THIS SERIES IS NOT recommended for new design-ins and this series is discontinued

Recommended alternative: 35ACPE_4 series

Please click here for the datasheet.

35ACP_S series

35W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated

AC-DC Converter 35 Watt

- High efficiency up to 88%
- Universal AC input range (90~264VAC)
- Withstand 300VA surge input for 5 sec.
- Over voltage protection (OVP)
- Over load protection (OLP)
- Short circuit protection (SCP)
- Wide operating ambient temperature (-20°C~70°C)
- Operating altitude up to 5000M
- 100% full load burn-in test
- Easy assembling from top side
- PCB soldering side with conformal coating

The 35ACP_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.

SHORT CIRCUIT PROTECTED

c UL us

UL-60950-1 (E347551)

Common specifications	
Short circut protection:	Long-term mode, automatic recovery
Temperature rise at full load:	40°C MAX
Cooling:	Free air convection
Operation temperature range:	-25°C~+70°C
Storage temperature range:	-40°C ~+85°C
Storage humidity range:	< 95%
Temperature coefficient:	0.03%/°C MAX
MTBF (using MIL-HDBK-217F):	+25°C >200,000 hours
Power boost:	150% of rated current
Parallel function:	support
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):	101.6×63.5×33mm
Weight:	253g

Isolation specifications					
Item	Test condition	Min	Typ	Max	Units
Withstand voltage*	• Primary-Sec.: 10mA • Primary-PG: 10mA • Secondary-PG: 10mA	3000 1500 500			VAC
Isolation resistance		100			MΩ

* Input-Output, tested for 1 minute, 500VDC and leakage current less than 1mA

Protection specifications	
Over-load protection	105%~150% of rated output current, constant power, auto recovery
Over-voltage protection	105%~150% of rated output voltage, constant voltage

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

Input specifications		
Input voltage range		90~264VAC, 127~370VDC
Input frequency		47~63Hz
AC current	230VAC	1A (max)
Inrush current	Cold start, 230VAC	50A (typ)
Leakage current	Input—output: <0.25mA Input—PG: <3.5mA	

Output specifications					
Item	Test conditions	Min	Typ	Max	Units
Output voltage accuracy	Full load			±3	%
Voltage adjustment range		±5		±10	%
Line regulation	Vin= min. to max. at full load			±0.5	%
Load regulation	0% to 100% load			±1	%
Set-up time	@230VAC input, full load			1	s
Hold-up time (full load)	• @230VAC input • @120VAC input			20 10	ms ms
Overshoot and undershoot				5	%
Switching frequency			100		KHz

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

Example:
35ACP_24S

35 = 35Watt
AC = AC-DC
P = series
24 = 24 Vout
S = single output

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EMC specifications	
EMC / Emission	Compliance to EN55022, EN55024, Class B
EMC / Harmonic current	Compliance to EN61000-3-2, -3
EMC / Immunity	Compliance to EN61000-4-2, -3, -4, -5, -6, -8, -11; EN55024, EN61000-6-2 heavy industry level

