



■ Features

- Universal AC input / Full range
- No load power consumption < 0.075W
- Compact size
- Comply with EN55022 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

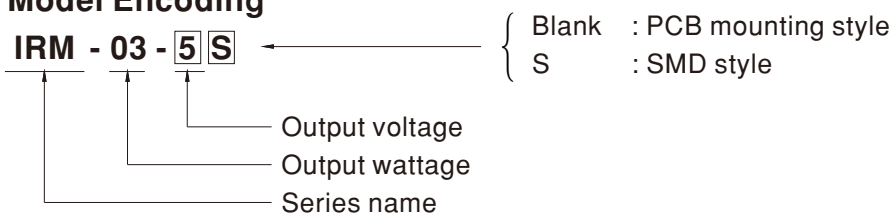
■ Applications

- 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 EN55022 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

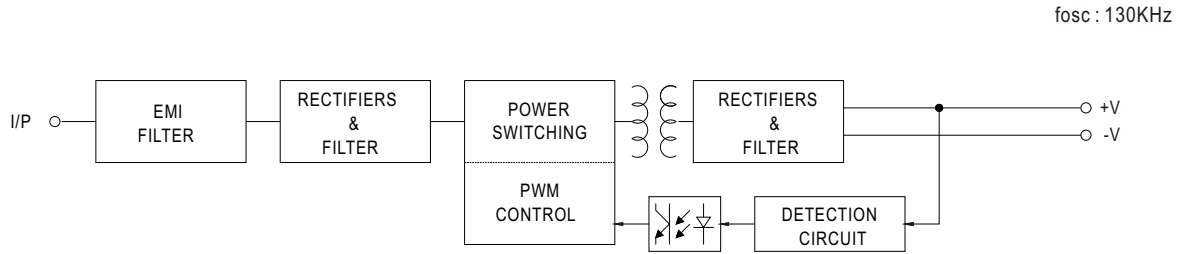




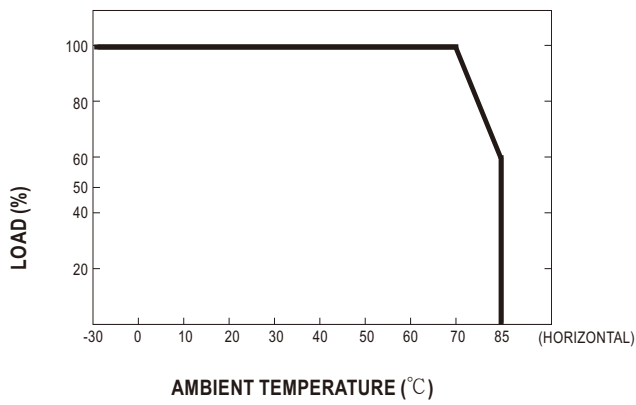
SPECIFICATION

| 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 | 24V |
| | RATED CURRENT | 900mA | 600mA | 333mA | 250mA | 200mA | 125mA |
| | CURRENT RANGE | 0 ~ 900mA | 0 ~ 600mA | 0 ~ 333mA | 0 ~ 250mA | 0 ~ 200mA | 0 ~ 125mA |
| | RATED POWER | 3W | 3W | 3W | 3W | 3W | 3W |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 100mVp-p | 100mVp-p | 150mVp-p | 200mVp-p | 240mVp-p |
| | VOLTAGE TOLERANCE Note.3 | ±2.5% | ±2.5% | ±2.5% | ±2.5% | ±2.5% | ±2.5% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±1.0% | ±0.5% | ±0.5% | ±0.5% | ±0.5% | ±0.5% |
| | SETUP, RISE TIME | 600ms, 30ms/230VAC 600ms, 30ms/115VAC at full load | | | | | |
| | HOLD UP TIME (Typ.) | 40ms/230VAC 8ms/115VAC at full load | | | | | |
| INPUT | VOLTAGE RANGE | 85 ~ 305VAC 120~430VDC | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | EFFICIENCY (Typ.) | 68% | 72% | 77% | 78% | 78% | 80% |
| | AC CURRENT (Typ.) | 70mA/115VAC 40mA/230VAC 35mA/277VAC | | | | | |
| | INRUSH CURRENT (Typ.) | 10A/115VAC 20A/230VAC | | | | | |
| | LEAKAGE CURRENT | < 0.25mA/277VAC | | | | | |
| PROTECTION | OVERLOAD | 105%~260% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | |
| | OVER VOLTAGE | 3.8 ~ 4.9V | 5.2~ 6.8V | 10.3 ~ 12.2V | 12.6 ~ 16.2V | 15.75 ~ 20.3V | 25.2 ~ 32.4V |
| ENVIRONMENT | 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) | | | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | | |
| SAFETY & EMC | SAFETY STANDARDS | UL60950-1, TUV EN60950-1 approved , Optional IEC60601-1, EN60335-1, EN61558-1/-2-16 | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH | | | | | |
| | EMC EMISSION | Compliance to EN55022 (CISPR22) 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 | | | | | |
| OTHERS | MTBF | 2137.6Khrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | PCB mounting style : 37*24*15mm (L*W*H) SMD style : 37*24*16mm (L*W*H) | | | | | |
| | PACKING | PCB mounting style : 0.02Kg;560pcs/12.8Kg/0.96CUFT SMD style :0.02Kg;560pcs/12.8Kg/0.96CUFT | | | | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> | | | | | | |

