

ACEW10W-xxV SERIES



FEATURES

- Wide input range (90-528VAC, 100-745VDC)
- 55*45*21mm compact size
- No load power consumption<0.5W
- Protection type: short circuit/over load/over voltage
- Operating temperature range: -40°C to +85°C
- 3000V isolation voltage
- 100% high temperature burn-in and function test
- 3 years warranty

MODEL NUMBERING

ACEW10W-xxV



SELECTION GUIDE

Product Model	Input Voltage	Rated Power (W)	Output Voltage (V)	Output Current (A)
ACEW10W-03	90-528VAC 100-745VDC	6.6	3.3	2
ACEW10W-05		10	5	2
ACEW10W-09		10	9	1.11
ACEW10W-12		10	12	0.83
ACEW10W-15		10	15	0.66
ACEW10W-24		10	24	0.42

INPUT CHARACTERISTICS

Parameter	Units	Models
Voltage Range	90-528VAC 100-745VDC	
Frequency Range	47-63Hz	
Current (Typ.)	120mA/380VAC 300mA/165VAC	
Inrush Current (Typ.)	Cold boot 40A/380VAC	
External Fuse Recommended	2A/500V	
Leakage Current (Typ.)	<1mA/380VAC/50Hz	
AVERAGE EFFICIENCY (Typ.)	74%	ACEW10W-03
	75%	ACEW10W-05
	76%	ACEW10W-09
	78%	ACEW10W-12
	80%	ACEW10W-15
	82%	ACEW10W-24

OUTPUT CHARACTERISTICS

Parameter	Units
Voltage Tolerance	±2.0%
Line Regulation Rate	±1.0%
Load Regulation Rate	±1.0%
Setup, Rise Time (Typ.)	2000ms, 50ms/380VAC at full
Hold Up Time (Typ.)	20ms/380VAC at full load
Ripple & Noise (Max.)	100mV

GENERAL CHARACTERISTICS

Parameter	Units					
Over Load	≥110% load, recovers automatically after fault condition is removed					
Over Voltage	Output voltage off or clamp					
	Voltage	3.3/5VDC	9VDC	12VDC	15VDC	24VDC
	Range	≤7.5V	≤15V	≤16V	≤20V	≤30V
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed					
Working Temperature	-40°C to +85°C (Refer to "Derating curve")					
Working Humidity	85%RH max					
Storage Temperature, Humidity	-40°C to +85°C, 10-95%RH					
Temperature Drift Coefficient	0.03%/ (0-50°C)					
Vibration	10-500Hz, 2G, 10min./1cycle, 60min.each along X, Y, Z axes					
MTBF	300K hrs min. MIL-HDBK-217F (25°C)					

EMC CHARACTERISTICS

Parameter	Units	
Safety Standards	EN62368	
Isolation Voltage	I/P-O/P: 3000VAC I/P-FG: 1500VAC O/P-FG: 500VAC	
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: >100M Ohms/500VDC 25°C 70%RH	
EMC Emission & Immunity	EN55011, EN55032 (CISPR32) CLASS B	(Refer to "Typical Application")
ESD	IEC/EN 61000-4-2 level 4 Contact ±8kV/Air ±15kV	(Refer to "Typical Application")
RF	IEC/EN 61000-4-3	(Refer to "Typical Application")
EFT	IEC/EN 61000-4-4 level 4 ±4kV	(Refer to "Typical Application")
Surge	IEC/EN 61000-4-5 level 4 ±2kV	

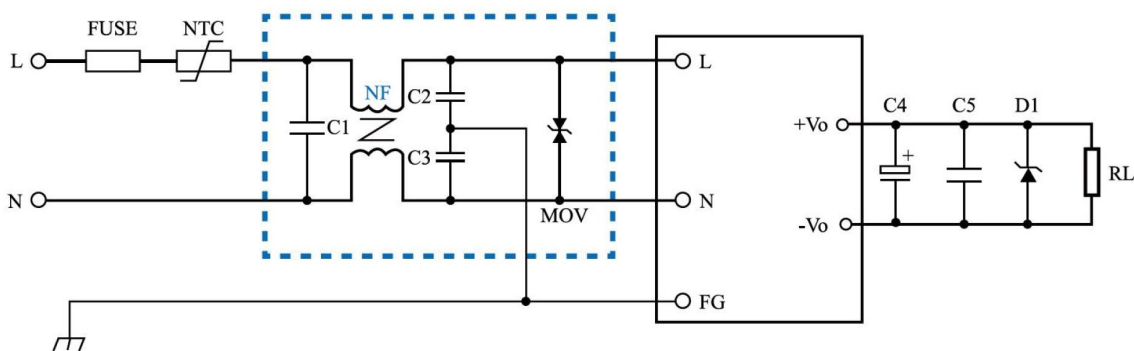
PHYSICAL CHARACTERISTICS

Parameter	Units
Dimension	55 × 45 × 21mm
Weight	70g/PCS 8.067kg/Carton
Package	112PCS/Carton
Carton Size	360 × 300 × 250mm

NOTE

1. All parameters not specially mentioned are measured at nominal input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF& 47uF parallel capacitor and connected according to "typical application". Element parameters shall be the same as those measured in the suggestion form.
3. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives.
4. This series of overvoltage protection protects the subsequent circuit in case of module abnormality through the peripheral TVS tube.

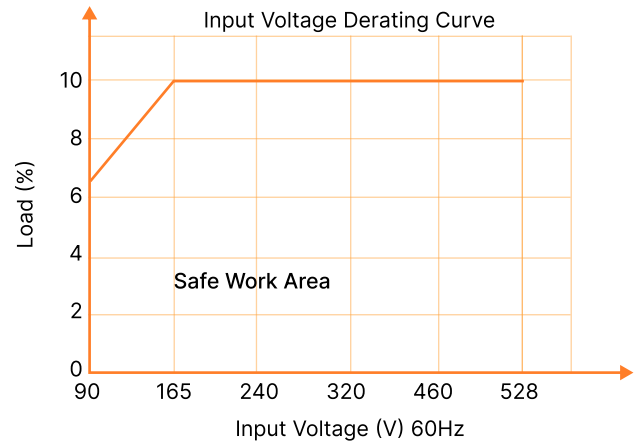
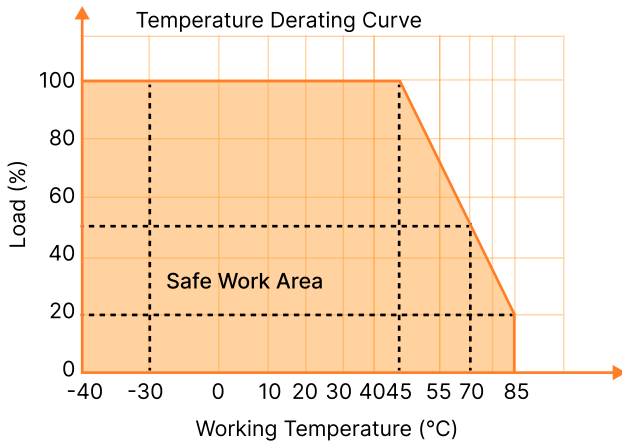
CIRCUIT DESIGN AND APPLICATION



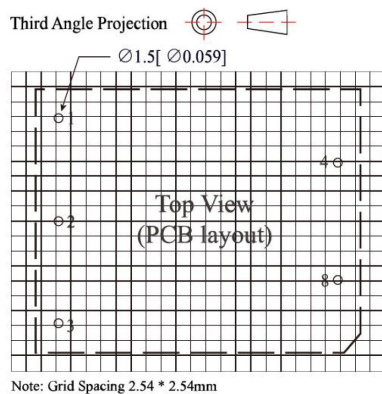
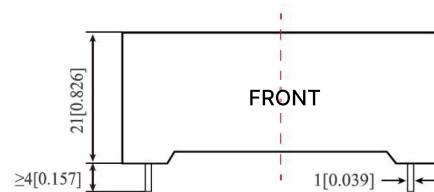
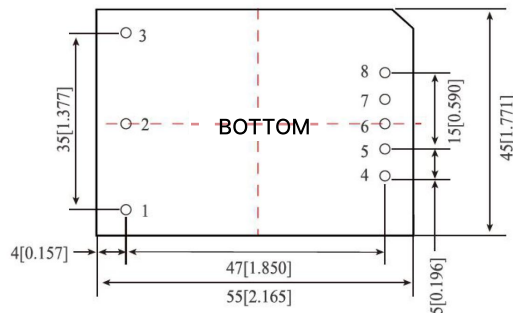
Product Model	FUSE	NTC	NF	MOV	C1	C2/C3	C5	C4	D1
ACEW10W-03	2A/500V	Thermistor 10D-9	Common mode inductance 3-10mH 0.2-0.5A	Varistors 14D821K	104K/600V	102K/600V	104K/50V	470uF/16V	P6KE7.5A
ACEW10W-05								470uF/16V	P6KE7.5A
ACEW10W-09								150uF/16V	P6KE15A
ACEW10W-12								120uF/16V	P6KE16A
ACEW10W-15								120uF/25V	P6KE20A
ACEW10W-24								100uF/35V	P6KE30A

1. The output filter capacitor C4 is electrolytic capacitor. It is recommended to use high-frequency low-resistance electrolytic capacitor. Refer to the technical specifications provided by the manufacturers for capacity and current. The voltage drop of capacitor is more than 80%. C5 is to remove high frequency noise. D1 is the TVS tube recommended to be used for protecting the post-stage circuit (in case of module abnormality).
2. The dotted box in the figure shows the EMC filter connected to meet the higher EMC requirements. It can be omitted in general applications.

PRODUCT CHARACTERISTIC CURVE



DIMENSIONS AND INSTALLATION



Pin	Function
1	FG
2	AC(N)
3	AC(L)
4	-Vo
5	No Pin
6	No Pin
7	No Pin
8	+Vo

NOTE: Unit size: mm[inch] Terminal tolerance: $\pm 0.1\text{mm}$ Unmarked tolerances: $\pm 0.5\text{mm}$

NOTE

1. If the product works under the minimum required load, it cannot guarantee that the performance of the product complies with all the performance indicators in this manual;
2. The maximum capacitive load is tested under the input voltage range and full load condition;
3. Unless otherwise stated, all indexes in this manual are measured at $T_a=25^{\circ}\text{C}$, humidity $<75\%\text{RH}$, nominal input voltage and rated output load;
4. All index testing methods in this manual are based on the enterprise standards of the company;
5. Our company can provide product customization, specific needs can directly contact our technical staff;
6. RHENXV reserves the right to make changes to the product at any time without notice.