DESCRIPTIONS

75W, AC-DC DIN-Rail Power Supply



RoHS

CE Report UKCA Report

EN62368-1 BS EN62368-1

FEATURES

- Universal 85 - 305VAC or 120 - 430VDC Input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -40℃ to +85℃
- High I/O isolation test voltage up to 4000VAC
- Low ripple & noise
- Output short circuit, over-current, over-voltage, over-temperature protection
- DIN rail TS-35/7.5 or 15 mountable
- OVC II
- Operating altitude up to 5000m
- Safety according to UL62368, EN60335, EN61558, GB4943
- Safety according to IEC/UL/BS EN 62368

APPLICATIONS

- Industrial control
- Electricity
- Security

Selection Guide

Certification	Part No.	Output Power (W)	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range (V)	Efficiency at 230VAC (%) Typ.	Max. Capacitive Load (μF)
EN/BS EN	AD75-12V2	75.6	12V/6.3A	12-14V	88	6000
	AD75-24V2	76.8	24V/3.2A	24-28V	90	1500
	AD75-48V2		48V/1.6A	48-53V	91	1000

Note:1.Use suffix "Q" for conformal coating:AD75-xxV2-Q.

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	--	305	VAC
			DC input		120	--	430	VDC
	Input Frequency		AC input		47	--	63	Hz
	Input Current		115VAC		--	--	2	A
			230VAC		--	--	1	
	Inrush Current		115VAC	Cold start	--	30	--	
			230VAC		--	50	--	
	Contact leakage current		240VAC		< 0.5mA			
	Hot Plug				Unavailable			
Output Specifications	Output Voltage Accuracy		Full load range	12V	--	±2.0	--	%
				24V/48V	--	±1.0	--	
	Line Regulation		Rated load		--	±0.5	--	
	Load Regulation		0% - 100% load		--	±1.0	--	
	Ripple & Noise*		20MHz bandwidth (peak-peak value)	12V	--	80	--	mV
				24V	--	120	--	
				48V	--	150	--	
	Temperature Coefficient				--	±0.03	--	%/℃
	Minimum Load				0	--	--	%
	Stand-by Power Consumption		115VAC		--	0.5	1.0	W
			230VAC		--	1.0	1.5	
	Hold-up Time		115VAC		--	12	--	ms
			230VAC		--	60	--	
	Short Circuit Protection		Recovery time <5s after the short circuit disappear.		Constant current mode, continuous, self-recover			
	Over-current Protection		230VAC, rated load	Normal temperature	110% Io - 150% Io, self-recover			
				High temperature, low temperature	≥105% Io, self-recover			
	Over-voltage Protection		12V		≤17VDC (Hiccup, self-recover)			
			24V		≤33VDC (Hiccup, self-recover)			
			48V		≤60VDC (Hiccup, self-recover)			
	Over-temperature Protection		230VAC, rated load		Output voltage turn off, self-recover after the temperature drops			
General Specifications	Isolation Test	Input - ⏚	Electric strength test for 1min., leakage current <10mA		2000	--	--	VAC
		Input - output			4000	--	--	
		Output - ⏚			500	--	--	
	Insulation Resistance	Input - ⏚	At 500VDC		50	--	--	MΩ
		Input - output			50	--	--	

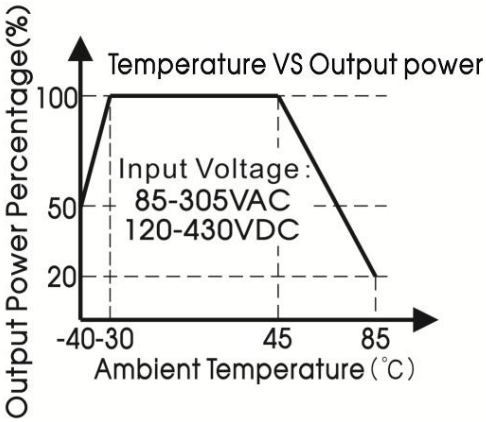
	Output - ⏚			50	--	--	
General Specifications	Operating Temperature			-40	--	+85	℃
	Storage Temperature			-40	--	+85	
	Operating Humidity	Non-condensing		10	--	95	%RH
	Storage Humidity			20	--	95	
	Switching Frequency			--	65	--	kHz
	Power Derating	Operating temperature derating	-40℃ to -30℃	5	--	--	%/℃
			+45℃ to +85℃	2	--	--	
		Input voltage derating	85VAC - 100VAC	2	--	--	%/VAC
			277VAC - 305VAC	0.71	--	--	
	Safety Class			CLASS I			
	MTBF	MIL-HDBK-217F@25℃		≥300,000 h			
Mechanical Specifications	Case Material	Metal (AL1100, SGCC)					
	Dimensions	110.00mm x 87.50mm x 32.00mm					
	Weight	340g (Typ.)					
	Cooling Method	Free air convection					

