



MEAN WELL APV-12E 12W Single Output Switching Power Supply Instruction Manual

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MEAN WELL APV-12E 12W Single Output Switching Power Supply



Features

- Constant voltage design
- Protections: Short circuit/ Over load/Over voltage
- Fully isolated plastic case
- Cooling by free air convection
- Small and compact size
- Class II power unit, no FG
- No load power consumption <0.5W
- IP42 design
- Suitable for LED lighting and moving sign applications
- 100% full load burn-in test
- Low cost, high reliability
- 2 years warranty

Applications

Suitable for LED related fixture or appliance (such as LED Decoration or Advertisement devices)(Note. 8)

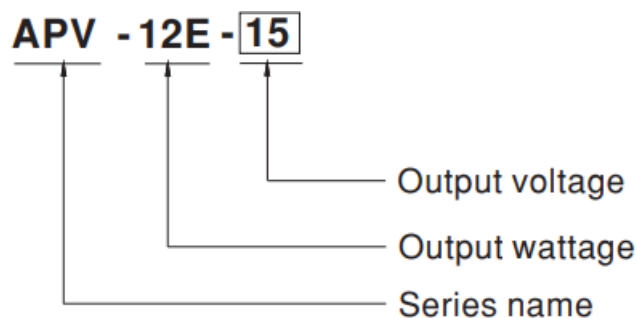
GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

APV-12E series is one 12W AC/DC constant voltage mode single output LED power supply. It accepts input 180-264VAC and provides four models with different output voltage, 5V, 12V, 15V, 24V, respectively, that the small wattage LED applications employ the most frequently. Exploiting Class II design (without FG pin) and adopting the 94V-0 flame retardant plastic enclosure, APV-12E ideally fits the entry-level LED applications

Model Encoding



SPECIFICATIONS

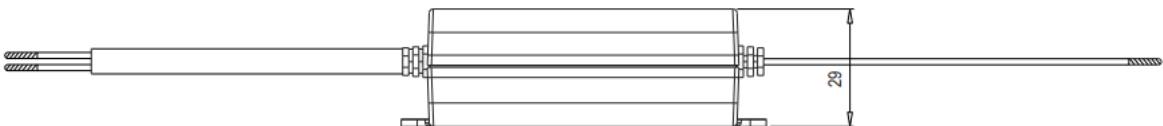
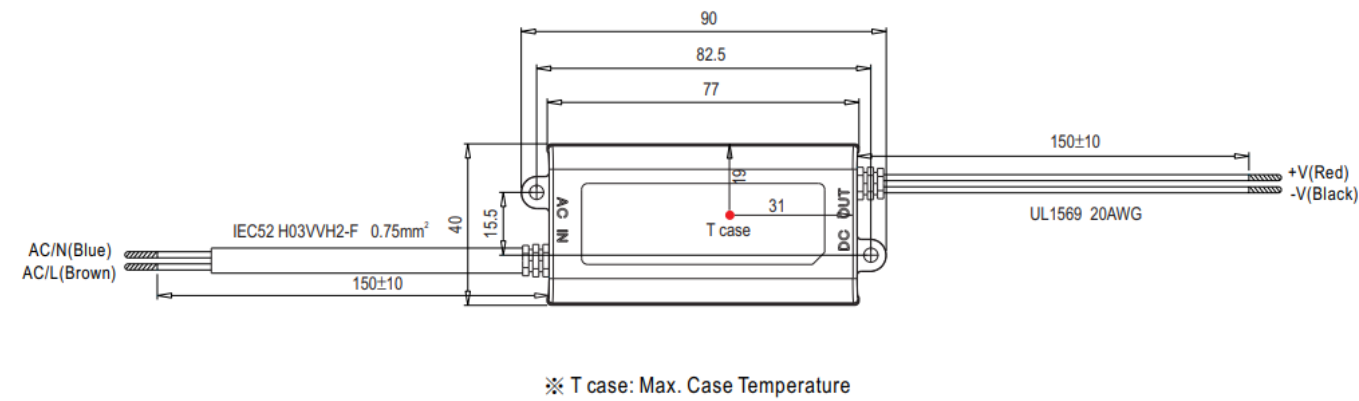
| MODEL | | APV-12E-5 | APV-12E-12 | APV-12E-15 | APV-12E-24 |
|-------|---------------|-----------|------------|------------|------------|
| | DC VOLTAGE | 5V | 12V | 15V | 24V |
| | RATED CURRENT | 2A | 1A | 0.8A | 0.5A |

