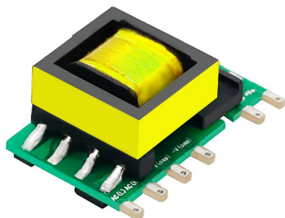


ACS15W-xxV



FEATURES

- Input voltage range: 85~305VAC (100~430VDC)
- Working temperature range: -40 °C to +85 °C
- Complete protection functions
- Industrial grade product technical design



DESCRIPTION

The ACS15W-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

ACS15W-xxV

Series Name

Rated Wattage Output Voltage

SELECTION GUIDE

Product Model	Output Voltage (Vo)	Output Current (Io)	Output Power (W)	Efficiency (230VAC, %/Typ.)	Max.Capacitive Load(μF)
ACS15W-03V	3.3	3000	9.9	77	20000
ACS15W-05V	5	2800	15	78	15000
ACS15W-09V	9	1670	15	82	5000
ACS15W-12V	12	1250	15	82	4000
ACS15W-15V	15	1000	15	84	2000
ACS15W-24V	24	625	15	85	1000

AC - DC CONVERTERS
15 WATTS
INPUT

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage	AC Input	85	--	305	VAC
	DC Input	100	--	430	VDC
Input voltage frequency	AC Input	47	--	63	Hz
Input Current	115VAC	--	--	0.4	A
	230VAC	--	--	0.25	A
Inrush current	115VAC	--	18	--	A
	230VAC	--	35	--	A
Leakage Current	277VAC/50Hz	0.25mA RMS Max			
Input fuse	Built in fuse (300V, 1A)				

Remarks: This product does not support hot plug

OUTPUT

Parameter	Conditions	Min.	Typ.	Max.	Units
Output voltage accuracy	10% -100% load	--	±2	±3	%
Linear regulation rate	Rated load	--	±0.5	--	%
Load regulation rate	10% to 100% load	±1	±1.5	±2	%
Minimum load		0	- -	- -	%
Standby power	At room temperature, 230VAC input	--	0.1	0.25	W
Ripple & Noise	20MHz bandwidth (peak to peak)	--	80	150	W
Temperature drift coefficient	230VAC, 0 - 50°C,100% load	--		--	%/°C
Overvoltage protection	3.3V	Hiccup mode, self recovery, or output voltage clamp			
	5V				
	9V				
	12V / 15V				
	24V				
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	3600	--	--	VAC
			5000	--	--	VDC
Insulation resistance	Input-Output,	Environmental temperature: 25 ± 5 °C, Relative humidity: less than 95% RH, uncondensed, Test voltage: 500VDC.	50	--	--	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	-40°C to -25°C	4	65	--	%/°C
		+55°C to +70°C	3.34	--	--	%/°C
	Operating temperature derating	85VAC-100VAC	1.67	--	--	%/VAC
		277VAC-305VAC	0.72	--	--	%/VAC
Standard for Safety	Altitude derating	2000m-5000m				
Mean Time Between Failures 【MTBF】	MIL-HDBK-217F@25°C		300	--	--	kHours
Safety standards	Compliant with GB4943.1, BS EN/EN62368-1, EN60335-1, EN61558-1, IEC62368-1, EN62477-1; Security Class I.					

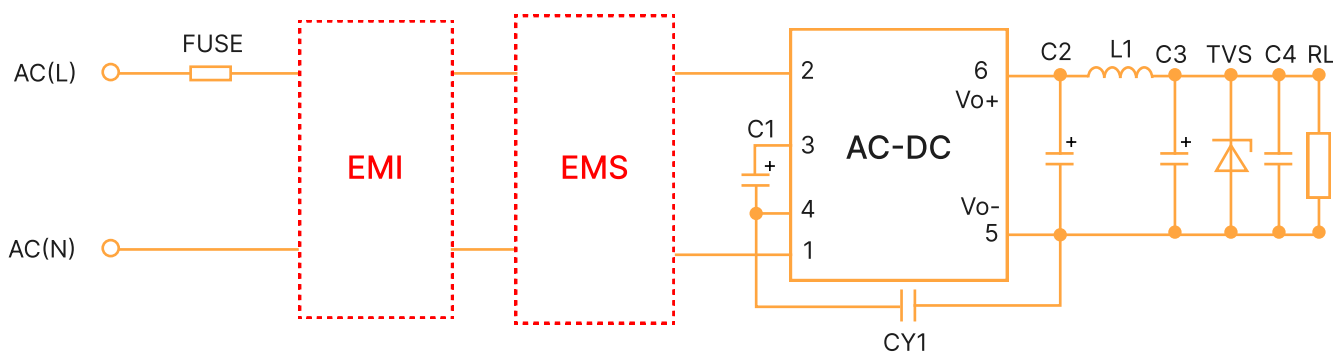
PHYSICAL CHARACTERISTICS

Parameter	Contents
Housing material	None (bare board)
Overall dimensions	40.50 × 26.00 × 15.00 mm(L*W*H)
Weight	12g (Typ.)
Cooling mode	Natural air cooling

SAFETY & EMC

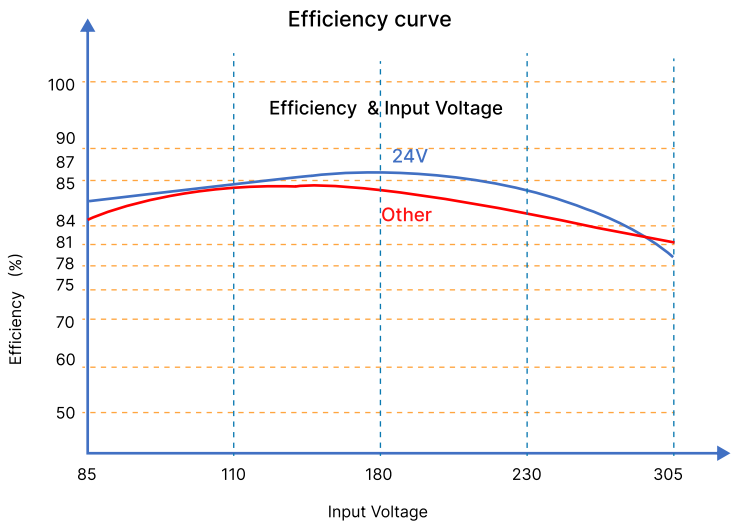
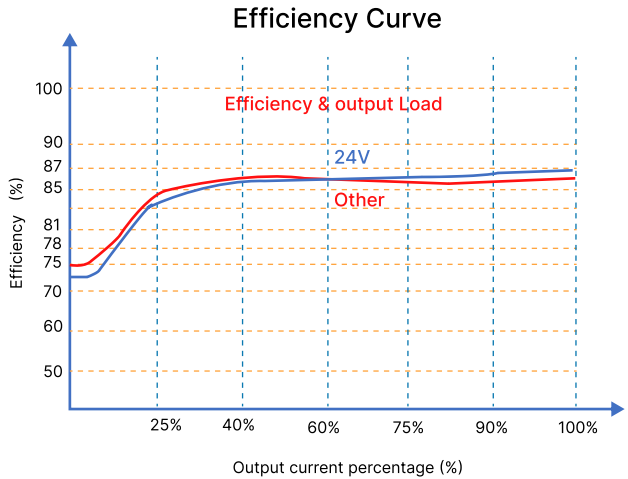
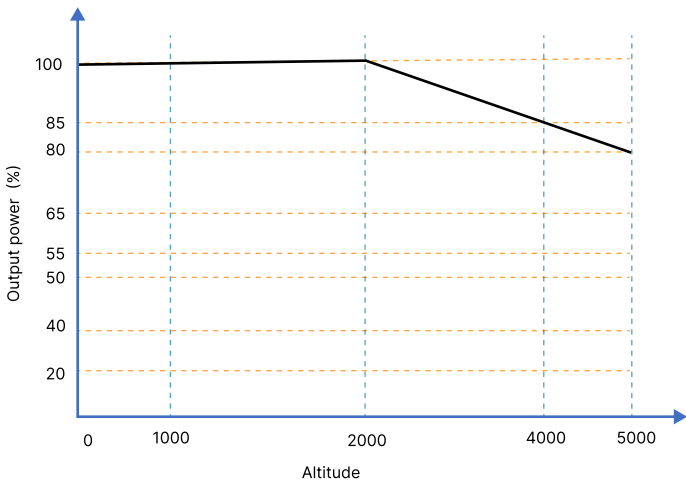
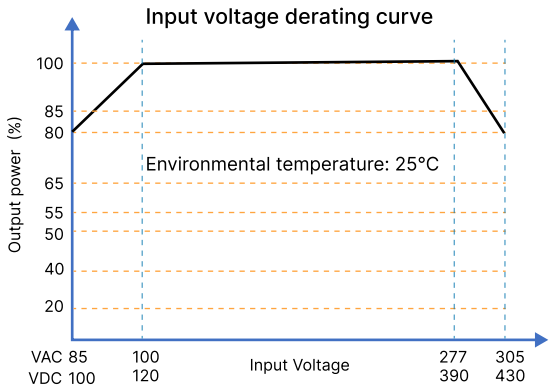
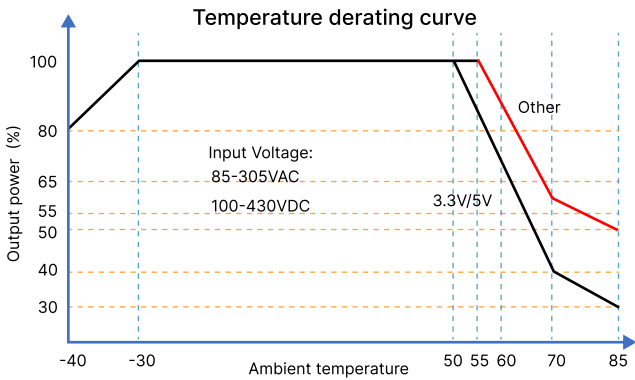
Parameter	Category	Content		
EMI	Conductive disturbance	CISPR32 EN55032	150kHz—30MHz, CLASS A	
		CISPR32 EN55032	150kHz—30MHz, CLASS B	
	Radiation disturbance	CISPR32 EN55032	30MHz—1GHz, CLASS A	
		CISPR32 EN55032	30MHz—1GHz, CLASS B*	
EMS	Electrostatic discharge	IEC/EN61000-4-2	Contact $\pm 6\text{KV}$ /Air $\pm 8\text{KV}$	Perf. Criteria A
	Radiated immunity	IEC/EN61000-4-3	80MHz – 1GHz 10V/m	Perf. Criteria A
	EFT	IEC/EN61000-4-4	$\pm 4\text{KV}$, (5 or 100)kHz	Perf. Criteria A
	Surge immunity	EC/EN61000-4-5	line to line $\pm 2\text{KV}$ /line to PE $\pm 4\text{KV}$	Perf. Criteria A
		IEC/EN61000-4-5	line to line $\pm 4\text{KV}$ /line to PE $\pm 6\text{KV}$	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

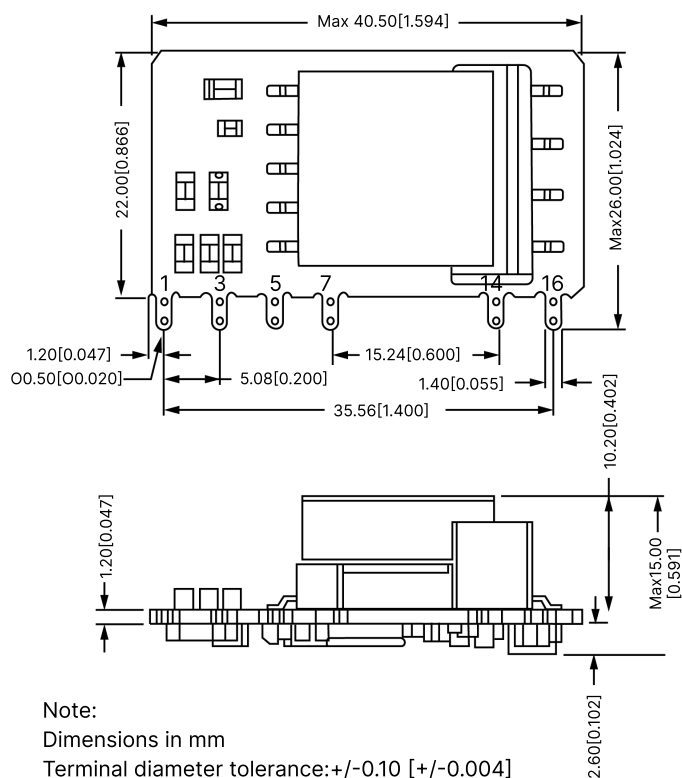


Product Model	Fuse (Must)	C1 (Must)	C2 (Must)	L1 (Must)	C3 (Must)	C4	CY1 (Must)	TVS
ACS15W-03V	1A, 300V	47uF/450V	1500uF/6.3V	2.2uH (Max: 8mΩ)	470uF/16V	0.1uF/50V	2.2nF/400VAC	SMBJ7.0A
ACS15W-05V			1000uF/16V		330uF/16V			SMBJ7.0A
ACS15W-09V			680μF/16V		220uF/35V			SMBJ12A
ACS15W-12V			680μF/16V		220uF/35V			SMBJ20A
ACS15W-15V			1000μF/25V		220uF/35V			SMBJ20A
ACS15W-24V			470uF/35V		220uF/35V			SMBJ30A

PRODUCT CHARACTERISTIC CURVE



OVERALL DIMENSIONS AND PIN FUNCTIONS



Note:
 Dimensions in mm
 Terminal diameter tolerance: ± 0.10 [± 0.004]
 Undeclared tolerance: ± 0.50 [± 0.020]

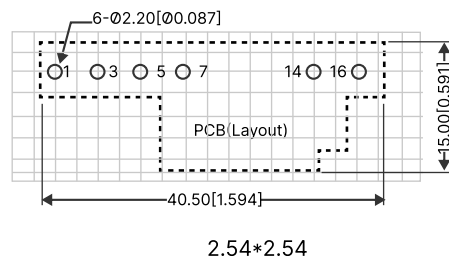
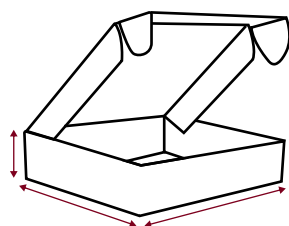


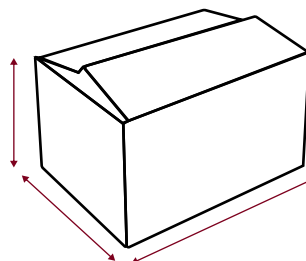
Table 3: Pin Function Table

Pin	Function
1	AC(N)
3	AC(L)
5	+V(cap)
7	-V(cap)
14	-Vo
16	+Vo

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 HENXY.