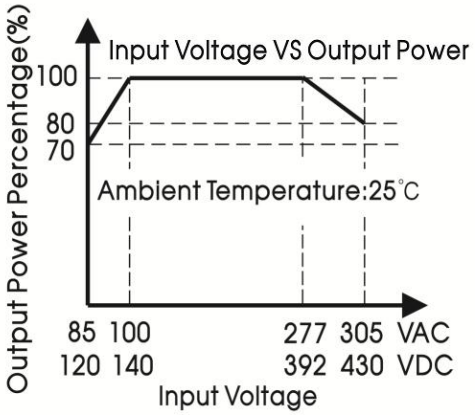
Note: *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor.

Electromagnetic Compatibility (EMC)

Electromagnetic Compatibility (EMC)	EMI	CE	CISPR32/EN55032 CLASS B	
		RE	CISPR32/EN55032 CLASS B	
		Harmonic current	IEC/EN61000-3-2 CLASS A	
	EMS	ESD	IEC/EN 61000-4-2 Contact ±6KV/Air ±8KV	perf. Criteria A
		RS	IEC/EN 61000-4-3 10V/m	perf. Criteria A
		EFT	IEC/EN 61000-4-4 ±2KV	perf. Criteria A
		Surge	IEC/EN 61000-4-5 line to line ±2KV/line to ground ±4KV	perf. Criteria A
		CS	IEC/EN61000-4-6 10 Vr.m.s	perf. Criteria A
		MS	IEC/EN61000-4-8 30A/m	perf. Criteria A
		Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11 0%, 70%	perf. Criteria B