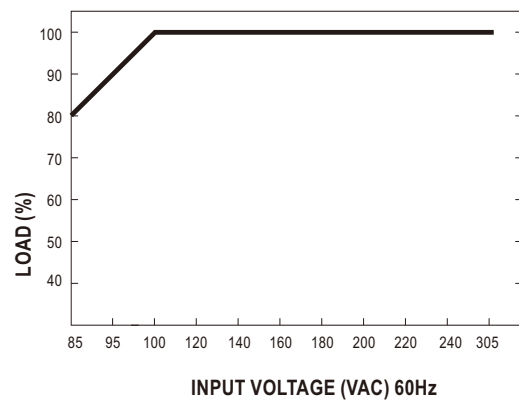
■ Block Diagram



■ Derating Curve



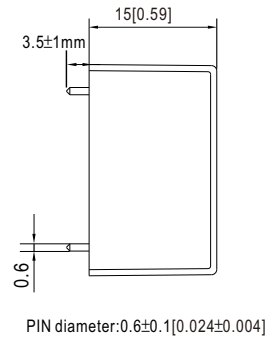
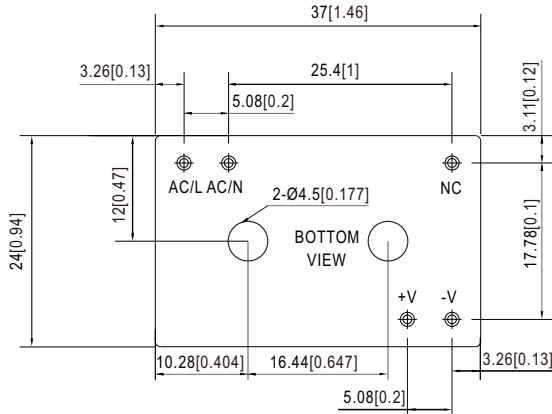
■ Output Derating VS Input Voltage



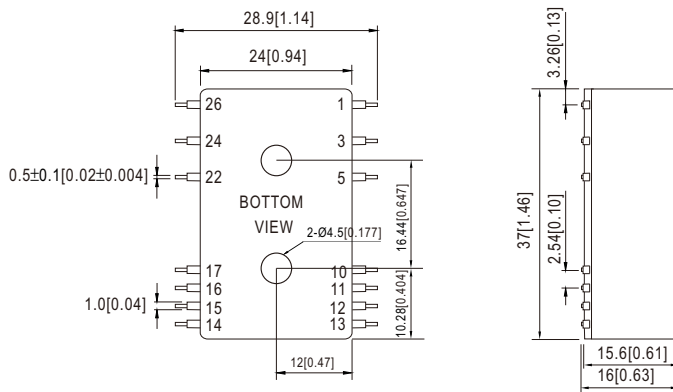
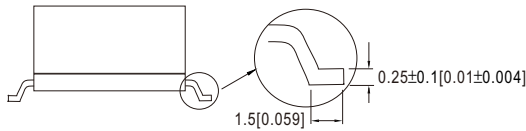
Mechanical Specification

Case No. IRM03 Unit: mm[inch]
Tolerance: $\pm 0.5[\pm 0.02]$
unless otherwise specified

PCB mounting style

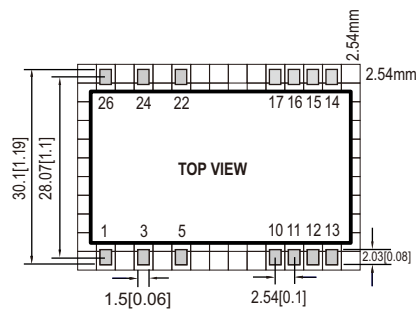


SMD style



| 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)



Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [AC/DC Power Modules](#) category:

Click to view products by [Mean Well](#) manufacturer:

Other Similar products are found below :

[TUNS700F28-P](#) [VI-BAMD-EM](#) [FARM2CN1](#) [VI-HAM-CM](#) [CFM21M120-E](#) [TUHS25F15](#) [CFM21M240](#) [CFM21M050](#) [CFM21M150](#)
[TUHS15F15](#) [CFM21M240-E](#) [TUHS10F15](#) [CFM21M090-E](#) [CFM21M090](#) [CFM21M120](#) [CFM21M050-E](#) [AP24N24-Zero](#) [ERP-350-12](#) [VI-](#)
[HAM-IM](#) [HWS80A-24/A](#) [CFM21M090-S](#) [CFM21M240-T](#) [FA5-220S12B](#) [HV05-A24](#) [NG03-A12](#) [NK02-A05](#) [NK02-A12](#) [NK02-A24](#)
[NL05-A12](#) [NR03-A05](#) [ERS4120N007R26](#) [LDE05-20B12](#) [LM35-20B12](#) [LM35-20B24](#) [LM35-22B12](#) [LM35-22B24](#) [LM50-20B05](#) [LM50-](#)
[20B12](#) [LM50-20B15](#) [LM50-20B24](#) [LM50-22B12](#) [LM50-22B24](#) [LM75-20B12](#) [LM75-20B24](#) [LM75-22B12](#) [LM75-22B24](#) [LM100-22B12](#)
[LM150-22B24](#) [LM350-10B12](#) [LM350-10B24](#)