

MPU-300D Series

Dual Output 300W Power Factor Corrected AC/DC Power Supplies



Key Features:

- Small 1U 300W Supply
- Dual Outputs
- PFC to EN61000-3-2 "A"
- EN 60950 Approved (UL)
- CE Certified
- FCC Class B Emissions
- Auto Selectable AC Input
- Four Mechanical Options



MicroPower Direct



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	Autoranging	90		132	VAC
		180		264	
Input Frequency		47		63	Hz
Input Current, Full Load	100 - 120 VAC		8		A
	200 - 240 VAC		4		
Inrush Current, Cold Start	110 VAC			35	A
	220 VAC			70	
Leakage Current, See Note 1	264 VAC		1.0		mA
Power Factor Correction	Meets EN61000-3-2 Class A				
Input Protection	T8A/250V Fuse				

Output					
Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Adjustment	V1 By Trim Pot		±5.0		%
Output Regulation, See Note 2	See Model Selection Guide				
Hold Time	110 VAC, 80% Load		20		mSec
Ripple & Noise (20 MHz), See Note 3	See Model Selection Guide				
Overload Protection	Power Limit	110		140	%
Over Voltage Protection	>130% of Rated Output Voltage. Recycle AC Input.				
Over Temperature Protection			+110		°C
Temperature Coefficient			±0.04		%/°C
Transient Recovery Time, See Note 4	50% Load Change		2.5		mS
Transient Response Deviation			5		%
Overshoot/Undershoot	At Turn On/Off			5.0	%
Turn On Delay	230 VAC			1	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		23		kHz

Interface Signals						
Power Supply On	Green LED (LED1) on the PCB					
Power Good Signal	PG on CN1. Goes TTL high 100 to 500 mS after regulation. Goes low at least 1 mS before the loss of regulation. Will sink 100 mA.					
Fan Fail	FF on pin 3 of CN1. Open collector output rated for 15 VDC/5 mA sink current maximum. Goes high if a fan failure is detected					

Environmental						
Parameter	Conditions		Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient		0	+25	+50	°C
Output Derating	2.5%/ °C from +50 °C to + 70 °C					
Storage Temperature Range			-20		+85	°C
Cooling	See Model Selection Guide					
Operating Humidity	RH, Non-condensing				90	%

Reliability Specifications					
Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 30°C, Gnd Benign	100			kHours
Safety Standards	UL 60950, EN 60950				
EMI Compliance	Compliance to EN 55022 (CISPR22) Class B; EN 61000-3-2,3				
EMS Immunity Compliance	EN 6100-4-2,3,4,5,6,11; EN 55024, CE Marked (LVD)				
Vibration	Sinusoidal 5~50 Hz, Acceleration ±7.35 m/s² on X, Y & Z Axis				

Model Selection Guide

CompuMess Elektronik GmbH · Lise-Meitner-Straße 4 · D-85716 Unterschleißheim
Telefon (089) 32 1501-0 · Telefax (089) 32 1501-11
info@compumess.de · www.compumess.de · www.netzteile.de

Model Number	Output Voltage Factory		Max. Output Current (Note 7)		Regulation (Note 2)	Ripple & Noise (Note 3)	Efficiency (Note 7)
			18 CFM (U/w Air, E, F)	Convection (U)			
MPU-300D-0512yz	V1	+5 VDC	30.00A	15.00A	±5.0%	1.0%	75%
	V2	+12 VDC	16.67A	10.42A			
MPU-300D-0524yz	V1	+5 VDC	30.00A	15.00A	±5.0%	1.0%	75%
	V2	+24 VDC	8.33A	5.20A			
MPU-300D-0548yz	V1	+5 VDC	30.00A	15.00A	±5.0%	1.0%	75%
	V2	+48 VDC	4.16A	2.60A			
MPU-300D-1224yz	V1	+12 VDC	16.67A	12.50A	±5.0%	1.0%	75%
	V2	+24 VDC	8.33A	6.25A			

