

MPU-240S Series

Compact U-Channel, 240W Power Factor Corrected, AC/DC Power Supplies



Key Features:

- 240W Output Power
- Universal 90-264 AC Input
- Low Profile U-Channel
- Power Factor Correction
- EN 60950 Approved
- 7 Single Output Models
- Meets EN 55022 B
- “Finger Safe” Cover Avail.
- DIN Rail Kit Available



MicroPower Direct

292 Page Street
Suite D
Stoughton, MA 02072
USA

T: (781) 344-8226

F: (781) 344-8481

E: sales@micropowerdirect.com

W: www.micropowerdirect.com



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 Current	See Model Selection Guide					
Inrush Current	Cold Start, 115 VAC			30.0	A Pk	
	Cold Start, 230 VAC			60.0		
Power Factor Correction, See Note 1	115 VAC	0.98			W/VA	
	230 VAC	0.95				
Safety Ground Leakage Current				0.50	mA	

Output						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Output Voltage/Current	See Model Selection Guide					
Output Voltage Accuracy			±2.0		%	
Line Regulation	V _{IN} = Min to Max		±1.0		%	
Load Regulation	I _{OUT} = 5% to 100%		±1.0		%	
Ripple & Noise (20 MHz), See Note 2	See Model Selection Guide					
Hold-Up Time< 115 VAC	U-Channel	13			mSec	
	With Cover	20				
Temperature Coefficient			±0.03		%/°C	
Overload Protection	See Note 3	130		180	%I _{OUT}	
Over Voltage Protection, See Note 4	Latch Off (See Model Selection Guide)					
Short Circuit Protection, See Note 4	Latch Off					

General						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Isolation Voltage	Input to Output	4,000			VAC	
		5,656			VDC	
	Input to Ground	2,000			VAC	
		500				
Switching Frequency			65		kHz	

EMI Characteristics						
Parameter	Standard	Criteria	Level			
Radiated Emissions	EN 55022		B			
Conducted Emissions	EN 55022		B			
Noise Immunity (EMS)	EN 55024					
Surge	EN 61000-4-4		±1 kV (L-N) ±2 kV (L-FG & N-FG)			

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	See Mechanical Drawings (Pages 3 & 4)					
Weight	U-Channel			20.45 Oz (0.580 kg)		
	With Cover			21.59 Oz (0.610 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 (except 5 VOUT model)					
Vibration	10~500 Hz, 2G 10 min/1 Cycle. Period of 60 min each along X, Y & Z Axis					

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Model Selection Guide

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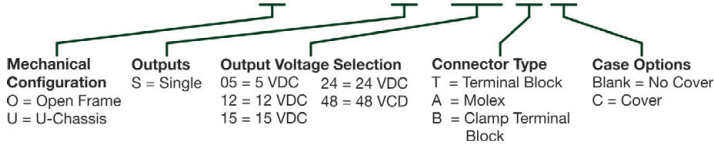
Model Number	Input		Voltage (VDC)	Output			Max Output Power (W)	Max Ripple & Noise (mV P-P)	Efficiency (% Typ)
	Current (A)			Current (A)					
	115 VAC	230 VAC		Without Cover	With Cover	% Min.			
MPU-240S-05YZ	3.0	1.5	5.0	36.00	---	5.00	180	150	87
MPU-240S-12YZ	3.0	1.5	12.0	20.00	16.66	2.00	240	120	90
MPU-240S-15YZ	3.0	1.5	15.0	16.00	14.66	2.00	240	200	90
MPU-240S-24YZ	3.0	1.5	24.0	10.00	10.00	2.00	240	200	92
MPU-240S-28YZ	3.0	1.5	28.0	8.57	8.57	2.00	240	200	92
MPU-240S-32YZ	3.0	1.5	32.0	7.50	7.50	2.00	240	200	92
MPU-240S-38YZ	3.0	1.5	38.0	6.66	6.66	2.00	240	200	92
MPU-240S-48YZ	3.0	1.5	48.0	5.00	5.00	2.00	240	200	93

Notes:

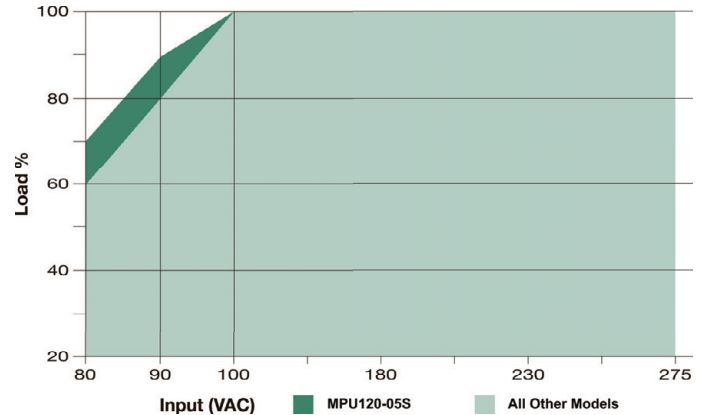
1. PFC meets EN61000-3-2.
2. Ripple and noise is measured at 20 MHz bandwidth using a 0.1 μ F and a 47 μ F capacitor connected in parallel as close to the power supply terminals as possible.
3. Overload protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
4. Short circuit protection and over voltage protection are provided by latch-off circuits. The unit must be restarted once the fault condition is cleared.
5. These units will operate at no load without damage.
6. The 5 Vout model is not available with a cover.
7. Each unit includes a 5A/250V 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 4.8A/250V slow blow fuse is recommended.

