

■ Features:

- Compact size
- Universal Input:85 - 265VAC/100 - 370VDC
- High efficiency, high reliability
- Regulated output, Low ripple & noise
- High isolation voltage up to 3K VAC
- Plastic case: 27*37*17mm
- Output short-circuit, over-current protection
- Low standby power consumption, environment friendly
- PCB mounting
- 3-year warranty



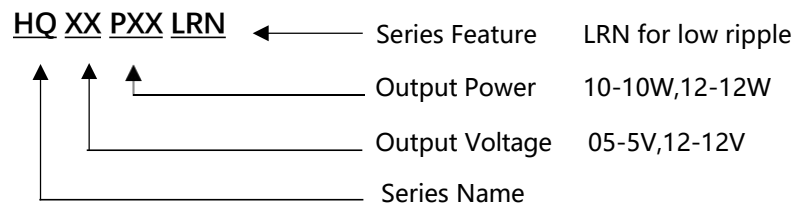
■ Application:

- Industrial electrical equipment
- Mechanical equipment
- Industrial automation equipment
- Handheld electronic equipment
- Wireless network
- Telecommunications/data communication
- Instrument

■ Product description:

HQ series—a 12W compact size power converter offered by HIECUBE. It features universal input voltage, taking both DC and AC input voltage, low power consumption, Low ripple & noise, high efficiency, high reliability, 3000VAC safer isolation. It offers good EMC performance, and widely used in industrial, electricity, instruments, telecommunication and civil applications.

■ Product model description:



■ Input Specifications:

Item	Voltage Range	Input Current@110V	Input Current@220	Power Factor	Start time
HQ05P10LRN	85V~265VAC 100V~370VDC 50/60HZ	< 250mA	< 130mA	< 0.5	< 0.2S
HQ06P10LRN					
HQ09P12LRN					
HQ12P12LRN					
HQ15P12LRN					
HQ20P12LRN					
HQ24P12LRN					

■ Output Specifications:

Item	Voltage	Current	Power	Eff (Typ)	Vol accuracy	Load regulation
HQ05P10LRN	5V	2A	10W	78%	±1%	±1%
HQ06P10LRN	6V	1.6A		79%		±1%
HQ09P12LRN	9V	1.3A	12W	82%		±1%
HQ12P12LRN	12V	1A		85%		±0.8%
HQ15P12LRN	15V	0.8A		85%		±0.8%
HQ20P12LRN	20V	0.6A		86%		±0.8%
HQ24P12LRN	24V	0.5A		86%		±0.4%

■ Ripple & Noise:

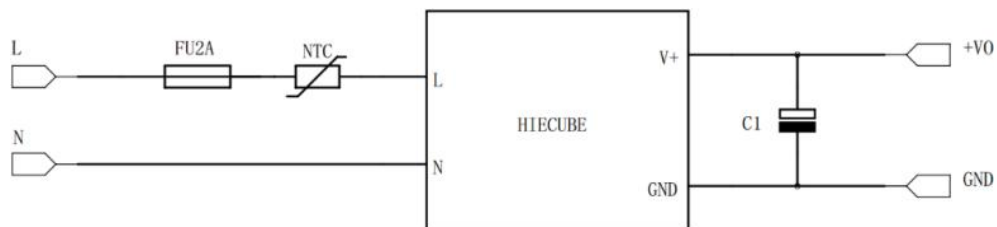
Item	20M bandwidth (peak-peak value)		200M bandwidth (peak-peak value)	
	Typ	Max	Typ	Max
HQ05P10LRN	30mV	35mV	50mV	80mV
HQ06P10LRN	30mV	35mV	45mV	85mV
HQ09P12LRN	20mV	30mV	45mV	80mV
HQ12P12LRN	20mV	25mV	40mV	80mV
HQ15P12LRN	20mV	25mV	40mV	80mV
HQ20P12LRN	20mV	28mV	50mV	85mV
HQ24P12LRN	20mV	28mV	50mV	85mV

■ General Specifications:

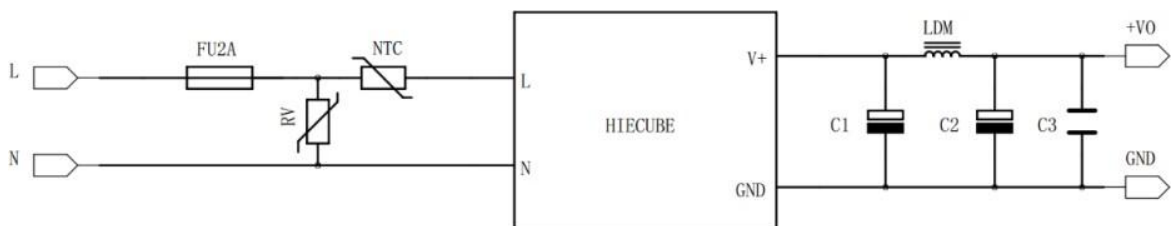
Item	Operating Conditions
Switching Frequency	65KHz
Short Circuit Protection	Hiccups, continuous, self-recovery
Over-load Protection	> Load110%, self-recovery
Overheat Protection	higher than 80°C (±4°C)
Isolation voltage	Input-Output 3000VAC /1min
Operating Temperature	-30~60°C
Storage Temperature	-40~70°C
Weight	30g(±2g)
Package Dimensions	27*37*17mm
Casing Material	Black flame-retardant and heat-resistant plastic
Cooling Method	Free air convection
Safety Class	CLASS II

■ Design Reference:

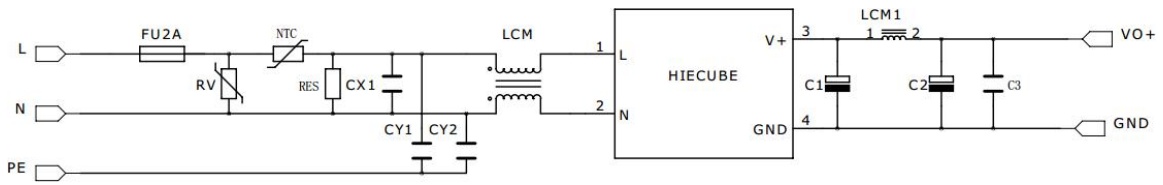
1. Typical application circuit:



2.Low ripple application circuit:



3.EMC application circuit:

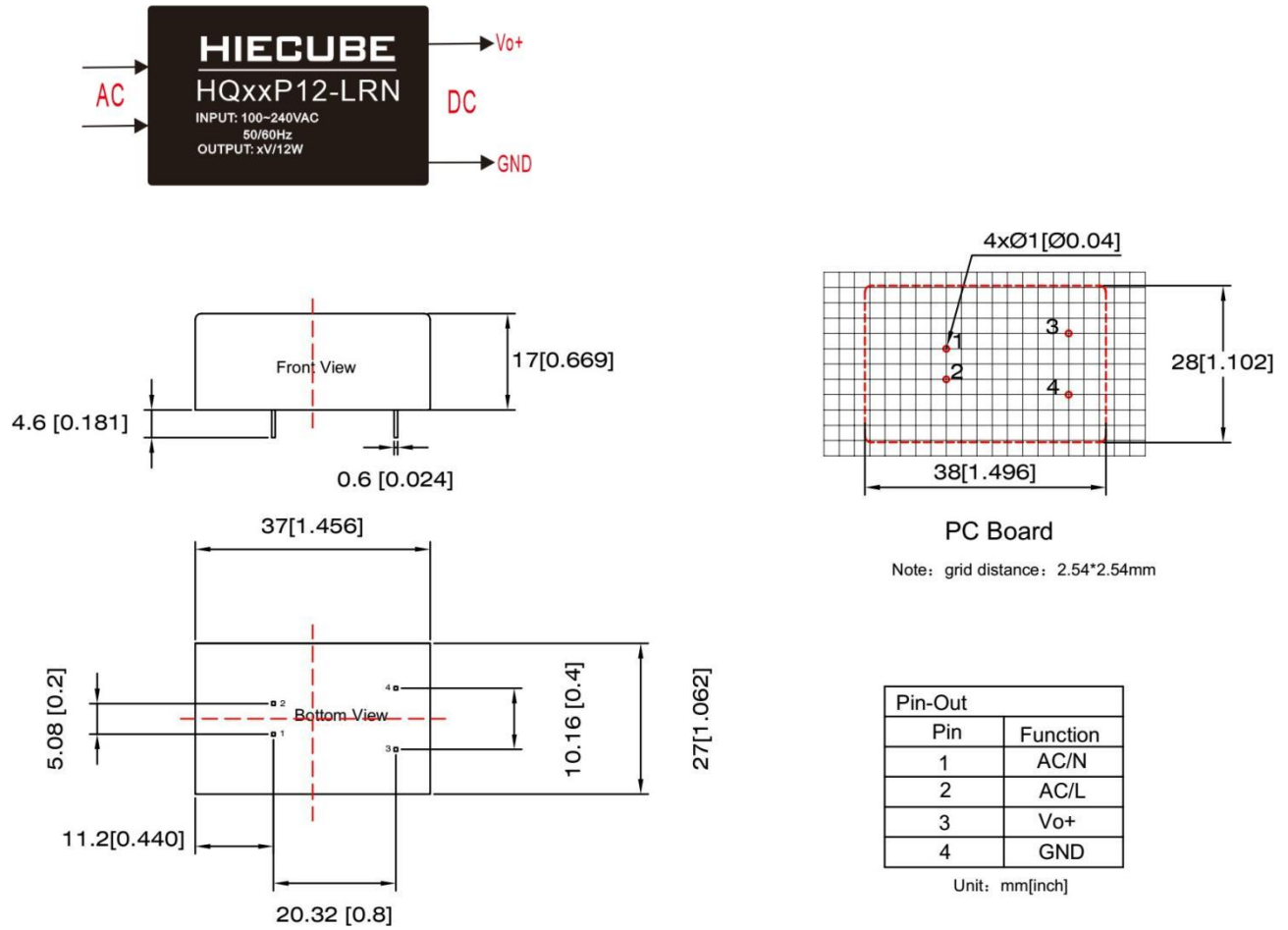


Peripheral component parameters

INPUT		
Component name		Parameter
FU2A	FUSE	2A /250V
RV	Mov	14D471K
NTC	Thermistor	10D-11
RES	Discharge resistor	1MΩ/1W
LCM	Common-mode inductor	UU9.8
CX1	Safety capacitance	0.33uF/275V
CY1 CY2	Y2 capacitance	222M/250V

OUTPUT				
VOUT	C1	C2	LDM	C3
5V/6V	16V/1000uF	16V/1000uF	Rod inductance	CBB Capacitance 104/50V
9V	25V/680uF	25V/680uF		
12V				
15V				
20V	35V/470uF	35V/470uF		
24V				

■ Outline Dimensions & Pin connections



Note:

1. All index testing methods in this datasheet are based on our Company' s corporate standards;
2. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25°C, humidity<75% with nominal input voltage and rated output load;

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