APS-480-24 Datasheet

Aiming to create better and safer working environments and life experiences through the products we deliver.

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480W DIN-Rail Switching Power Supply

APS-480-24

is an environment friendly power supply for standard DIN-rail mounting with feature of cost-effective and energy efficient. The products offer a high level of stability and immunity to noise, it also has an extremely compact design for space saving and are ideal for applications such as industrial control equipment machinery and all kinds of applications in harsh environment. With good EMC performance, the products compliant with international standards for EMC and safety specifications meet IEC/EN/UL62368, UL61010.

c UL us LISTED

CE EN62368-1

CB Report

RoHS

Features & Benefits

- Wide input voltage range: 85 ~ 264 VAC /120 ~ 370 VDC
- Accepts AC or DC input (dual-use of same terminal)
- Operating temperature: -40 ℃ to +70 ℃
- The efficiency is up to 94.5%
- High I/O isolation test voltage up to 3000VAC
- DC OK function
- Active PFC, PF > 0.99
- Low ripple & noise
- Output short circuit, over-current, over-voltage,
- over-temperature protection, input undervoltage protection
- DIN rail TS-35/7.5/15 mountable
- Ultra slim design with 48mm width
- Safety according to IEC/EN/UL62368, UL61010, IS13252 (Part1)

Ordering Information

Part No.	Output power (W)	Nominal Output Voltage & Current (Vo/Io)	Output Voltage Adjustable Range ADJ*	Efficiency @230VAC (Typ.)	Max. Capacitive Load	Certification
APS-480-24	480	24 V/20 A	24 V-28 V	94%	20000 μF	EN/BIS

* The actual adjustment may exceed the listed values, care shall be taken to ensure the output voltage and power within the maximum value that listed above.

Specifications

Input Specifications

Item	Operating condition		Min.	Typ.	Max.
Input Voltage Range	AC input		85 V	-	264 V
	DC input		120 V	-	370 V
Input Frequency			47 Hz	-	63 Hz
Input Current	115 VAC		-	-	5 A
	230 VAC		-	-	2.5 A
Inrush Current	115 VAC	Cold start	-	-	15 A
	230 VAC		-	-	15 A
Leakage Current	240 VAC		<0.8 mA		
Power Factor	115 VAC		0.99	-	-
	230 VAC		0.99	-	-
Hot Plug			Unavailable		

Output Specifications

Item	Operating condition		Min.	Typ.	Max.
Output Voltage Accuracy	Full load range		-	±1.0%	
Line Regulation	Rated load		-	±0.5%	
Load Regulation	0% - 100% load		-	±1.0%	
Output Ripple & Noise	20MHz bandwidth (peak-to-peak value)		-	-	50 mV
Temperature Coefficient			-	±0.03%/℃	-
Minimum Load			0%	-	-
Hold-up Time			16 ms	20 ms	-
DC OK Signal			30 VDC/1 A Max.		
Short Circuit Protection	Recovery time 10s after the short circuit disappear.		Constant current hiccup mode, constant current works 1s, turn off 10s, continuous, self-recovery		
Over-voltage Protection	24 V		29 V -35 V (Hiccup, self-recovery)		
Over-current Protection	230VAC, rated load	Normal temperature high temperature	110% - 250% Io, the output turned off after working normally for 1s, self-recovery		
		Low temperature	≥105% Io, automatic recover after fault condition is removed		
Over-temperature	230VAC,100% load	Over-temperature protection start	-	-	90 ℃
		Over-temperature protection release	60 ℃	-	-
Input Undervoltage Protection	Protection start (Input voltage drops from high to low)		-	60 VAC	-
	Protection release (Input voltage rises from low to high)		-	75 VAC	-