Notes:

- Models are available with leakage current specified as low as 500 µA (at 240 VAC) / 300 µA (at 120 VAC). Contact the factory for details.
- Output regulation includes line & load.
- Ripple & noise is measured from 10 Hz to 20 MHz. Measurement connection to the unit is made with a 0.1 µF ceramic capacitor & a 22 µF electrolytic capacitor connected in parallel.
- 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 above) is covered in the safety agency certification. Standard models are factory set to the "Preset" voltage. This may be set

to other levels within the range without affecting the agency certification. For more information, contact the factory.

- The maximum continuous output power level, (combined for V1 & V2) is 300W (with 18 CFM) for the **MPU-300D-1224** & 250W for all other models. For convection cooling, the maximum continuous output power level (combined for V1 & V2) is 150W for the **MPU-300D-1224** & 125W for all other models. For more information, contact the factory.
- A 10% minimum load is required to maintain regulation and ripple specifications.

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

MPU-300D-XXXXYZ

Mechanical Configuration
U = U-Chassis

Outputs
D = Dual

Output Voltage Selection

Connector Type
T = Terminal Block
A = Molex

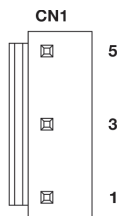
Case Options (If Available)
C = Cover
E = End Fan
F = Top Fan

Connections

Input Connector (CN2):

- JST Crimp Style Connector
JST Mating Part No:
BP5P-VH or equivalent
(two pins removed)

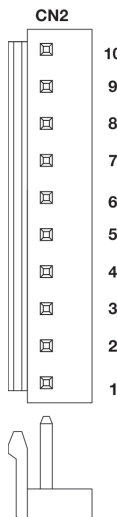
Pin	JST
1	Field Ground
3	AC-Neutral
5	AC-Line



Output Connector (CN1):

- JST Crimp Style Connector
JST Mating Part No: B10P-VH

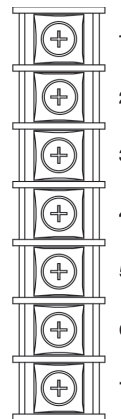
Pin	JST
1	V1 _{OUT}
2	V1 _{OUT}
3	V1 _{OUT}
4	Common
5	Common
6	Common
7	Common
8	Common
9	V2 _{OUT}
10	V2 _{OUT}



Input/Output Connector (CN1):

- Terminal Block:
Howder No. HB-95-7P
7 pins, M3.5 Screw, 9.5 mm Centers

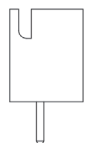
Pin	T Block
1	AC-Line
2	AC-Neutral
3	Field Ground
4	V2 _{OUT}
5	Common
6	Common
7	V1 _{OUT}



Fan Driver Connector (CN3):

- JST Crimp Style Connector
JSTMating Part No: XHP-2 or equivalent

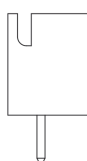
Pin	Function
1	Minus
2	Plus



Logic Signal Connector (CN4):

