ADL150-2B-xx Series

DESCRIPTIONS 150W，AC-DC DIN-Rail Power Supply



RoHS 3 Years Warranty

CE Report UKCA Report

EN62368-1 BS EN62368-1

FEATURES

- Universal 85-264VAC (277VAC available) or 120-370VDC (390VDC available) input voltage
- Withstand 300VAC surge input for 5s
- Operating ambient temperature range: -30℃ to +70℃ (can be start-up at -40℃)
- High I/O isolation voltage up to 4000VAC
- OVC III (EN61558)
- Low standby power consumption, low ripple & noise
- High efficiency, high reliability
- Output short circuit, over-current, over-voltage over-temperature protection
- DIN rail TS35X7.5/ TS35X15 mountable
- Ultra-thin design: width 105mm (6SU)

APPLICATIONS

- Industrial control equipment machinery

Selection Guide

Certification	Part No.	Output Power	Nominal Output Voltage	Output Voltage Adjustable	Efficiency at 230VAC (%) Typ.	Capacitive Load
EN/BS EN	ADL150-2B-12	135.6	12V/11.3A	10.8 - 13.8	89	10000
	ADL150-2B-15	142.5	15V/9.5A	13.5 - 18.0	89.5	8000
	ADL150-2B-24	150.0	24V/6.25A	21.6 - 29.0	91.5	5000
	ADL150-2B-48	153.6	48V/3.2A	43.2 - 52.8	91	2400

Note: 1.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.

2.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	--	
	Leakage Current	240VAC/50Hz		0.5mA RMS Max.			
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	0% - 100% load	12V output	--	±2	--	%
			Other output	--	±1	--	
	Line Regulation	Rated load		--	±1	--	
	Load Regulation	230VAC		--	±1	--	
	Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	12V output	--	--	100	mV
			15V output	--	--	120	
			24V output	--	--	150	
			48V output	--	--	150	
	Temperature Coefficient			--	±0.03	--	%/℃
	Stand-by Power Consumption	230VAC Input	12V/15V/24V output	--	--	0.30	W
			48V output	--	--	0.40	
	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 output		≤16V	Output voltage hiccup		
		15V output		≤23V			
		24V output		≤35V			
		48V output		≤60V	Output voltage clamp		
	Over-temperature Protection	Over-temperature protection activation		--	--	85	℃
		Over-temperature protection deactivation		50	--	--	
	Minimum Load			0	--	--	%
	Start-up Delay Time	Room temperature		--	500	800	ms

Output Specifications	Hold-up Time		115VAC	--	12	--	ms
			230VAC	--	30	--	
General Specifications	Isolation	Input-output	Electric Strength Test for 1min., leakage current < 5mA	4000	--	--	VAC
	Operating Temperature			-30	--	+70	℃
	Storage Temperature			-40	--	+85	
	Storage Humidity			--	--	95	%RH
	Operating Altitude			--	--	2000	m
	Switching Frequency			--	65	--	kHz
	Power Derating		+45℃ to +70℃	2.0	--	--	%/℃
			85VAC - 100VAC 12V/15V	1.1	--	--	%/VAC
			85VAC - 100VAC 24V/48V	0.784	--	--	
			100VAC - 120VAC 12V	--	--	122.4	W
			100VAC - 120VAC 15V	--	--	128.3	
			100VAC - 120VAC 24V	--	--	127.4	
			100VAC - 120VAC 48V	--	--	130.6	
	Safety Class			CLASS II			
	MTBF			MIL-HDBK-217F@25℃ > 300,000 h			
Mechanical Specifications	Case Material		Black plastic, heat-resistant (UL94V-0)				
	Package Dimensions		105.00 x 90.00 x 55.40mm				
	Weight		330g (Typ.)				
	Cooling Method		Free air convection				

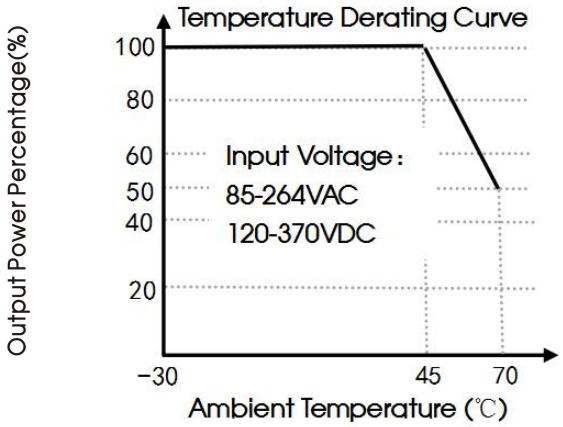
Note: *The "Tip and barrel method" is used for ripple and noise test.

