DESCRIPTIONS

AC-DC 60W DIN-Rail Power Supply



RoHS

3 Years Warranty

FEATURES

- Universal 85-264VAC or 120-370VDC input voltage
- Withstand 305VAC surge input for 5s
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range -40℃ to +85℃
- High I/O isolation voltage up to 4000VAC
- OVC III (design refer to EN62477/2000m)
- Low ripple & noise, high efficiency
- Output short circuit, over-current, over-voltage protection
- The output has CV constant current function
- DIN rail TS35X7.5/ TS35X15 mountable
- Meets Class I (peripheralize), Class II (no perimeter required)
- Design refer to UL/EN/BS EN62368, UL508, EN60335, EN61558, EN62477

APPLICATIONS

- Industrial control equipment
- Machinery
- Other kinds of industrial equipment in harsh environments

Selection Guide

Certification	Part No.*	Output Power (W)	nominal Output Voltage and Current (vo/Io)	Output Voltage Adjustable Range ADJ (V)**	Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.
--	ADL60-2B-05V2	32.5	5V/6.5A	4.9-5.5	86	20000
	ADL60-2B-12V2	54	12V/4.5A	10.8-13.8	91	10000
	ADL60-2B-15V2	60	15V/4.0A	13.5-18.0	91	8000
	ADL60-2B-24V2	60	24V/2.5A	21.6-29.0	91	4000

	ADL60-2B-48V2	60	48V/1.25A	43.2-55.2	91.5	680

Note:1. *Use suffix "Q" for conformal coating;

2.**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.

3.The product picture is for reference only. For details, please refer to the actual product.

Selection Guide

Product Specification	Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Specifications	Input Voltage Range	AC input		85	--	264	VAC
		DC input		120	--	370	VDC
	Input Frequency			47	--	63	Hz
	Input Current	115VAC		--	--	1.2	A
		230VAC		--	--	0.8	
	Inrush Current	115VAC		--	30	38	
		230VAC		--	60	78	
	Contact Leakage Current	264VAC		0.25mA RMS max.			
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	0% - 100% load	5V	--	±2	--	%
			12V/15V/24V/48V	--	±1	--	
	Line Regulation	Rated load		--	±0.5	--	
	Load Regulation	230VAC	5V	--	±1.5	--	
			12V/15V/24V/48V	--	±1.0	--	
	Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	5V	--	--	80	mV
			12V/15V	--	--	120	
			24V	--	--	150	
			48V	--	--	240	
	Temperature Coefficient			--	±0.02	--	%/℃
	Stand-by Power Consumption	230VAC input	5V/12V/15V/24V	--	--	0.3	W
			48V	--	--	0.4	
	Short Circuit Protection			Hiccup, continuous, self-recovery			
	Over-current Protection			≥110% Io, self-recovery			
				Belch or constant current mode when output voltage < 50% or constant current mode when output voltage < 50% When the output voltage is 50%-100%, it is in constant current mode, and the load abnormal condition can be automatically restored after removal			
	Over-voltage	5V		≤7.5V	Output voltage hiccup		

	Protection		12V	≤16V			
			15V	≤22.5V			
			24V	≤36V			
			48V	≤60V			
	Minimum Load			0	--	--	%
	Start-up Time			--	--	1	s
	Hold-up Time		115VAC	--	15	--	ms
			230VAC	--	80	--	
General Specifications	Isolation	Input - output	Electric Strength Test for 1min., (leakage current < 5mA)	4000	--	--	VAC
	Insulation Resistance	Input - output	Test voltage: 500VDC	100	--	--	MΩ
	Operating Temperature			-40	--	+85	℃
	Storage Temperature			-40	--	+85	
	Storage Humidity		Non-condensing	--	--	95	%RH
	Operating Humidity			--	--	90	
	Altitude			--	--	5000	m
	Output Power Derating		Operating temperature derating: -40℃to -30℃, Other output	3.0	--	--	%/℃
			Operating temperature derating: -40℃to -30℃, 24V	7.0	--	--	
			Operating temperature derating: -40℃to -30℃, 15V	8.0	--	--	
			Operating temperature derating: +45℃ to +70℃	2.0	--	--	
			Operating temperature derating: +70℃ to +85℃	2.0	--	--	
			Input voltage derating: 85VAC - 100VAC	1.0	--	--	%/VAC
	Safety Class			Class I (With peripheral), Class II (Without peripheral)			
	MTBF		MIL-HDBK-217F@25℃	> 300,000 h			
Mechanical Specifications	Case Material		Plastic, heat-resistant (UL94V-0)				
	Package Dimensions		92.66 x 52.00 x 58.00mm				
	Weight		180g (Typ.)				
	Cooling Method		Free air convection				