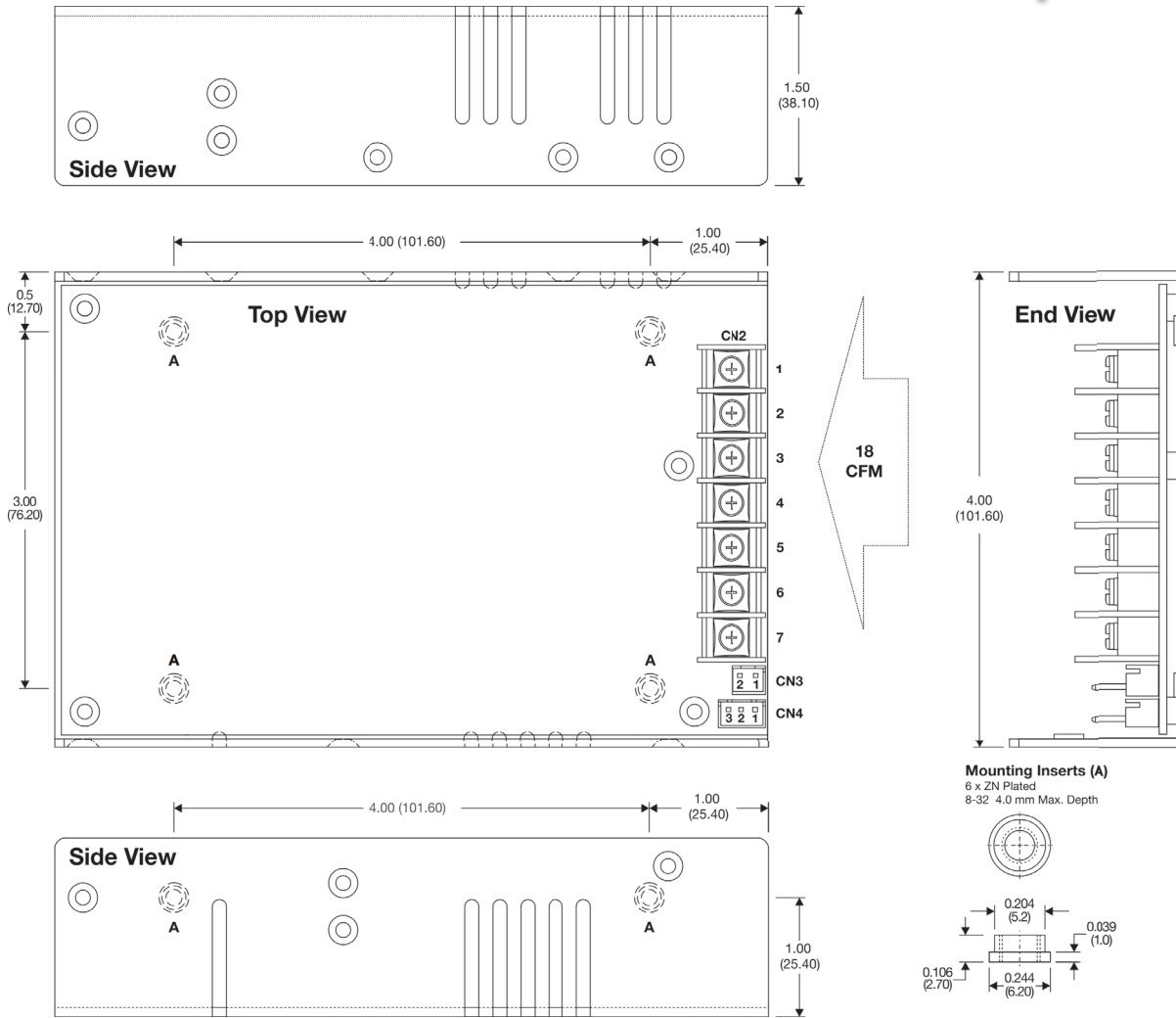
- JST Crimp Style Connector
JST Mating Part No: XHP-3

