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HLK-PM03 Ultra-compact module power

1. Product features:

1. Meet UL, CE requirements,
2. Ultra-thin, ultra-small
3. All voltage input (AC: 90 ~ 264V)
4. Low ripple and low noise
5. Output overload and short circuit protection
6. High efficiency, high power density
7. The product is designed to meet the requirements of EMC and Safety Test
8. Low power consumption, environmental protection, no-load loss <0.1W
9.100% load aging and testing
10.1 year warranty perio

2. Environment Condition

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

3. Electrical Characteristic

1. Input characteristics (test at room temperature 20 ℃).

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	+3.3±0.1	VDc
Full rated output voltage	+3.3±0.2	VDc
Short-term maximum output current	≥1200	mA
The maximum output current for a long time	≥1000	mA
Voltage Regulation	±0.2	%
Load Regulation	±0.5	%
Output ripple and noise (mVp-p)	≤70 Rated input voltage, full load. Using 20MHz of bandwidth, The load side 10uF and 0.1uF capacitor to be tested.	mV
Switch overshoot amplitude	(Rated input voltage and output load plus 10%)≤5	$\%V_O$
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 ℃ 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 ℃;

Shell maximum surface temperature does not exceed 60 ℃

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.

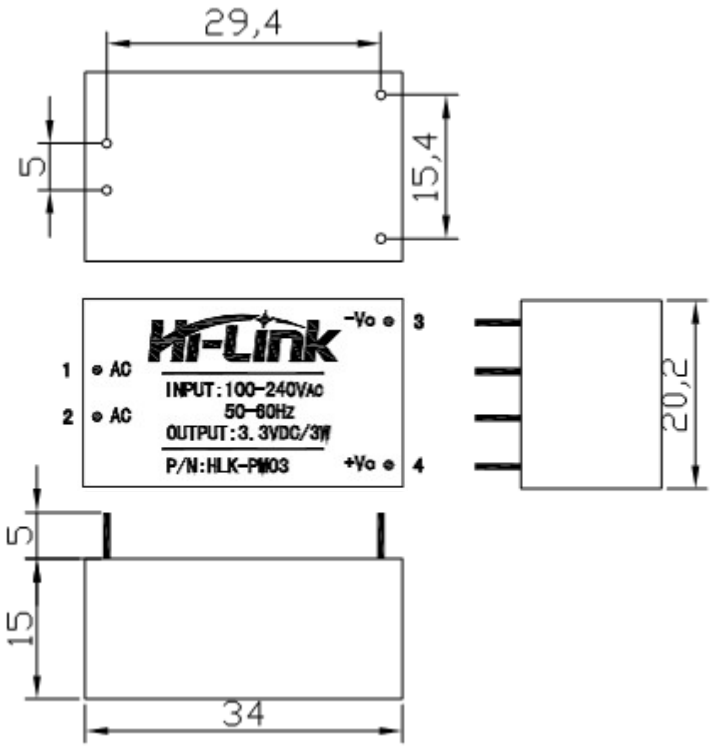
5.3 Transport

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