

240W, AC/DC DIN-Rail Power Supply



FEATURES

- Universal 320-600VAC or 450-850VDC input voltage, three-phase input (two-phase operation is possible)
- Operating ambient temperature range: -30°C to +70°C
- High I/O isolation voltage up to 4000VAC
- Industrial-grade design
- Low ripple & noise, high efficiency
- Output short circuit, over-current, over-voltage, over-temperature protection
- OVC II, 5000m altitude (UL62368-1, UL61010-1 standards)
- Safety according to UL62368, UL61010, IEC62477

LIT240-26Bxx 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 UL62368, UL61010, IEC62477 standards for EMC and safety.

Selection Guide

Certification	Part No.	Output Power (W)	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range ADJ (V)*	Efficiency at 500VAC (%) Typ.	Capacitive Load (μF) Max.
/	LIT240-26B24	240	24V/10A	24-28	92	10000
	LIT240-26B48	240	48V/5A	48-55	92	5000

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 (three-phase input)	AC input	320	--	600	VAC
	DC input	450	--	850	VDC
Input Frequency		47	--	63	Hz
Input Current	400VAC	--	--	0.9	A
	500VAC	--	--	0.8	
Inrush Current	400VAC	--	50	--	
Leakage Current	480VAC	<3.5mA/rms			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit	
Output Voltage Accuracy	All load range	--	±1.0	--	%	
Line Regulation	Rated load	--	±0.5	--		
Load Regulation	500VAC	--	±1.0	--		
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	24V output	--	100	150	mV
		48V output	--	150	200	
Temperature Coefficient		--	±0.03	--	%/°C	
Short Circuit Protection		Constant current hiccup, self-recovery				
Over-current Protection		≥ 130% Io, constant current hiccup, self-recovery				
Over-voltage Protection	24V output	≤36V	Output voltage hiccup, self-recovery			
	48V output	≤62V				
Over-temperature Protection	Over-temperature protection start	--	--	85	°C	
	Over-temperature protection release	50	--	--		
Minimum Load		0	--	--	%	
Start-up Time		--	--	1.5	s	

Hold-up Time	400VAC	--	20	--	ms
	500VAC	--	40	--	

Note: *The "Tip and barrel method" is used for ripple and noise test; Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor, please refer to Enclosed Switching Power Supply Application Notes for specific information.

General Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Isolation	Input - output	Electric Strength Test for 1min., leakage current < 10mA	4000	--	--	VAC
	Input - PE	Electric Strength Test for 1min., leakage current < 15mA	2500	--	--	
	Output - PE		500	--	--	
	Output - DC OK		500	--	--	
Insulation Resistance	Input - output	500VDC	100	--	--	MΩ
	Input - PE					
	Output - PE					
Operating Temperature			-30	--	+70	℃
Storage Temperature			-40	--	+85	
Storage Humidity			--	--	95	%RH
Altitude			--	--	5000	m
Power Derating	+60℃ to +70℃		3.0	--	--	% / VAC
	320VAC - 340VAC	Three-phase input	1.0	--	--	
	550VAC - 600VAC	Three-phase input	0.4	--	--	
	320VAC - 340VAC	Two-phase input (80%Io)	1.0	--	--	
	550VAC - 600VAC	Two-phase input (80%Io)	0.4	--	--	
Safety Standard		Design refer to UL62368-1, UL61010-1, IEC62477-1:2021				
Safety Class		CLASS I				
MTBF		MIL-HDBK-217F@25℃ > 300,000 h				

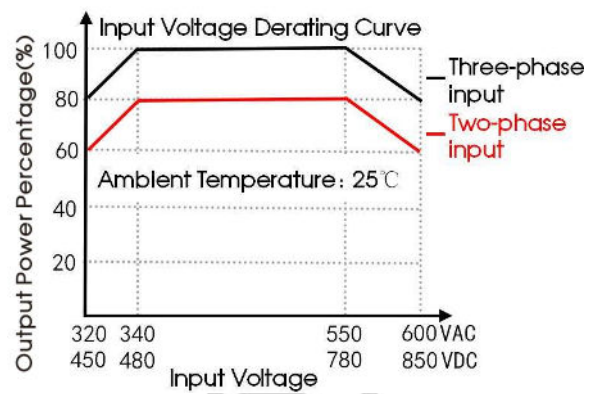
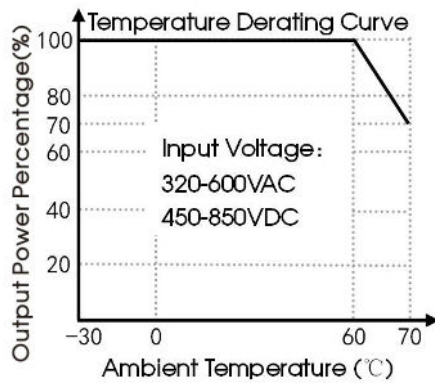
Mechanical Specifications

Case Material	Metal (AL1100, SPCC) and Plastic (PC940)
Package Dimensions	XX x XX x XX mm
Weight	XX g (Typ.)
Cooling method	Free air convection

Electromagnetic Compatibility (EMC)

Emissions	CE	CISPR32 EN55032	CLASS B	
	RE	CISPR32 EN55032	CLASS B	
	Harmonic current	EN61000-3-2	CLASS A	
	Voltage flicker	EN61000-3-3		
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	±2KV	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
	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
	PFM	EN61000-4-8 (30A/m)		Perf. Criteria B

Product Characteristic Curve



Note: ① With an AC input between 320-340VAC/550-600VAC and a DC input between 450-480VDC/780-850VDC, 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.

1. For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: XXXXXXXX;
2. 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;
3. All index testing methods in this datasheet are based on our company corporate standards;
4. 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;
5. We can provide product customization service, please contact our technicians directly for specific information;
6. Products are related to laws and regulations: see "Features" and "EMC";
7. The out case needs to be connected to PE (\perp) of system when the terminal equipment in operating;
8. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.

Mornsun Guangzhou Science & Technology Co., Ltd.

Address: No. 5, Kehui St. 1, Kehui Development Center, Science Ave., Guangzhou Science City, Huangpu District, Guangzhou, P. R. China
Tel: 86-20-38601850 Fax: 86-20-38601272 E-mail: info@mornsun.cn www.mornsun-power.com