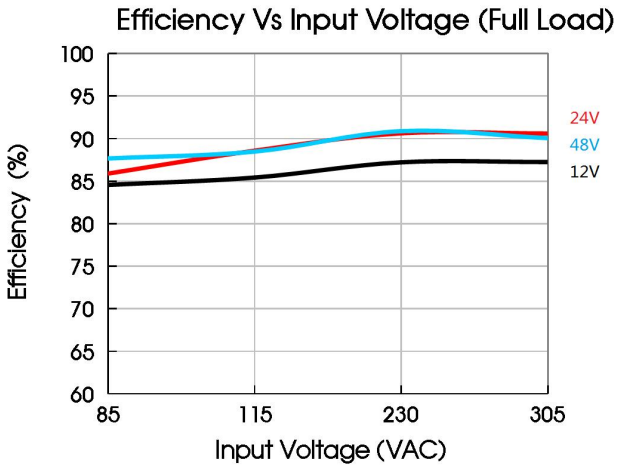
Characteristic Curve

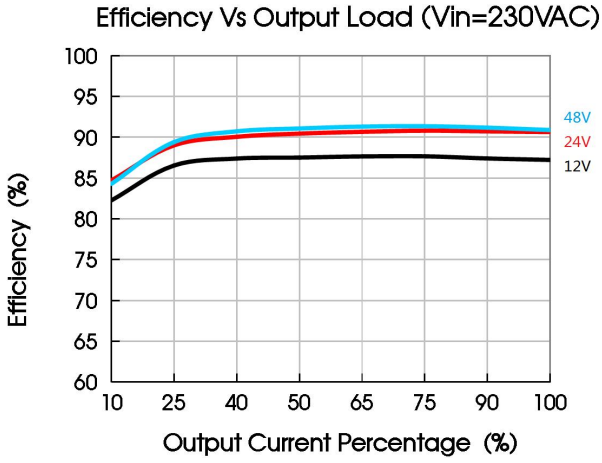




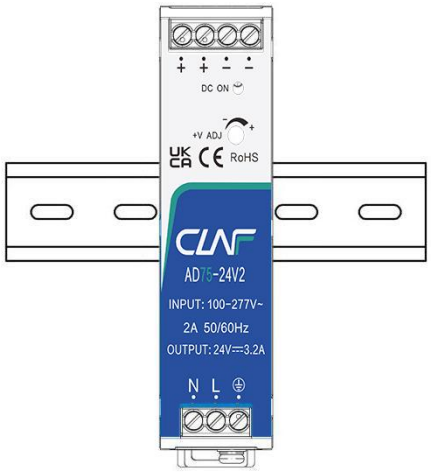
Note: 1. With an AC input voltage between 85 - 100VAC/277 - 305VAC and a DC input between 120 - 140VDC/392 - 430VDC the output power must be derated as per the temperature derating curves;

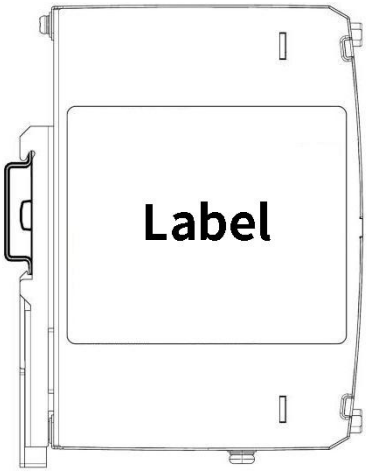
2. This product is suitable for applications using natural air cooling.



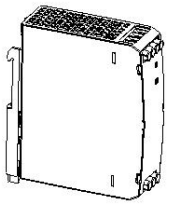


Installation Diagram

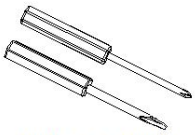




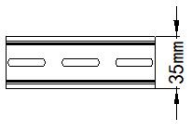
Bill Of Material		
1	Product	1 PCS
2	Phillips screwdriver Slotted screwdriver	1 PCS
3	TS35/7.5 or TS35/15	1 PCS
4	26–10AWG wires	/ PCS
	All above is only for reference, the actual wiring diameter and locking torque refer to the appearance size dia	



