

# MPU-360E Series

## Compact U-Channel, 360W Power Factor Corrected, AC/DC Power Supplies



### Key Features:

- 360W Output Power
- Universal 90-264 AC Input
- Built-In DC Fan (Top)
- Active PFC = >0.99
- EN 60950 Approved
- Low Leakage Current
- Four Single Output Models
- Meets EN 55022 B
- >120 kHour MTBF
- Only 6.8" x 3.2" x 2.1"



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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
				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, <2 mS	Cold Start, 115 VAC			30.0	A Pk
				60.0	
Safety Ground Leakage Current	264 VAC, 63 Hz			0.3	mA
Power Factor Correction, See Note 1	115 VAC	0.99			W/VA
	230 VAC	0.93			

#### Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage/Current	See Model Selection Guide				
Minimum Load		0.0			%
Output Voltage Tolerance			±2.0		%
Line Regulation	Vin = Min to Max		±1.0		%
Load Regulation	Iout = 5% to 100%		±1.0		%
Ripple & Noise (20 MHz), See Note 2	12 VDC Output			150	mV P - P
	24, 36, 48 VDC Output			200	
Hold-Up Time	115 VAC	12			mSec
Temperature Coefficient			±0.03		%/°C
Short Circuit Protection	Continuous (Autorecovery)				
Over Voltage Protection	See Model Selection Guide				
Overload Protection	See Note 3	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			
	Surge	IEC/EN 61000-4-5			
Switching Frequency	Fixed		75		kHz

#### Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-10	+25	+70	°C
Storage Temperature Range		-25		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			95	%

#### Physical

Size	6.8 x 3.2 x 2.1 Inches (172.7 x 81.3 x 53.3 mm)				
Weight	25.7 Oz (0.729 kg)				

#### Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	50			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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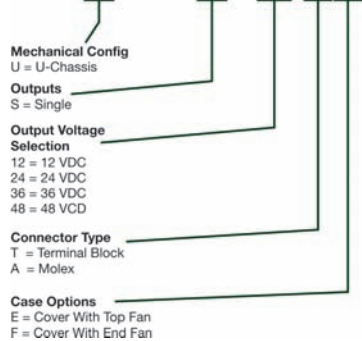
Model Number	Input		Output			Maximum Output Power (W)	Over Voltage Protection (VDC)	Max. Capacitive Load (µF)	Efficiency (% , Typ)
	Current (A)		Voltage (VDC)	Current (A)	Minimum Load (%)				
	115 VAC	230 VAC							
MPU-360S-12T(A)E	4.0	2.0	12.0	30.0	0.0	360	15.0	85,000	90
MPU-360S-24T(A)E	4.0	2.0	24.0	15.0	0.0	360	28.0	48,000	92
MPU-360S-36T(A)E	4.0	2.0	36.0	10.0	0.0	360	40.0	21,000	93
MPU-360S-48T(A)E	4.0	2.0	48.0	7.50	0.0	360	57.0	13,000	93

For a 360W unit with a cover and end fan, see the MPU-360F datasheet; For a unit without a cover or fan, see the MPU-360 datasheet

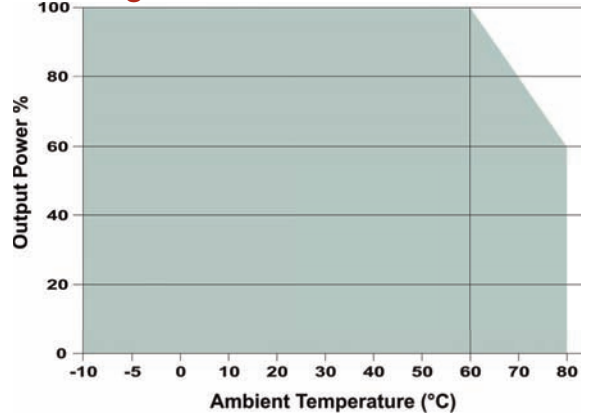
Notes:

- PFC meets EN61000-3-2.
- 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.
- Overload protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
- These units will operate at no load without damage.
- 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.

