

NEW

HLK-10M12B

220V to 12V 833mA · 10W



New Solution/More Competitive

Lower price HLK-10M12B compatible with HLK-10M12 AC to DC 12v 10w Step Down mini Power Supply Module Converter Intelligent household switch power module

AC/DC-10WB Series Power Module List

MULTIPLE SPECIFICATIONS AVAILABLE

- International standard pins, PCB board installation
- Wide voltage 85-265VAC/120-350VDC input
- Ultra small isolated power module
- Stable single output
- Working temperature -25°C-- +60°C



Model	Input Voltage	Output Voltage/Current
HLK-10M03B	10W	3.3V/3000mA
HLK-10M05B		5V/2000mA
HLK-10M09B		9V/1100mA
HLK-10M12B		12V/830mA
HLK-10M15B		15V/660mA
HLK-10M24B		24V/420mA

Product Features

- Global universal input voltage(85-265VAC)
- Input and output isolation voltage 3000VAC
- Low power consumption, green enviroment protection, no-load loss < 0.1W
- High efficiency, high power density

- Long life design, continuous working time is greater than 100,000hours
- High output-quality environmentally friendly waterproof thermal conductive glue potting, dustproof, moisture-proof, shockproof, flame-retardant
- Meet UL/CE/EMC and safety testing requirements
- Can be used in medical, industrial control, electric power, instrumentation, communication, railway and other fields

Environment Condition

Working Temperature	-25—+60 °C
Storage temperature	-40—+80 °C
Relative humidity	5—95 %
Thermal methods	Natural cooling
Atmospheric pressure	80—106 Kpa
Altitude	≤2000 m
Vibration coefficient	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes. Meets secondary road transportation requirements

Input Features(test at room temperature)

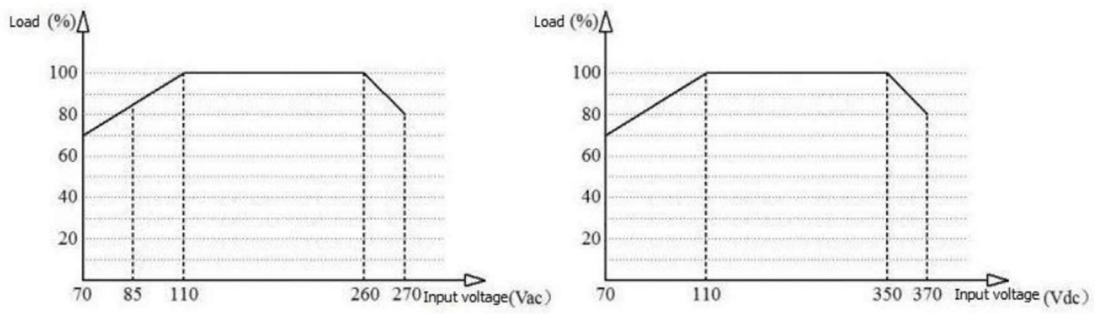
Rated input voltage	100-240Vac
Input voltage range	85-265VAC/120-350VDC
The maximum input CURRENT	≤0.2A
Input inrush current	≤10A

Input low start	$\leq 300\text{ms}$
Long-term reliability	$\text{MTBF} \geq 100000\text{H}$
External fuse recommended	1A/250Vac or 10 Ω wire wound resistance, Slow blow