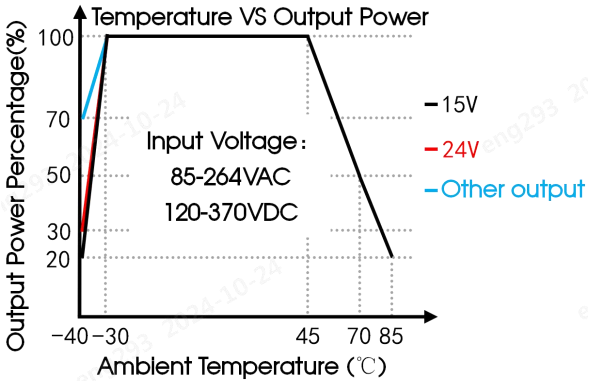
Note: The "Tip and barrel method" is used for ripple and noise test, with a 0.1uf ceramic capacitor & 47uf parallel capacitor,

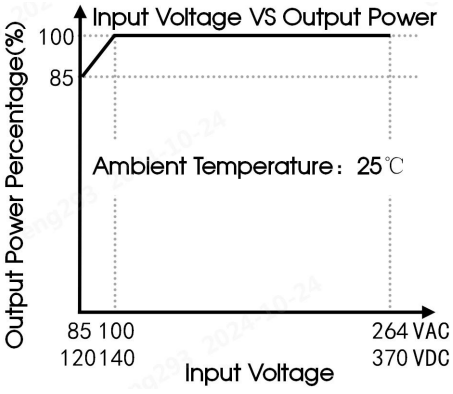
Electromagnetic Compatibility (EMC)

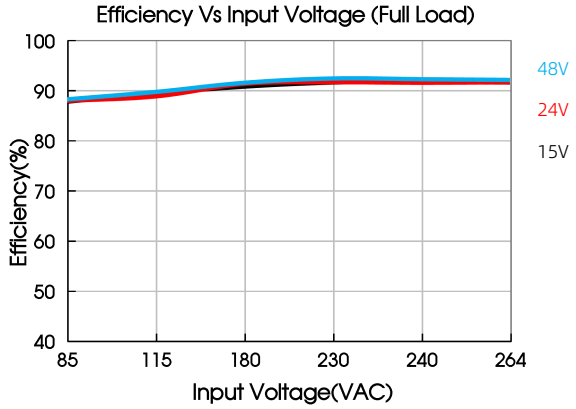
Electromagnetic Compatibility (EMC)	EMI	CE	CISPTV22/EN55032	CLASS B	
		RE	CISPTV22/EN55032	CLASS B	
		Harmonic current	IEC/EN61000-3-2	CLASS A	
		Voltage flicker	IEC/EN61000-3-3		
	EMS	ESD	IEC/EN61000-4-2	Contact ±6KV/Air ±8KV	Perf. Criteria A
		RS	IEC/EN61000-4-3	10V/m	Perf. Criteria A
		EFT	IEC/EN61000-4-4	±2KV	Perf. Criteria A
			IEC/EN61000-4-4	±4KV(See Fig. 1 for typical application circuit)	Perf. Criteria B
		Surge	IEC/EN61000-4-5	Line to line ±2KV	Perf. Criteria A
				Line to PE ±4KV (See Fig. 1 for typical application circuit)	Perf. Criteria A
		CS	IEC/EN61000-4-6	10Vr.m.s	Perf. Criteria A
		PFMF	IEC/EN61000-4-8	30A/m	Perf. Criteria A
		Voltage Variations*	IEC61000-6-2/IEC61000-4-11	70% Un，25/30cycle(50/60Hz); 40% Un，10/12cycle(50/60Hz); 0% Un，1cycle	Perf. Criteria B
		Short interruptions*	IEC61000-6-2/IEC61000-4-11	0% Un，250/300cycle(50/60Hz)	Perf. Criteria C

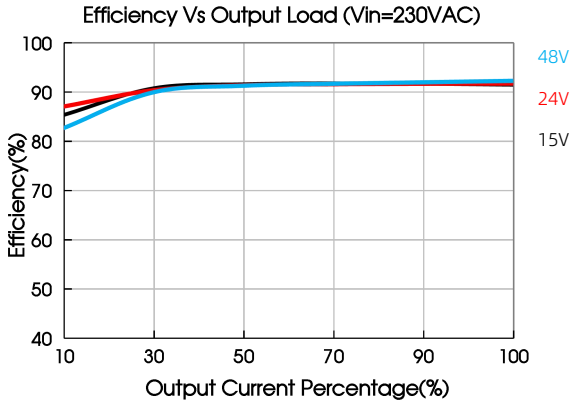
Note: *Un Maximum input nominal voltage.

Product Characteristic Curve









Note: 1.With an AC input between 85-100VAC and a DC input between 120-140VDC, the output power must be derated as per temperature derating curves;

2.This product is suitable for applications using natural free air cooling; for applications in closed environment please consult FAE.

