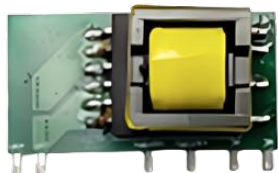


ACSW05W-xxV



FEATURES

- Input voltage range: 90 - 528VAC (100~745VDC)
- Working temperature range: -40°C to +85°C
- Complete protection functions
- Industrial grade product technical design
- 3 years warranty

DESCRIPTION

The ACSW05-xxV series is an efficient modular power supply for miniaturized bare boards, with advantages such as dual use of AC and DC, wide input voltage range, high reliability, low power consumption, and safe isolation. Widely applicable to industrial control, power instruments, smart homes, and other occasions that require strict volume requirements and low EMC requirements. If it is necessary to apply in harsh electromagnetic compatibility environments, EMC peripheral circuits must be added.

MODEL NUMBERING

ACSW05W-xxV

Series Name

Wide Input

Output Voltage

Output Power

SELECTION GUIDE

Product Model	Output Power (W)	Output Voltage (Vo)(V)	Output current (Io)(mA)	Efficiency (230VAC, %/Typ.)	Max.Capacitive Load (μF)
ACSW05W-03V	3.3	3.3	1000	70	2200
ACSW05W-05V	05	5	1000	72	1500
ACSW05W-09V	05	9	560	72	680
ACSW05W-12V	05	12	420	78	470
ACSW05W-15V	05	15	340	78	330
ACSW05W-24V	05	24	210	78	100

INPUT

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage	AC Input	90	--	528	VAC
	DC Input	100	--	745	VDC
Input voltage frequency	AC Input	47	--	63	Hz
Input Current	115VAC	--	--	0.2	A
	230VAC	--	--	0.1	A
Impulse current	115VAC	--	10	--	A
	230VAC	--	17	--	A
	480VDC	--	28	--	A
Input fuse	External suggested				

Remarks: This product does not support hot plug

OUTPUT

Parameter	Conditions	Min.	Typ.	Max.	Units
Output voltage accuracy	10% -100% load	--	±3	±6	%
Linear regulation rate	Rated load	--	±1.5	- -	%
Load regulation rate	10% to 100% load	--	±3	- -	%
Minimum load		10	- -	- -	%
Standby power	At room temperature, 230VAC input	--	0.1	0.15	W
Ripple & Noise	20MHz bandwidth (peak to peak)	--	100	180	mV
Temperature drift coefficient	230VAC, 0 - 50°C,100% load	--	±0.2	--	%/°C
Overvoltage protection	3.3V / 5V	≤7.5V	Hiccup mode, self recovery, Or output voltage clamp		
	9V	≤15V			
	12V / 15V	≤20V			
	24V	≤30V			
Short circuit protection	Hiccup type, capable of long-term short circuit and self recovery				
Overcurrent protection	110% -220% Io, Self recovering				
Over Temperature Protection	Hiccup mode, self recovery				

Note: The testing method for ripple and noise is parallel line testing, and a 100uF electrolytic capacitor and a 0.1uF ceramic capacitor need to be connected in parallel at the output end

GENERAL CHARACTERISTICS

Parameter	Conditions		Min.	Typ.	Max.	Units
Isolation voltage	Input-Output,	Test time 1 minute, Leakage current less than 5mA	4000	--	--	VAC
Insulation resistance	Input-Output,	Environmental temperature: 25 ± 5 °C, Relative humidity: less than 95% RH, uncondensed, Test voltage: 500VDC.	100	--	--	MΩ
Working temperature			-40	--	+85	°C
Storage temperature			-40	--	+105	°C
Working humidity			20	--	85	%RH
Storage humidity			10	--	95	%RH
Switching frequency			--	65	--	KHz
Output power derating	Operating temperature derating	-20°C to -10°C	2.75	--	--	%/°C
		+50°C to +70°C	1.67	--	--	%/°C
	Input voltage derating	85VAC-100VAC	1.33	--	--	%/VAC
		277VAC-305VAC	0.71	--	--	%/VAC
	Altitude derating	2000m-5000m	0.67	--	--	%/Km
Leakage current	230VAC/50Hz		<0.1mA,RMS Max			
Mean Time Between Failures 【MTBF】	MIL-HDBK-217F@25°C		500	--	--	kHours
Safety standards	Compliant with GB4943.1, BS EN/EN62368-1, EN60335-1, EN61558-1, IEC62368-1, EN62477-1; Security Class I.					

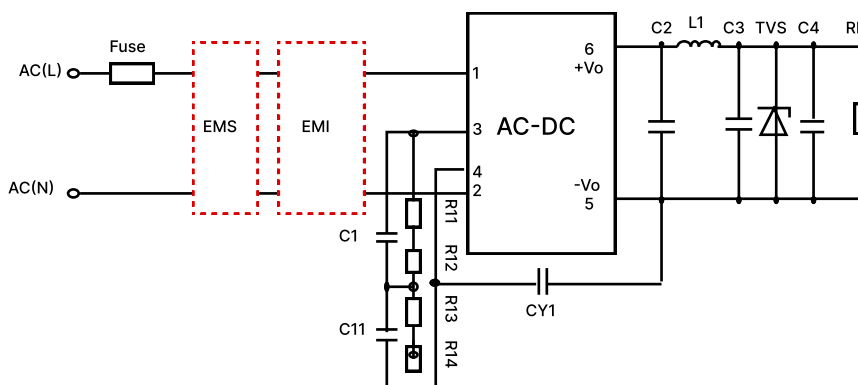
PHYSICAL CHARACTERISTICS

Parameter	Contents
Housing material	None (bare board)
Overall dimensions	33.50 × 17.20 × 13.00 mm (L*W*H)
Weight	6.2g (Typ.)
Cooling mode	Natural air cooling

SAFETY & EMC

Parameter	Category	Content		
EMI	Conductive disturbance	CISPR32 EN55032	150kHz—30MHz, CLASS A	
		CISPR32 EN55032	150kHz—30MHz, CLASS B	
	Radiation disturbance	CISPR32 EN55032	30MHz—1GHz, CLASS A	
		CISPR32 EN55032	30MHz—1GHz, CLASS B*	
EMS	Electrostatic discharge	IEC/EN61000-4-2	2 Contact1±6KV/Air ±8KV	Perf. Criteria A
	Radiated immunity	IEC/EN61000-4-3	80MHz – 1GHz 10V/m	Perf. Criteria A
	EFT	IEC/EN61000-4-4	±4KV, (5 or 100)kHz	Perf. Criteria A
	Surge immunity	EC/EN61000-4-5	line to line ±2KV/line to PE ±4KV	Perf. Criteria A
		IEC/EN61000-4-5	line to line ±4KV/line to PE ±6KV	Perf. Criteria A
	Conducted disturbance immunity	IEC/EN61000-4-6	0.15MHz-80MHz 10Vr.m.s	Perf. Criteria A
	Voltage dip	IEC/EN61000-4-11	0%, 70%	Perf. Criteria A
	Voltage Interruption	IEC/EN61000-4-11	0% of 230Vac, 0Vac, 5000ms	Perf. Criteria B