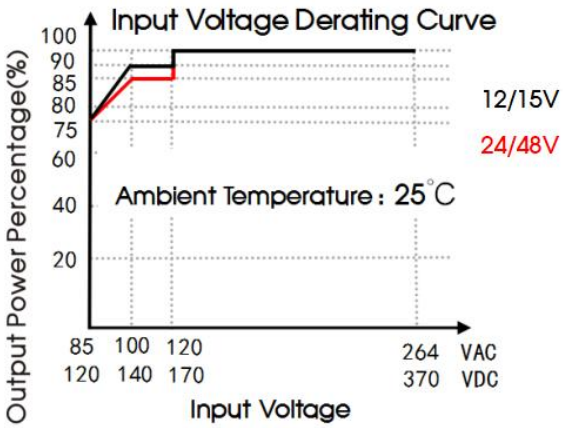
Electromagnetic Compatibility (EMC)

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 ±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
		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

Note: *Test harmonic current at 70% load.

Product Characteristic Curve

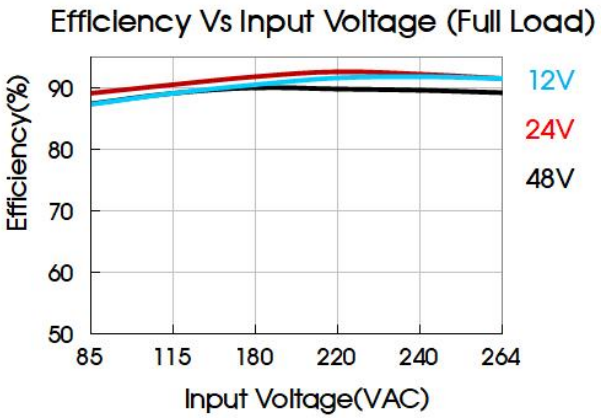


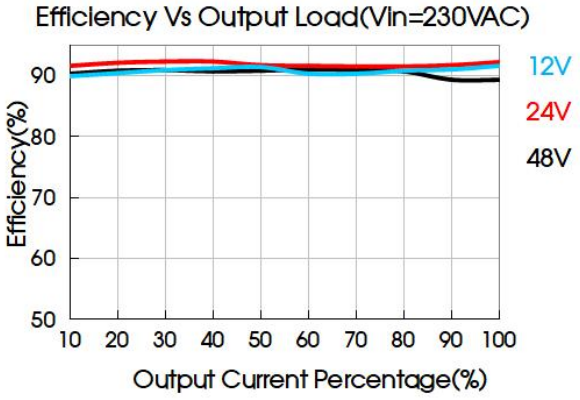


Note:

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;

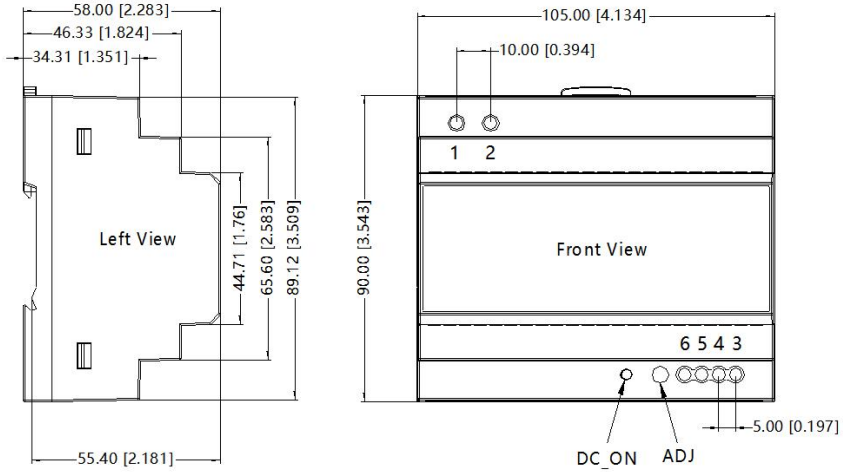
② This product is suitable for applications using natural air cooling;





Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



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. All index testing methods in this datasheet are based on our company corporate standards;
3. We can provide product customization service, please contact our technicians directly for specific information;
4. Specifications are subject to change without prior notice;
5. Products are related to laws and regulations: see "Features" and "EMC";
6. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.
7. The image certification marks are for reference only; please refer to the selection table for actual specifications. Certification is based on the physical mark or packaging label.