HLK 10M15L Isolated PCB Open Frame Circuit Board

The 10W ultra-small series power supply module is a small volume, high efficiency power module designed for customers by Hi-Link. It has the advantage of global input voltage range, low temperature rise, low power consumption, high efficiency, high reliability, high security isolation etc. and has been widely used in smart home, automation control, communication equipment, instruments 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-10M15L
- Morsun part number:LH10-13B015
- Power: 10W
- Package size: 44.5*25.4*20 mm
- Input voltage range: 85¬264V
- Output voltage: 15Vdc
- Output current: 670mA
- Connection mode: Series switching power supply
- Isolation voltage: 3000Vdc

ENVIRONMENTAL CONDITION:

Item name	Technical Indicators	Unit	Notes
Working temperature	-25~+60	˚C	
Storage temperature	-40~+80	˚C	
Relative humidity	5~95	%	
Thermal methods	Natural cooling		
Atmosphere pressure	80~106	Kpa	
Attitute	<=2000	m	
Vibration	Vibration coefficient 10~500Hz,2G10min./1cycle,60min each along X,Y,Z areas		Meet the second-class road transport requirement

INPUT CHARACTERSITICS:

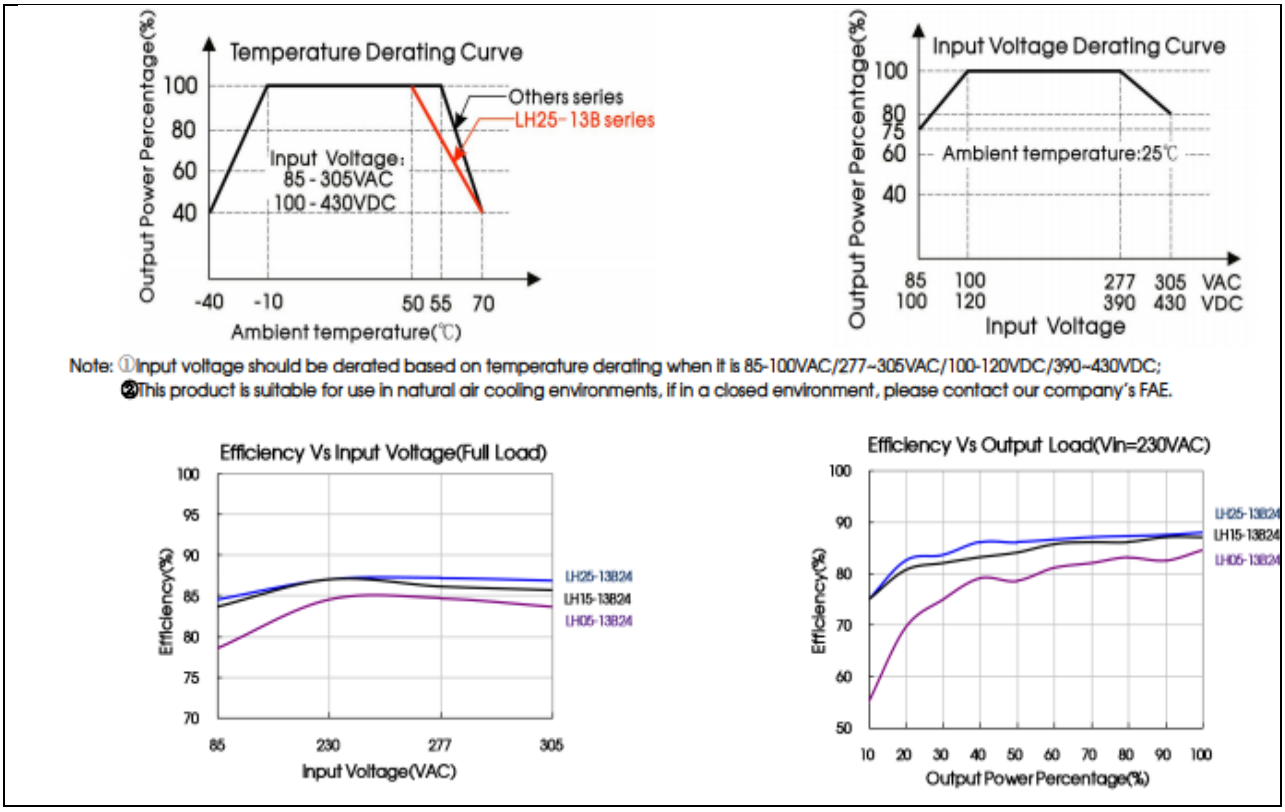
Project Name	Technical Criteria	Unit	Remark
Rated Input Voltage	90-245	Vac	
Input Voltage Range	85-264	Vac	Or 70-350Vdc
Maximum input current	≤0.2	A	
Input surge current	≤10	A	
Maximum input	≤270	Vac	

voltage			
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≥100,000	h	
External fuse recommendation	0.5A/250Vac		Slow fuse

