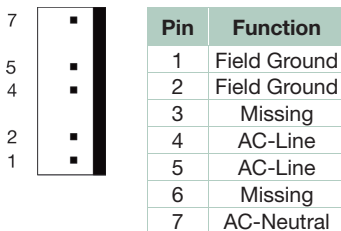
**Input Connector (CN1):**

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



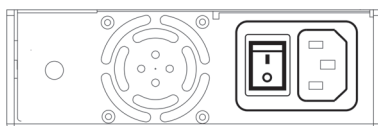
**Input Connector (CN1):**

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



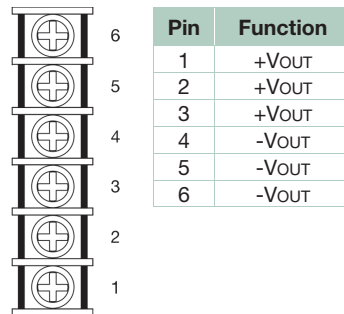
**Input Connector (CN1):**

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



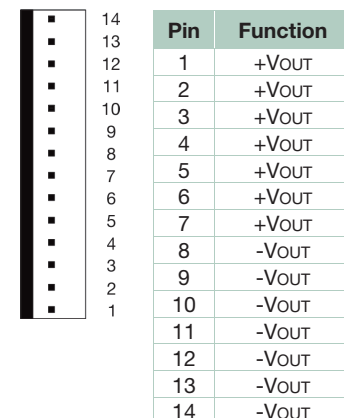
**Output Connector (CN2):**

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



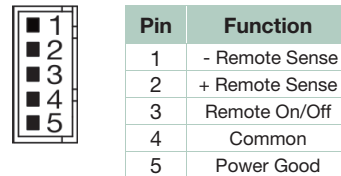
**Output Connector (CN2):**

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



**Logic Signal Connector (CN3):**

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

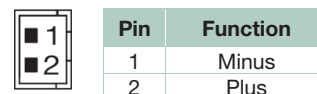


**Interface Signals**

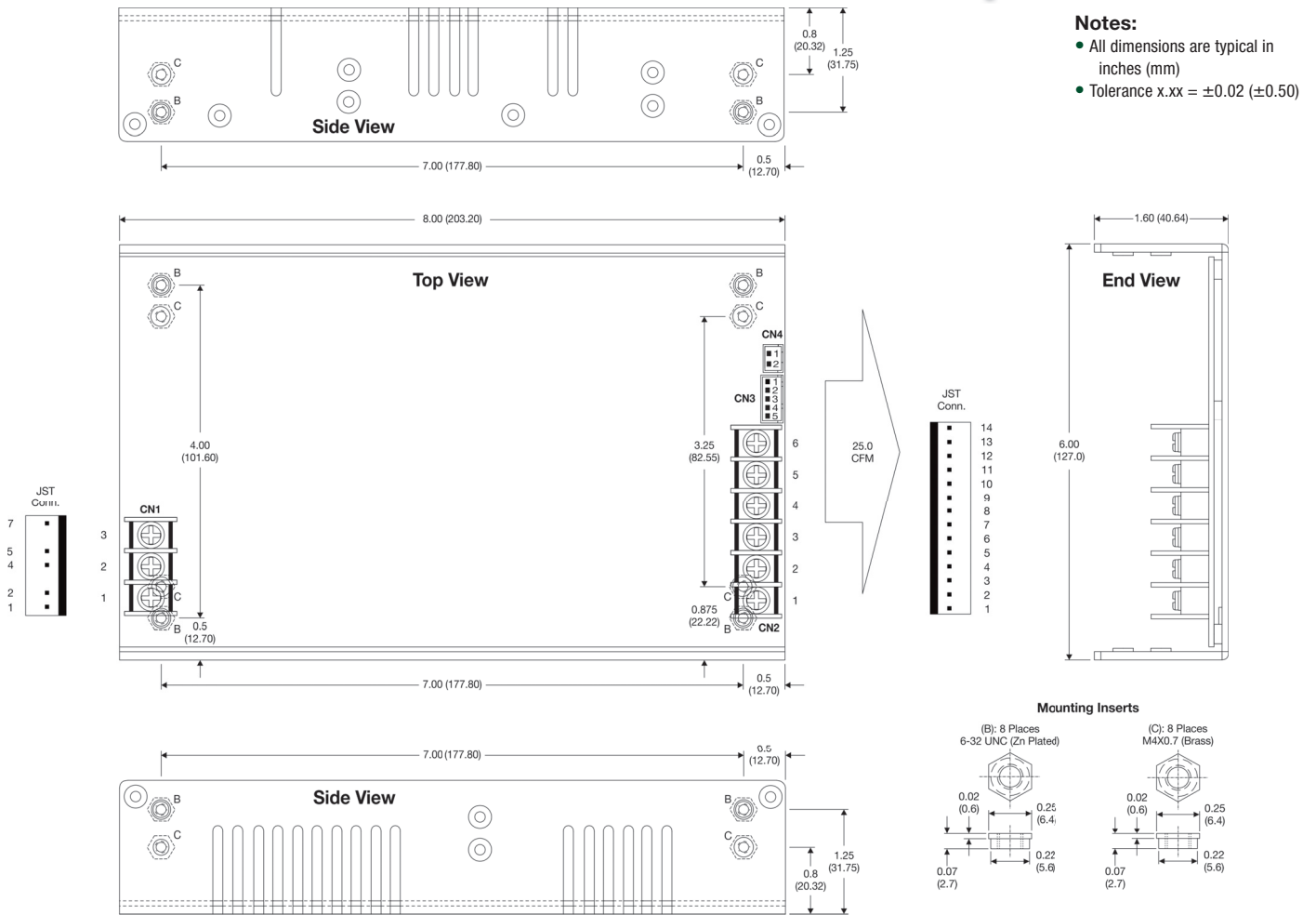
Power Supply On	Bi-color LED Is green for "power on"; orange when protection enabled
Remote Sense	Compensates for up to a 0.5V line drop
Power Good Signal	Goes TTL high 100 to 500 mS after regulation. Goes low at least 1 mS before the loss of regulation. Will sink 100 mA.
Remote On/Off	A TTL low signal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

