

Features

- Universal 85 - 305Vac and 120 -430Vdc
- Remote ON-OFF
- Operating temperature range - 30°C to +70°C
- Output short circuit, over-current (Built-in constant current limiting circuit), over-voltage, over-temperature protection.
- EMI performance meets. CISPR32 / EN55032 CLASS B
- Safety approved IEC/EN/UL62368, GB4943 meets IEC/EN60335, IEC/EN61558
- High I/O isolation test voltage up to 4000VAC
- Built-in active PFC function

RS PRO Embedded Switch Mode Power Supplies

RS Stock No.: 2580572 & 2580573 & 2580574



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

AC-DC switching power supply with built-in active PFC function. Provides high efficiency and high reliability solutions for industrial, street lighting and instrumentation applications. These converters offer excellent EMC performance, meeting CISPR32/EN55032 Class B and IEC/EN61000-4. Safety approval UL/EN/IEC62368, GB4943, meets EN60335,

Model	AC-DC Enclosed 150W
Mounting Type	Chassis Mount
MTBF	MIL-HDBK-217F@25°C > 300,000 h
Applications	Industrial control systems, instrumentation, and lighting

RS Stock#	Input Voltage	Output Voltage	Output Current	Adj' range (V)	Wattage	Efficiency (Typ)
2580572	85 to 305V ac 120 to 430V dc	12V DC	8.5A	11.4 – 13.8V	102W	85%
2580573	85 to 305V ac 120 to 430V dc	24V DC	4.2A	22.8 – 27.6V	100.8W	86%
2580574	85 to 305V ac 120 to 430V dc	48V DC	2.1A	45.6 – 55.2V	100.8W	87%

Input Specifications

Item	Operating Conditions	Min	Typ	Max.	Unit
Input Voltage Range	AC Input	85	-	305	VAC
	DC Input	120	-	430	VDC
Input Voltage Frequency		47	-	63	Hz
	85VAC	-	-	1.7	A
Input Current	115VAC	-	-	1.3	
	230VAC	-	-	0.7	
Inrush Current	115VAC	Cold Start	-	25	
	230VAC		-	45	-
Power Factor	115VAC	At full Load	0.97	0.98	-
	230VAC		0.92	0.93	-
Leakage Current	277VAC	<2mA			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions		Min	Typ	Max.	Unit
Output Voltage Accuracy	Full Load Range	12V	-	±2	-	%
		24V/48V	-	±1	-	
Line Regulation	Rated Load		-	±0.5	-	%
Load Regulation	0% - 100% load	12V/24V/48V	-	±0.5	-	
Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	12V	-	100	-	mV
		24V	-	150	-	
		48V	-	250	-	
Temperature Coefficient			-	±0.05	-	%/°C
Minimum Load			0	-	-	%
Hold-up Time	230VAC		16	-	-	ms
Stand-by Power Consumption	230VAC	12V/24V	-	-	2.0	W
		48V	-	-	2.5	
Short Circuit Protection	Recovery time <3s after the short circuit disappear		Constant current, continuous, self-recover			
Over-current Protection			105%-150% I _o , constant current mode, self-recover			
Over-voltage Protection	12V		≤ 16.8V (Output voltage hiccup)			
	24V		≤ 32.4V (Output voltage hiccup)			
	48V		≤ 60V (Output voltage hiccup)			
Over-temperature Protection*			Hiccup, self-recovery			
Remote Control	Open or 0~0.8VDC Power ON		0	-	0.8	VDC
	4-10VDC Power OFF		4	-	10	
Note : *The "Tip and barrel method" is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, please refer to Enclosed Switching Power Supply Application Notes for specific information. *Over-temperature Protection needs to be tested under rated full load conditions.						