| | | | | | |
|--------------------|---|--|------------|------------|--------------|
| OUTP UT | CURRENT RANG E | 0 ~ 2A | 0 ~ 1A | 0 ~ 0.8A | 0 ~ 0.5A |
| | RATED POWER | 10W | 12W | 12W | 12W |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 120mVp-p | 120mVp-p | 150mVp-p |
| | VOLTAGE TOLERANCE Note.3 | ±5.0% | | | |
| | LINE REGULATI ON | ±1.0% | | | |
| | LOAD REGULATI ON | ±2.0% | | | |
| | SETUP, RISE TIM E Note.6 | 500ms, 30ms / 230VAC at full load | | | |
| | HOLD UP TIME (Typ.) | 20ms/230VAC at full load | | | |
| INPU T | VOLTAGE RANG E Note.4 | 180 ~ 264VAC 254 ~ 370VDC | | | |
| | FREQUENCY RA NGE | 47 ~ 63Hz | | | |
| | POWER FACTOR (Typ.) | PF>0.5/230VAC at full load | | | |
| | EFFICIENCY (Ty p.) | 75% | 81% | 81% | 83% |
| | AC CURRENT | 0.2A/230VAC | | | |
| | INRUSH CURRE NT(Typ.) | COLD START 70A(twidth=120μs measured at 50% Ipeak) at 230VAC | | | |
| | MAX. No. of PSU s on 16A CIRCUIT BREAKER | 17 units (circuit breaker of type B) / 29 units (circuit breaker of type C) at 230VAC | | | |
| | LEAKAGE CURR ENT | 0.25mA / 240VAC | | | |
| PROT ECTI ON | OVER LOAD | Above 105% rated output power | | | |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | |
| | OVER VOLTAGE | 5.75 ~ 6.75V | 13.8 ~ 16V | 17.5 ~ 21V | 27.6 ~ 32.4V |
| | | Protection type : Shut off o/p voltage, clamping by zener diode | | | |
| | WORKING TEMP. | -30 ~ +70°C(Refer to “Derating Curve”) | | | |
| | WORKING HUMI DITY | 20 ~ 90% RH non-condensing | | | |
| | | | | | |

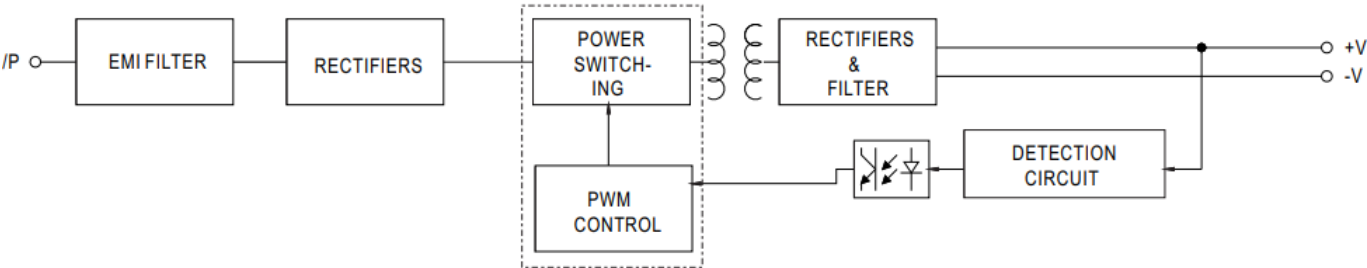
| | | |
|-------------------------|---------------------------------|--|
| ENVIRONMENT | STORAGE TEMP. , HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes |
| SAFETY & EMC | SAFETY STANDARDS | EAC TP TC 004, IP42, BS EN/EN 62368-1 approved |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC |
| | ISOLATION RESISTANCE | I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH |
| | EMC EMISSION | Compliance to BS EN/EN55032,BS EN/EN61000-3-2,BS EN/EN61000-3-3, EAC TP TC 020 |
| | EMC IMMUNITY | Compliance to BS EN/EN55024,BS EN/EN61000-4-2,3,4,5,6,8,11; light industry level(surge 2KV), EAC TP TC 020 |
| OTHERS | MTBF | 7075.9K hrs min. Telcordia SR-332 (Bellcore) ; 1058.6K hrs min. MIL-HD BK-217F (25°C) |
| | DIMENSION | 77*40*29(L*W*H) |
| | PACKING | 0.08Kg; 120pcs/11.8Kg/1.06CUFT |
| | | |

