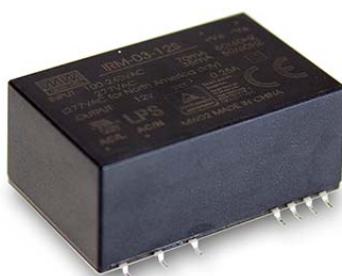
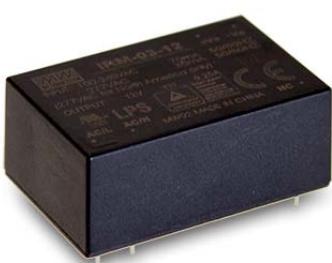




3W Single Output Encapsulated Type

IRM-03 series

R33100  
RoHS

LPS cULus

UL62368-1

BS EN/EN62368-1 TPTC004  
BS EN/EN60335-1

IEC62368-1



CB

UK  
CA

## ■ Features

- Universal AC input / Full range
- No load power consumption<0.075W
- Compact size
- Comply with BS EN/EN55032 Class B without any additional components
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Isolation Class II
- High reliability, low cost
- 3 years warranty

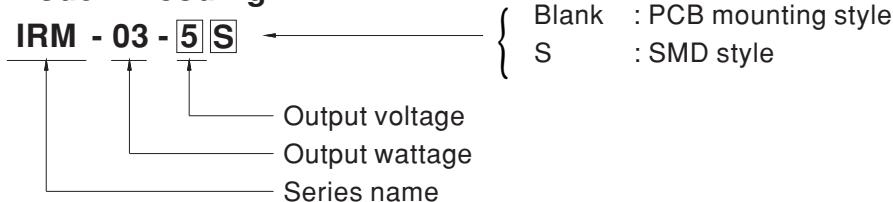
## ■ Applications

- Industrial electrical equipment
- Mechanical equipment
- Factory automation equipment
- Handheld electronic device

## ■ Description

IRM-03 is a 3W miniature (37\*24\*15mm) 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 a universal input voltage range of 85~305VAC. The phenolic case and the fully-potted silicone enhance the heat dissipation and meet the anti-vibration demand up to 5G; moreover, it provides the fundamental resistance to dust and moisture. With the high efficiency up to 80% and the extremely low no-load power consumption below 0.075W, IRM-03 series fulfills the worldwide regulation for the low power consumption requirement for electronics. The entire series is a Class II design (no FG pin), incorporating the built-in EMI filtering components, enabling the compliance with BS EN/EN55032 Class B; the supreme EMC features keep the end electronic units from electromagnetic interference. In addition to module-type model, IRM-03 series also offers the SMD style model.

## ■ Model Encoding



## SPECIFICATION

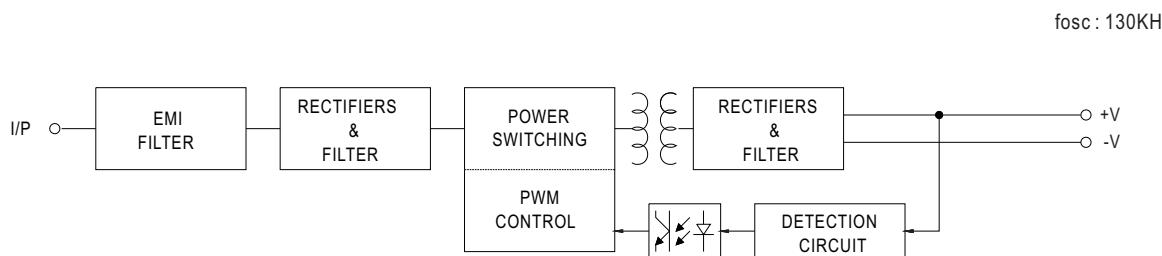
MODEL	IRM-03-3.3	IRM-03-5	IRM-03-9	IRM-03-12	IRM-03-15	IRM-03-24					
OUTPUT	DC VOLTAGE	3.3V	5V	9V	12V	15V					
	RATED CURRENT	900mA	600mA	333mA	250mA	200mA					
	CURRENT RANGE	0 ~ 900mA	0 ~ 600mA	0 ~ 333mA	0 ~ 250mA	0 ~ 200mA					
	RATED POWER	3W	3W	3W	3W	3W					
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	100mVp-p	150mVp-p	200mVp-p					
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.5%	±2.5%	±2.5%	±2.5%					
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%					
	LOAD REGULATION	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%					
	SETUP, RISE TIME	600ms, 30ms/230VAC	600ms, 30ms/115VAC at full load								
INPUT	HOLD UP TIME (Typ.)	40ms/230VAC	8ms/115VAC at full load								
	VOLTAGE RANGE	85 ~ 305VAC 120~430VDC									
	FREQUENCY RANGE	47 ~ 63Hz									
	EFFICIENCY (Typ.)	68%	72%	77%	78%	78%					
	AC CURRENT (Typ.)	70mA/115VAC	40mA/230VAC	35mA/277VAC							
	INRUSH CURRENT (Typ.)	10A/115VAC	20A/230VAC								
PROTECTION	LEAKAGE CURRENT	< 0.25mA/277VAC									
	OVERLOAD	105%~260% rated output power									
		Protection type : Hiccup mode, recovers automatically after fault condition is removed									
ENVIRONMENT	OVER VOLTAGE	3.8 ~ 4.9V	5.2~ 6.8V	10.3 ~ 12.2V	12.6 ~ 16.2V	15.75 ~ 20.3V					
		Protection type : Shut off o/p voltage, clamping by zener diode									
	WORKING TEMP.	-30 ~ +85°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 90% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +100°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)									
SAFETY & EMC	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes									
	LEAD TEMPERATURE	260°C, 10s (max.)									
	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368, TUV BS EN/EN60335-1, EAC TP TC 004, BSMI CNS14336-1 approved, design refer to BS EN/EN61558-2-16 , IEC60601-1 (By request)									
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC									
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH									
OTHERS	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020, CNS13438 Class B									
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, heavy industry level (surge L-N : 1kV), criteria A, EAC TP TC 020									
	MTBF	2137.6Khrs min. MIL-HDBK-217F (25°C)									
DIMENSION	DIMENSION	PCB mounting style : 37*24*15mm (L*W*H) SMD style : 37*24*16mm (L*W*H)									
	PACKING	PCB mounting style : 0.026Kg;560pcs/15.3Kg/0.77CUFT SMD style : 0.026Kg;560pcs/15.3Kg/0.77CUFT									
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 0.1uf & 47uf 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).										
	※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>										