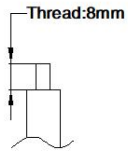
Product



Phillips screwdriver
Slotted screwdriver
Diameter of the cutting tools: 3mm

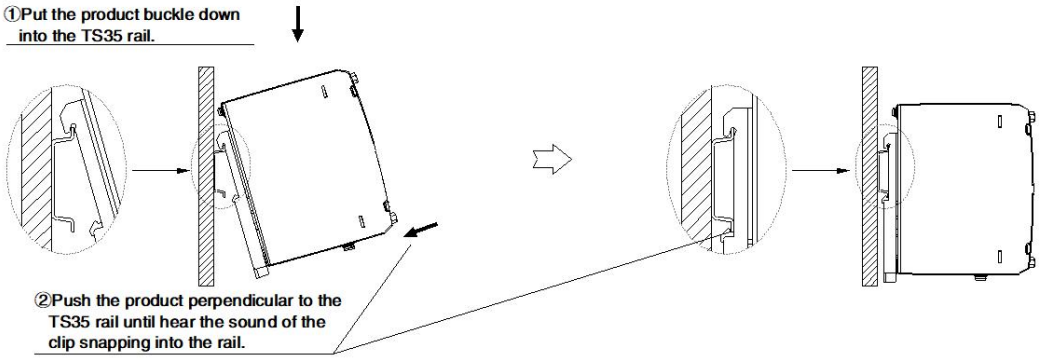


TS35/7.5 or TS35/15

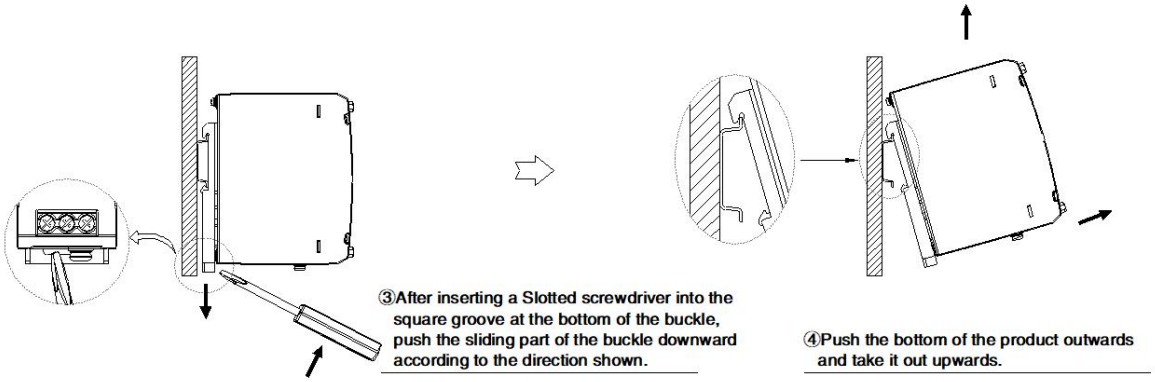


26–10AWG wires

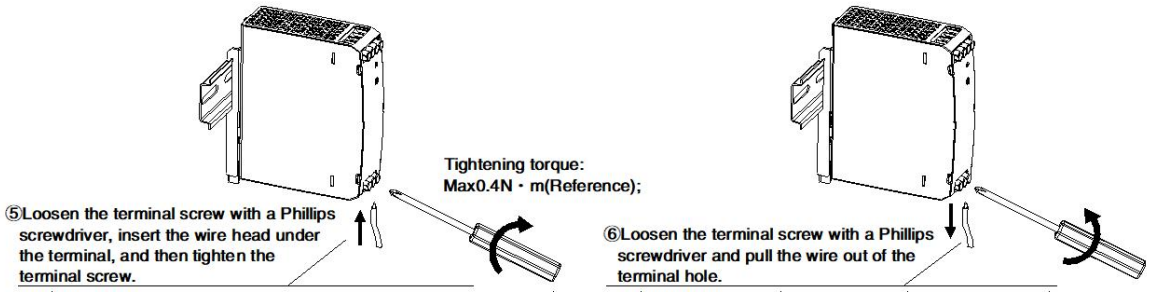
Installation steps ①–②



Disassembly steps ③–④



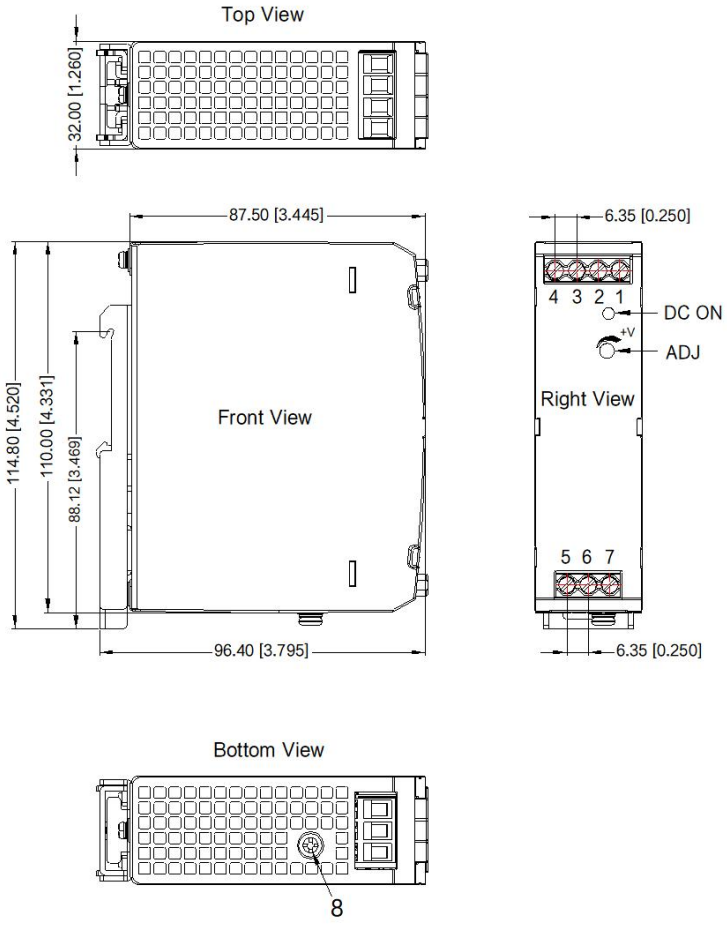
Connecting/Disconnecting Steps ⑤–⑥



Note: Keep the following installation clearances: 20mm on top, 20mm on the bottom, 5mm on the left and right sides are recommended when the device is loaded permanently with more than 50% of the rated power. Increase this clearance to 15mm in case the adjacent device is a heat source (e.g. another power supply).

Dimensions and Recommended

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Mark
1	-Vo
2	-Vo
3	+Vo
4	+Vo
5	AC(N)
6	AC(L)
7	⏚

7、8 any position must be connected to the earth (⏚)

Note:
Unit: mm[inch]
ADJ: Output adjustable resistor
Wire range: 26-10 AWG
Tightening torque: Max 0.4 N・m
Mounting rail: TS35, rail needs to connect safety ground
General tolerances: ± 1.00[± 0.039]

WARNING Risk of electrical shock, fire, personal injury or death:

AVERTISSEMENT AVERTISSEMENT Risque de choc électrique, d'incendie, de blessures corporelles ou de décès :

1. Do not use the power supply without proper grounding (Protective Earth). Use the terminal on the input block for earth connection and not one of the screws on the housing;
   N'utilisez pas l'alimentation électrique sans mise à la terre appropriée (Terre protectrice). Utilisez le terminal sur le bloc d'entrée pour la connexion terrestre et non pas une des vis sur le boîtier;
2. Turn power off before working on the device, protect against inadvertent re-powering;
   Éteignez l'alimentation avant de travailler sur l'appareil, protégez-vous contre la réénergisation accidentelle;
3. Make sure that the wiring is correct by following all local and national codes;
   Assurez-vous que le câblage est correct en suivant tous les codes locaux et nationaux;