Model Number

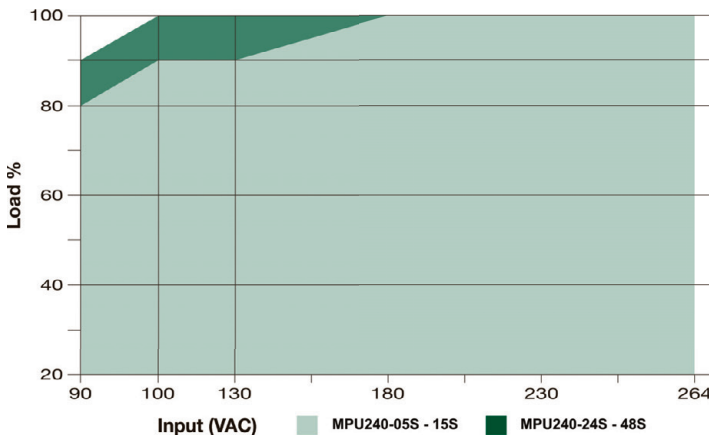
MPU-240S-XXYZ



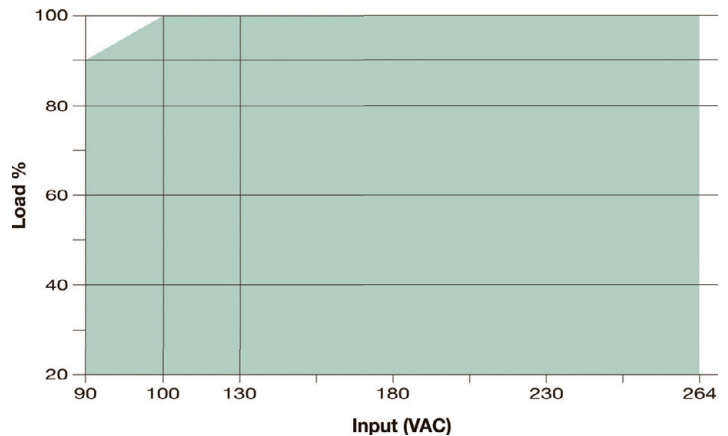
Temperature Derating



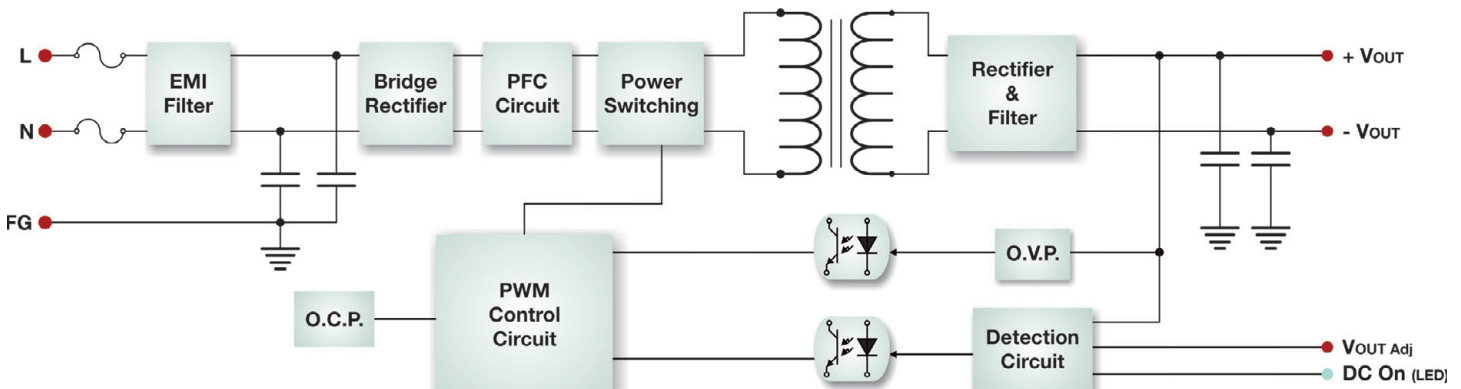
Load vs Input Voltage: Without Fan



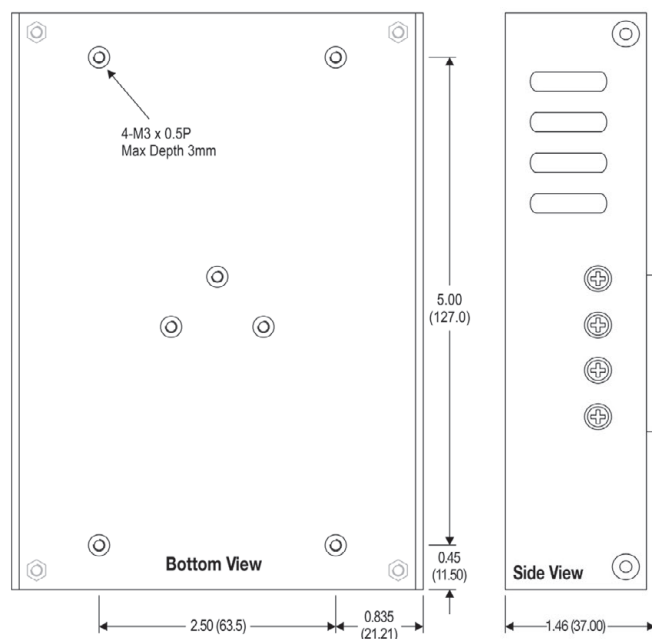
Load vs Input Voltage: "C" Models With 15 CFM



Block Diagram



Mechanical Dimensions: 5V Output Model



Notes:

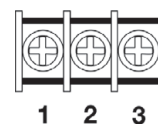
- All dimensions are typical in inches (mm)
- Tolerance x.xx = ± 0.02 (± 0.50)

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Connections

Input Connector (CN1):

- Barrier Strip Terminal Block:
Anytek Connector: DG28S-B-03P:
M3 Screws
3 terminals, 7.62 mm Centers
Suitable Wire = 22 - 14 AWG