1. All parameters NOI specially mentioned are measured at 230VAC Input, rated load and 25C 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. Derating may be needed under low input voltage. Please check the static characteristics for more details.
5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
6. Length of set-up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the setup time.
7. The ambient temperature derating of 3.5°C/1000m with fanless models and 5°C/1000m with fan models for operating altitudes higher than 2000m(6500ft).
8. This product is not intended for LED lighting luminaire applications in the EU. (In the EU the LPF/NPF/XLG series are recommended.)
9. For any application note and IP waterproof function installation caution, please refer to our user manual before using. <https://www.meanwel.com/Upload/PDFLED EN.pdf>

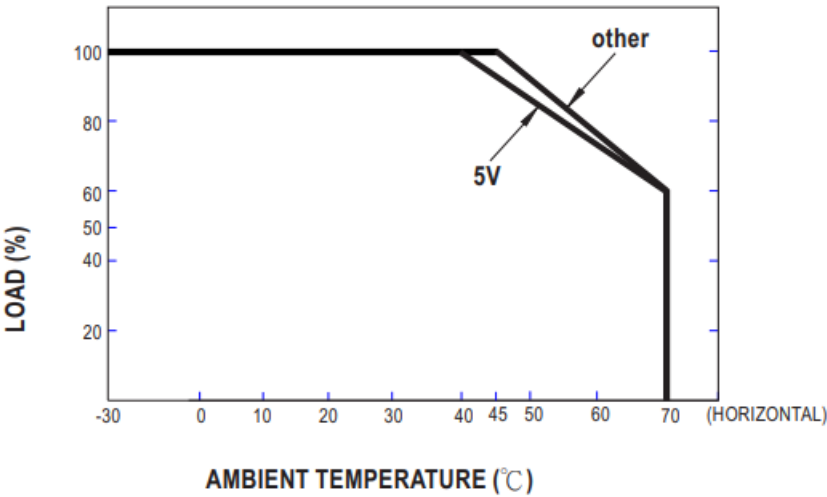
Mechanical Specification



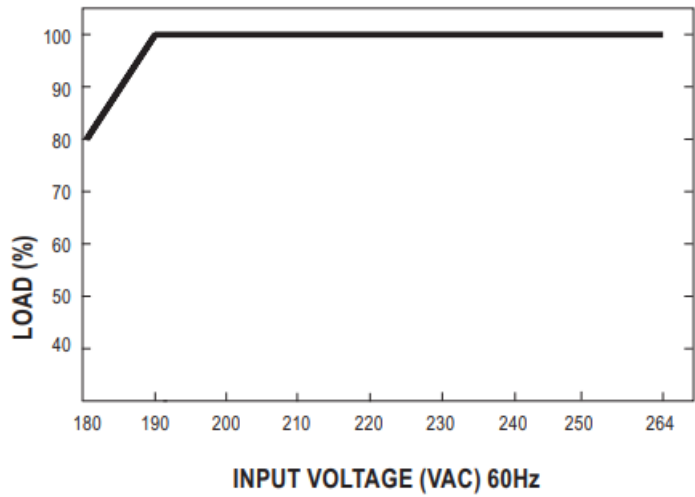
Block Diagram




Derating Curve



Static Characteristics



Documents / Resources

| | |
|---|---|
|  | <p>MEAN WELL APV-12E 12W Single Output Switching Power Supply [pdf] Instruction Manual APV-12E, 12W Single Output Switching Power Supply, APV-12E 12W Single Output Switching Power Supply, Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply, Supply</p> |
|---|---|

References

- [Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer](#)