4. Do not modify or repair the unit;
   Ne modifiez pas ou ne réparez pas l'appareil;
5. Do not open the unit as high voltages are present inside;
   Ne modifiez pas ou ne réparez pas l'appareil;
6. Use caution to prevent any foreign objects from entering the housing;
   Faire preuve de prudence pour empêcher les objets étrangers d'entrer dans le logement;
7. Do not use in wet locations or in areas where moisture or condensation can be expected;
   Faire preuve de prudence pour empêcher les objets étrangers d'entrer dans le logement;
8. Do not touch during power-on, and immediately after power-off, hot surfaces may cause burns;
   Ne touchez pas pendant l'alimentation et, immédiatement après l'alimentation, les surfaces chaudes peuvent causer des brûlures.
9. For ambient temperature ≤60℃, use ≥90℃ - copper wire only; for ambient temperature >60℃ to 85℃, use ≥105℃ - copper wire only; use only wires with a minimum dielectric strength of 300V (input) and 60V (output);
   Température ambiante ≤60℃, utiliser ≥90℃ - seulement fils de cuivre; Température ambiante >60℃ et 85℃, utiliser ≥105℃ - seulement fils de cuivre; Uniquement pour l'ulilisation de fils de cuivre d'une résisitance d'isolation minimale de 300V (d'entrée) et 60V (de sortie).

Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity <75% RH with nominal input voltage and rated output load;
2. The room temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m;
3. To improve conversion efficiency, there may be some audio noise when the module operates at high voltage, but this does not affect the product's performance or reliability.
4. The out case needs to be connected to PE (⏚) of system when the terminal equipment in operating;
5. The output voltage can be adjusted by the ADJ, clockwise to increase;
6. The power supply is considered a component which will be installed into a terminal equipment. All EMC tests should be confirmed with the final equipment.
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.