**Fan Driver Connector (CN4):**

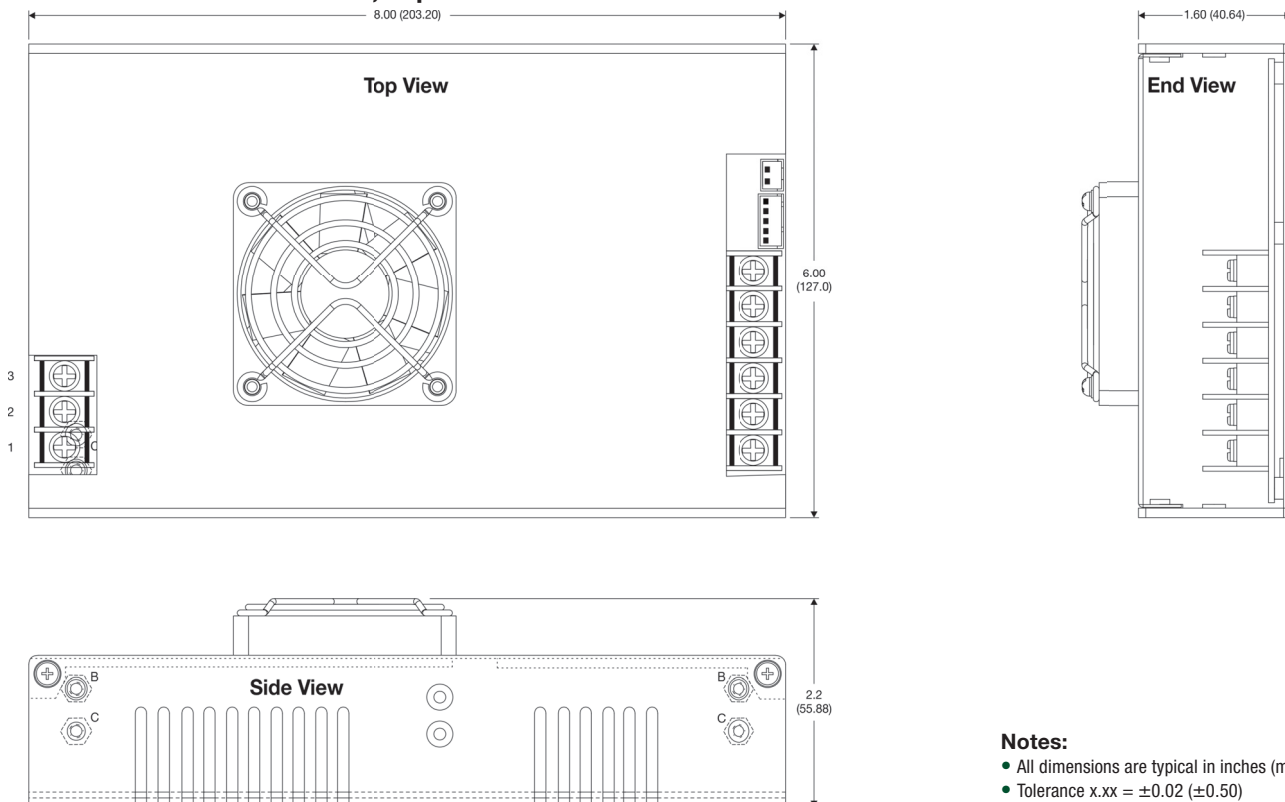
- Mating Part No:  
JST XHP-2 or equivalent  
(CHYAO SHIUNN JS-2001-2)

