

AC/DC 240W DIN-Rail Power Supply

LIF240-26Bxx Series

MORNSUN®



CE Report
EN62368-1

UK
CA
BS EN 62368-1

RoHS



FEATURES

- Universal 180-550VAC or 254-780VDC 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
- OVC III, 2000m altitude (UL62477 standards)
- Safety according to UL62368, UL61010, UL62477

LIF240-26Bxx is Mornsun 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

Certification	Part No.	Output Power	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range ADJ (V) ($\leq 240W$)*	Efficiency at 400VAC (%) Typ.	Capacitive Load (μF) Max.
EN/UKCA	LIF240-26B24	240W	24V/10A	24-28	91	10000
	LIF240-26B48		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	VAC
	DC input		254	--	780	VDC
Input Frequency			47	--	63	Hz
Input Current	230VAC		--	--	2.0	A
	400VAC		--	--	1.0	
Inrush Current	400VAC	Cold start	--	--	110	
Power Factor	230VAC		--	0.93	--	--
	400VAC		--	0.90	--	
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	--	±1.0	--	%
Line Regulation	Rated load	--	±0.5	--	
Load Regulation	400VAC	--	±1.0	--	
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	400VAC, rated load	Output voltage turn off, self-recovery			

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Minimum Load			0	--	--	%
Start-up Time	230VAC		--	1.5	3.0	s
	400VAC		--	0.8	1.5	
DC OK Signal**	Resistive load		30VDC/1A Max.			
Hold-up Time	Room temperature, full load	230VAC	--	18	--	ms
		400VAC	--	18	--	
Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, please refer to Enclosed Switching Power Supply Application Notes for specific information.						
**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	--	--	VAC
	Input - PE		2000	--	--	
	Output - PE		500	--	--	
	Output - DC OK		500	--	--	
Insulation Resistance	Input - output	500VDC	100	--	--	M Ω
	Input - PE					
	Output - PE					
Operating Temperature			-40	--	+70	℃
Storage Temperature			-40	--	+85	
Operating Humidity		Non-condensing	--	--	95	%RH
Storage Humidity			--	--	95	
Power Derating		-40℃ to -30℃	3.0	--	--	% /℃
		+50℃ to +70℃	2.0	--	--	
		180VAC - 200VAC	0.5	--	--	%/VAC
		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℃ > 300,000 h				

Mechanical Specifications

Case Material	Metal (AL1100, SGCC)
Package Dimensions	124.00 x 54.00 x 110.00 mm
Weight	790g (Typ.)
Cooling Method	Free air convection

Electromagnetic Compatibility (EMC)

