



25ACP_S Series

25W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated

AC-DC Converter

25 Watt

- ⊕ High efficiency up to 84%
- ⊕ Universal AC input range (88~264VAC)
- ⊕ 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)
- ⊕ 100% full load burn-in test
- ⊕ Easy assembling from top side
- ⊕ PCB soldering side with conformal coating

The 25ACP_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 circuit protection:	Long-term mode, automatic recovery
Temperature rise at full load:	40°C MAX
Cooling:	Free air convection
Operation temperature range:	-20°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 2 nd Ed; IEC 60950-1:2005(2 nd Ed); EN60950-1:2006
Case material:	Heat-resistant Plastic (UL94-V0) and metal
Dimensions (L*W*H):	79×51×28.8mm
Weight:	217g

Isolation specifications					
Item	Test condition	Min	Typ	Max	Units
Withstand voltage*	• Primary-Sec.: 10mA	3000			VAC
	• Primary-PG: 10mA	1500			
	• Secondary-PG: 10mA	500			
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-power protection	105%~150% of rated output power, constant power, auto recovery

Input specifications			
Input voltage range	88~264VAC		
Input frequency	47~63Hz		
AC current	230VAC	0.7A (max)	
Inrush current	Cold start, 230VAC	• 115VAC 20A (typ)	• 230VAC 40A (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			±2	%	
Voltage adjustment range	• 3.3V	3.1		3.5	V	
	• 5V	4.75		5.25	V	
	• 12V	11.4		12.6	V	
	• 24V	14.25		15.75	V	
	• 48V	22.8		25.2	V	
Line regulation	Vin= min. to max. at full load			±1	%	
Load regulation	0% to 100% load			±2	%	
Set-up time (full load)	• @230VAC input • @115VAC input			2	s	
				1	s	
Hold-up time (full load)	• @230VAC input • @115VAC input			20	ms	
				10	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: 25ACP_24S

25 = 25Watt
AC = AC-DC
P = series
24 = 24 Vout
S = single output

Note:

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

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EMC specifications

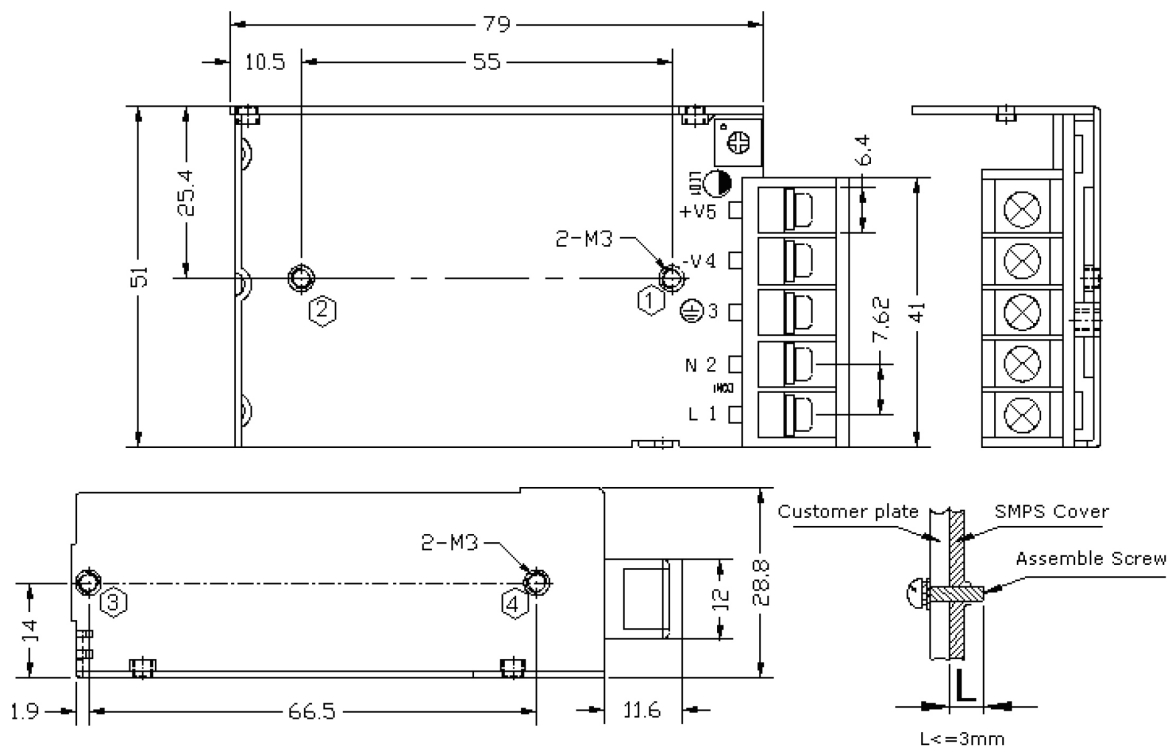
EMC / Emission	Compliance to EN55022 CALSS B FCC PART15 B
EMC / Immunity	Compliance to EN61000-4-2, 4, 5, 8, 11; EN55024, EN61000-6-2 heavy industry level

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]	Efficiency [%, typ]	
							115VAC	230VAC
UL	25ACP_03S	25	3.3	6	0~6	50	70	71
UL	25ACP_05S	25	5	5	0~5	80	75	77
UL	25ACP_12S	25	12	2.1	0~2.1	120	80	82
UL	25ACP_15S	25	15	1.7	0~1.7	150	81	83
UL	25ACP_24S	25	24	1.1	0~1.1	240	83	84

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

Mechanical dimensions

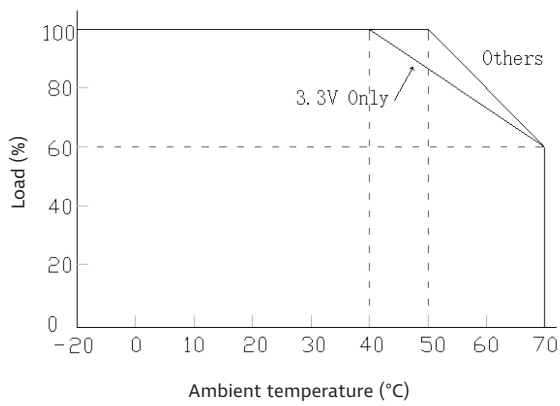


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Typical characteristics

Derating Curve



Functional block diagram

