ADL15-2B-xx Series

DESCRIPTIONS

15W AC-DC DIN-Rail Power Supply



RoHS

3 Years Warranty

c UL us CE Report UKCA Report

UL62368-1 EN62368-1 BS EN62368-1

FEATURES

- Universal 85-264VAC (277VAC available) or 120-370VDC (390VDC available) input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range -40℃ to +70℃
- High I/O isolation voltage up to 4000VAC
- Industrial-grade design
- OVC III (EN61558-1 standards)
- Low standby power consumption, high efficiency
- Low ripple & noise
- Output short circuit, over-current, over-voltage protection
- DIN rail TS35X7.5/ TS35X15 mountable
- Safety according to UL/IEC62368, IEC/EN61010, IEC60335, IEC/EN61558

APPLICATIONS

- Industrial control

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.
EN/BS EN	ADL15-2B-05	12	5V/2.4A	4.5-5.5	80	2000
UL/EN/BS EN	ADL15-2B-12	15	12V/1.25A	10.8-13.8	85	1500
UL/EN/BS EN	ADL15-2B-15	15	15V/1A	13.5-18.0	85.5	1100
	ADL15-2B-24	15.2	24V/0.63A	21.6-29.0	86	700
EN/BS EN	ADL15-2B-48	15.4	48V/0.32A	43.2-55.2	87	300

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.

Characteristic

Product characteristics	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		--	--	0.5	A
		230VAC		--	--	0.25	
	Inrush Current	115VAC		--	15	--	
		230VAC		--	25	--	
	Contact leakage current	240VAC		0.5mA			
	Hot Plug			Unavailable			
Output Specifications	Output Voltage Accuracy	0% - 100% load	5V output	--	±2	--	%
			Other output	--	±1	--	
	Line Regulation	Rated load		--	±0.5	--	
	Load Regulation	230VAC		--	±1	--	
	Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	5V output	--	--	80	mV
			12V output	--	--	120	
			15V output	--	--	120	
			24V output	--	--	150	
			48V output	--	--	240	
	Temperature Coefficient			--	±0.02	--	%/℃
	Stand-by Power Consumption	230VAC input		--	--	0.3	W
	Short Circuit Protection			Hiccup, continuous, self-recovery			
	Over-current Protection	Constant voltage mode		≥110% Io, self-recovery			
		Constant current mode		Constant current limiting within 50% -100% rated output voltage, recovers automatically after fault condition is removed, it is not recommended to use when the output voltage <50%			
	Over-voltage Protection	5V output		≤6.75V	Output voltage hiccup		
		12V output		≤16.2V			
		15V output		≤22.5V			
		24V output		≤36V			
		48V output		≤64.8V			
	Minimum Load			0	--	--	%
	Start-up Time			--	--	2	s

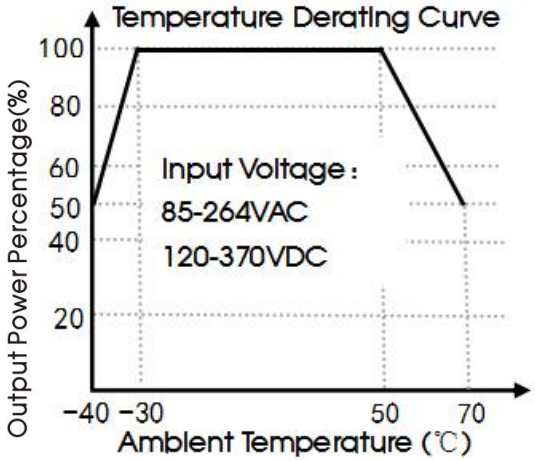
	Hold-up Time		115VAC	--	12	--	ms
			230VAC	--	30	--	
General Specifications	Isolation	Input - output	Electric Strength Test for 1min., (leakage current < 5mA)	4000	--	--	VAC
	Operating Temperature			-40	--	+70	℃
	Storage Temperature			-40	--	+85	
	Storage Humidity			--	--	95	%RH
	Operating Altitude			--	--	2000	m
	Switching Frequency			--	65	--	kHz
	Power Derating		-40℃ to -30℃	5.0	--	--	%/℃
			+50℃ to +70℃	2.5	--	--	
			85VAC - 100VAC	1.34	--	--	%/VAC
	Safety Class			CLASS I I			
	MTBF		MIL-HDBK-217F@25℃	> 300,000 h			
Mechanical Specifications	Case Material		Plastic, heat-resistant (UL94V-0)				
	Package Dimensions		90.00 x 58.00 x 17.50mm				
	Weight		60g (Typ.)				
	Cooling Method		Free air convection				

