

ACE30W-xxVM



FEATURES

- Universal AC Input/ Full Range
- No load power consumption < 0.1W
- Wide operating temperature range -30~85°C
- High efficiency up to 88%
- Protections: Short circuit/Over load/Over voltage
- Isolation Class II
- 3 Years Warranty



ACE30W-xxVM is a 30W miniature (69.6*39*24.2mm) 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

ACE30W-xxVM



SELECTION GUIDE

Part Number	DC Voltage (Vdc)	Rated Current (mA)	Rated Power (W)	Max. Capacitive Load (uF)
ACE30W-05VM	5	6000	30	6000
ACE30W-12VM	12	2500	30	4400
ACE30W-15VM	15	2000	30	3300
ACE30W-24VM	24	1250	30	700
ACE30W-48VM	48	625	30	470

INPUT

Parameter	Units	Model
INPUT VOLTAGE	85-305VAC	
	120-430VDC	
FREQUENCY RANGE	47-63Hz	
NO LOAD POWER CONSUMPTION	<0.1W	
AVERAGE EFFICIENCY(Typ.)	83%	ACE30W-05VM
	88%	ACE30W-12VM
	88%	ACE30W-15VM
	88.5%	ACE30W-24VM
	90%	ACE30W-48VM
AC CURRENT(Typ.)	1.0A/115VAC	
	0.5A/230VAC	
	0.3A/277VAC	
INRUSH CURRENT(Typ.)	Cold Start 45A/400 μ s at 230VAC 50Hz	
	Cold Start 25A/600 μ s at 115VAC 50Hz	
LEAKAGE CURRENT	<0.25mA/277VAC	

OUTPUT

Parameter	Units	Model
RIPPLE & NOSE(MAX.)	120mVp-p	ACE30W-05VM
	150mVp-p	ACE30W-12VM
	200mVp-p	ACE30W-15VM
	240mVp-p	ACE30W-24VM
	300mVp-p	ACE30W-48VM
VOLTAGE TOLERANCE	±2.5%	All Series
LINE REGULATION	±0.5%	All Series
LOAD REGULATION	±1.0%	ACE30W-05VM
	±0.5%	ACE30W-12VM
	±0.5%	ACE30W-15VM
	±0.5%	ACE30W-24VM
	±0.5%	ACE30W-48VM
SETUP,RISE,HOLD UP TIME	1sec,30ms/230VAC (at full load)	
	1.5s,30ms/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	5.25 ~ 7.5V
	12.6 ~ 16.2V
	15.75 ~ 20.25V
	25.2 ~ 32.4V
	50.4 ~ 64V
	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 ~ 50°C)
VIBRATION	PCB Mounting: Blank: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
MTBF	7713.0K hrs min. MIL-HDBK-217F (25°C)

SAFETY

Parameter	Units
SAFETY STANDARDS	EN60335-1, EN62233, EN IEC62368-1, UL62368-1
WITHSTAND VOLTAGE	I/P-O/P: 4.2KVac/1min
ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500Vdc / 25 / 70% RH

EMC

EMC EMISSION	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	
EMC IMMUNITY	EN55035		
	Parameter	Standard	Test Level/Note
	ESD	EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact, criteria A
	Radiated Susceptibility	EN61000-4-3	Level 3, criteria A
	EFT/Burest	EN61000-4-4	Level 3, criteria A
	Surge	EN61000-4-5	Level 4, 2KV/L-N, criteria A
	Conducted	EN61000-4-6	Level 3, criteria A
	Magnetic Field	EN61000-4-8	Level 4, criteria A
	Voltage Dips and interruptions	EN61000-4-11	> 95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods

NOTE

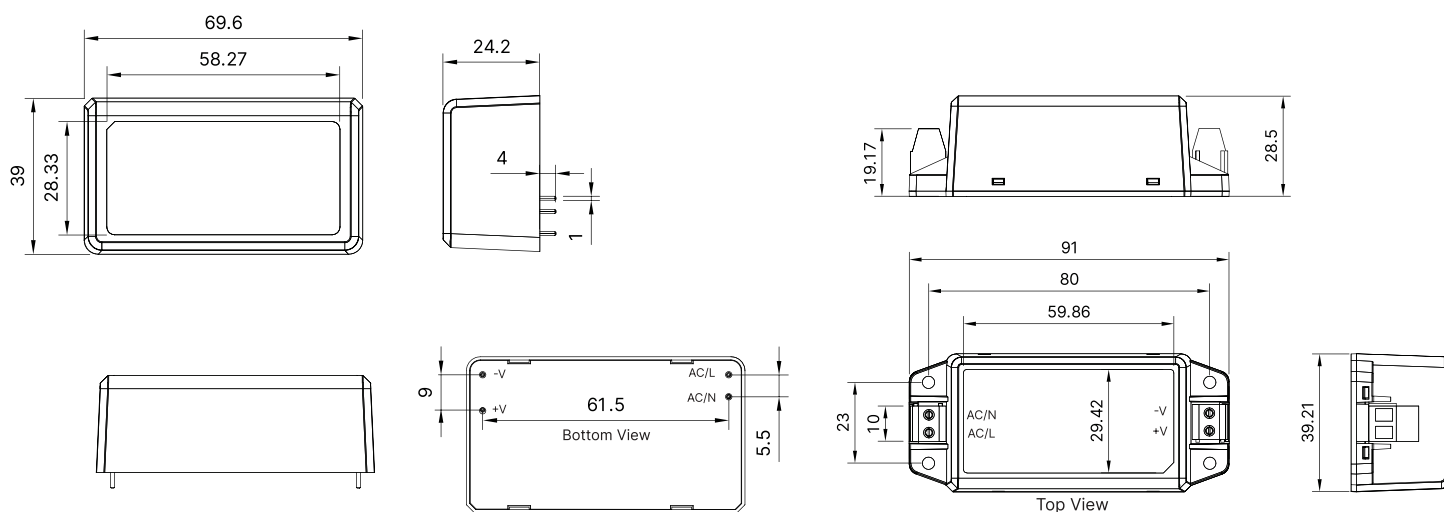
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.
5. 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).
6. 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, WEIGHT & PACKING

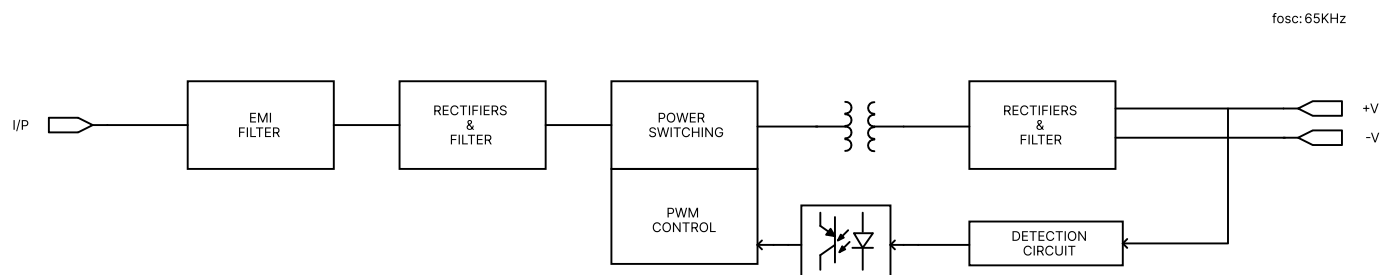
Parameter	Units
DIMENSION (LxWxH)	PCB Mounting: 69.6 × 39 × 24.2 mm
	Terminal Blocks: 91 × 39.21 × 28.5 mm
WEIGHT	PCB Mounting: 94g/pcs; Terminal Blocks: 113g/pcs
PACKING	PCB Mounting: 32.5×17.5×25cm 100pcs/Carton
	Terminal Blocks: 41.5×25×17cm 100pcs/Carton

DIMENSIONS AND INSTALLATION

(Unit: mm , tolerance: ±0.5mm)

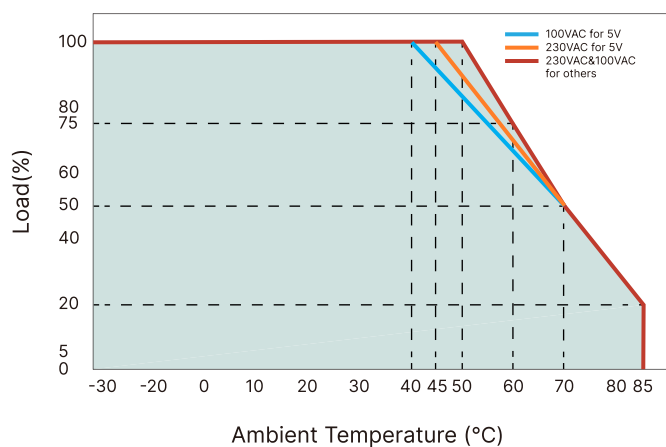


FUNCTIONAL DIAGRAM



ENGINEERING DATA

Derating Curve



Static Characteristics