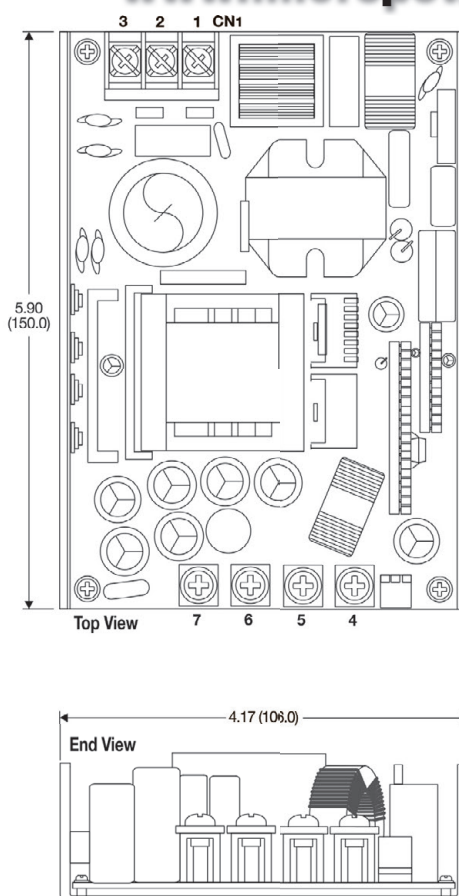


Term.	Function
1	AC-Line
2	AC-Neutral
3	Field Grnd

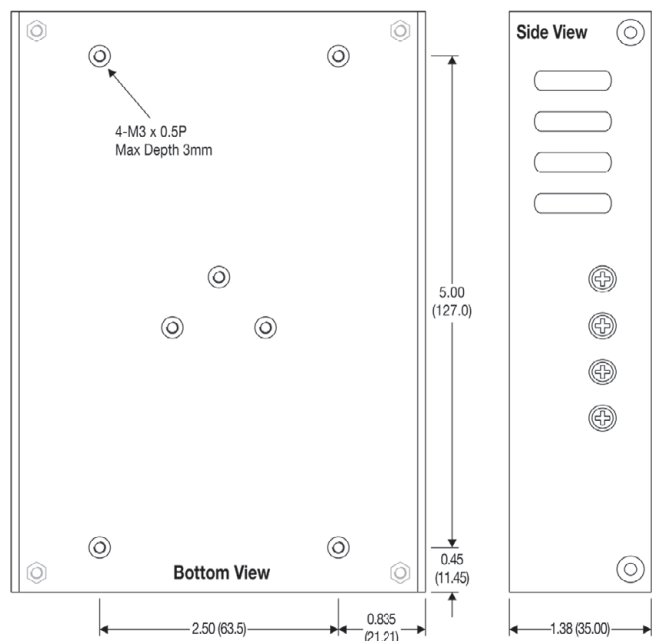
Output Connectors:

- Four PCB Terminals (Wire Lugs):
PCB-50 (M5 Screws)
Suitable Wire = 22 - 14 AWG

Term.	Function
4	+VOUT
5	+VOUT
6	-VOUT
7	-VOUT



Mechanical Dimensions: All Other Models



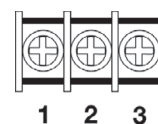
Notes:

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

Connections

Input Connector (CN1):

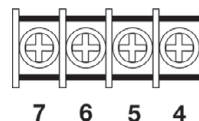
- Barrier Strip Terminal Block:
Anytek Connector: DG28S-B-03P:
M3 Screws
3 terminals, 7.62 mm Centers
Suitable Wire = 22 - 14 AWG



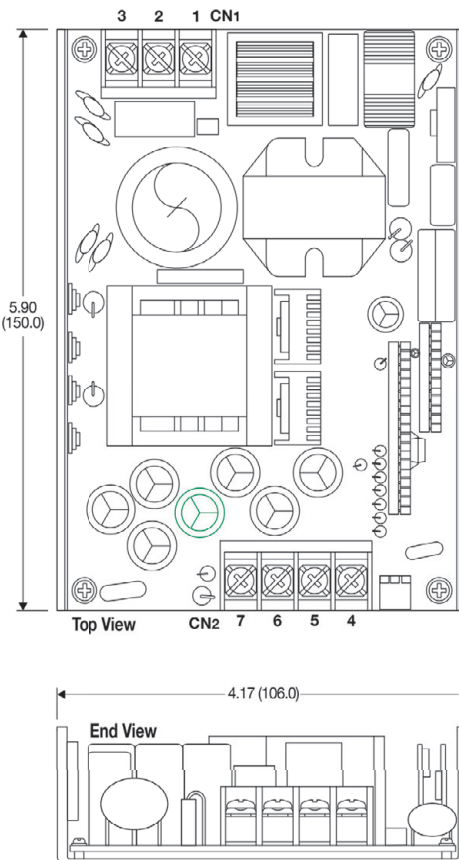
Term.	Function
1	AC-Line
2	AC-Neutral
3	Field Grnd

