

ACE45W-xxVM



FEATURES

- Universal AC Input/ Full Range
- No load power consumption<0.15W
- Wide operating temperature range -30°C To +85°C
- High efficiency up to 89.5%
- Protections: Short circuit/Over load/Over voltage
- Isolation Class II
- 3 years warranty

ACE45W-xxVM is a 45W 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 equipment. This product allows the universal input voltage range of 85~305VAC.

MODEL NUMBERING

ACE45W-xxVM

Series Name

Rated Wattage

Model Type

Output Voltage

SELECTION GUIDE

Product Model	DC Voltage (Vdc)	Rated Current (mA)	Rated Power (W)	Max.Capacitive Load (uF)
ACE45W-05VM	5	8000	40	6000
ACE45W-12VM	12	3800	45.6	4400
ACE45W-15VM	15	3000	45	3300
ACE45W-24VM	24	1900	45.6	700
ACE45W-48VM	48	940	45.12	470

INPUT

Parameter	Units	Model
RATED VOLTAGE RANGE	100-277VAC	
VOLTAGE RANGE	85-305VAC/120-430VDC	
FREQUENCY RANGE	47-63Hz	
AVERAGE EFFICIENCY(TYP.)	83.5%	ACE45W-05VM
	87.5%	ACE45W-12VM
	88%	ACE45W-15VM
	89.5%	ACE45W-24VM
	89.5%	ACE45W-48VM
NO LOAD POWER CONSUMPTION	<0.15W	
AC CURRENT(TYP.)	1.8A/115VAC	
	0.9A/230VAC	
	0.75A/277VAC	
INRUSH CURRENT(TYP.)	COLD START 60A AT 230VAC 50HZ	
	COLD START 30A AT 115VAC 50HZ	
LEAKAGE CURRENT	<0.25mA/277VAC	

OUTPUT

Parameter	Units	Model
RIPPLE & NOISE (MAX.)	80mVp-p	ACE45W-05VM
	120mVp-p	ACE45W-12VM
	120mVp-p	ACE45W-15VM
	150mVp-p	ACE45W-24VM
	240mVp-p	ACE45W-48VM
VOLTAGE TOLERANCE	±2.5%	

Parameter	Units	Model
LINE REGULATION	±0.5%	
LOAD REGULATION	±1.0%	ACE45W-05VM
	±1.0%	ACE45W-12VM
	±0.5%	ACE45W-15VM
	±0.5%	ACE45W-24VM
	±0.5%	ACE45W-48VM
SETUP, RISE, HOLD UP TIME	0.2s, 35ms, 50ms/230VAC (at full load)	
	0.2s, 35ms, 5ms/115VAC (at full load)	

PROTECTION

Parameter	Units
OVER LOAD	115~160%
	Hiccup mode, recovers automatically after fault condition is removed.
SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.
OVER VOLTAGE	5V : 5.25 ~ 7.5V
	12V : 12.8 ~ 16V
	15V : 17 ~ 24V
	24V : 27 ~ 34V
	48V : 50.4 ~ 63V
	Hiccup mode, recovers automatically after fault condition is removed.

ENVIRONMENT

Parameter	Units
WORKING TEMP.	30°C ~ +85°C (Refer to "Derating Curve")
WORKING HUMIDITY	20 ~ 90% RH Non-condensing
STORAGE TEMP. HUMIDITY	-40°C ~ +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 III

SAFETY & EMC

Parameter	Units		
SAFETY STANDARDS	EN60335-1,		
WITHSTAND VOLTAGE	I/P-O/P: 3KVAC/1min		
ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH		
	Parameter	Standard	Test Level/Note
	Conducted	EN55014-1	CLASS B
	Radiated	EN55014-2	CLASS B
	Harmonic Current/Note5	EN61000-3-2	CLASS A
	Voltage Flicker	EN61000-3-3	
	Parameter	Standard	Test Level/Note
	ESD	EN61000-4-2	Level 3, 8KV air,Level 2, 4KV contact criteria A
	Radiated Susceptibility	EN61000-4-3	10V/m, criteria A
	EFT/Burest	EN61000-4-4	±2KV, criteria A
	Surge	EN61000-4-5	1KV/L-L, criteria A
	Conducted	EN61000-4-6	10Vr.m.s, criteria A
	Magnetic Field	EN61000-4-8	10A/m, criteria A
	Voltage Dips and interruptions	EN61000-4-11	> 95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods

DIMENSION & PACKING

Parameter	Units
WEIGHT	PCB Mounting: 195g/pcs; Terminal Blocks: 260g/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	895.4Khrs min. MIL-HDBK-217F(25°C)