Pin	Function
1	Power Good
2	Common
3	Fan Fail

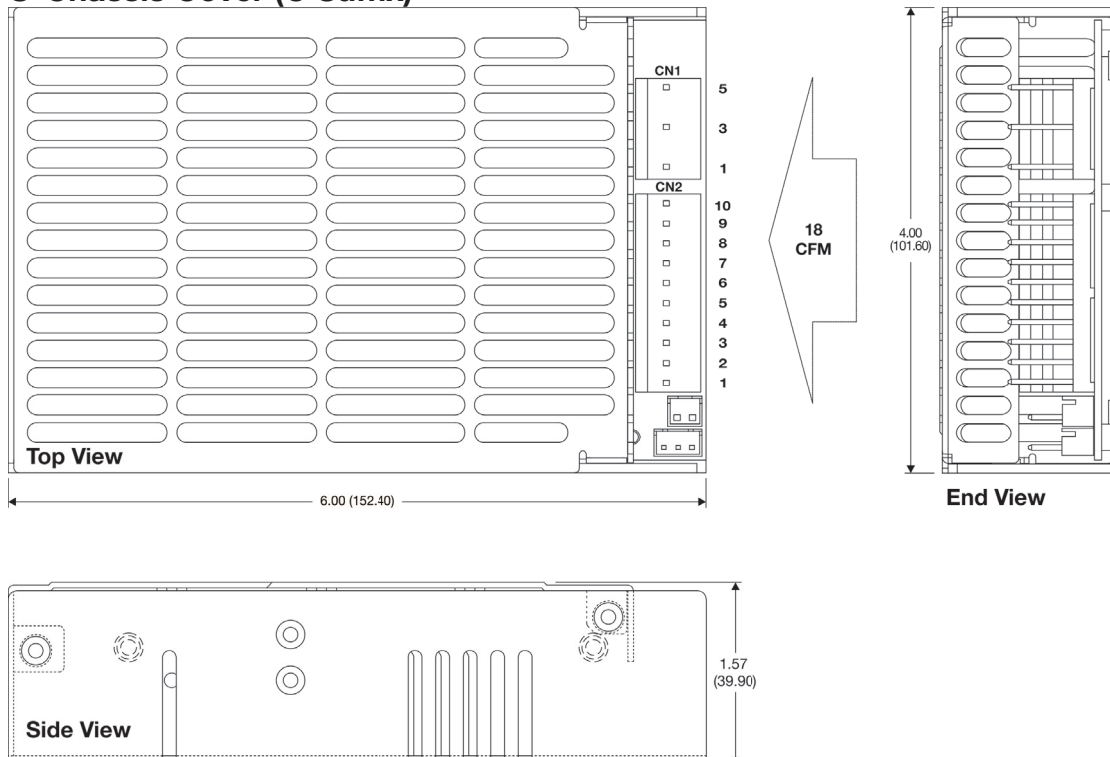


Mechanical Dimensions: U-Chassis

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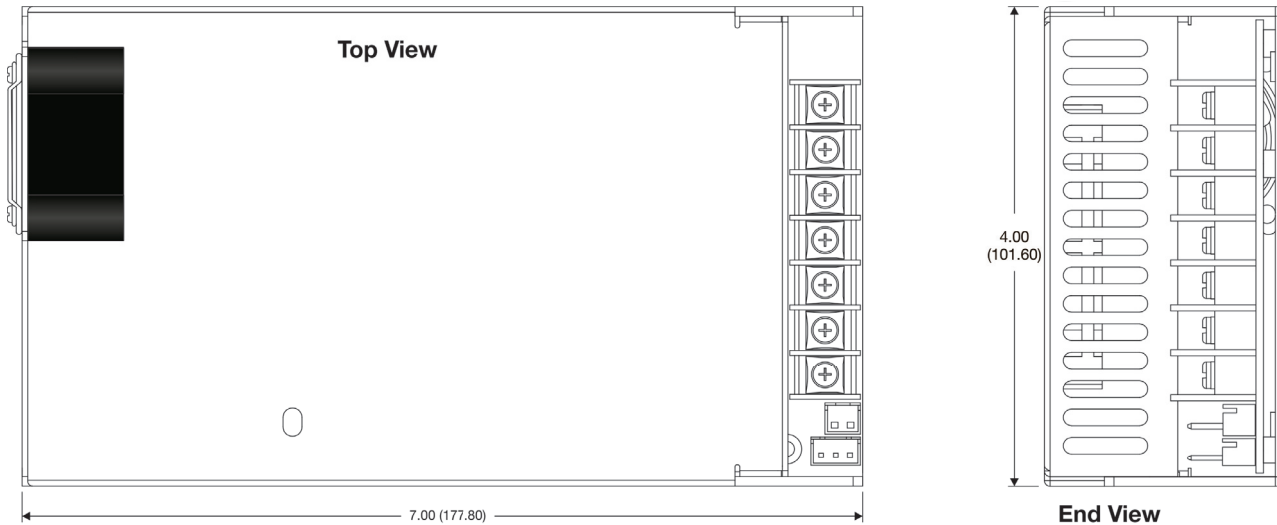