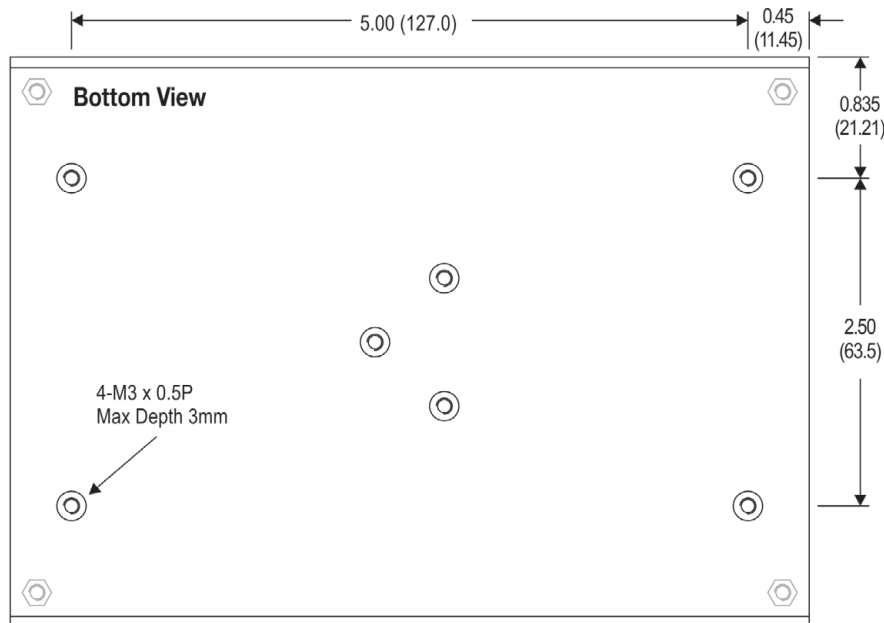
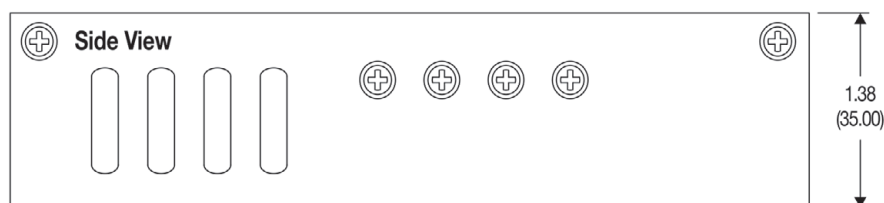
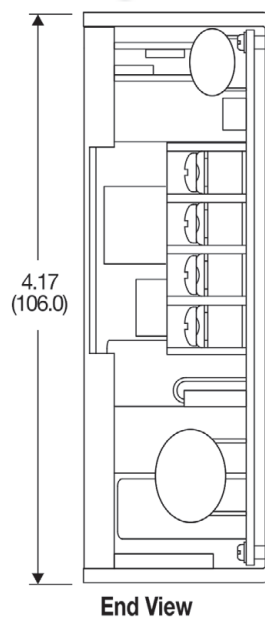
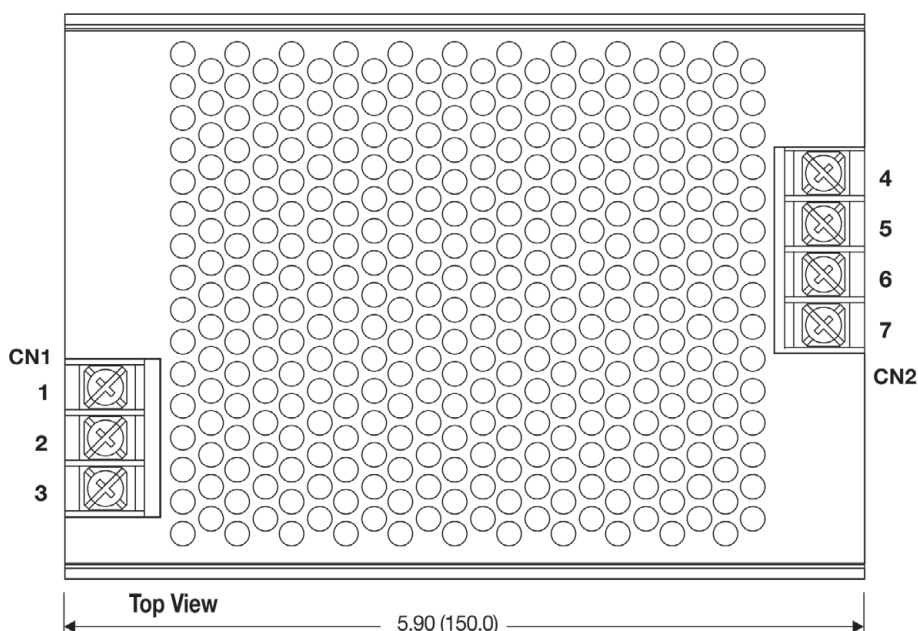
Output Connector (CN2):

