

## HLK 40D2405 Power Supply Module



The output power of 40w DC to DC module power supply is 40w. 2:1 wide voltage input range , efficiency upto 91%, 1500Vdc isolation voltage , allowable operating temperature -40°C to +85°C , with output over voltage , over current, short circuit protection functions, bare metal meets CISPR32/ EN55032 CLASS A , widely used in medical, industrial control, electrical power, instrumentation, communication, railway and other fields.

### FEATURES:

- Ultra wide range input (2:1), output 40W
- Conversion efficiency 91%(Typ)
- Isolation voltage: 1500VDC
- Ultra low standby power consumption : 0. 1w (typ)
- Ultra fast charge: 1 ms (typ)
- Operating temperaturerange: -40°C~+85°C
- Output short-circuit protection , low requirements for output voltage stability
- International standard pins, PCB board in-line installation
- Adopting high quality environmental protection waterproof & thermally conductive adhesive potting, moisture-proof, vibration-proof, meet the waterproof & dustproof IP65 standard
- High reliability, long life design, long continuous working time

## SPECIFICATIONS:

- Hi-link part number: HLK-40D2405
- Morsun part number: VRB2405LD-40W(H) R3
- Power: 40W
- Package size: 50.8\*50.8\*12.7mm
- Output voltage: 5V
- Output current: 8000mA
- Input voltage range: 9~36 Vdc
- Output voltage form: Single voltage regulator
- Isolation voltage: 1500Vdc

## ENVIRONMENTAL CONDITIONS:

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:

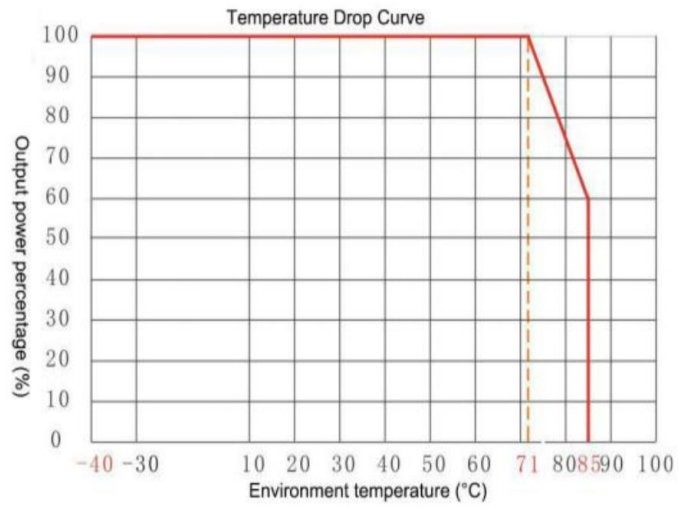
Items	Working conditions	Unit	Remarks		
Rated input voltage	24	Vdc			
Input voltage range	18-36	Vdc			
Max input current	≤2.5	A			
Reflected ripple current	40	mA	DC24V Rated input voltage series		
Impulse voltage	≤50	Vdc			
Starting voltage	18	Vdc			
Input under voltage protection	---	Vdc			
Start delay time	1	ms	Rated input voltage and constant resistance load		
Input filter type			PI version		
Hot plug			No-support		
Remote end (Ctrl)*	Module open		Ctrl Floating or TTL high level (3.5-12VDC)		
	Module closed		Ctrl connected to GND or low level (0-1.2VDC)		
	Input current during shutdown	mA	-	1	0

**Notes: Test at room temperature**

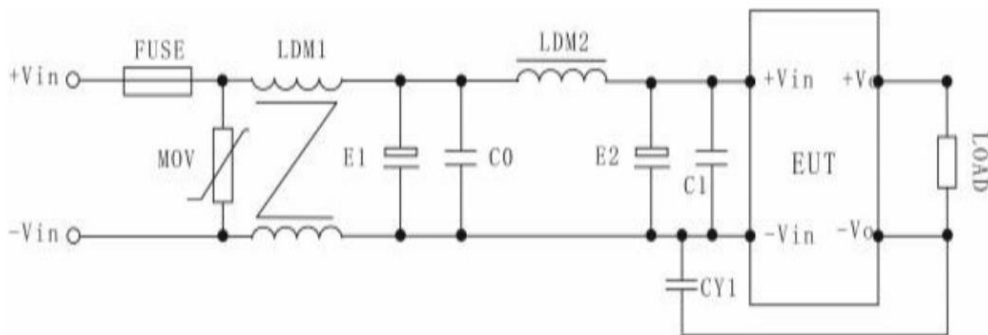
## OUTPUT CHARACTERISTICS:

Items	Technical parameters	Unit	Remarks
No-load rated output voltage	5V±2%	Vdc	
Short time maximum output current	≥8200	mA	
Rated output current	8000	mA	
Voltage regulation	±0.5	%	
Load Regulation	±1	%	
Conversion efficiency	Vin=24 Vdc, Output full load 88	%	
Output ripple and noise (mVp-p)	≤100 Pure resistive load, 20MHz bandwidth, peak to peak value	mV	
Output voltage regulation	-	-	No adjustment
Output over-current protection	Output 110-200% of the maximum load	A	
Output short circuit protection	Direct short circuit during normal output, automatically resume normal operation after short circuit removal		Does not damage the whole machine
Output over-voltage protection	--	Vdc	
Insulation voltage	Input-output, test time 1 minute, leakage current less than 1mA/1500V	-	
Insulation resistance	Input-output, insulation voltage 500VDC	MΩ	
Isolated capacitor	Input-output, 100KHz/0.1V 1000pF	-	

## DERATING CURVE:



## 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

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