

60ACPO_S Series

60W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated



AC-DC Converter

60 Watt

- High efficiency up to 87%
- Universal AC input range (90~264VAC)
- Over power protection (OPP)
- Over voltage protection (OVP)
- Over load protection (OLP)
- ♠ Short circuit protection (SCP)
- ₩ide operating ambient temperature (-25°C~70°C)
- All using 105°C long life electrolytic capacitors
- 100% full load burn-in test

The 60ACPO_S series features standard rail mounting, energy efficiency and is highly cost-effective. The series offers stability and high noise immunity especially for industrial control equipment, machinery and other demanding environments for industrial equipment. This converter offers a compact and light weight design with and standard rail installation (35mm). Furthermore this series offers Easy Fuse Tripping due and a built-in DC OK relay contact. The converter can be installed on TS-35/7.5 or TS-35/15.







Common specifications	
Short circut protection:	Long-term mode, automatic recovery
Temperature rise at full load:	50°C MAX
Cooling:	Free air convection
Operation temperature range:	-25°C~+70°C
Storage temperature range:	-0°C ~+85°C
Storage humidity range:	< 95%
Temperature coefficient:	0.053%/°C MAX
MTBF (using MIL-HDBK-217F):	+25°C >200,000 hours MIL-217 Method 2 Components Stress Method
Safety standards:	UL60950-1 2nd Ed; IEC 60950-1:2005 (2nd Ed); EN60950-1:2006
Case material:	Heat-resistant Plastic (UL94-V0) and metal
Dimensions (L*W*H):	101.6×50.8×30mm
Weight:	200g

Isolation specification	ons				
Item	Test condition	Min	Тур	Max	Units
Withstand voltage	 Primary-secondary: 10mA 	3000			VAC
	• Secondary PG: 10mA	500			
Isolation resistance		100			ΜΩ

Protection specifications				
Over-load protection	105%~180% of rated output current	Protection type: Hiccup mode, auto recovery		
Over-voltage protection	105%~180% of rated output voltage	Protection type: Constant voltage, auto recovery		
Over-power protection	105%~180% of rated output power	Protection type: Hiccup mode, auto recovery		

Input specifications			
Input voltage range		90~264VAC	
Input frequency		47~63Hz	
AC current		<1.5A (max)	
Inrush current	Cold start	@120VAC <30A (typ)	@230VAC <60A (typ)
Leakage current	<0.25mA		

Output specification	ns				
Item	Test conditions	Min	Тур	Max	Units
Output voltage accuracy	Full load		±3		%
Voltage adjustment range	-5% ~ +10% of rated volt	age			
Line regulation	Vin= min. to max. at full load			±0.5	%
Load regulation	0% to 100% load			±2	%
Set-up time	@230VAC input, full load			1	S
Hold-up time	@230VAC input, full load	20			ms
Overshoot and undershoot				5	%
Switching frequency			65		KHz

^{*} Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.

Example:

60ACPO_24S

60 = 60Watt

AC = AC-DC PO = series

24 = 24 Vout

S = single output

Note:

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.

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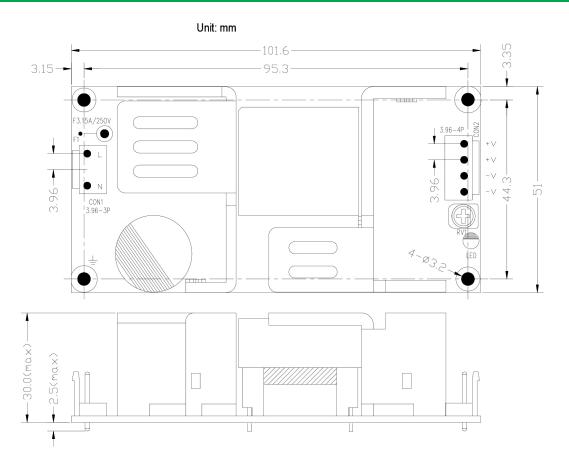
EMC specifications	
EMI / Conduction&Radiation	Compliance to EN55022, FCC PRAT15 Class B
Harmonic current	Compliance to EN61000-3-2,-3
EMS / Immunity	Compliance to EN61000-4-2, -3, -4, -5, -6, -8, -11; heavy industry level

The power supply is considered as a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

Approval	Model	Power [W]	Output [Vo, VDC]	Rated Current [A]	Ripple&No 0~70°C	oise* [mV, typ] -25~0°C	Efficiency [%, typ] 220VAC
UL	60ACPO_05S	60	5	8	50	200	81
UL	60ACPO_12S	60	12	4.5	120	200	84
UL	60ACPO_15S	60	15	3.6	150	360	84
UL	60ACPO_24S	60	24	2.5	240	360	86
UL	60ACPO_48S	60	48	1.25	240	480	87

Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.

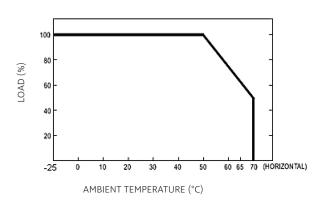
Mechanical dimensions

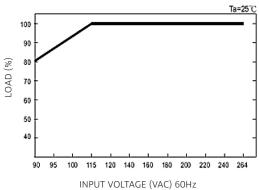


Item	Connectors	Mating housing	Contacts	
AC IN(CON1)	LANDWIN3961P0300T (Central Pin removed)	LANDWIN 3960S or JST VHR or	LANDWIN 3963T011R or JST SVH-21T-P1.1	
DC OUT(CON2)	LANDWIN 3961P0400T	Molex 51144	Or Molex 50539	

Typical characteristics

Derating Curves





Functional block diagram

Block diagram

