

AC-DC DIN Rail Power Supply 240W

multicomp PRO

**RoHS
Compliant**



Features

- Universal 180-550V AC or 254-780V DC input voltage
- Single/Two phase both available
- Operating ambient temperature range: -40°C to +70°C
- Low ripple & noise, high efficiency
- DC OK function
- Built-in active PFC function
- 150% peak load for 5 seconds
- Output short circuit, over-current, over-voltage, over-temperature, constant current limit protection
- 3 Years Warranty

MPIF240-26Bxx AC-DC converter series featuring a cost-effective, energy efficient green power supply solution for standard DIN-rail mounting. The products offer a high level of stability and immunity to noise for electricity industry, and other industrial equipment in a variety of harsh environments. With good EMC performance, compliant with international UL/EN/BS EN62368, UL61010, UL508, UL62477, UL60664, GB4943 standards for EMC and safety.

Selection Guide

Part Number	Output Power (W)	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range ADJ (V) ($\leq 240W$)*	Efficiency at 230V AC (%) Typ.	Capacitive Load (μF) Max.
MPIF240-26B24	240	24V/10A	24-28	91	10000
MPIF240-26B48		48V/5A	48-55	91	10000

Note: *The actual adjustment range may extend outside the values stated, care should be exercised to ensure that the output voltage and power levels remain within the published maximum values.

Input Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	AC input		180	--	550	V AC
	DC input		254		780	V DC
Input Frequency			47			63
Input Current	230V AC		--		2	A
	400V AC				1	
Inrush Current	400V AC	Cold start				
Power Factor	230V AC			0.93		
	400V AC			0.9		
Leakage Current	480VAC		1mA RMS Max.			
Input Temporary Over-voltage	Rated load output, 600VAC input		5s/time, interval 10s, product without damaging			
Hot Plug			Unavailable			

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Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit	
Output Voltage Accuracy	Full load range	--	±1	--	%	
Line Regulation	Rated load		±0.5			
Load Regulation	400V AC		±1			
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)		--	150		mV
Temperature Coefficient			±0.03	--		%/°C
Short Circuit Protection		Hiccup, continuous, self-recovery				
Over-current Protection		≥150% Io, hiccup, self-recovery				
Over-voltage Protection	24V output	≤33V	Output voltage clamp or hiccup			
	48V output	≤65V				
Over-temperature Protection	400V AC, rated load	Output voltage turn off, self-recovery				
Minimum Load		0	--	--	%	
Start-up Time	230V AC	--	1.5	3	s	
	400V AC	--	0.8	1.5		
DC OK Signal**	Resistive load	30V DC/1A Max.				
Hold-up Time	Room temperature, full load	230V AC	--	18	--	ms
		400V AC				

Note: **DC OK Signal: When the output voltage is normal, the relay is connected. When the output voltage is abnormal (<90%Vo), the relay is disconnected.

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Isolation	Input - output	4000	--	--	V AC
	Input - PE	2000			
	Output - PE	500			
	Output - DC OK	500			
Insulation Resistance	Input - output	500V DC	--	--	MΩ
	Input - PE				
	Output - PE				
Operating Temperature		-40	--	+70	°C
Storage Temperature		-40	--	+85	
Operating Humidity	Non-condensing	--	--	95	%RH
Storage Humidity					

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Item	Operating Conditions	Min.	Typ.	Max.	Unit
Power Derating	-40°C to -30°C	3	--	--	%°C
	+50°C to +70°C	2			
	180V AC - 200V AC	0.5			%/V AC
	2000-5000m	3.5			%/Km
Safety Standard		EN62368-1, BS EN 62368-1 (Report); Design refer to UL508, UL61010-1, UL62477-1, UL60664, UL62368-1, GB4943.1 & EN61558-1			
Safety Class		CLASS I			
MTBF		MIL-HDBK-217F @25°C >300,000 h			

Mechanical Specifications

Case Material	Metal (AL1100, SGCC)
Dimensions	124mm x 54mm x 110mm
Weight	790g (Typ.)
Cooling Method	Free air convection

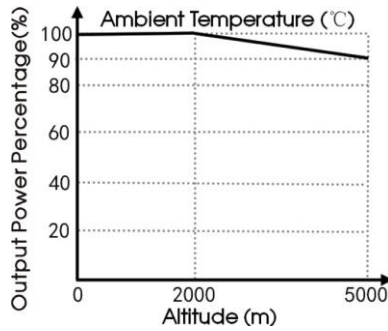
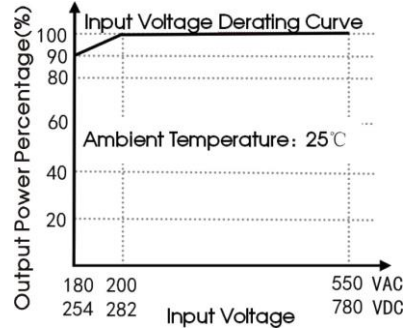
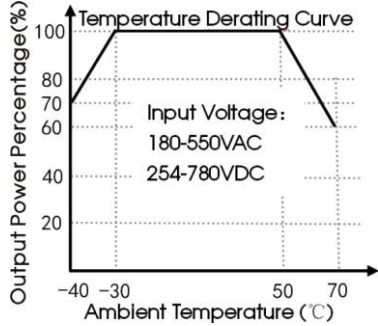
Electromagnetic Compatibility (EMC)

