

# MPU-150S Series

## Compact U-Channel, 150W Power Factor Corrected, AC/DC Power Supplies



### Key Features:

- 150W Output Power
- Universal 90-264 AC Input
- Active PFC = >0.97
- EN 60950 Approved
- Low Leakage Current
- Six Single Output Models
- Meets EN 55022 B
- >100 kHour MTBF
- Only 5.0" x 3.2" x 1.5"



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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
		120		370	VDC
Input Frequency		47		63	Hz
Input Filter	Meets EN 55022 Class B; FCC Class B				
Input Current	See Model Selection Guide				
Inrush Current	Cold Start, 115 VAC			30.0	A Pk
	Cold Start, 230 VAC			60.0	
Safety Ground Leakage Current	115 VAC		0.47		mA
	230 VAC		0.94		
Power Factor Correction, See Note 1	115 VAC	0.97			W/VA
	230 VAC	0.93			

#### Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage/Current	See Model Selection Guide				
Output Voltage Tolerance			±2.0		%
Minimum Output Load	See Note 2	0.0			%
Line Regulation	Vin = Min to Max		±1.0		%
Load Regulation	Iout = 5% to 100%		±1.0		%
Ripple & Noise (20 MHz), See Note 3	3.3, 5 VDC Output			100	mV P - P
	12, 15, 24, 48 VDC Output			1	%
Hold-Up Time	115 VAC	18			mSec
Temperature Coefficient			±0.02		%/°C
Short Circuit Protection	Continuous (Autorecovery)				
Over Voltage Protection	See Model Selection Guide				
Overload Protection	See Note 4	130		150	%

#### General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output	3,000			VAC
	Input to Ground	1,500			
	Output to Ground	500			
Isolation resistance	500 VDC		100		MΩ
Isolation Capacitance			4,700		pF
EMC Compliance	Conducted	EN 55022; EN 61000-3-2, -3			
	Electrostatic Discharge (ESD)	IEC/EN 61000-4-2, -6, -8, -11			
	RF Field Susceptibility	IEC/EN 61000-4-3			
	Electrical Fast Transients/Bursts On Mains	IEC/EN 61000-4-4			
Switching Frequency	Surge	IEC/EN 61000-4-5			
	Fixed		67		kHz

#### Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-25	+25	+70	°C
Storage Temperature Range		-40		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			95	%

#### Physical

Size	5.0 x 3.24 x 1.5 Inches (127.0 x 82.2 x 38.1 mm)				
Weight	U-Channel	15.73 Oz (0.452 kg)			
	With Cover	16.35 Oz (0.470 kg)			

#### Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	100			kHours
Safety Standards	UL 1950, EN 60950, IEC 60950				
Vibration	10~500 Hz, 5G 10 min/1 Cycle. Period of 60 min each along X, Y & Z Axis				

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Model Number	Input		Output Voltage (VDC)	Output Current (A)				Max. Output Power (W)				Over Voltage Protection (VDC)	Efficiency (% Typ)
	Current (A)			Convection		18 CFM		Convection		18 CFM			
	115 VAC	230 VAC		U-Chan	Cover	U-Chan	Cover	U-Chan	Cover	U-Chan	Cover		
MPU-150S-03T(C)	3.0	1.5	3.3	20.00	16.00	25.00	25.00	66	52	82.5	82.5	4.9	73
MPU-150S-05T(C)	3.0	1.5	5.0	20.00	16.00	25.00	25.00	100	80	125.0	125.0	6.5	78
MPU-150S-12T(C)	3.0	1.5	12.0	10.00	7.90	12.50	10.0	120	95	150.0	125.0	16.5	81
MPU-150S-15T(C)	3.0	1.5	15.0	8.00	6.33	10.00	8.0	120	95	150.0	125.0	20.2	81
MPU-150S-24T(C)	3.0	1.5	24.0	5.00	3.95	6.25	5.0	120	95	150.0	125.0	33.5	82
MPU-150S-48T(C)	3.0	1.5	48.0	2.50	1.98	3.13	2.5	120	95	150.0	125.0	64.5	83

For Cover option, add suffix "C" to model number (i.e. MPU-150S-12TC)

