DESCRIPTIONS

AC-DC 150W DIN-Rail Power Supply



RoHS

FEATURES

- Universal 85-264VAC (277VAC available) or 120-370VDC (390VDC available) input voltage
- Withstand 305VAC surge input for 5s
- Operating ambient temperature range: -30℃ to +85℃
- High I/O isolation voltage up to 4000VAC
- OVC III (design refer to EN61558, EN62477/2000m)
- Low ripple & noise, high efficiency
- Output short circuit, over-current, over-voltage over-temperature protection
- The output has CV constant current function
- DIN rail TS35X7.5/ TS35X15 mountable
- Ultra-thin design: width 105mm (6SU)
- Design refer to UL/EN/IEC/BS EN62368, UL508, UL61010, EN/IEC60335, EN61558, EN62477

APPLICATIONS

- Industrial
- Smart Home/Building

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.
--	ADL150-2B-12V2	135.6	12V/11.3A	10.8 - 13.8	89.0	10000
	ADL150-2B-15V2	142.5	15V/9.5A	13.5 - 18.0	89.5	8000
	ADL150-2B-24V2	150.0	24V/6.25A	21.6 - 29.0	91.5	5000
	ADL150-2B-48V2	153.6	48V/3.2A	43.2 - 52.8	91.0	2400

Note: 1.*Use suffix "Q" for bottom conformal coating; : ADL150-2B-xxV2-Q;

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.

Specifications

Product Specifications	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		--	--	3	A
		230VAC		--	--	1.8	
	Inrush Current	115VAC		--	35	--	
		230VAC		--	70	--	
	Contact leakage current	240VAC/50Hz		0.5mA RMS Max.			
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	0% - 100% load	12V	--	±2	--	%
			Other output	--	±1	--	
	Line Regulation	Rated load		--	±1	--	
	Load Regulation	230VAC		--	±1	--	
	Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	12V	--	--	100	mV
			15V	--	--	120	
			24V/48V	--	--	150	
	Temperature Coefficient			--	±0.03	--	%/℃
	Stand-by Power Consumption	230VAC	Other output	--	--	0.3	W
			48V	--	--	0.4	
	Short Circuit Protection			Hiccup, continuous, self-recovery			
	Over-current Protection	≥105% Io, self-recovery		Hiccup mode or constant current limiting when output voltage <50%, recovers automatically after fault condition is removed			
				Constant current limiting within 50% -100% rated output voltage, recovers automatically after fault condition is removed			
	Over-voltage Protection	12V		≤16.0V	Output voltage hiccup, self-recovery		
		15V		≤21.5V			
		24V		≤32.4V			
		48V		≤60.0V			
	Over-temperature Protection	230VAC, rated load	Over-temperature protection activation	--	60	--	℃
			Over-temperature	--	45	--	

				protection deactivation				
	Minimum Load				0	--	--	%
	Start-up Delay Time				--	500	800	ms
	Hold-up Time		115VAC		--	12	--	
			230VAC		--	30	--	
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				-30	--	+85	℃
	Storage Temperature				-40	--	+85	
	Storage Humidity		Non-condensing		--	--	95	%RH
	Operating Altitude				--	--	5000	m
	Output Power Derating		Operating temperature derating	+45℃ to +70℃	2.0	--	--	%/℃
				+70℃ to +85℃	2.66	--	--	
			Input voltage derating	85VAC - 100VAC	12V/15V	1.1	--	--	%/VAC
					24V/48V	0.784	--	--	
				100VAC - 120VAC	12V	--	--	122.0	W
					15V	--	--	128.3	
					24V	--	--	127.5	
					48V	--	--	130.6	
	Safety Class				Class II			
	MTBF		MIL-HDBK-217F@25℃		> 300,000 h			
Mechanical Specifications	Case Material		Plastic, heat-resistant (UL94V-0)					
	Package Dimensions		105.00 x 90.00 x 58.00mm					
	Weight		330g (Typ.)					
	Cooling Method		Free air convection					

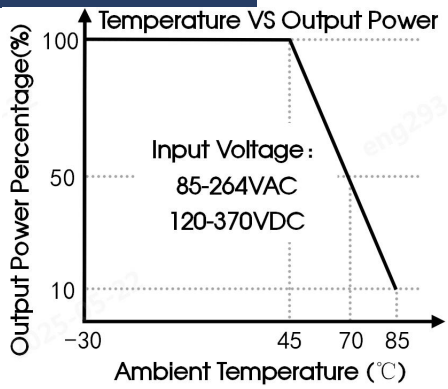
Note: The "Tip and barrel method" is used for ripple and noise test, with a 0.1uf ceramic capacitor & 47uf parallel capacitor, please refer to Enclosed Switching Power Supply Application Notes for specific information.

