

ACE90W-xxVM



FEATURES

- Universal AC Input/ Full Range
- No load power consumption < 0.15W
- Wide operating temperature range -30~85°C
- High efficiency up to 91.5%
- Protections: Short circuit/Over load/Over voltage
- Isolation Class II
- 3 years warranty

ACE90W is a 90W miniature (87*52*30mm) AC-DC module-type power supply, ready to be soldered onto the PCB boards of various kinds of electronic instruments or industrial automation equipments. This product allows the universal input voltage range of 85~305VAC.

MODEL ENCODING

ACE90W-xxVM



SELECTION GUIDE

Product model	DC Voltage (Vdc)	Rated Current (mA)	Rated Power (W)	Max.Capacitive Load (uF)
ACE90W-12VM	12	6700	80.4	6800
ACE90W-15VM	15	5670	85.05	4500
ACE90W-24VM	24	3750	90	3000
ACE90W-48M	48	1880	90.2	470

INPUT

Parameter	Units	Model
VOLTAGE RANGE	85-305VAC/120-430VDC	
FREQUENCY RANGE	47-63Hz	
AVERAGE EFFICIENCY(TYP.)	89.5%	ACE90W-12VM
	90.5%	ACE90W-15VM
	91%	ACE90W-24VM
	91.5%	ACE90W-48VM
NO LOAD POWER CONSUMPTION	<0.15W	
AC CURRENT(TYP.)	2.0A/115VAC	
	1.1A/230VAC	
	0.9A/277VAC	
INRUSH CURRENT(TYP.)	COLD START 100A/800US AT 230VAC 50HZ	
	COLD START 40A/800US AT 115VAC 50HZ	
LEAKAGE CURRENT	<0.25MA/277VAC	

OUTPUT

Parameter	Units	Model
RIPPLE & NOISE(MAX.)	120mVp-p	ACE90W-12VM
	150mVp-p	ACE90W-15VM
	200mVp-p	ACE90W-24VM
	360mVp-p	ACE90W-48VM
VOLTAGE TOLERANCE	±2.0%	ALL SERIES

Parameter	Units	Model
LINE REGULATION	$\pm 0.5\%$	ALL SERIES
LOAD REGULATION	$\pm 1.0\%$	ACE90W-12VM
	$\pm 0.5\%$	ACE90W-15VM
	$\pm 0.5\%$	ACE90W-24VM
	$\pm 0.5\%$	ACE90W-48VM
SETUP,RISE,HOLD UP TIME	0.5S,50MS,50MS/230VAC(AT FULL LOAD)	
	0.5S,50MS,12MS/115VAC(AT FULL LOAD)	

PROTECTION

Parameter	Units
OVER LOAD	105~160%
	Hiccup mode, recovers automatically after fault condition is removed.
SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.
OVER VOLTAGE	12.6 ~ 16.5V
	15.75 ~ 24V
	25.2 ~ 34V
	50.4 ~ 65V
	Shut off o/p voltage, clamping by zener diode

ENVIRONMENT

Parameter	Units
WORKING TEMP.	-30 ~ +85°C (Refer to" Derating Curve".)
WORKING HUMIDITY	20 ~ 90% RH Non-condensing
STORAGE TEMP. HUMIDITY	-40 ~ +85°C,10 ~ 95%RH Non-condensing
TEMP. COEFFICIENT	±0.03%/(0 ~ 40°C)
VIBRATION	PCB Mounting: 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
	Terminal Blocks: 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes
SOLDERING TEMPERATURE	Wave soldering:265°C,5s(max.); Manual soldering:390°C,3s(max.)
OVER VOLTAGE CATEGORY	OVC II; According to EN62368-1; altitude up to 2000 meters

SAFETY & EMC

Parameter	Units	Model
SAFETY STANDARDS	EN IEC 62368-1, EN60335-1, EN62233, UL62368-1	
WITHSTAND VOLTAGE	I/P-O/P: 3KVAC/1min	
ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH	
EMC EMISSION	Parameter	Standard
	Conducted	EN IEC 55014-1
	Radiated	EN IEC 55014-2
	Harmonic Current/Note5	EN61000-3-2
	Voltage Flicker	EN61000-3-3
	EN IEC 55014-1, EN IEC 55014-2	
EMC IMMUNITY	Parameter	Standard
	ESD	EN61000-4-2
	Radiated Susceptibility	EN61000-4-3
	EFT/Burest	EN61000-4-4
	Surge	EN61000-4-5
	Conducted	EN61000-4-6
	Magnetic Field	EN61000-4-8
	Voltage Dips and interruptions	EN61000-4-11

