

ACE05W-xxVM



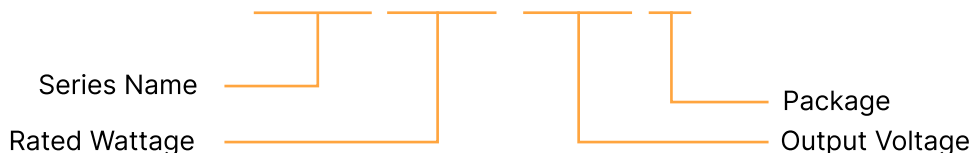
FEATURES

- Universal AC Input/ Full Range
- No load power consumption < 0.1W
- Wide operating temperature range -40°C To +85°C
- High efficiency up to 81.5%
- 46.08×25.78×21.7 mm compact size
- Protections: Short circuit/Over load/Over voltage
- Operating attitude up to 5000 meters
- 3 years warranty

ACE05W-xxVM is a 5W miniature (46.08*25.78*21.7mm) 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 NUMBERING

ACE05W-xxVM



SELECTION GUIDE

Part Number	DC Voltage (Vdc)	Rated Current (mA)	Rated Power (W)	Max.Capacitive Load(uF)
ACE05W-03VM	3.3	1250	4.12	12000
ACE05W-05VM	5	1000	5	8500
ACE05W-12VM	12	420	5	1600
ACE05W-15VM	15	330	5	960
ACE05W-24VM	24	230	5.52	500

INPUT

Parameter	Units	Model
RATED VOLTAGE RANGE	100-277VAC	
VOLTAGE RANGE	85-305VAC/120-430VDC	
FREQUENCY RANGE	47-63Hz	
NO LOAD POWER CONSUMPTION	<0.1W	
AVERAGE EFFICIENCY(Typ.)	74%	ACE05W-03VM
	78%	ACE05W-05VM
	80.5%	ACE05W-12VM
	82.5%	ACE05W-15VM
	81%	ACE05W-24VM
AC CURRENT(Typ.)	0.3A/115VAC	
	0.1A/230VAC	
	0.08A/277VAC	
INRUSH CURRENT(Typ.)	Cold Start 40A at 230VAC 50Hz	
	Cold Start 20A at 115VAC 50Hz	
LEAKAGE CURRENT	<0.70mA/277VAC	

OUTPUT

Parameter	Units	Model
RIPPLE & NOISE (MAX.)	200mVp-p	All Series
VOLTAGE TOLERANCE	±2.5%	All Series
LINE REGULATION	±0.3%	All Series
LOAD REGULATION	±0.5%	All Series
SETUP, RISE, HOLD UP TIME	1.2s,30ms,80ms/230VAC (at full load)	
	1.4s,30ms,12ms/115VAC (at full load)	

PROTECTION

Parameter	Units
OVER LOAD	110~260%
	Hiccup mode, recovers automatically after fault condition is removed.
SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.
OVER VOLTAGE	3.3V : 3.8~6VDC
	5V : 5.8~7.5VDC
	12V : 12.8~16VDC
	15V : 17~24VDC
	24V : 27~34VDC
	Hiccup mode, recovers automatically after fault condition is removed.

ENVIRONMENT

Parameter	Units
WORKING TEMP.	-30°C To +85°C (Full load can be operated at -30°C to +50°C, while load should be reduced at +50°C to +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	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. 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
MTBF	1454.7Khrs min. MIL-HDBK-217F(25°C)

SAFETY

Parameter	Units
SAFETY STANDARDS	EN62368-1
WITHSTAND VOLTAGE	I/P-O/P: 3KVAC/1min
ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH

EMC

EMC EMISSION	Parameter	Standard	Test Level/Note
	Conducted	BS EN/EN55032(CISPR32)	CLASS B
	Radiated	BS EN/EN55032(CISPR32)	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