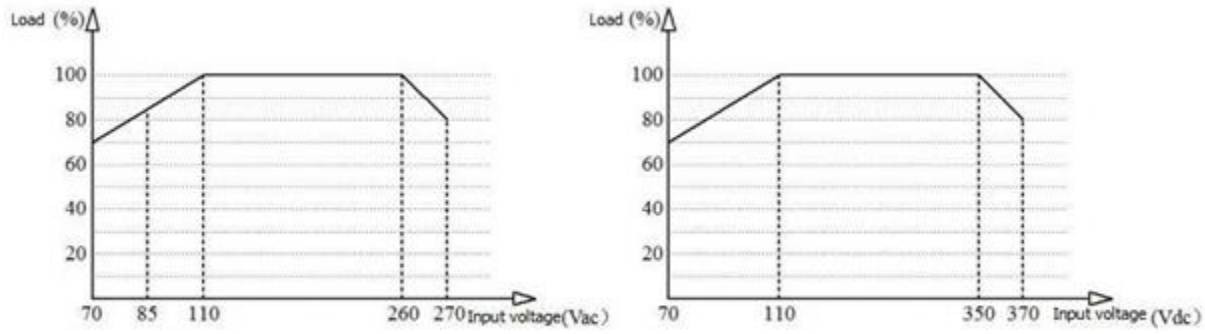
OUTPUT CHARACTERISTICS:

Project Name	**Technical Criteria**	**Unit**
No-load rated output voltage	15±0.1	Vdc
Full load rated output voltage	15±0.2	Vdc
Short-time maximum output current	≥740	mA
Long time maximum output current	≥670	mA
voltage regulation	±2	%
load regulation	±0.5	%
Output ripple and noise (mVp-p)	≤70 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	110-150% 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	

PRODUCT CHARACTRISTICS CURVE:

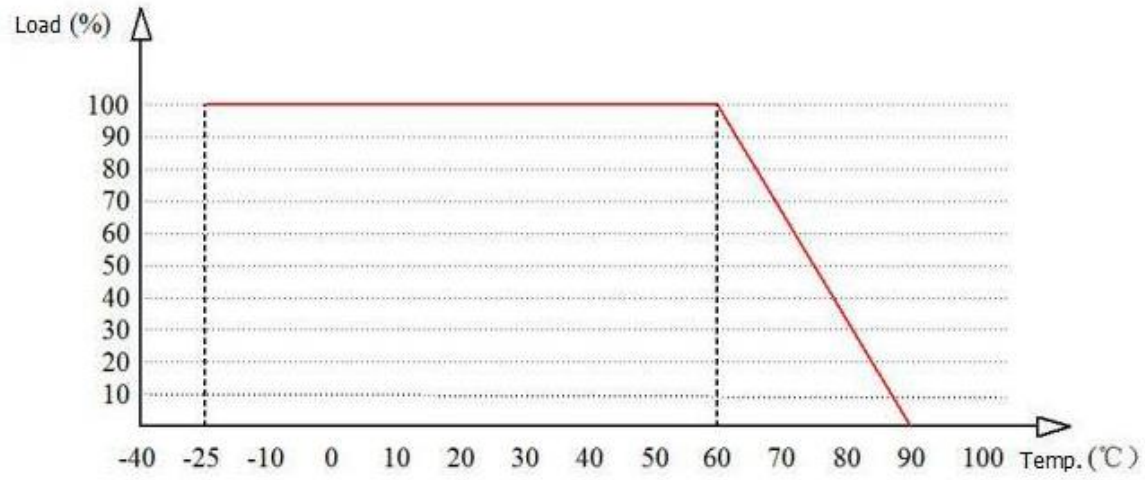


INPUT VOLTAGE AND LOAD CHARACTERISTICS:



Input voltage and load characteristic curve

WORKING ENVIRONMENT TEMPERATURE AND LOAD CHARACTERISTICS:



TYPICAL APPLICATION CIRCUIT: