



## ■ Features

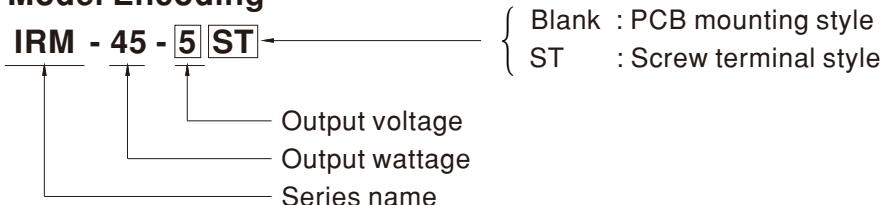
- Universal AC input / Full range
- Compact size
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- Isolation Class II
- No load power consumption<0.1W
- Pass LPS(Except for 5V)
- 100% full load burn-in test
- High reliability
- 3 years warranty

## ■ Description

IRM-45 is a 45W miniature (87\*52\*29.5mm) 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 85~264VAC. The 94V-0 flame retardant plastic 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 90.5% and the extremely low no-load power consumption below 0.1W, IRM-45 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 EN55032 Class B; the supreme EMC features keep the end electronic units from electromagnetic interference. In addition to the PCB mounting style model, IRM-45 series also offers the screw terminal style model (ST).

## ■ Model Encoding





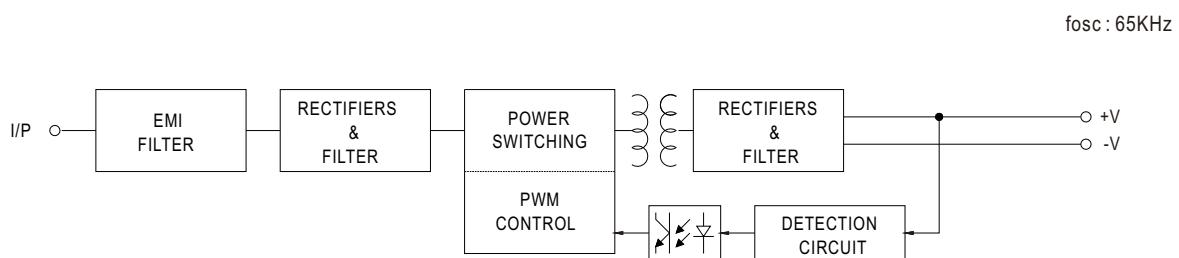
45W Single Output Encapsulated Type

IRM-45 series

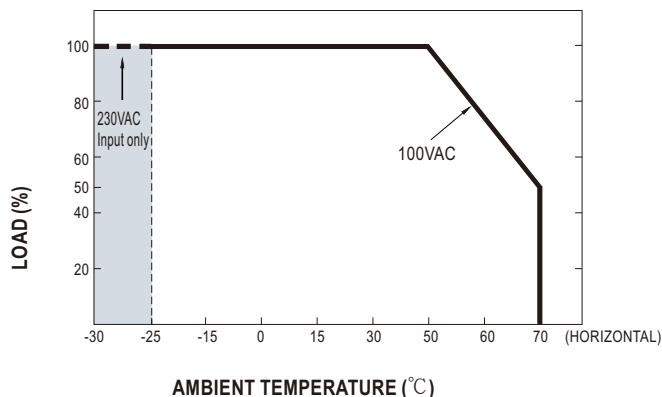
## SPECIFICATION

MODEL	IRM-45-5	IRM-45-12	IRM-45-15	IRM-45-24	IRM-45-48
OUTPUT	DC VOLTAGE	5V	12V	15V	24V
	RATED CURRENT	8A	3.8A	3A	1.9A
	CURRENT RANGE	0 ~ 8A	0 ~ 3.8A	0 ~ 3A	0 ~ 1.9A
	RATED POWER	40W	45.6W	45W	45.6W
	RIPLPE & NOISE (max.) Note.2	80mVp-p	150mVp-p	180mVp-p	200mVp-p
	VOLTAGE TOLERANCE Note.3	±2.5%	±2.5%	±2.5%	±2.5%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%
	SETUP, RISE TIME	1000ms, 30ms/230VAC	2000ms, 30ms/115VAC at full load		
INPUT	HOLD UP TIME (Typ.)	50ms/230VAC	12ms/115VAC at full load		
	VOLTAGE RANGE	85 ~ 264VAC			
	FREQUENCY RANGE	47 ~ 440Hz			
	EFFICIENCY (Typ.)	83.5%	87.5%	88.5%	89.5%
	AC CURRENT (Typ.)	1.5A/115VAC	0.75A/230VAC		
	INRUSH CURRENT (Typ.)	COLD START 30A/115VAC	60A/230VAC		
PROTECTION	LEAKAGE CURRENT	< 0.25mA/240VAC			
	OVERLOAD	115%~160% rated output power			
		Protection type : Hiccup mode, recovers automatically after fault condition is removed			
ENVIRONMENT	OVER VOLTAGE	5.25 ~ 6.75V	12.6 ~ 16.2V	15.75 ~ 20.25V	25.2 ~ 32.4V
		Protection type : Shut off o/p voltage, clamping by zener diode			
	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH			
SAFETY & EMC	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes			
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved			
	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 EN55032 (CISPR32) Class B, EN61000-3-2,-3			
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, heavy industry level (surge L-N : 1KV), criteria A			
	MTBF	1212Khrs min. MIL-HDBK-217F (25°C)			
NOTE	DIMENSION	PCB mounting style : 87*52*29.5mm (L*W*H) Screw terminal style : 109*52*33.5mm (L*W*H)			
	PACKING	PCB mounting style : 0.195Kg;60pcs/12.7Kg/0.97CUFT Screw terminal style : 0.228Kg; 50pcs/12.4Kg/0.55CUFT			