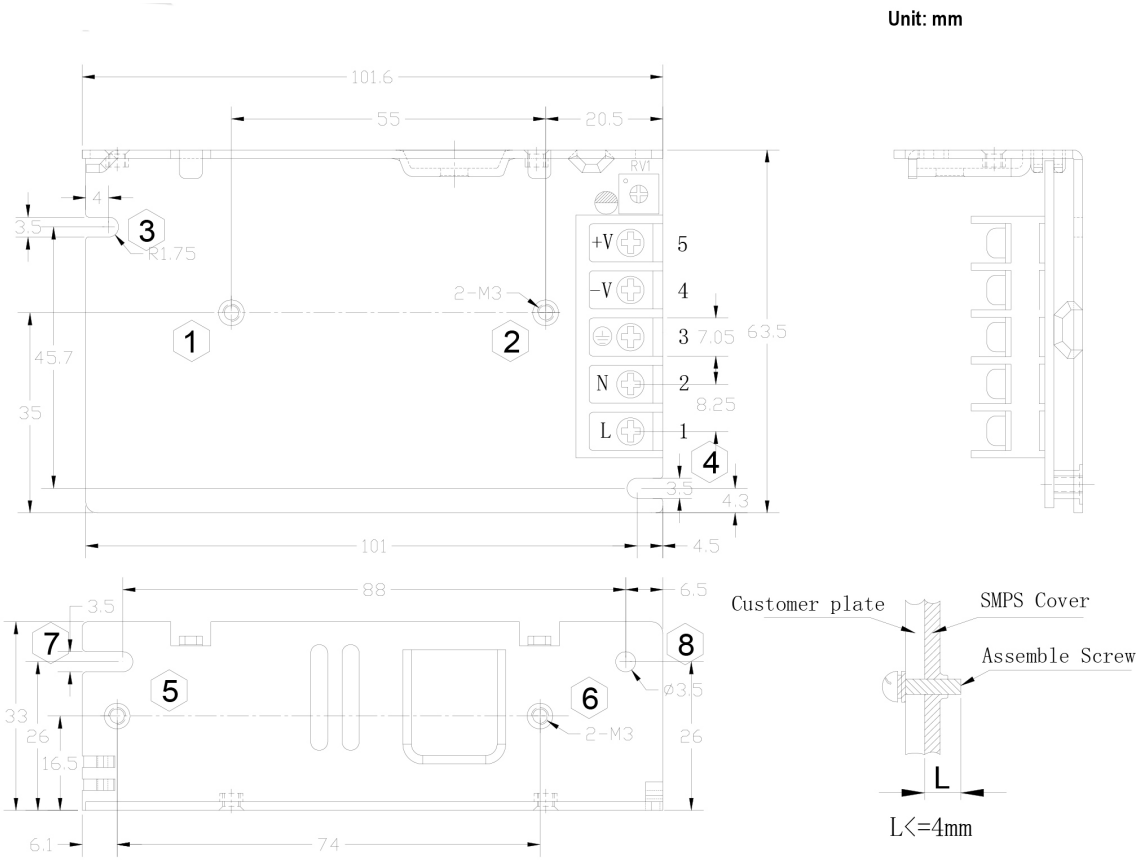
The SPS is considered as a component which will be installed into a final equipment.
The final equipment must be re-confirmed that it still meets EMC directives.

Approval	Model	Power [W]	Output [Vo, VDC]	Rated Current [A]	Current Range [A]	Ripple&Noise* [mV, typ] 0~70°C	Ripple&Noise* [mV, typ] -25~0°C	Efficiency [%, typ] 230VAC	Efficiency [%, typ] 115VAC
UL	35ACP_05S	35	5	6	0~6	50	80	80	79
UL	35ACP_12S	35	12	3	0~3	80	180	84	83
UL	35ACP_15S	35	15	2.4	0~2.4	120	200	86	85
UL	35ACP_24S	35	24	1.5	0~1.5	120	200	87	86
UL	35ACP_48S	35	48	0.76	0~0.76	180	240	88	87

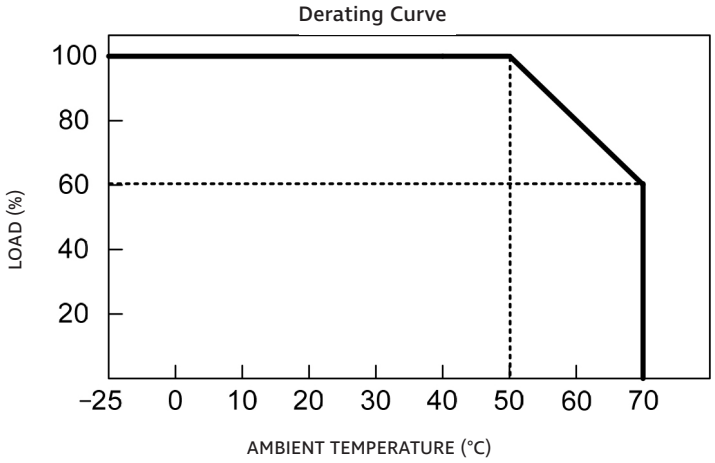
Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.

Mechanical dimensions

Unit: mm



Typical characteristics



Functional block diagram

Functional diagram