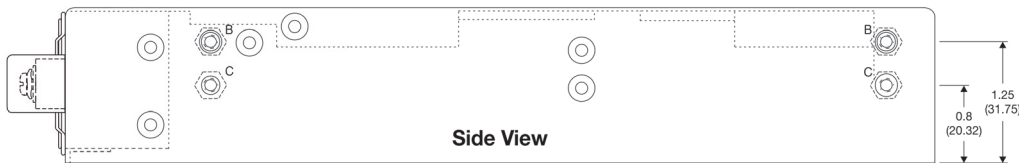
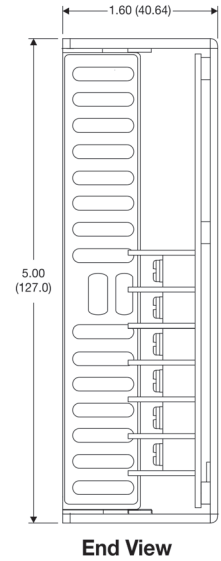
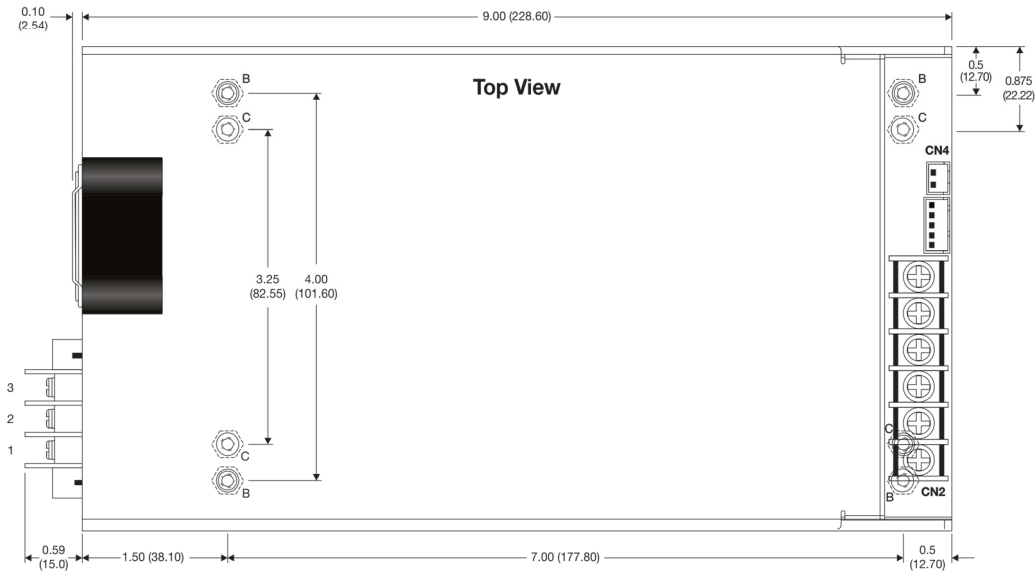
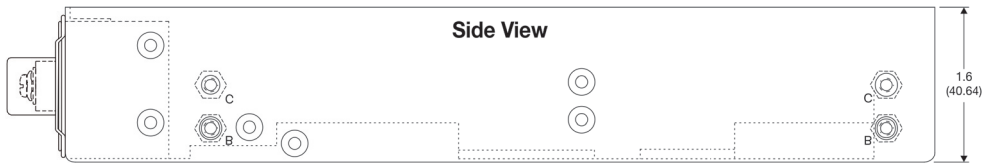


# Mechanical Dimensions

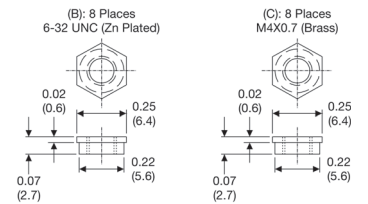


# Mechanical Dimensions, Top Fan "F" Models

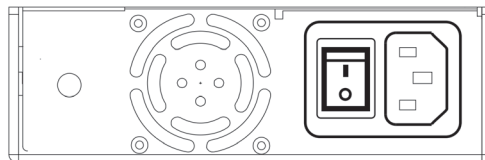




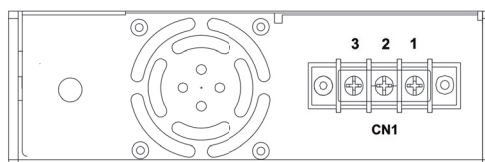
**Mounting Inserts**



**Back Panel - IEC 320**



**Back Panel - Terminal Strip**



**Notes:**

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



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