- Barrier Strip Terminal Block:
Anytek Connector: DG28S-B-04P:
M3 Screws
4 terminals, 7.62 mm Centers
Suitable Wire = 22 - 14 AWG



Term.	Function
4	+VOUT
5	+VOUT
6	-VOUT
7	-VOUT



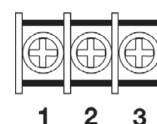


The 5 Vout model is not available with a cover installed

Connections

Input Connector (CN1):

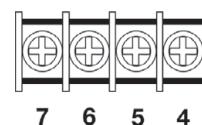
- Barrier Strip Terminal Block:
Anytek Connector: DG28S-B-03P:
M3 Screws
3 terminals, 7.62 mm Centers
Suitable Wire = 22 - 14 AWG



Term.	Function
1	AC-Line
2	AC-Neutral
3	Field Grnd

Output Connector (CN2):

- Barrier Strip Terminal Block:
Anytek Connector: DG28S-B-04P:
M3 Screws
4 terminals, 7.62 mm Centers
Suitable Wire = 22 - 14 AWG



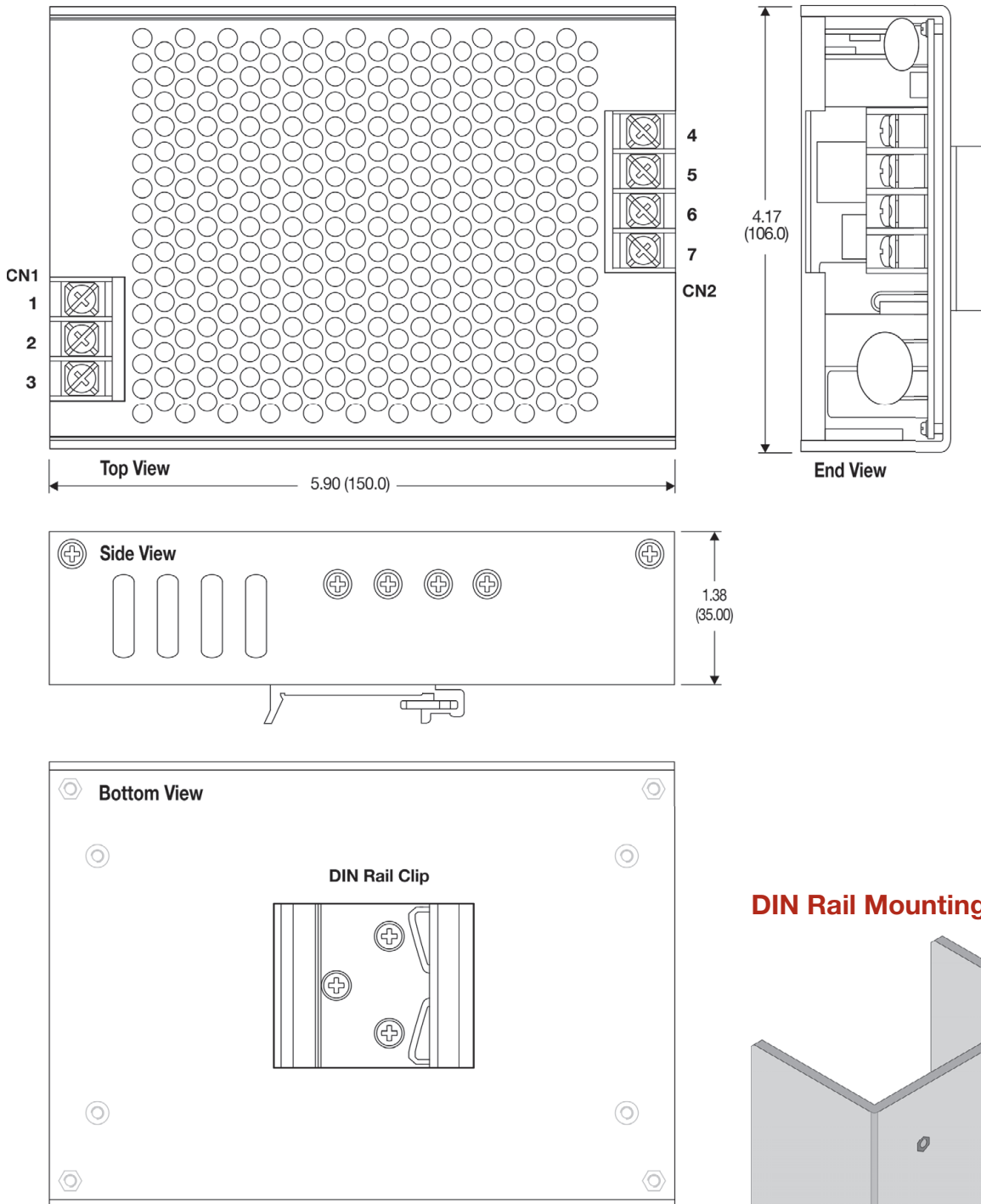
Term.	Function
4	+VOUT
5	+VOUT
6	-VOUT
7	-VOUT

Notes:

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

OPTIONAL DIN Rail Mount

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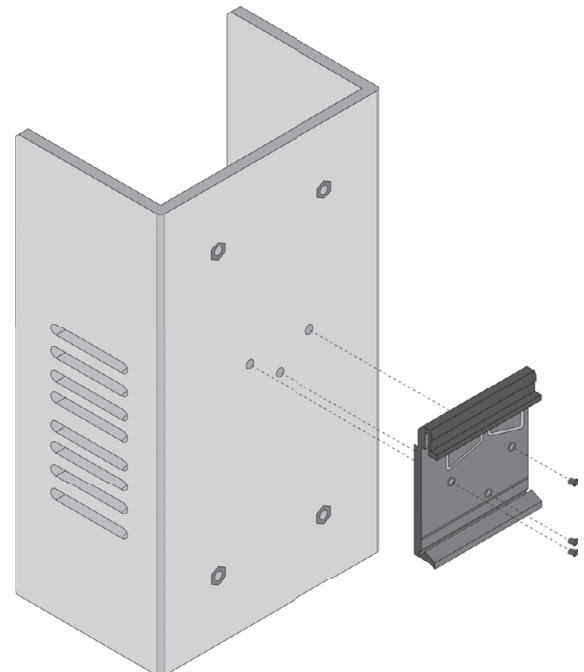


A DIN Rail Mounting kit is available from **MPD**, for use with **MPU-240°C** models. The kit contains a mounting clip and three screws.