Output Features

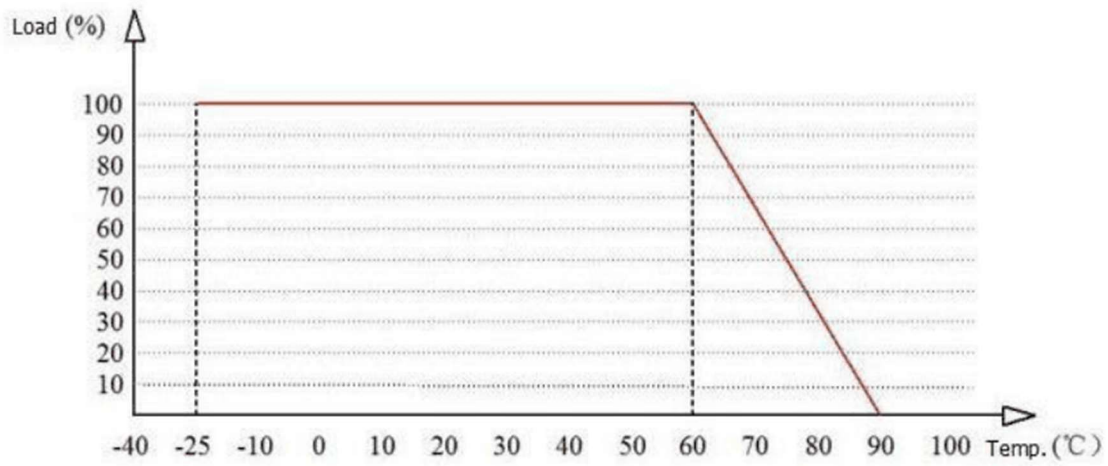
No-load rated output voltage	$5.0 \pm 0.1\text{Vdc}$
Full-load rated output voltage	$5.0 \pm 0.2\text{Vdc}$
Short term maximum output current	$\geq 1200\text{mA}$
Rated output current	1000mA
Voltage regulation rate	$\pm 0.2\%$
Load regulation rate	$\pm 0.5\%$
Switching on/off overshoot amplitude	(Rated input voltage, output with 10% load) $\leq 5\%V_o$
Output over-current protection	110-150% A
Output maximum load	
Ripple/Noise	$\leq 100\text{mVp-p(Typ:50)}$

Input Voltage & Load Characteristics



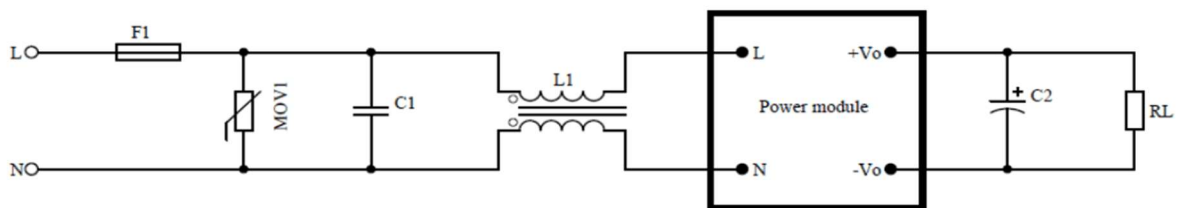
Input voltage and load characteristic curve
input voltage and load characteristic curve

Working Environment Temperature & Load Characteristics



Environmental temperature and load characteristic curve

Typical Application Circuit



Parameter Recommendation

F1/Fuse:1A/250Vac or 10Ω wire wound resistor, slow fuse

MOV1/Varistor:10D561K(The cumulative surge is to protect the module from damage)

C1/Safety capacitance: 0.1uF/275VAC(Filtering/safety protection/EMC certification)

L1/Common-mode inductance:Sensible value 10-30mH(testing requirements 1KHZ/0.3V current:100-500mA). EMI filtering

Safety Characteristics

Meet UL/CE requirements(UL/CE certification requires customers to self-certify)

Safe compatible with battery

The input end design adopts UL certification 1A insurance

The fire ration of PCB board is 94-V0

Safety standards comply with UL1012,EN60950,UL60950

Insulation voltage I/P-O/P > 2500Vac

Insulation resistance I/P-O/P > 100M Ohms/500Vdc 25°C 70%RH

Conforms to radiation EN55011, EN55022(CISPR22)

Electrostatic discharge IEC/EN 61000-4--2 level4 8KV/15KV

Temperature rise safety design

Under normal conditons, the maximum temperature rise of the inner surface of the power supply capacitor,

main converter, etc. does not exceed 90°C , and the maximum temperature rise of the shell surface does not exceed 60°C



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