EMC compliance recommended circuit

1.Recommended circuit 1

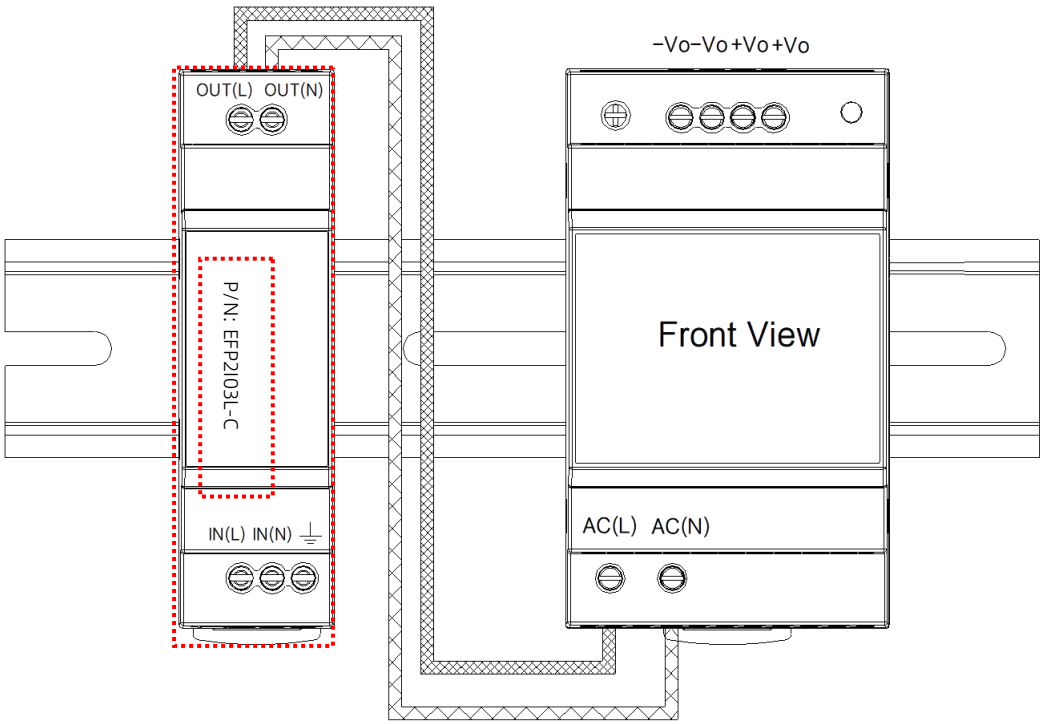
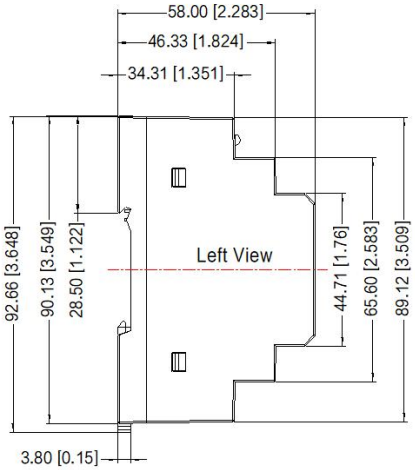


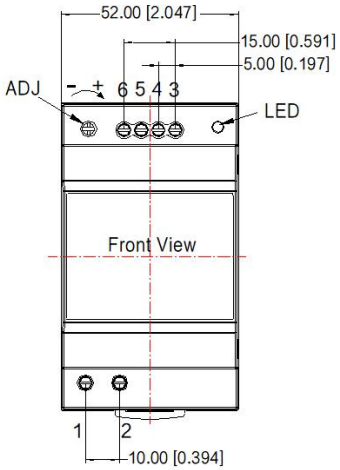
Fig. 1

Note: Applies to Class I (with peripherals), Class II (without peripherals).

Dimensions and Recommended

第三角投影





Pin-Out	
Pin	Mark
1	AC(L)
2	AC(N)
3	+Vo
4	+Vo
5	-Vo
6	-Vo

Note:
Unit: mm[inch]
ADJ: adjustable resistance to change output voltage
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N・m
Mounting rail: TS35
General tolerances: ± 1.00[± 0.039]

Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75% with nominal input voltage and rated output load;
2. The room temperature derating of 3.5℃/1000m is needed for operating altitude greater than 2000m;
3. All index testing methods in this datasheet are based on our company corporate standards;
4. We can provide product customization service, please contact our technicians directly for specific information;
5. Specifications are subject to change without prior notice.
6. Products are related to laws and regulations: see "Features" and "EMC";
7. The output voltage can be adjusted by the ADJ, clockwise to increase;
8. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.