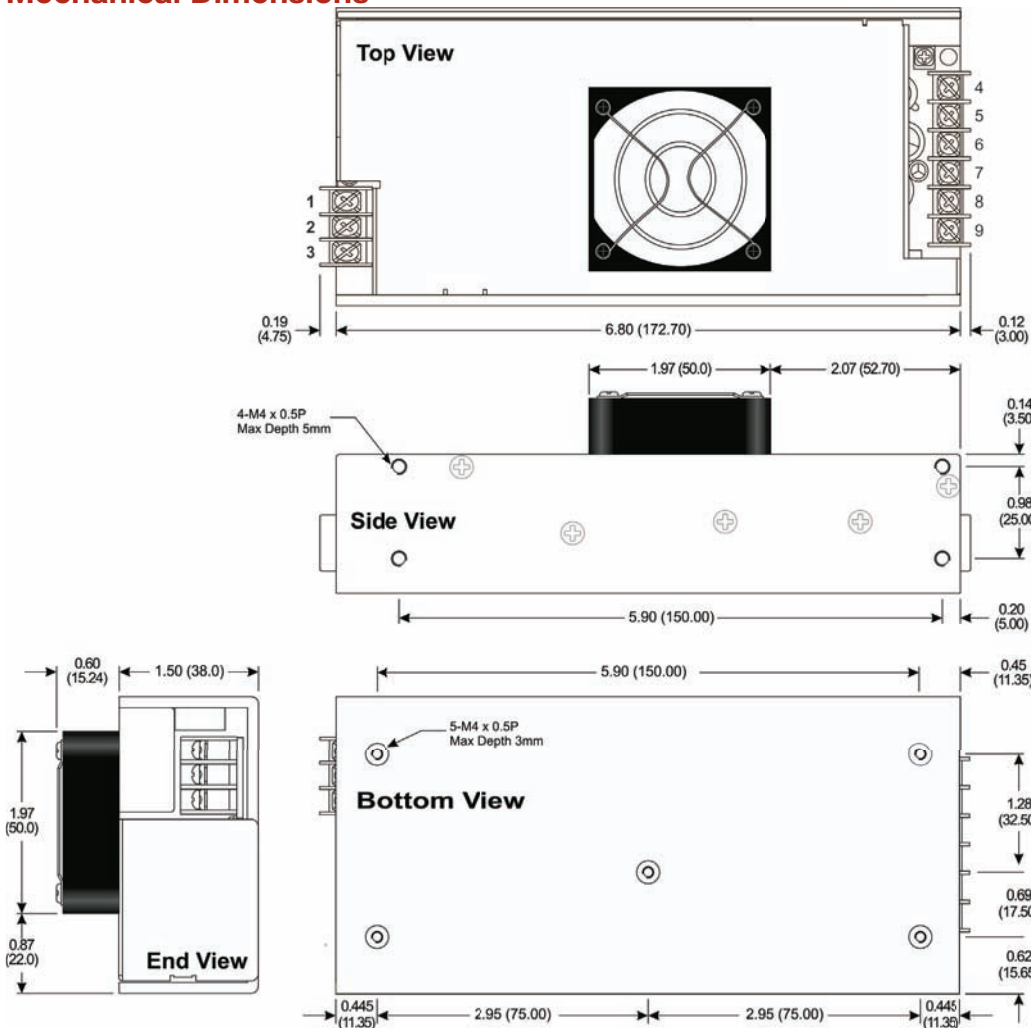
Model Number  
MPU-360S-XYZ



Derating Curve



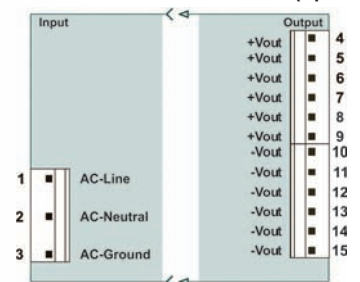
Mechanical Dimensions



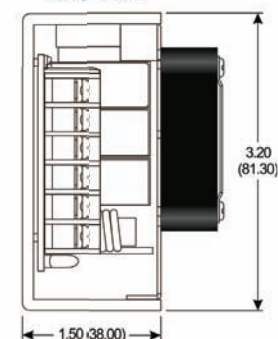
Pin Connections

Pin	Function	Pin	Function
1	AC-Ground	4	+Vout
2	AC-Neutral	5	+Vout
3	AC-Line	6	+Vout
		7	+Vout
		8	-Vout
		9	-Vout
		10	-Vout
		11	-Vout
		12	-Vout
		13	-Vout
		14	-Vout
		15	-Vout

Molex Connectors (Optional)



End View



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Notes:

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