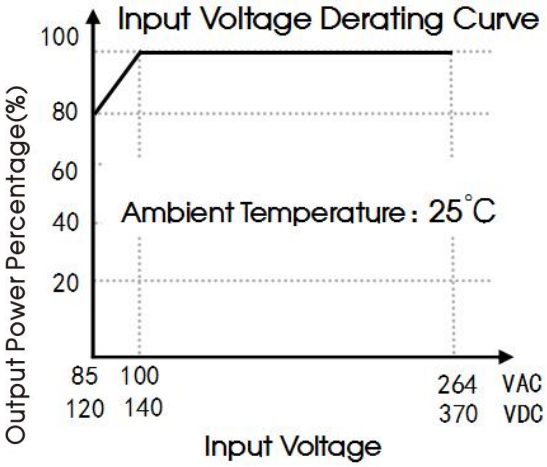
Note:*The "Tip and barrel method" is used for ripple and noise test, using a 12” twisted pair-wire terminated with a 0.1uf ceramic capacitor & 47uf parallel capacitor.

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 ±2KV	Perf. Criteria A
		Surge	IEC/EN61000-4-5 line to line ±1KV	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

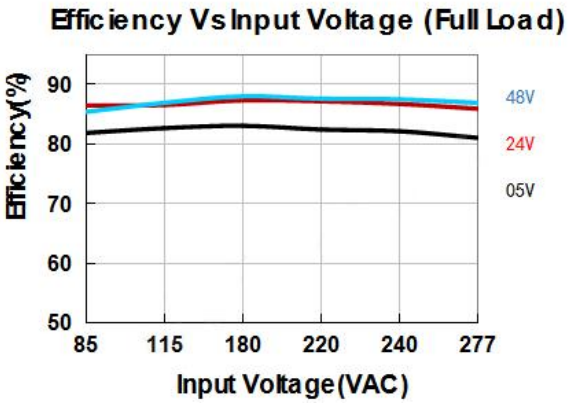
Product Characteristic Curve

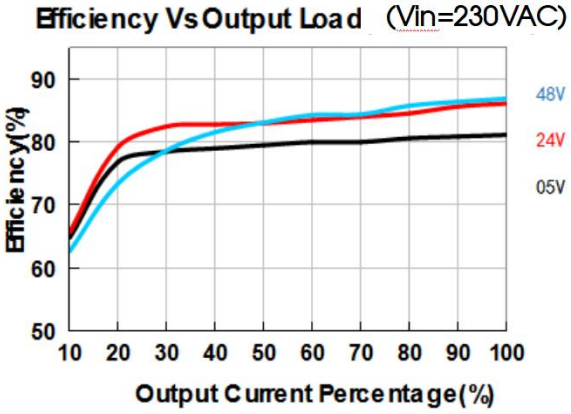




Note: ① With an AC input between 85-100VAC and a DC input between 120-140VDC, the output power must be derated as per temperature derating curves,but voltage derating should be carried out based on temperature derating;

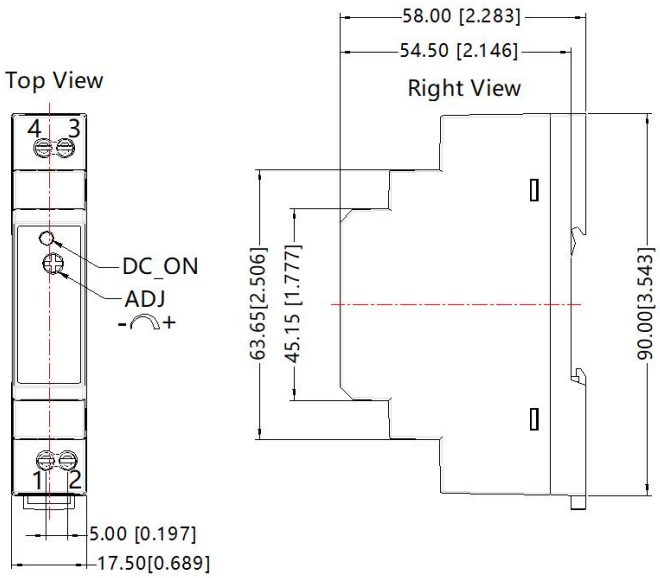
② This product is suitable for applications using natural air cooling;





Design Reference

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Mark
1	AC(N)
2	AC(L)
3	-Vo
4	+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, rail needs to connect safety ground
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.