U-Chassis Cover (C Suffix)

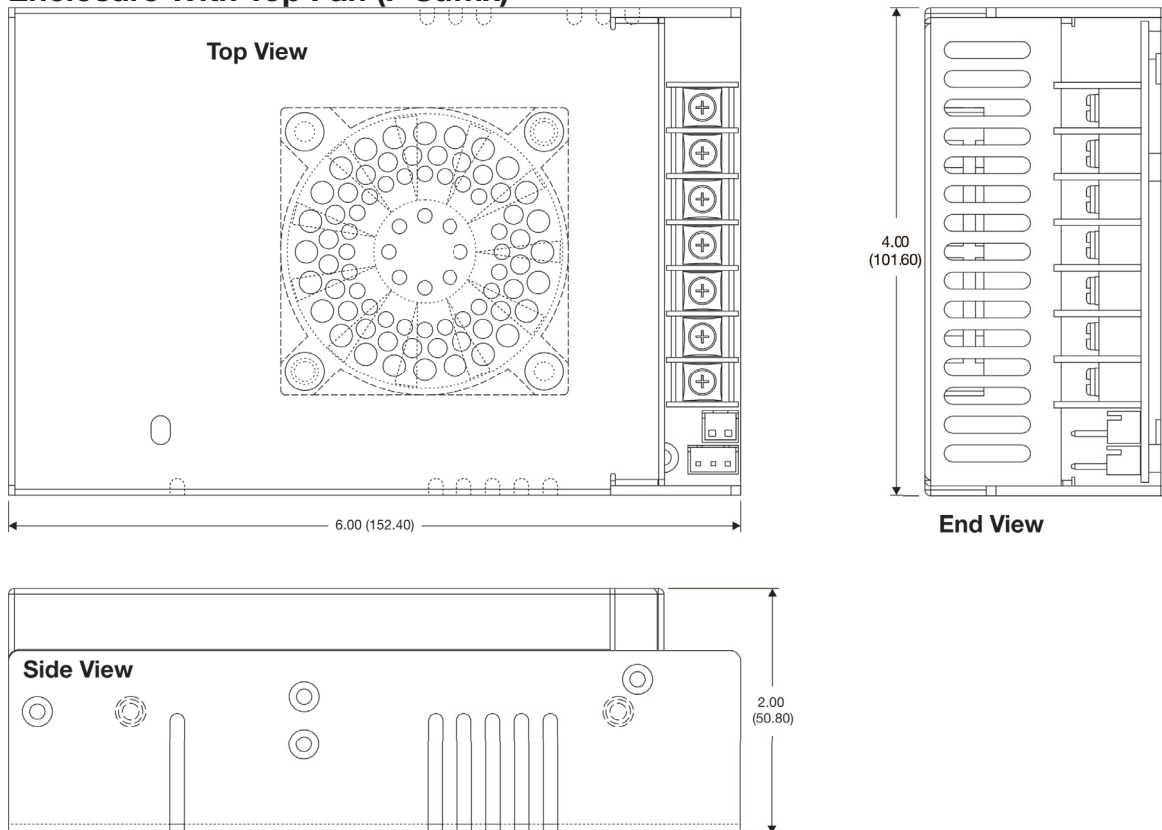


Enclosure With End Fan (E Suffix)

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Enclosure With Top Fan (F Suffix)



MicroPower Direct
 We Power Your Success - For Less!