

HLK PM12L Open Frame PCB Circuit Power Supply Module



HLK-PM12L 12V/3W Switch Power Supply Module is plastic enclosed PCB mounted isolated switching step-down power supply module. It can supply 12V DC from 120V AC – 230V AC and has a power rating of 3 Watt. This makes it perfect for small projects that needs a 12 volt supply from mains. There are many advantages for these modules, such as low-temperature rise, low power, high efficiency, high reliability, high-security isolation etc.

This Power Supply Module voltage source is a switching source, so you do not have to worry about fluctuations in voltage grid. It is designed to be mounted on the PCB and is the ideal solution to power pads that you take. It is widely used in a smart home, automation and control, communication equipment, instrumentation and other industries.

FEATURES:

- Ultra-thin, ultra-small, minimum volume in the industry
- Universal input voltage ((90~245Vac)
- Low power consumption, environmental protection, no-load loss <0.1W
- Low ripple and low noise
- Good output short circuit and over-current protection and self-recovery
- High efficiency, high power density
- Input-output isolated voltage-proof 3000Vac
- 100% full load aging and testing
- High reliability, long life design, continuous working time more than 100000 hours
- Meet UL,CE requirements; product design meets EMC and safety test requirements

- Adopt high quality environmental protection waterproof heat conduction glue to fill seal,moisture-proof, anti-vibration, meet the IP65 standard of waterproof and dust proof
- Economic solution, cost-effective
- Work without an external circuit

SPECIFICATIONS:

- Hi-link part number: HLK-PM012
- Morsun part number: LD0-2B12R2
- Power: 3W
- Package size: 44.5*25.4*20mm
- Input voltage range: 85~264V
- Output voltage: 12V
- Output current: 250mA
- Connection mode: Series switching power supply
- Isolation voltage: 3000Vdc

ENVIRONMENTAL CONDITION:

Items	Technical parameters	Unit	Remarks
Working temperature	-40—+85	℃	
Storage temperature	-40—+80	℃	
Relative humidity	5—95	%	
Heat dissipation method	Natural cooling		
Atmospheric pressure	80—106	Kpa	
Vibration	Vibration coefficient: 10~500Hz,2G10min/1cycle, 60min.each along X,Y,Z axes		Meet secondary road transport requirements

INPUT CHARACTERISTICS:

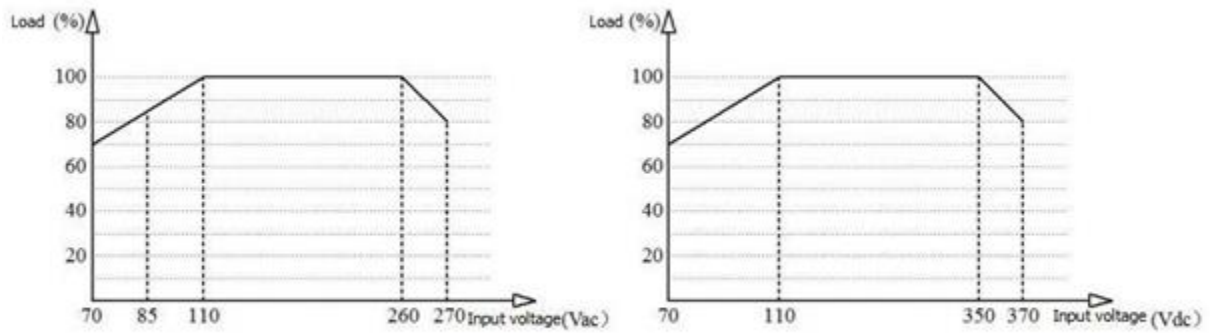
Project Name	Technical Criteria	Unit	Remark
Rated Input Voltage	90-245	Vac	
Input Voltage Range	85-264	Vac	Or 70-350Vdc
Maximum input current	≤ 0.2	A	
Input surge current	≤ 10	A	
Maximum input voltage	≤ 270	Vac	
Input slow start	≤ 50	ms	
Input low Voltage efficiency	Vin=110Vac,output full load ≥ 69	%	
Input high voltage efficiency	Vin=220Vac,output full load ≥ 70	%	
Long-term reliability	MTBF $\geq 100,000$	h	
External fuse recommendation	0.5A/250Vac		Slow fuse

Notes: Test at room temperature

OUTPUT CHARACTERISTICS:

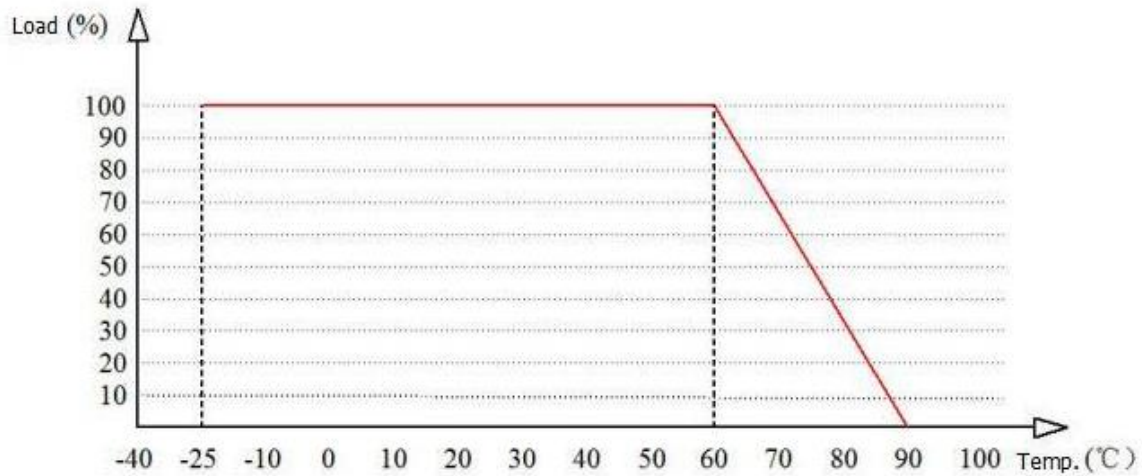
Project Name	Technical Criteria	Unit
No-load rated output voltage	12 \pm 0.1	Vdc
Full load rated output voltage	12 \pm 0.2	Vdc
Short-time maximum output current	≥ 310	mA
Long time maximum output current	≥ 250	mA
voltage regulation	± 0.2	%
load regulation	± 0.5	%
Output ripple and noise (mVp-p)	≤ 50 Rated input voltage, full output load. Using 20MHz bandwidth oscilloscope, Load side and 10uF and 0.1uF capacitors are tested.	mV
Switching machine overshoot amplitude	(rated input voltage, output plus 10% load) ≤ 5	% V0
Output over-current protection	150-200% of maximum output load	A
Output short circuit protection	Direct short circuit in normal output and automatic return to normal operation after removal of short circuit	

INPUT VOLTAGE AND LOAD CHARACTERISTICS:

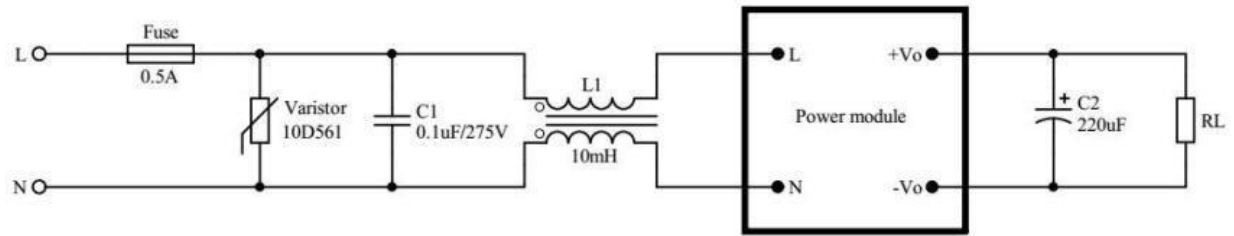


Input voltage and load characteristic curve

WORKING ENVIRONMENT TEMPERATURE AND LOAD CHARACTERISTICS:



TYPICAL APPLICATION CIRCUIT:





Certificate of Conformity

Certificate No. : HTT202006309E
Applicant : Shenzhen Hi-Link Electronics Co., Ltd.
Applicant Address : 3/F, West Gate, Caiyue Building, 24 Liuxian Avenue, Longhua, Shenzhen
Manufacturer : Shenzhen Hi-Link Electronics Co., Ltd.
Manufacturer Address : 3/F, West Gate, Caiyue Building, 24 Liuxian Avenue, Longhua, Shenzhen
Product : Power module
Model No. : HLK-5M05, HLK-5M03, HLK-5M04, HLK-5M06, HLK-5M09, HLK-5M12, HLK-5M15, HLK-5M24
Trademark : N/A

The following products have been tested by us with listed standards and found in compliance with the council EMC 2014/30/EU. It is possible to use CE marking to demonstrate the compliance with this EMC.

Test standards:	Report(s) Number	Issued By	Issued Date
EN 55032: 2015+AC:2016+A11:2020 EN 55035: 2017+A11:2020 EN IEC 61000-3-2: 2019 EN 61000-3-3:2013+A1:2019	HTT202006309ER	HTT	Jun.29,2020

This certificate of conformity is not transferable and based on an evaluation of a sample of the above mentioned product.



Authorized Signer:

Kevin Yang

Kevin Yang/Senior Manager

Date: Jun.29,2020