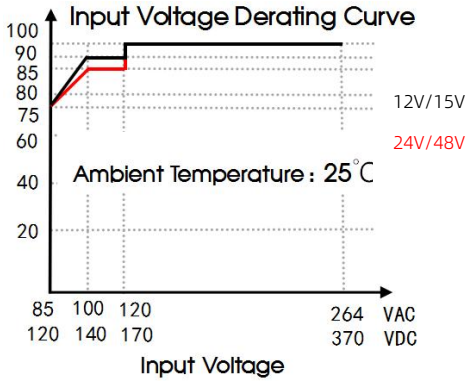
Electromagnetic Compatibility (EMC)

Electromagnetic Compatibility (EMC)	Emissions (EMI)	CE	CISPR32/EN55032	CLASS B	
		RE	CISPR32/EN55032	CLASS B	
		Harmonic current*	IEC/EN61000-3-2	CLASS A	
	Immunity (EMS)	ESD	IEC/EN61000-4-2	Contact ±4KV/Air ±8KV	Perf. Criteria A
		RS	IEC/EN61000-4-3	10V/m	Perf. Criteria A
		EFT	IEC/EN61000-4-4	±4KV	Perf. Criteria B
		Surge	IEC/EN61000-4-5	Line to line ±2KV	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: 1.*Test harmonic current at 70% load;
2.**Un Maximum input nominal voltage.

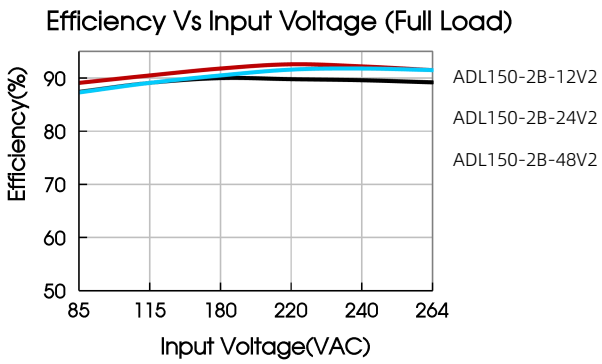
Characteristic Curve

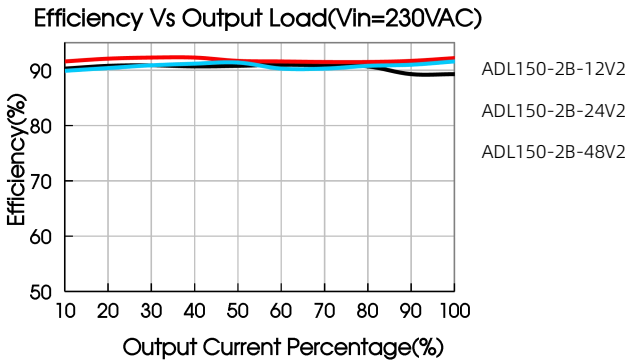




Note: 1.With an AC input between 85-120VAC and a DC input between 120-170VDC, the output power must be derated as per temperature derating curves;

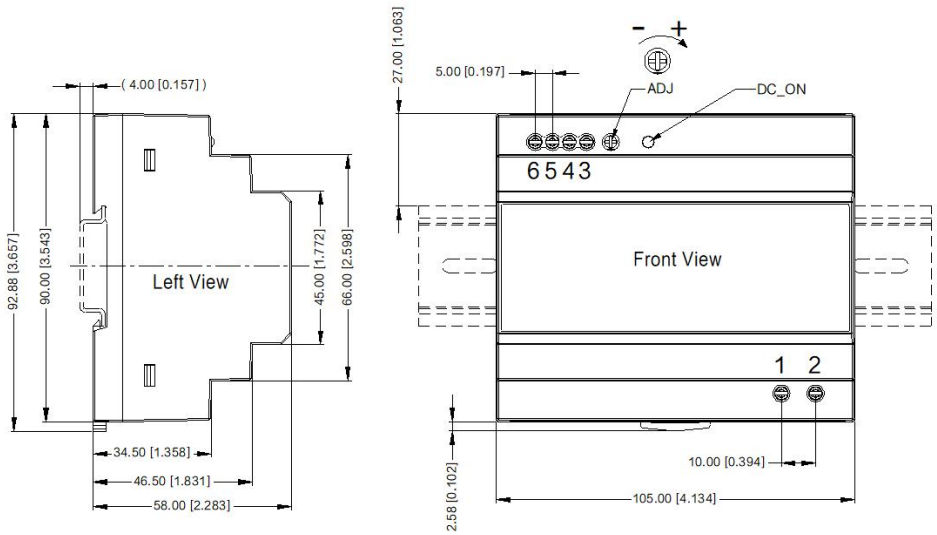
2.This product is suitable for applications using natural free air cooling; for applications in closed environment please consult our FAE.





Dimensions and Recommended

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Mark
1	AC(N)
2	AC(L)
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. Specifications are subject to change without prior notice;
5. Products are related to laws and regulations: see "Features" and "EMC";
6. The output voltage can be adjusted by the ADJ, clockwise to increase;
7. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.