EMC Specifications

Emissions	CE	CISPR32/EN55032 CLASS B	
	RE	CISPR32/EN55032 CLASS B	
	Harmonic Current	IEC/EN61000-3-2	
	Voltage Flicker	IEC/EN61000-3-3	
Immunity	ESD	IEC/EN 61000-4-2 Contact ±6KV /Air ±8KV	Perf. Criteria A
	RS	IEC/EN 61000-4-3 3V/m	Perf. Criteria B
	EFT	IEC/EN 61000-4-4 ±2KV	Perf. Criteria A
	Surge	IEC/EN 61000-4-5 line to line ±1KV/line to ground ± 2KV	Perf. Criteria A
	CS	IEC/EN61000-4-6 10 Vrms	Perf. Criteria A
	DIP (AC input)	IEC/EN61000-4-11 0%, 70%	Perf. Criteria B

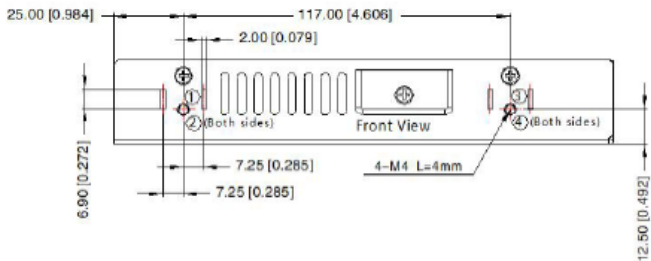
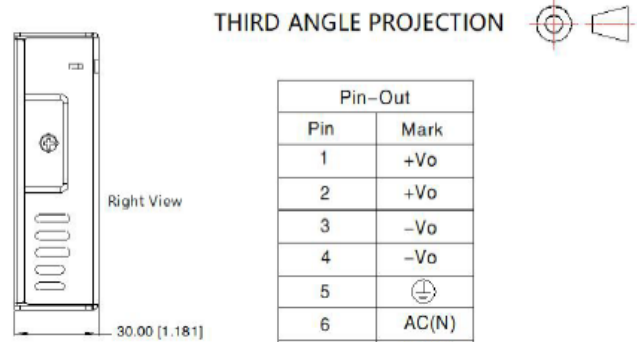
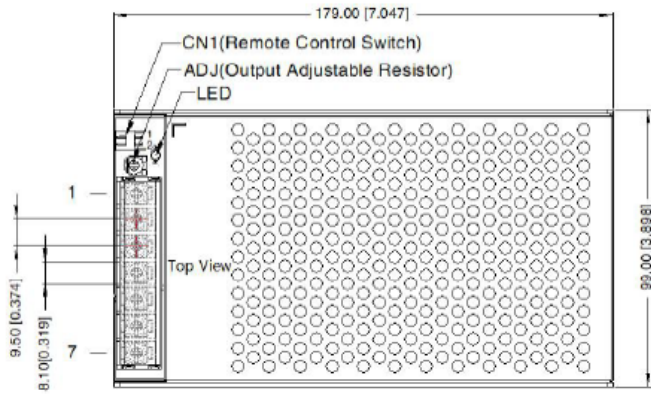
General Specifications

Item	Operating Conditions	Min	Typ	Max.	Unit	
Isolation	Input-Earth	Electric Strength Test for 1min, leakage current <10mA	2000	-	-	VAC
	Input-output	Electric Strength Test for 1min, leakage current <10mA	4000	-	-	
	Output-Earth	Electric Strength Test for 1min, leakage current <5mA	500	-	-	
Insulation Resistance	Input-Earth	500VDC, 25±5°C, Humidity < 95%RH, non- condensing 500VDC	100	-	-	MΩ
	Input-output		100	-	-	
	Output-Earth		100	-	-	
Operating Temperature		-30	-	+70	°C	
Storage Temperature		-40	-	+85		
Storage Humidity	Non-condensing	10	-	95	%RH	
Operating Humidity	Non-condensing	20	-	90		
Switching Frequency		-	65	-	kHz	
Power Derating	+50°C to +70°C	2	-	-	%/°C	
	85VAC-100VAC	1.33	-	-	%/VAC	
	2000m-5000m	6.66	-	-	%Km	
Safety Standard		IEC/EN/UL62368, IEC/EN60335, GB4943, IEC/EN61558				
Safety Certification		IEC/EN/UL62368, GB4943				
Safety Class		CLASS I				
MTBF	MIL-HDBK-217F@25°C	> 300,000 h				

