AC-DC DIN Rail Power Supply
240W

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) (≤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	Hz
Input Current	230V AC				2	A
	400V AC				1	
Inrush Current	400V AC	Cold start			110	
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			

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	Electric Strength Test for 1min., leakage current<5mA	4000	--	--	V AC
	Input - PE		2000			
	Output - PE		500			
	Output - DC OK	Electric Strength Test for 1min., leakage current<2mA	500			
Insulation Resistance	Input - output	500V DC	100	--	--	MΩ
	Input - PE					
	Output - PE					
Operating Temperature			-40	--	+70	°C
Storage Temperature			-40	--	+85	
Operating Humidity		Non-condensing	--	--	95	%RH
Storage Humidity						

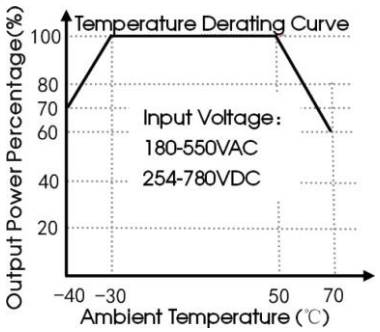
Item	Operating Conditions	Min.	Typ.	Max.	Unit
Power Derating	-40°C to -30°C	3	--	--	%/°C
	+50°C to +70°C	2			
	180V AC - 200V AC	0.5			%/V AC
	2000-5000m	3.5			%/Km
Safety Standard		EN62368-1, BS EN 62368-1 (Report); Design refer to UL508, UL61010-1, UL62477-1, UL60664, UL62368-1, GB4943.1 & EN61558-1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

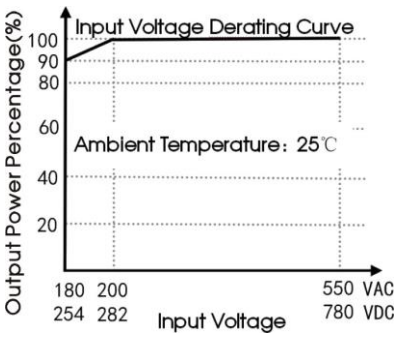
Mechanical Specifications	
Case Material	Metal (AL1100, SGCC)
Dimensions	124mm x 54mm x 110mm
Weight	790g (Typ.)
Cooling Method	Free air convection

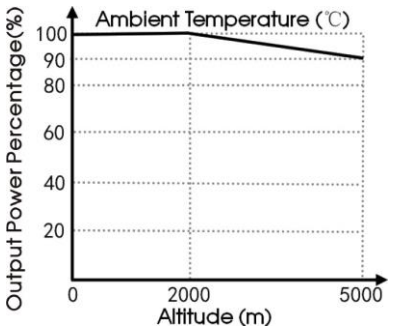
Electromagnetic Compatibility (EMC)

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

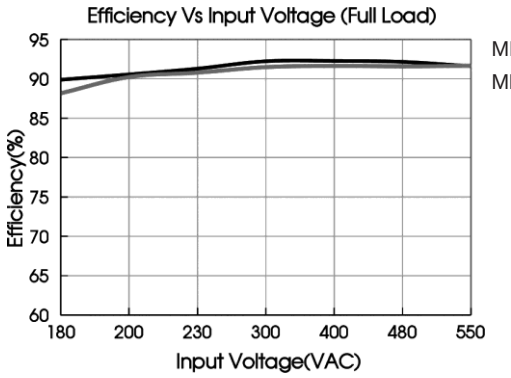
Product Characteristic Curve

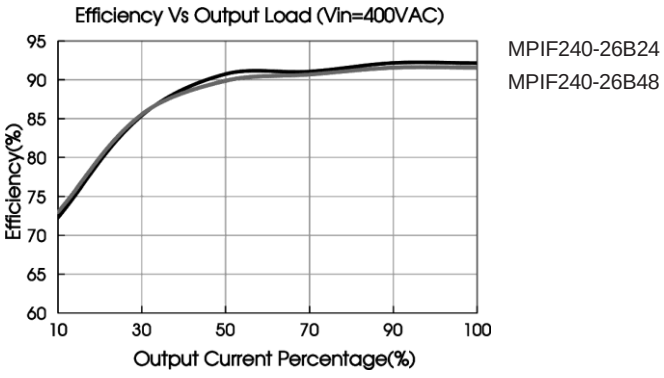




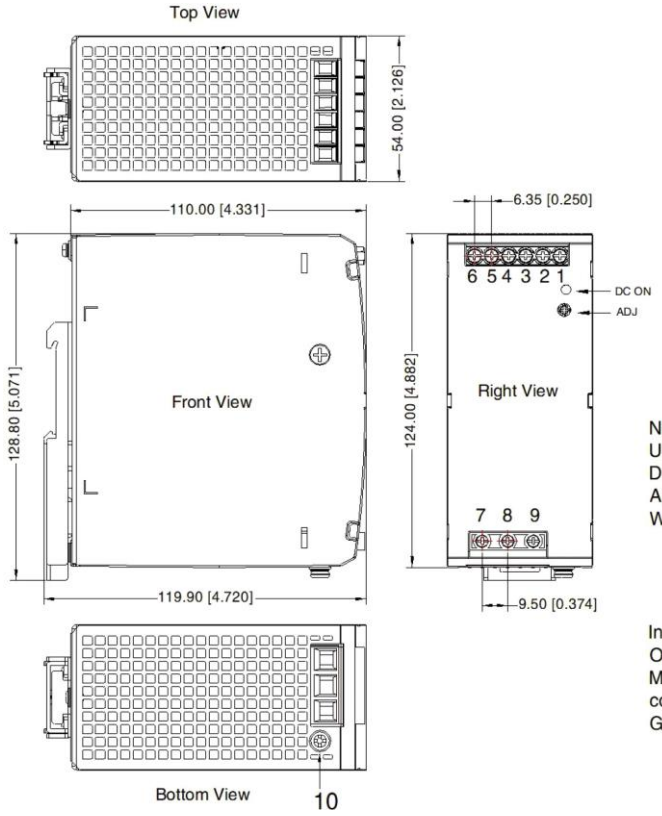


Note:
With an AC input between 180-198V AC/550-600V AC and a DC input between 254-280V DC/770-848V DC, the output power must be derated as per temperature derating curves;





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