

# MPU-75S Series

## Single Output, 75W Compact, U-Channel AC/DC Power Supplies



### Key Features:

- 75W Output Power
- Universal 90-264 AC Input
- EN 60950 Approved
- Low Leakage Current
- Four Single Output Models
- Meets EN 55022 B
- >130 kHour MTBF
- Compact 4.15 x 2.3 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			20.0	A Pk
	Cold Start, 230 VAC			40.0	
Safety Ground Leakage Current	264 VAC			3.5	mA

#### Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage/Current	See Model Selection Guide				
Output Voltage Tolerance			±2.0		%
Line Regulation	V <sub>in</sub> = Min to Max		±1.0		%
Load Regulation	I <sub>out</sub> = 5% to 100%		±1.0		%
Ripple & Noise (20 MHz), See Note 1	5V Output			100	mV P-P
	12V Output			150	
	15V Output			200	
	24V Output			300	
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 2	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
EMI/RFI	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		133		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	4.15 x 2.3 x 1.5 Inches (105.3 x 58.2 x 38.1 mm)				
Weight	U-Channel				9.90 Oz (0.285 kg)
	With Cover				10.1 Oz (0.290 kg)

#### Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	130			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				

# Model Selection Guide

Model Number	Input		Output			Max Output Power (W)	Over Voltage Protection (VDC)	Efficiency (% Typ)
	Current (A)		Voltage (VDC)	Current (A)				
	115 VAC	230 VAC		Rated	% Min.			
MPU-75S-05T(C)	2.0	1.0	5.0	12.00	1.00	60	6.2	73
MPU-75S-12T(C)	2.0	1.0	12.0	6.25	1.00	75	15.0	80
MPU-75S-15T(C)	2.0	1.0	15.0	5.00	1.00	75	18.0	80
MPU-75S-24T(C)	2.0	1.0	24.0	3.13	1.00	75	28.0	80

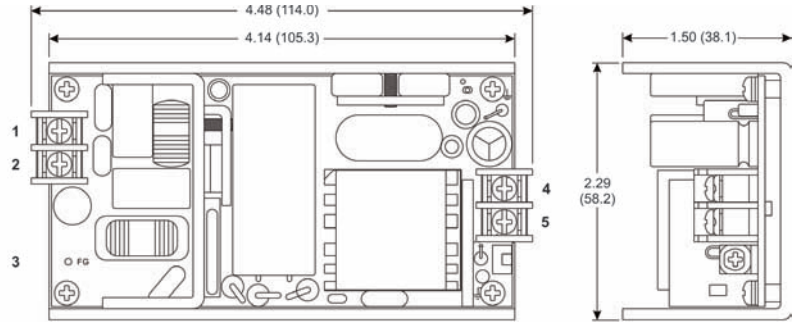
For Cover option, add suffix "C" to model number (i.e. MPU-75S-12TC)

For Open Frame models, see MPO-75S Datasheet

### Notes:

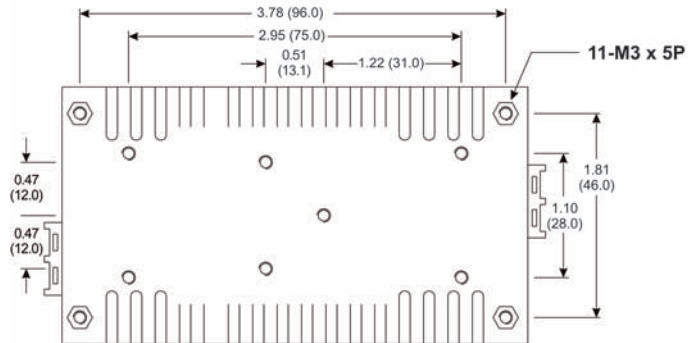
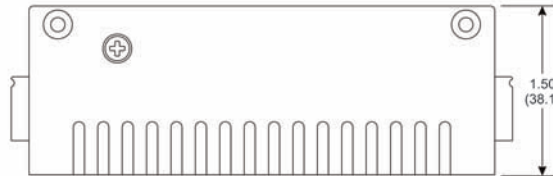
- Output ripple and noise is measured at 20 MHz bandwidth using a 0.1  $\mu$ F and 47  $\mu$ F capacitor connected in parallel as close to the power supply terminals as possible.
- Overload protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
- Over voltage protection is provided by a zener diode clamp.
- These units will operate at no load without damage, however, MPD recommends that a minimum 1% load always be used.
- 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.

## Mechanical Dimensions

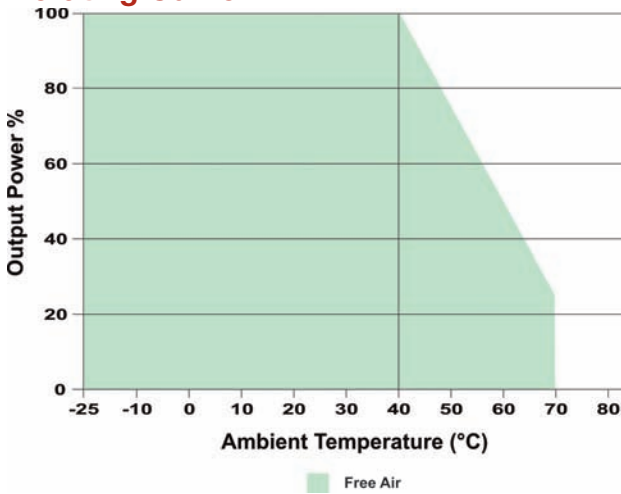


## Pin Connections

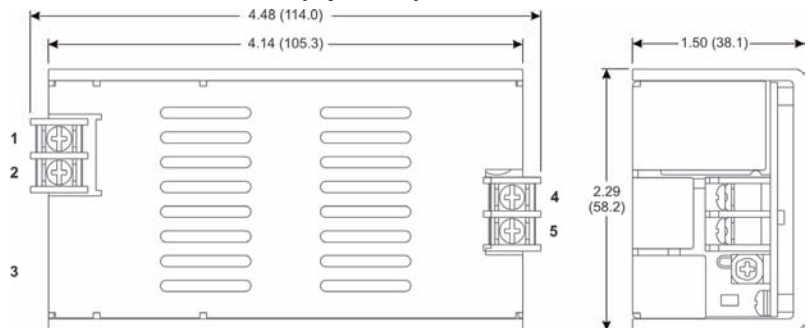
Pin	Function	Pin	Function
1	AC-Neutral	4	+V <sub>OUT</sub>
2	AC-Line	5	-V <sub>OUT</sub>
3	AC-Ground		



## Derating Curve



## Cover Dimensions (Optional)



### Notes:

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



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