Mechanical Specifications

Case Material	Metal (AL1100, SGCC)
Dimensions	179 x 99 x 30.0mm
Weight	460g (Typ.)
Cooling Method	Free air convection

Dimensions & Recommended Layout

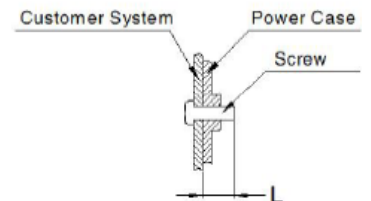
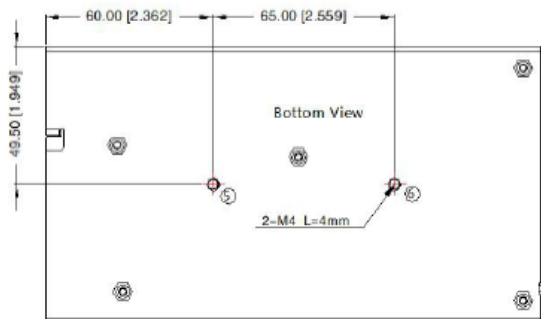


① - ⑥ any position must be connected to the earth (⊕)

CN1: KANGDAO TJC3-NAWD-2P or the same spec.

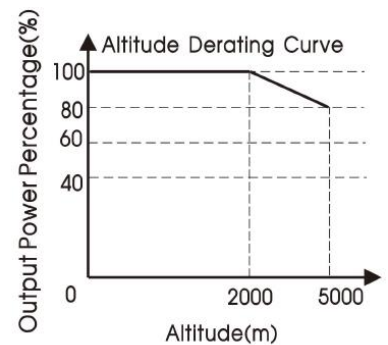
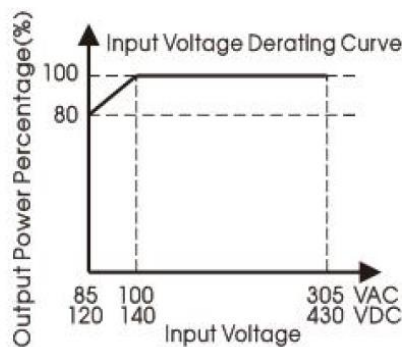
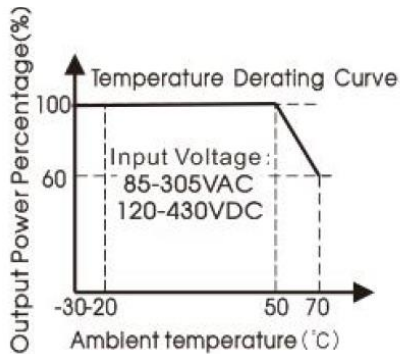
Pin	Function	Connector	Terminal
1	RC+	KANGDAO XH25001-2Y or the same spec.	KANGDAO XH2.54-TE or the same spec.
2	RC-		

Position	Screw Spec.	L(max)	Torque(max)
① - ⑥	M4	4mm	0.9N·m



Note:
 Unit: mm[inch]
 Wire range: 22-12AWG
 Connector tightening torque: M3.5, 0.8N·m
 General tolerances: ± 1.00 [± 0.039]

Product Curve



Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a=25^{\circ}\text{C}$, humidity.
2. All index testing methods in this datasheet are based on our company corporate standards.
3. To improve the efficiency at high input voltage, there will be audible noise generated, but it does not affect product performance and reliability.
4. Products are related to laws and regulations: see "Features" and "EMC".
5. The out case needs to be connected to PE of system when the terminal equipment in operating.
6. Our products shall be classified according to ISO14001 and related environmental laws and regulations and shall be handled by qualified units.
7. 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.