TYPICAL APPLICATION CIRCUIT

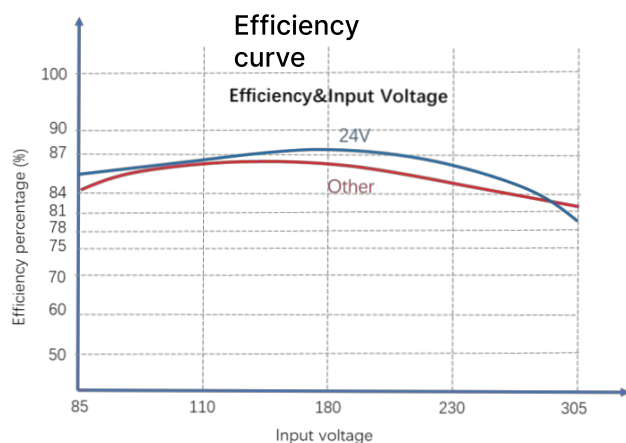
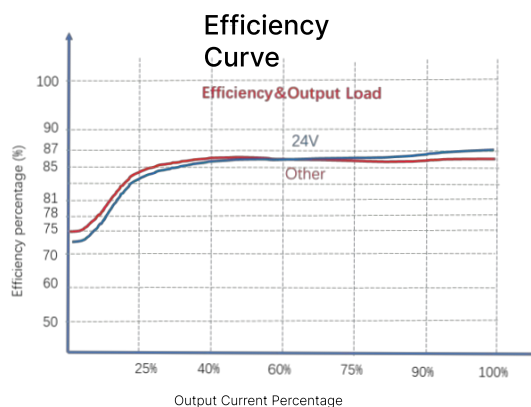
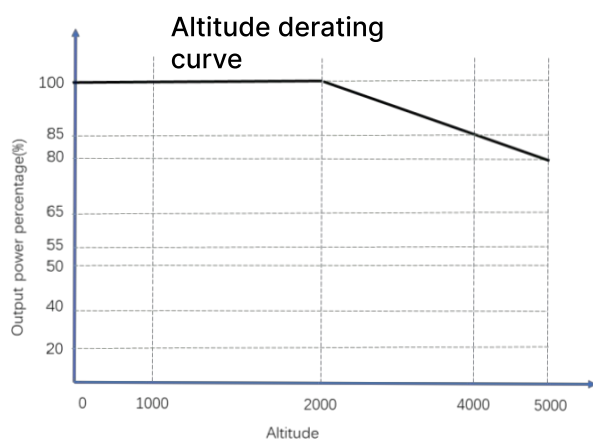
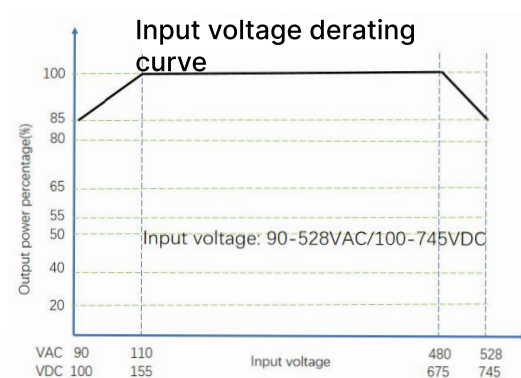
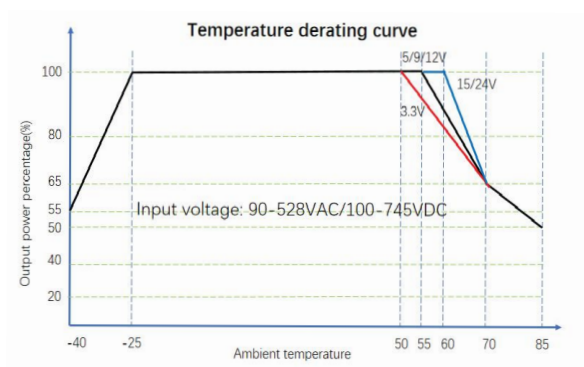


Component	Value
FUSE	1A/300V, Slow break
MOV	10D561K
R	Insurance resistor, 10Ω/1W
LDM1	2.2uH/ 15mΩMax/6.5A
NF	The common mode inductance NF inside the dashed box is not required, and the common mode inductance L=30mH. When higher EMC requirements need to be met, this inductance needs to be added
R11/R12/ R13/R14	1MΩ / 1206 (1/4W)

(C1/C11)(Must)		
Input Voltage	-25°C To +85°C	-40°C To +85°C
90VAC-528VAC	33uF/400V	47uF/400V
165VAC-528VAC	22uF/400V	33uF/400V
90VAC-305VAC	C1: 10uF/450V C11: Wire	C1: 22uF/450V C11: Wire

Part No	C2 (Must)	L1 (Must)	C3 (Must)	C4	CY1 (Must)	TVS
ACSW05W-03V	470uF/16V	2.2uH/15mΩ Max/6.5A	150uF/35V	0.1uF/50V	1.0nF/400VAC	SMBJ7.0A
ACSW05W-05V						
ACSW05W-09V	270uF/16V		100uF/35V			SMBJ12A
ACSW05W-12V			47uF/35V			SMBJ20A
ACSW05W-15V	220uF/35V					
ACSW05W-24V	150uF/35V					SMBJ30A

