

## Ultra-compact power module HLK-PM01

### DETAILS

#### 1. Product features:

1. Meet UL, CE requirements,
2. Ultra-thin, ultra-small
2. All voltage input (AC: 90 ~ 264V)
3. Low ripple and low noise
4. Output overload and short circuit protection
5. High efficiency, high power density
6. The product is designed to meet the requirements of EMC and Safety Test
7. Low power consumption, environmental protection, no-load loss <0.1W
8. 100% load aging and testing
9. 1 year warranty perio

#### 2. Environment Condition

| Item Name             | Technical Criteria  | Unit |
|-----------------------|---|------|
| Operation Temperature | -20—+60   | °C   |
| Store Temperature     | -40—+80   | °C   |
| Relative humidity     | 5—95  | %    |
| Cooling way           | Cooling by radiation  |      |
| Atmospheric pressure  | 80—106  | Kpa  |
| Sea level elevation   | ≤2000   | m    |
| Vibration             | Vibration coefficient<br>10~500Hz,2G10min./1cycle, 60min.each<br>along X,Y,Z axes |      |

#### 3.Electrical Characteristic

##### 1.Input characteristics (test at room temperature 20 °C).

| Item Name                    | Technical Criteria              | Unit |
|------------------------------|---------------------------------|------|
| Rated input voltage          | 100-240                         | VAc  |
| Input voltage range          | 90-264                          | VAc  |
| Maximum input current        | ≤0.2                            | A    |
| Input current surge          | ; ≤10                           | A    |
| maximum input voltage        | ≤270                            | VAc  |
| Enter slow start             | ≤50                             | mS   |
| Input Low Voltage Efficiency | Vin=110VAc. Output full-load≥69 | %    |

|  |  |                 |
|--|--|-----------------|
| Input High Voltage Efficiency              | Vin=220VAc, output full-load≥70  | %               |
| Long-term reliability                      | MTBF≥100, 000  | h               |
| Load rated output voltage                  | +5±0.1   | VDc             |
| Full rated output voltage                  | +5±0.2   | VDc             |
| Short-term maximum output current          | ≥1000  | mA              |
| The maximum output current for a long time | ≥600   | mA              |
| Voltage Regulation                         | ±0.2   | %               |
| Load Regulation                            | ±0.5   | %               |
| Output ripple and noise (mVp-p)            | ≤50<br>Rated input voltage, full load. Using 20MHz of bandwidth,<br>The load side 10uF and 0.1uF capacitor to be tested. | mV              |
| Switch overshoot amplitude                 | (Rated input voltage and output load plus 10%)≤5   | %V <sub>O</sub> |
| Output over-current protection             | 150-200% of the output maximum load  | A               |
| Output short circuit protection            | Direct short circuit at the normal output, automatically resume normal operation after a short circuit removal           |                 |

#### 4.Safety Characteristics :

4.1 Products designed to meet UL, CE safety certification requirements.

4.2 Safety and electromagnetic compatibility

Designed with the input of 0.5A UL certified insurance;

PCB board using double-sided copper clad plate production, material for the 94-V0 fire rating level;

Safety standards: Compliance with UL1012, EN60950, UL60950

Insulation voltage: I / P-O / P: 2500VAC

Insulation resistance :I / PO / P> 100M Ohms / 500VDC 25 °C 70% RH

Conduction and radiation :comply with EN55011, EN55022 (CISPR22)

Electrostatic discharge :IEC / EN 61000-4-2 level 4 8kV / 15kV

RF radiation Immunity: IEC / EN 61000-4-3 See Application Note

4.3 Temperature safety design

At room temperature,the capacitors of this power , the inner surface of the main converter maximum temperature does not exceed 90 °C;

Shell maximum surface temperature does not exceed 60 °C

#### 5.Logo, packaging, transportation, storage

5.1 Logo

5.1.1 Product logo

In place of products labeled with signs, its content in line with national standards, industry standards.

5.1.2 Packaging logo

Products marked with the manufacturer's name, address, zip code, product type, manufactured year, month, day on the box ;

Marked "up", "moisture" "Handle with care" and other transportation signs, all signs are in line with the provisions of GB 191.

5.2 Packaging

Products are separated using special plastic box packaging, with anti-vibration function, and in accordance with the provisions

of GB 3873.

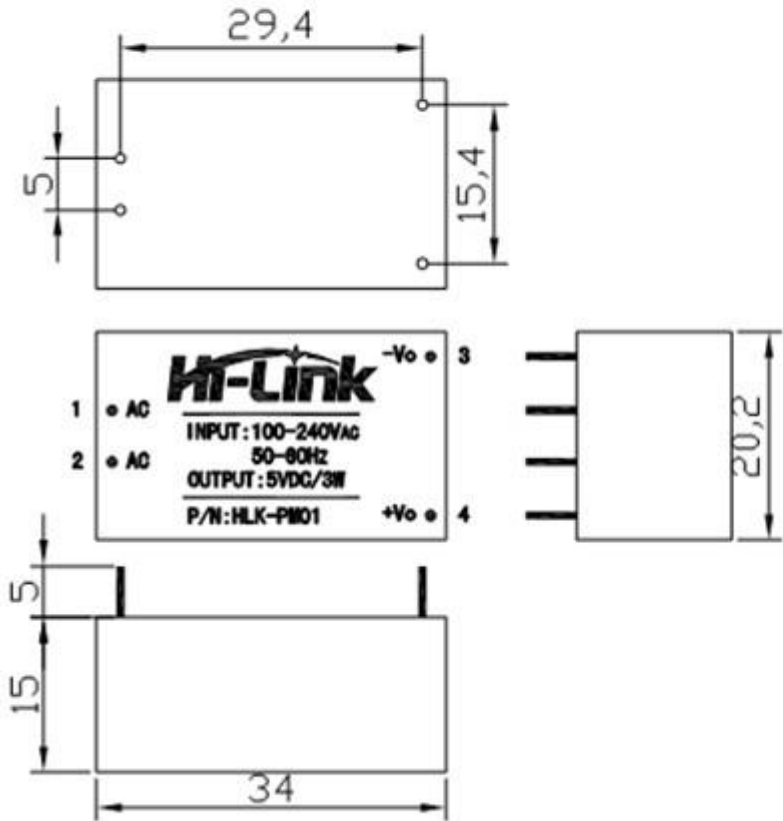
5.3 Transport

packaged products can be shipped by any transportation service, there should be awnings in transport and no excessive vibration, impact, etc.

5.4 Storage

Products should be stored in compliance with GB 3873.

6.Weight and Dimensions :



| Weight:≤20g  |     |
|--------------|-----|
| Pin Function |     |
| 1            | AC  |
| 2            | AC  |
| 3            | -V0 |
| 4            | +V0 |