For Open Frame models, see MPO-150S Datasheet

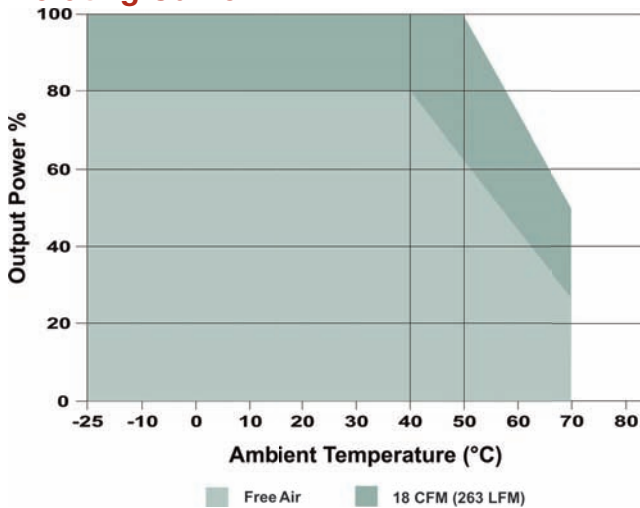
**Notes:**

1. PFC meets EN61000-3-2.
2. These units will operate at no load without damage.
3. Ripple and noise is measured at 20 MHz bandwidth using a 0.1 μF and a 47 μF capacitor connected in parallel as close to the power supply terminals as possible.
4. Overload protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
5. Each unit includes an input fuse. Since this fuse is not field replaceable, it is recommended that an external fuse be used on the input of the power supply for protection. For these units, a 15A/250V slow blow fuse is recommended.

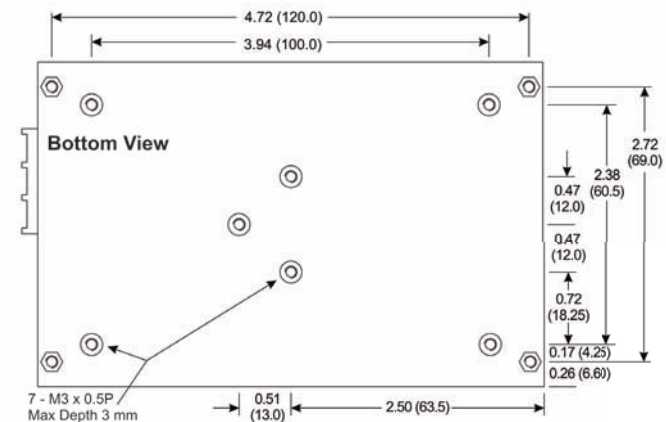
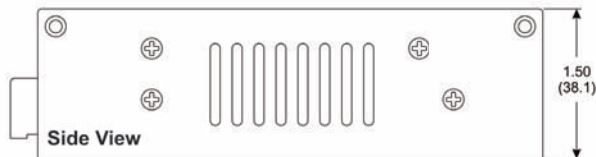
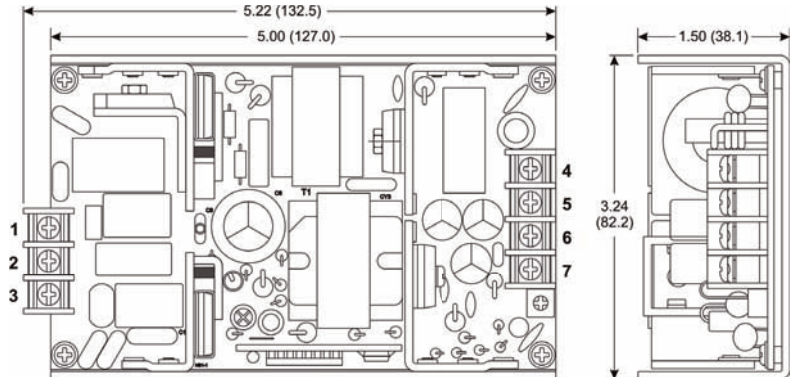
**Pin Connections**

Pin	Function	Pin	Function
1	AC-Line	4	+V <sub>OUT</sub>
2	AC-Neutral	5	+V <sub>OUT</sub>
3	AC-Ground	6	-V <sub>OUT</sub>
		7	-V <sub>OUT</sub>

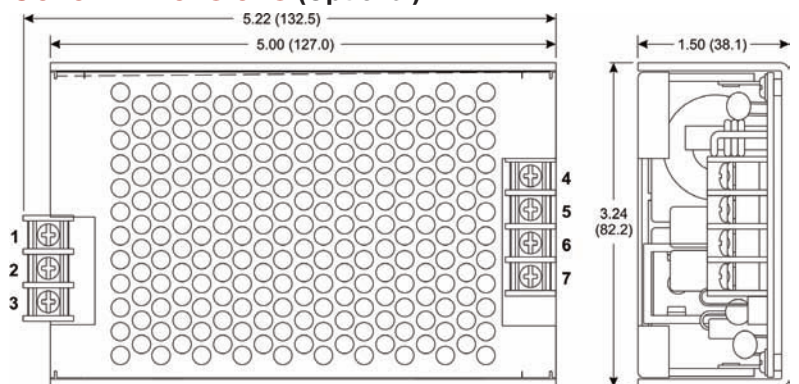
**Derating Curve**



**Mechanical Dimensions**



**Cover Dimensions (Optional)**



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**Notes:**

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