PRODUCT CHARACTERISTIC



OVERALL DIMENSIONS AND PIN FUNCTIONS

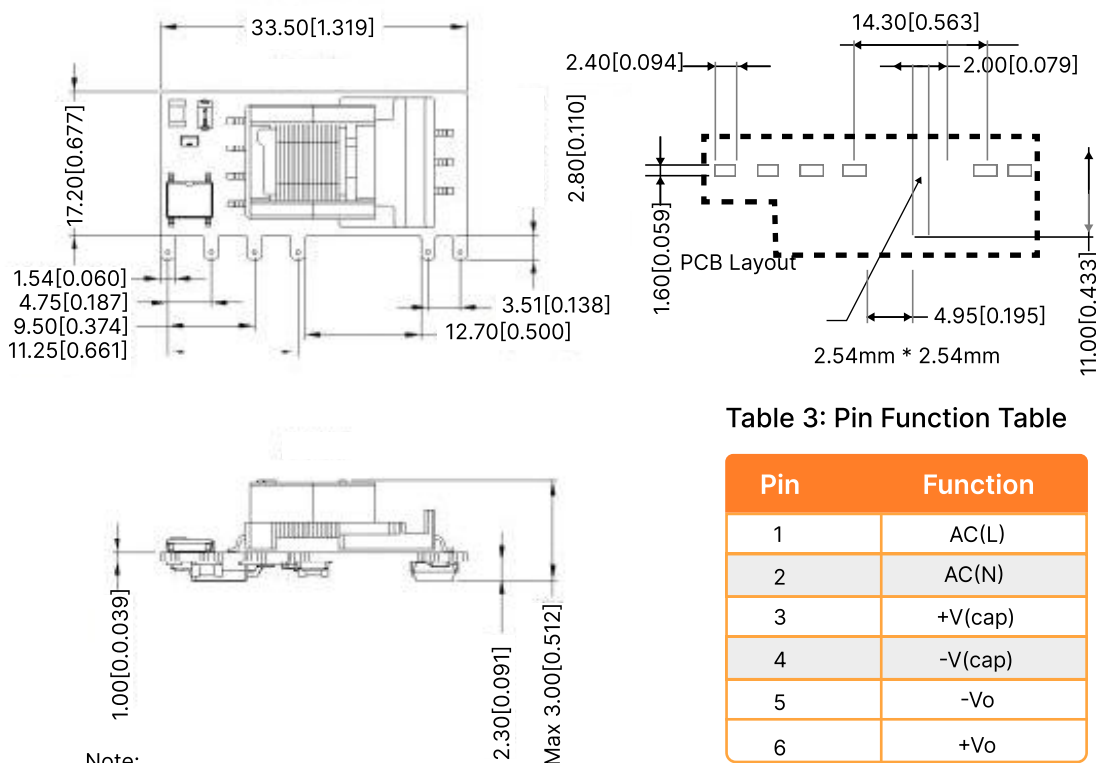
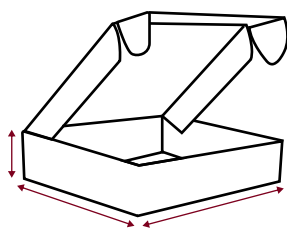


Table 3: Pin Function Table

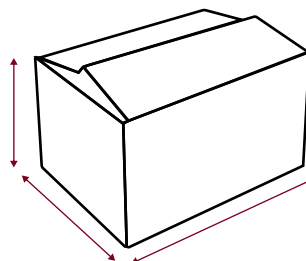
Pin	Function
1	AC(L)
2	AC(N)
3	+V(cap)
4	-V(cap)
5	-Vo
6	+Vo

Note:
 Dimensions in mm
 Terminal diameter tolerance: ± 0.10 [± 0.004]
 Undeclared tolerance: ± 1.00 [0.039]

PACKAGING METHOD



150 Pieces/Inner box



750 Pieces/Outer box

NOTES & INSTRUCTIONS

1. The input voltage shall not exceed the specified range value, otherwise permanent and unrecoverable damage may be caused
2. Unless otherwise specified, the parameters in this manual are measured at 25°C, 40%~75% humidity, input nominal voltage and output pure resistance mode under full load
3. All index test methods are based on the company's enterprise standards.
4. The copyright and the final interpretation right of the product belong to HENXV.