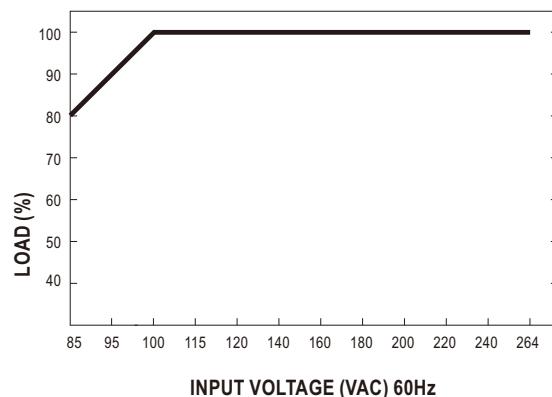
## ■ Block Diagram



## ■ Derating Curve

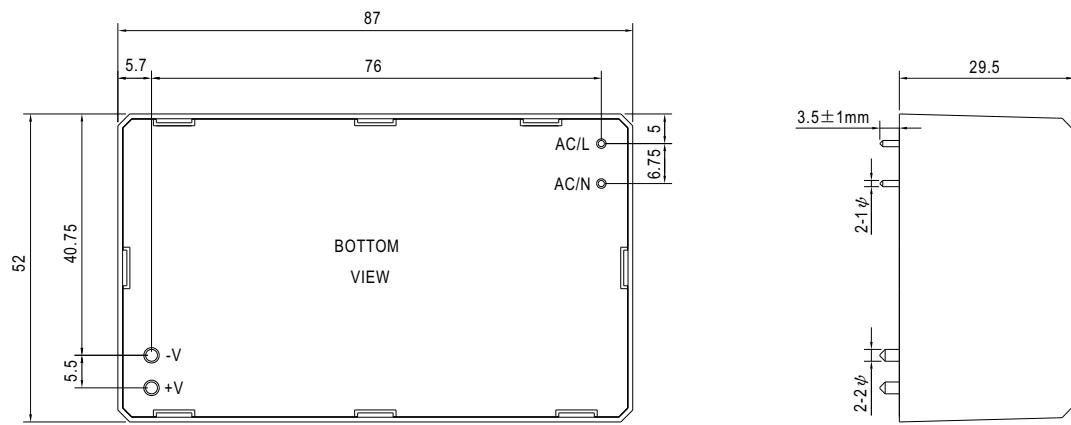


## ■ Output Derating VS Input Voltage



**■ Mechanical Specification**

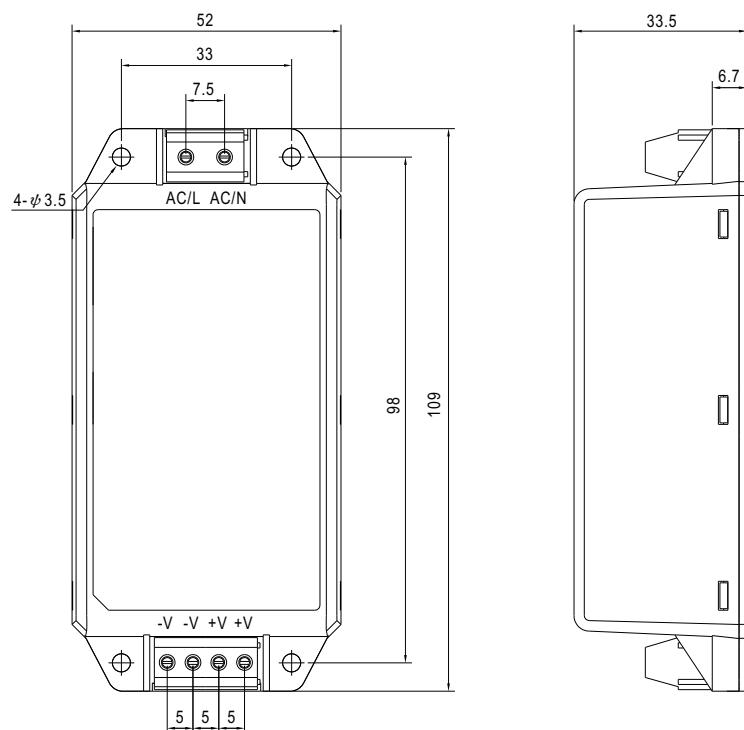
- PCB mounting style



Case No. IRM60 Unit:mm

 AC/L, AC/N P/N diameter:  $1\text{mm}$   
 +V, -V P/N diameter:  $2\text{mm}$ 

- Screw terminal style


**■ Installation Manual**

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