Emissions	CE	CISPR32 EN55032	CLASS B
	RE	CISPR32 EN55032	CLASS B
	Harmonic current	IEC/EN61000-3-2	CLASS A
Immunity	ESD	IEC/EN61000-4-2	Contact ±8KV/Air ±15KV perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m perf. Criteria A
	EFT	IEC/EN61000-4-4	±4KV perf. Criteria A
	Surge	IEC/EN61000-4-5	Line to line ±2KV/line to ground ±4KV perf. Criteria A
	CS	IEC/EN61000-4-6	10 Vr.m.s perf. Criteria A
	PFM	IEC/EN61000-4-8	30A/m Perf. Criteria B
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11	100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods perf. Criteria B

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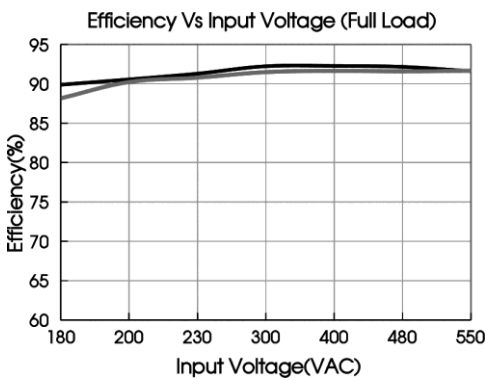
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Product Characteristic Curve

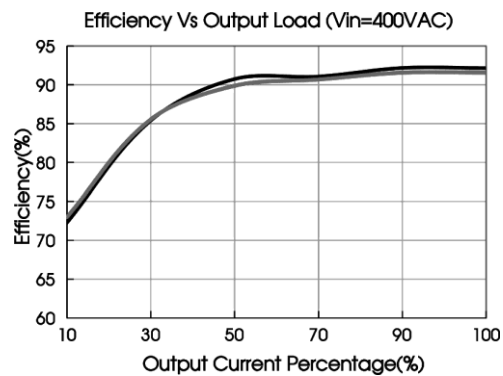


Note:

With an AC input between 180-198V AC/550-600V AC and a DC input between 254-280V DC/770-848V DC, the output power must be derated as per temperature derating curves;



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MPIF240-26B48

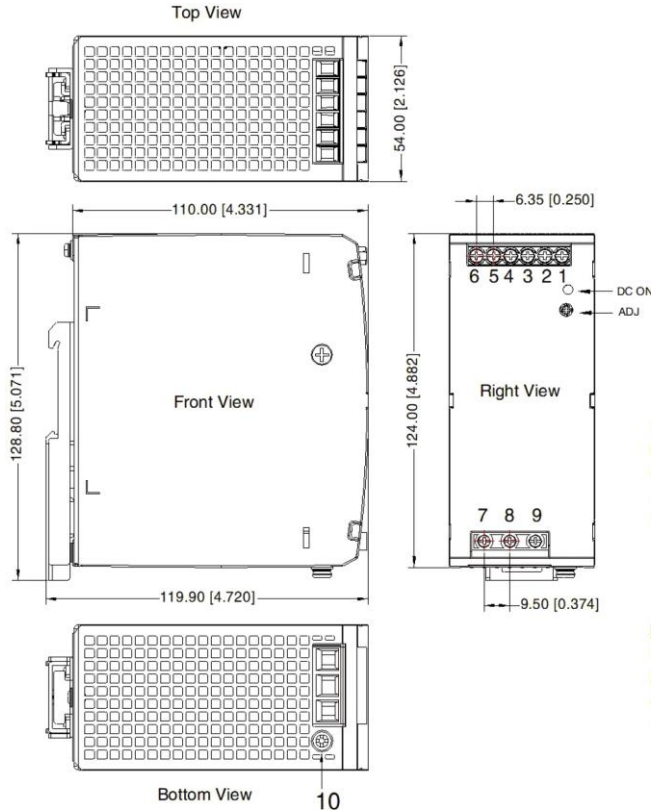


MPIF240-26B24
MPIF240-26B48

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Dimensions and Recommended Layout



Pin-Out	
Pin	Mark
1	+Vo
2	+Vo
3	-Vo
4	-Vo
5	DC OK
6	
7	L1
8	L2
9	⊕

9, 10 any position must be connected to the earth (⊕)

Note:
 Unit: mm[inch]
 DC ON: Output status indicator LED
 ADJ: Output adjustable resistor
 Wire range: Input: 24-10 AWG (12-10AWG for pin9)
 Output: 24V: 16-10AWG
 48V: 18-10AWG
 DC OK: 24-16AWG
 Input Tightening torque: Max 1.0 N·m
 Output Tightening torque: Max 0.5 N·m
 Mounting rail: TS35, rail needs to connect safety ground
 General tolerances: ± 1.00[± 0.039]

Notes:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25°C, humidity<75%RH with nominal input voltage and rated output load;
2. The room temperature derating of 3.5°C/1000m is needed for operating altitude greater than 2000m;
3. In order to improve the efficiency at high input voltage, there will be audible noise generated, but it does not affect product performance and reliability;
4. The out case needs to be connected to PE (⊕) of system when the terminal equipment in operating;

Part Number Table

Description	Part Number
AC-DC DIN Rail Power Supply, 2 Phase I/P, 24V, 10A	MPIF240-26B24
AC-DC DIN Rail Power Supply, 2 Phase I/P, 48V, 5A	MPIF240-26B48

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