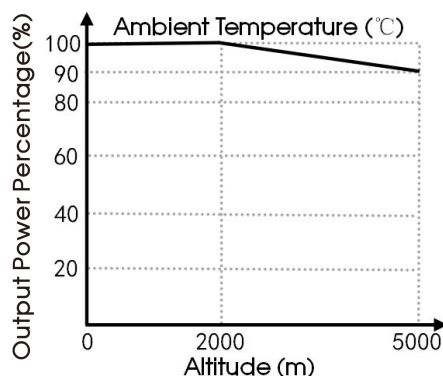
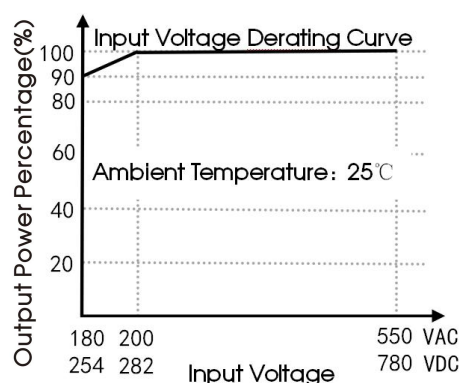
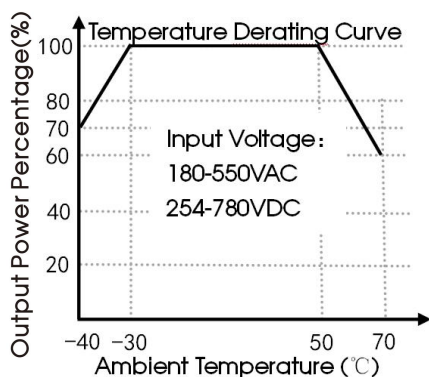
Emissions	CE	CISPR32 EN55032	CLASS B	
	RE	CISPR32 EN55032	CLASS B	
	Harmonic current	IEC/EN61000-3-2	CLASS A	
Immunity	ESD	IEC/EN61000-4-2	Contact ±8KV/Air ±15KV	Perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m	Perf. Criteria A
	EFT	IEC/EN61000-4-4	±4KV	Perf. Criteria A
	Surge	IEC/EN61000-4-5	Line to line ±2KV/line to ground ±4KV	Perf. Criteria A
	CS	IEC/EN61000-4-6	10Vr.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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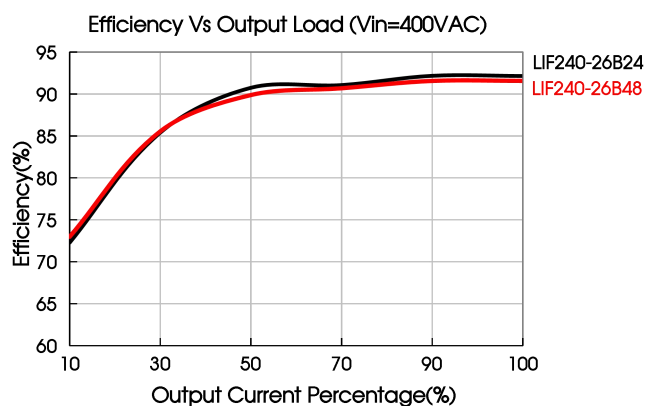
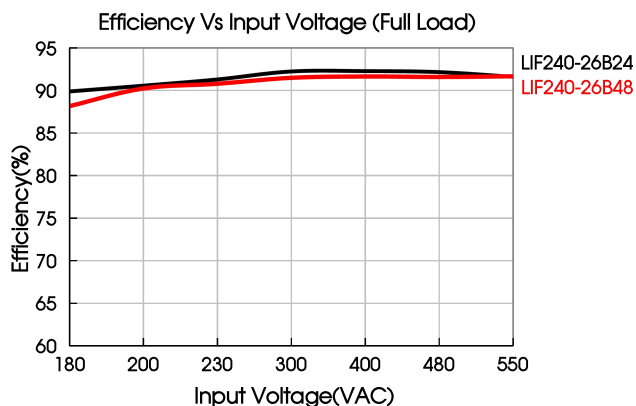
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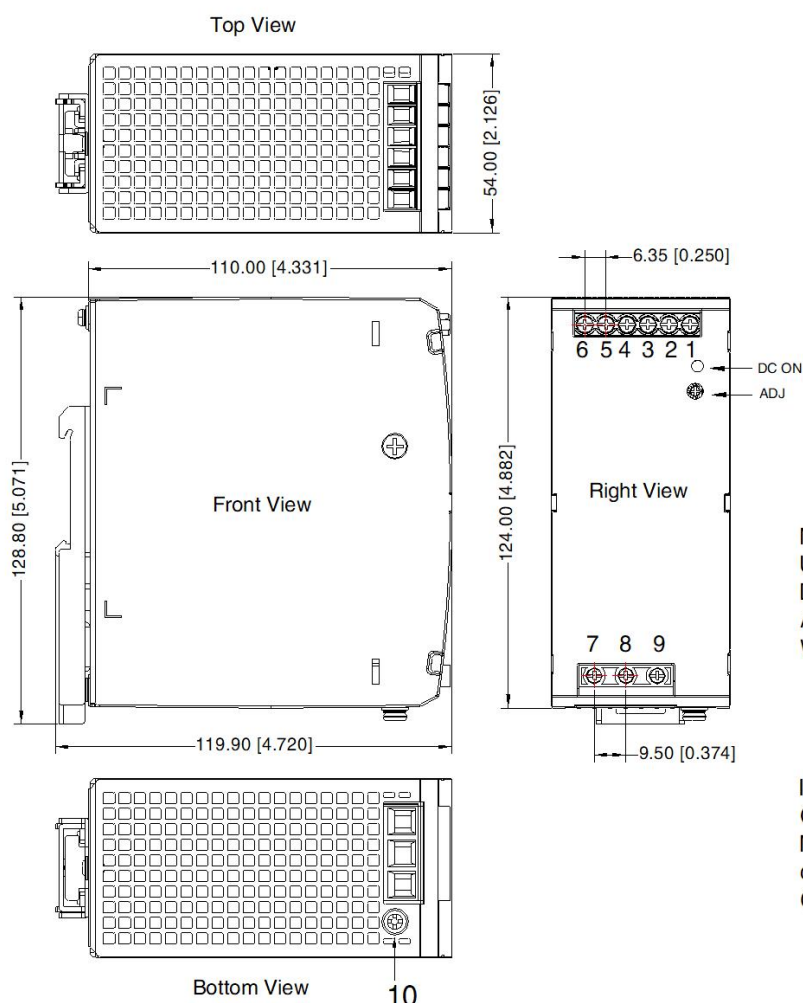
Product Characteristic Curve



Note: ① With an AC input between 180-200VAC and a DC input between 254-282VDC, the output power must be derated as per temperature derating curves;
② This product is suitable for applications using natural air cooling; for applications in closed environment please consult Mornsun FAE.



Dimensions and Recommended Layout



THIRD ANGLE PROJECTION

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: $\pm 1.00[\pm 0.039]$

Note:

- For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: 58220231;
- Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a=25^\circ\text{C}$, humidity<75%RH with nominal input voltage and rated output load;
- The room temperature derating of $3.5^\circ\text{C}/1000\text{m}$ is needed for operating altitude greater than 2000m;
- All index testing methods in this datasheet are based on our company corporate standards;
- 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;
- We can provide product customization service, please contact our technicians directly for specific information;
- Products are related to laws and regulations: see "Features" and "EMC";
- The out case needs to be connected to PE (⏏) of system when the terminal equipment in operating;
- Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.

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