DIMENSION & PACKING

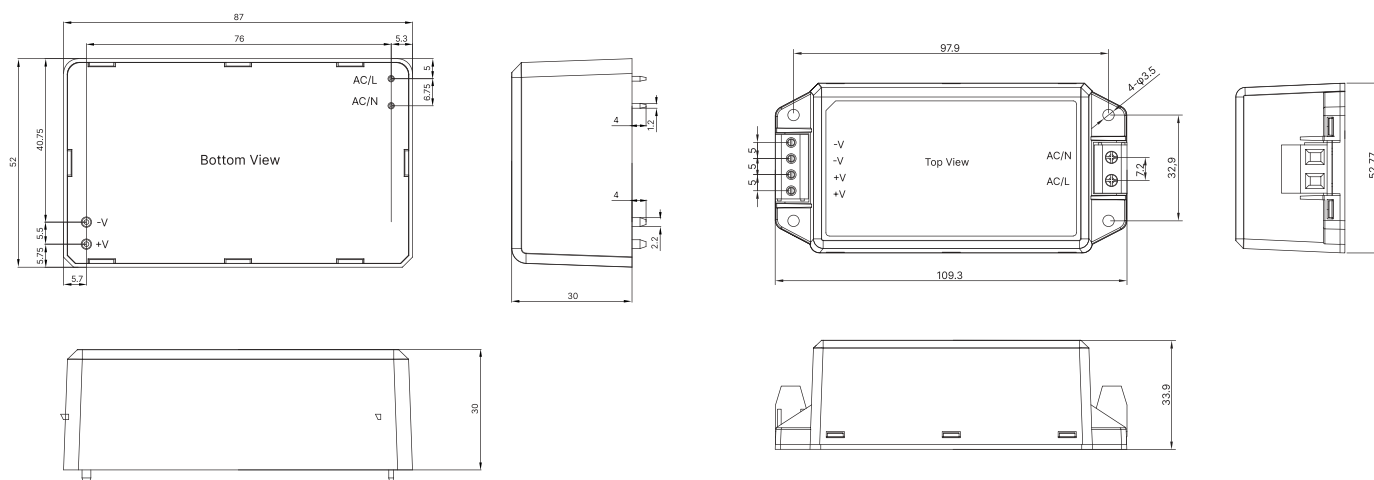
Parameter		Units
WEIGHT	PCB Mounting: 220g/pcs; Terminal Blocks: 285g/pcs	
PACKING	PCB Mounting: 48×27.5×16cm 50pcs/Carton; Terminal Blocks: 31.5×24.5×22cm 50pcs/Carton	
DIMENSION (LXWXH)	PCB Mounting: 87 × 52 × 30 mm; Terminal Blocks: 109.3 × 52.77 × 33.9 mm	
MTBF	755.4Khrs min. MIL-HDBK-217F(25°C)	

NOTE

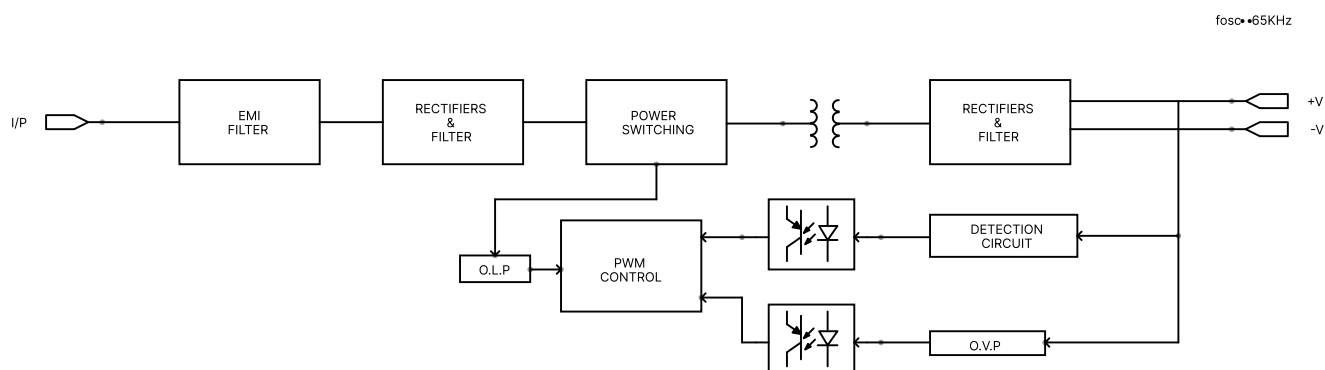
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5 °C/1000m with fan models for operating altitude higher than 2000m (6500ft).
5. 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.For guidance on how to perform these EMC tests,please refer to "EMI testing of component power supplies".

DIMENSIONS AND INSTALLATION

(Unit: mm , tolerance: $\pm 0.5\text{mm}$)

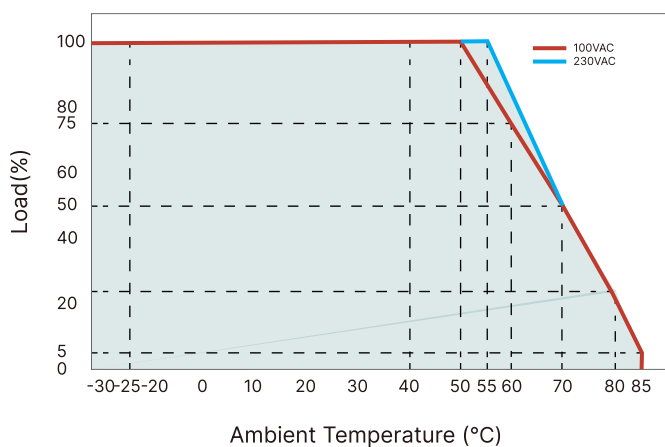


BLOCK DIAGRAM



ENGINEERING DATA

Derating Curve



Static Characteristics