The clip is attached to the bottom of the unit using the three threaded holes marked "A" on the mechanical diagrams. Screws should not be inserted over 2 mm into the threaded inserts,

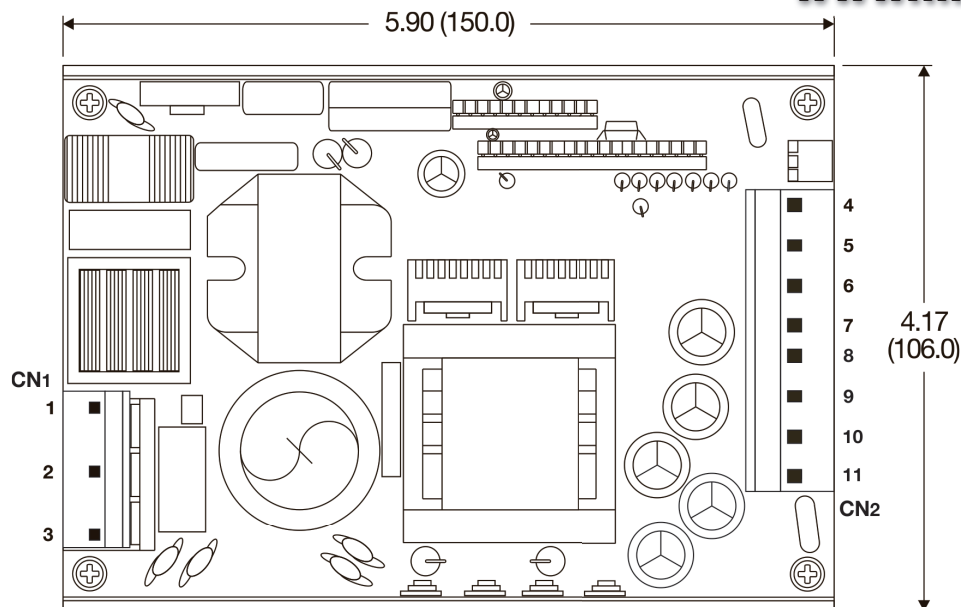
To order the kit, ask for part no: **MPU-240S-DRK**

DIN Rail Mounting Kit

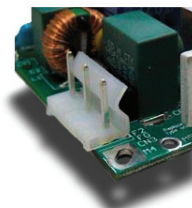


OPTIONAL CONNECTOR - "MOLEX" TYPE

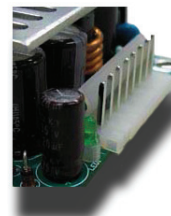
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Input



Output



Connections

Input Connector (CN1):

- "Molex" type connector:
Alex Connector: 8673W-050220
5 pins, 2 Removed
Mating Connector: 8639 type or equiv.

Pin	Function
1	AC-Line
2	AC-Neutral
3	Field Grnd

Output Connector (CN2):

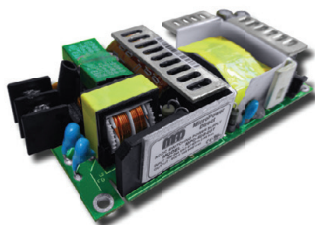
- "Molex" type connector:
Alex Connector: 8673W-080020
8 pins
Mating Connector: 8639 type or equiv.

Pin	Function
4	+VOUT
5	+VOUT
6	+VOUT
7	+VOUT

Pin	Function
8	-VOUT
9	-VOUT
10	-VOUT
11	-VOUT

Related products that may be of interest:

MPO-60S



- 60W Output Power
- Universal 90 - 264 VAC Input
- 4" x 2" Open Frame Construction
- EN 60950 Approved

MPU-60S



- 240W Output Power
- EN 60950 Approved
- Compact U-Channel Construction
- Cover & DIN Rail Kit Available

MPU-240S



- 300W Output Power
- EN 60950 Approved
- Small 5 x 3.2 x 1.5 In U-Channel
- Cover Available

MPO-120S



- 180W Output Power
- Universal 90 - 264 VAC Input
- Compact Open Frame
- EN 60950 Approved

MPU-120S



- 180W Output Power
- Compact U-Channel Construction
- Cover & DIN Rail Kit Available
- EN 60950 Approved

MPO-500



- 500W Output Power
- 5" x 3" x 1.4" Open Frame
- Active Power Factor Correction
- EN 60950 Approved

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