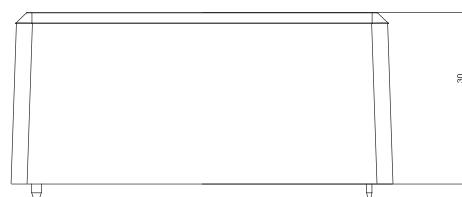
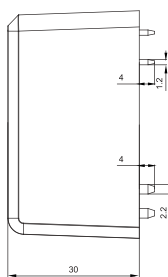
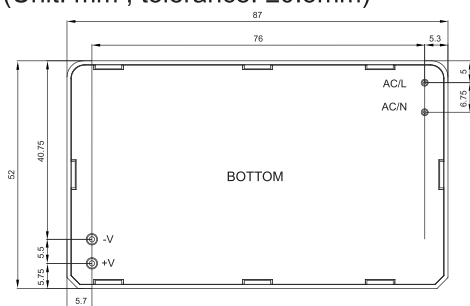
NOTE

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 fan less 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.

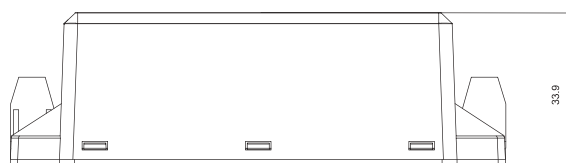
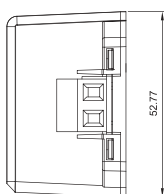
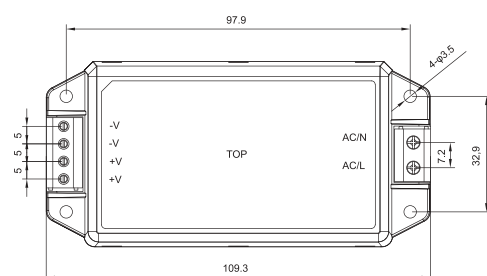
DIMENSIONS AND INSTALLATION

ACE45W-xxVM

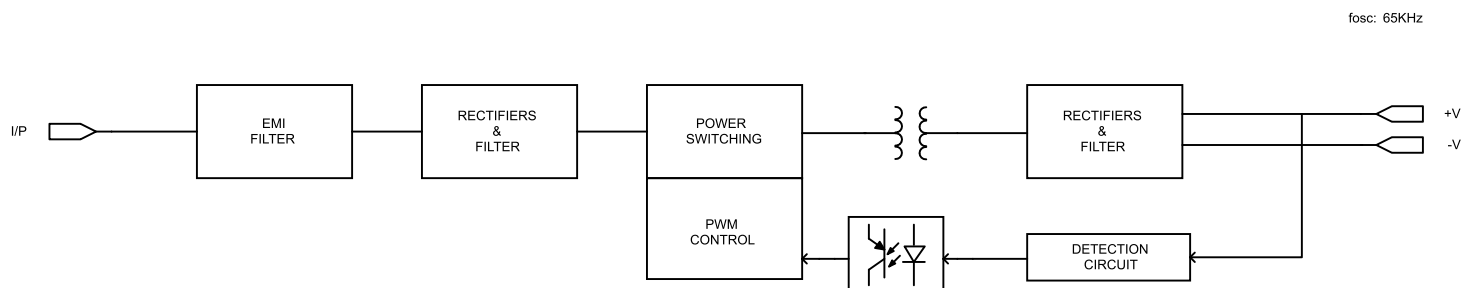
(Unit: mm , tolerance: ±0.5mm)



ACE45W-xxVMST

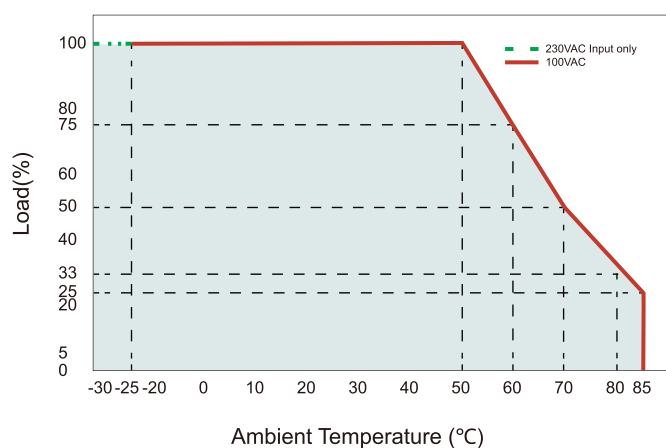


BLOCK DIAGRAM



ENGINEERING DATA

Derating Curve



Static Characteristics