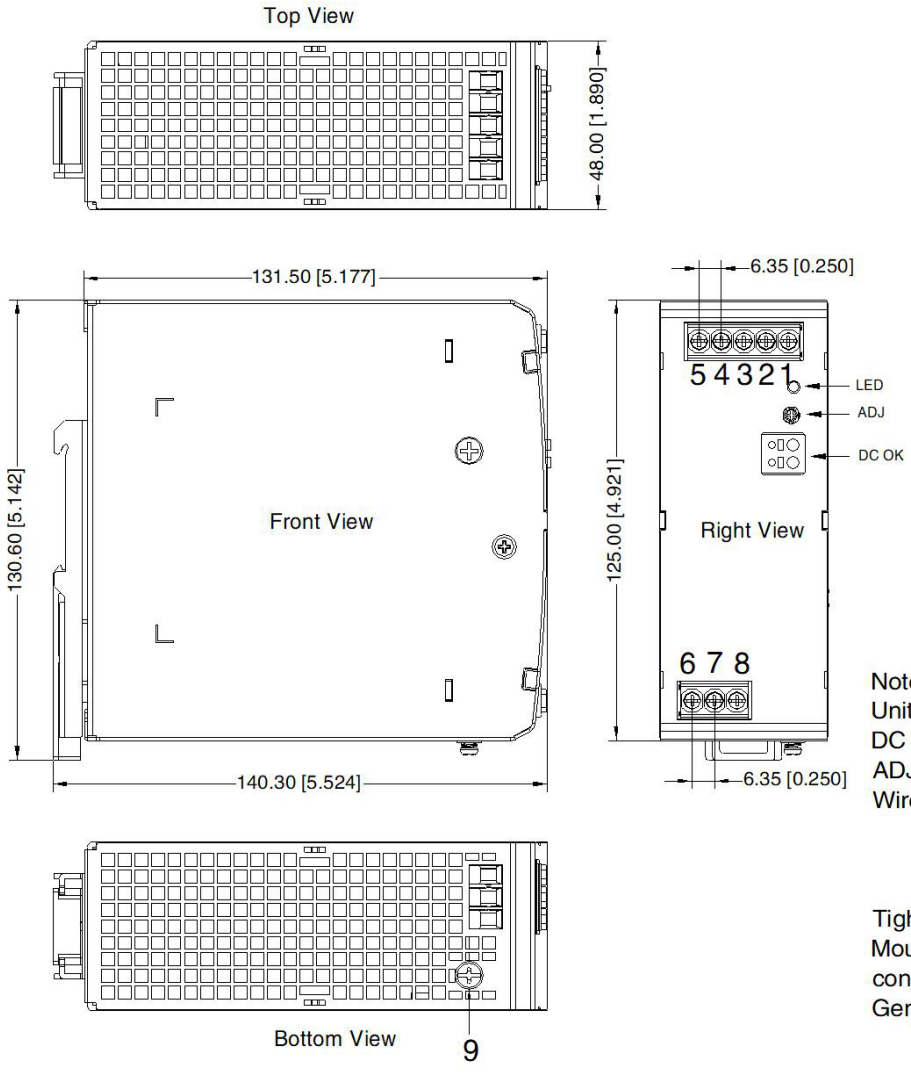
Specifications

General Specifications						
Item		**Operating condition**		**Min.**	**Typ.**	**Max.**
Isolation	**Input - Ground**	Electric strength test for 1min., leakage current <10 mA		2000 VAC	-	-
	Input - output			3000 VAC	-	-
	Output - Ground			500 VAC	-	-
Insulation Resistance	**Input - Ground**	@ 500VDC		100 MΩ	-	-
	Input - output			100 MΩ	-	-
	Output - Ground			100 MΩ	-	-
Operating Temperature				-40 ℃	-	+70 ℃
Storage Temperature				-40 ℃	-	+85 ℃
Operating Humidity		Non-condensing		20%RH	-	90%RH
Storage Humidity				10%RH	-	95%RH
Switching Frequency				-	-	-
Power Derating		Operating temperature derating	+50 ℃ to +70 ℃	2.5%/℃	-	-
		Input voltage derating	85 VAC–100 VAC	1.0%/VAC	-	-
Safety Standard		Design refer to IEC/EN/UL62368-1, UL61010-1, UL61010-2-201, IS13252 (Part1)				
Safety Class				CLASS I		
MTBF		MIL-HDBK-217F@25℃		> 300,000 h		

Mechanical Specifications	
Case Material	Metal (AL1100, SPCC) and Plastic (PC940)
Dimensions	131.50 mm x 48.00 mm x 125.00 mm
Weight	980 g (Typ.)
Cooling method	Free air convection

Electromagnetic Compatibility (EMC)				
Emissions	CE	CISPR32/EN55032	CLASS B	
	RE	CISPR32/EN55032	CLASS B	
	Harmonic current	IEC/EN 61000-3-2	CLASS A and CLASS D	
Immunity	ESD	IEC/EN 61000-4-2	Contact ±8KV/ Air ±15KV	Perf. Criteria A
	RS	IEC/EN 61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN 61000-4-4	±4KV	perf. Criteria A
	Surge	IEC/EN 61000-4-5	line to line ±2KV/ line to ground ±4KV	perf. Criteria A
	CS	IEC/EN 61000-4-6	10Vr.m.s	perf. Criteria A
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN 61000-4-11	0%, 70%	perf. Criteria B

Installation dimensions



THIRD ANGLE PROJECTION

Pin–Out	
Pin	Mark
1	–Vo
2	–Vo
3	–Vo
4	+Vo
5	+Vo
6	AC(N)
7	AC(L)
8	⏚

8、9 any position must be connected to the earth(⏚)

Note:
Unit: mm[inch]
DC ON：Output status indicator LED
ADJ: Output adjustable resistor
Wire range: Input: 20–10 AWG
Output: 24V: 14–10AWG
48V: 18–10AWG
DC OK: 24–16AWG
Tightening torque: Max 0.5 N·m
Mounting rail: TS35, rail needs to connect safety ground
General tolerances: ± 1.00[± 0.039]