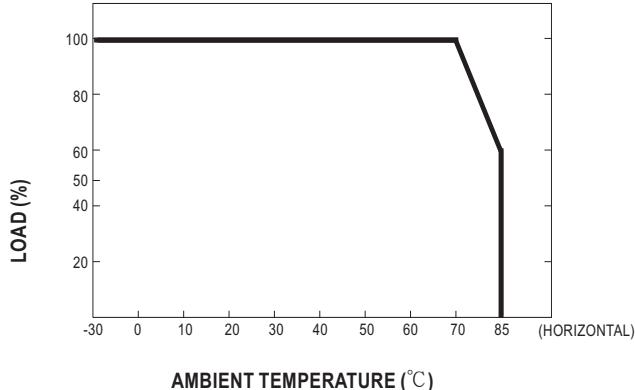
3W Single Output Encapsulated Type

IRM-03 series

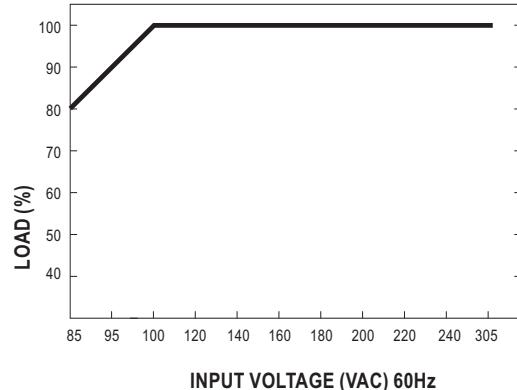
■ Block Diagram



■ Derating Curve

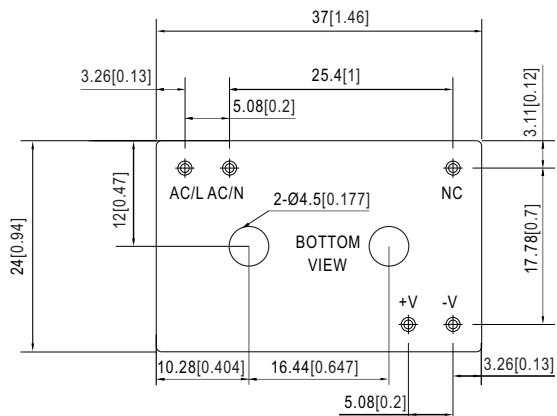


■ Output Derating VS Input Voltage



## ■ Mechanical Specification

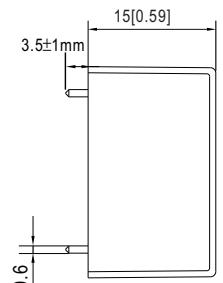
## • PCB mounting style



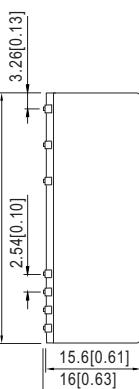
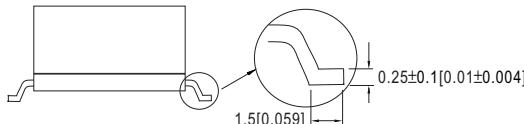
Case No.IRM03 Unit:mm[inch]

 Tolerance: $\pm 0.5[\pm 0.02]$ 

unless otherwise specified

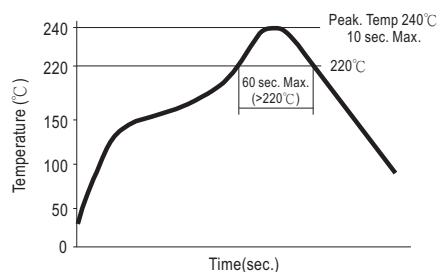
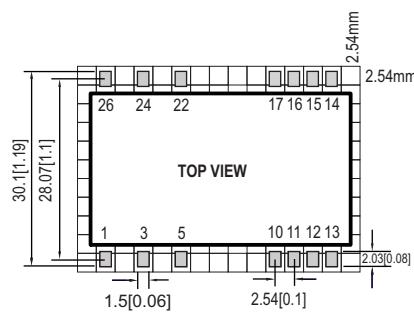

 PIN diameter: 0.6 $\pm 0.1$ [0.024 $\pm 0.004$ ]

## • SMD style



Pin NO.	Assignment
1	AC/L
3	AC/N
14	-Vo
16	+Vo
others	NC

## ■ Recommended PCB layout (for SMD style) (Reflow soldering method available)



Remark : The curve applies only to the " Hot Air Reflow Soldering"

## ■ Installation Manual

 Please refer to : <http://www.meanwell.com/manual.html>