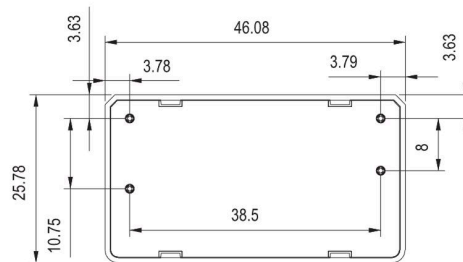
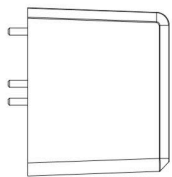
- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF & 47μF parallel capacitor.
- Tolerance : includes set up tolerance, line regulation and load regulation.
- 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.
- 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).
- 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, WEIGHT & PACKING

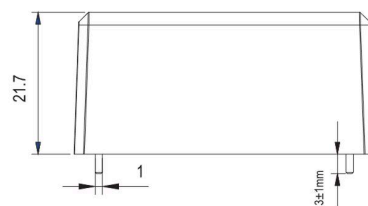
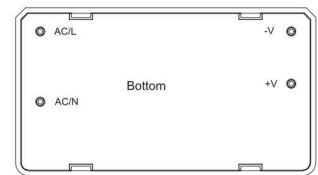
Parameter	Units
DIMENSION (LXWXH)	46.08 × 25.78 × 21.7 mm
WEIGHT	25g/pcs
COOLING METHOD	Natural Air Cooling
HOUSING MATERIAL	Black flame retardant and heat resistant plastic
CARTON SIZE	41 × 37 × 19.5 cm
MASTER CARTON QUANTITIES	250pcs/carton

DIMENSIONS AND INSTALLATION

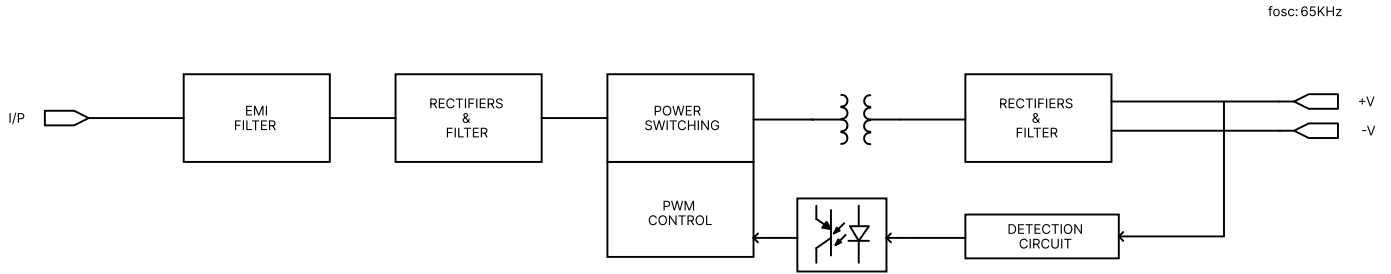
(UNIT: MM , TOLERANCE: ±0.5MM)



(Unit: mm , tolerance: ±0.5mm)

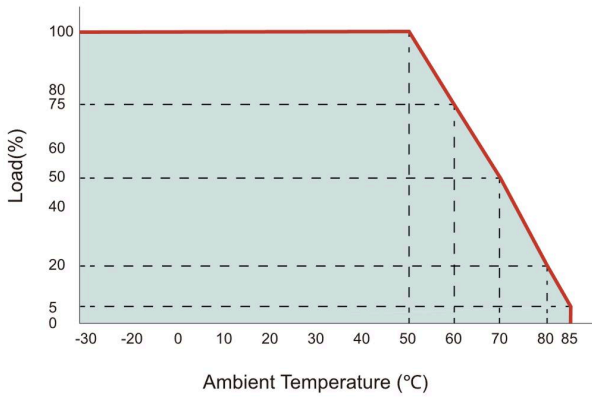


FUNCTIONAL DIAGRAM



ENGINEERING DATA

Derating Curve



Static Characteristics

