

### Features

- Wide input range (85-264VAC,100-370VDC)
- 70\*48\*23.5mm small size
- No-load power consumption<0.1W
- Protection type: short circuit/over load/over voltage
- Operating temperature range -40°C to +85°C
- 4000V isolation voltage
- Medical Level Safety Certification (Level 2 MOPP Patient Protection)
- 100% high temperature aging and testing
- 3 years warranty



3 years  
Warranty

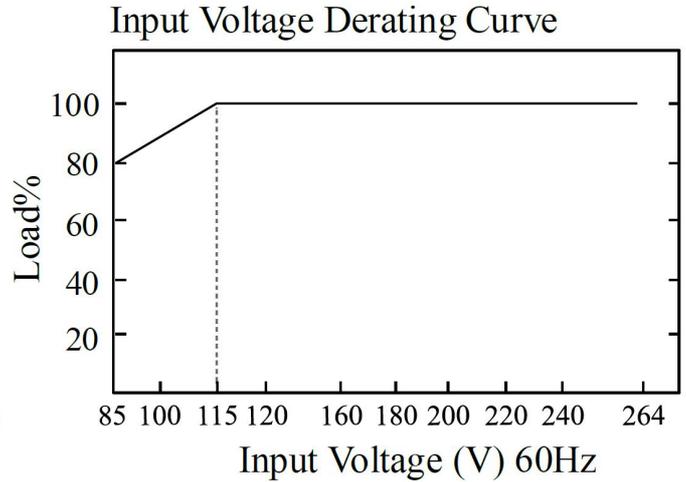
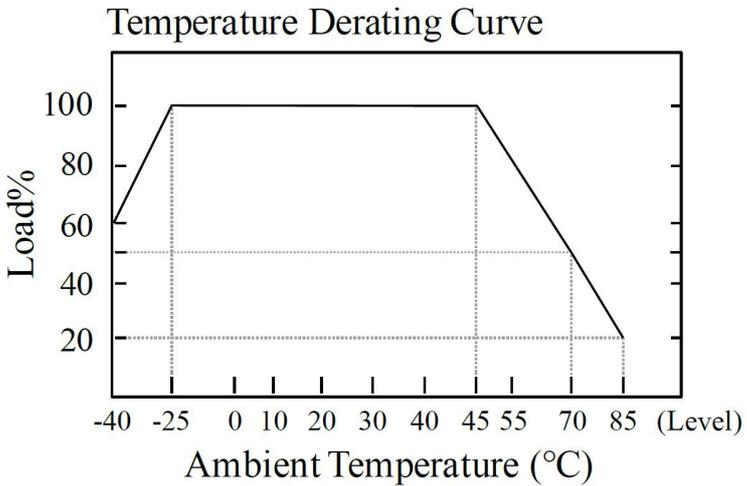
### Selection Guide

Model	Input Voltage	Rated Power (W)	Output Voltage (V)	Output Current (A)	Ripple & Noise (mVp-p)	Efficiency (%)
QH25-20B05MU	85-264VAC 100-370VDC	25	5	5	50	77
QH25-20B12MU		25	12	2.1	50	83
QH25-20B15MU		25	15	1.66	50	83
QH25-20B24MU		25	24	1.05	50	86
QH25-20B48MU		25	48	0.52	50	88

Specifications						
OUTPUT	Voltage Tolerance	±2.0%				
	Line Regulation	±1.0%				
	Load Regulation	±1.0%				
	Setup, Rise Time (Typ.)	1000ms, 40ms/230VAC 2000ms, 100ms/115VAC at full load				
	Hold Up Time (Typ.)	40ms/230VAC 15ms/115VAC at full load				
	Ripple & Noise (Max.) (Note 2.)	100mV				
INPUT	Voltage Range	85-264VAC 100-370VDC				
	Frequency Range	47-440Hz				
	Current (Typ.)	700mA/115VAC 400mA/230VAC				
	Inrush Current (Typ.)	Cold boot 20A/115VAC 40A/230VAC				
	External Fuse Recommended	T2A/250V				
	Leakage Current (Typ.)	<0.1mA/230VAC/50Hz				
PROTECTION	Over Load	≥110% load, recovers automatically after fault condition is removed				
	Short Circuit	Hiccup mode, recovers automatically after fault condition is removed				
	Over Voltage (Note 4.)	Voltage	5VDC	12VDC	15VDC	24VDC
Range		≤7.5VDC	≤16VDC	≤20VDC	≤30VDC	≤60VDC
ENVIRONMENT	Working Temp.	-40°C to +85°C (Refer to "Derating curve")				
	Working Humidity	85%RH max				
	Storage Temp., Humidity	-40°C to +85°C, 10-95%RH				
	Temp. Coefficient	0.03%/ (0-50°C)				
	Vibration	10-500Hz, 2G, 10min./1cycle, 60min.each along X, Y, Z axes				
SAFETY & EMC (NOTE 3.)	Safety Standards	BS EN/EN60601-1				
	Isolation Voltage	I/P-O/P: 4000VAC I/P-FG: 1500VAC O/P-FG: 500VAC				
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: >100M Ohms/500VDC 25°C 70% RH				
	EMC Emission & Immunity	EN55011, EN55032 (CISPR32) (Refer to "Typical Application")				
	ESD	IEC/EN 61000-4-2 level 4 Contact ±8kV/Air ±15kV (Refer to "Typical Application")				
	RF	IEC/EN 61000-4-3 (Refer to "Typical Application")				
	EFT	IEC/EN 61000-4-4 level 4 4kV (Refer to "Typical Application")				
	Surge	IEC/EN 61000-4-5 level 4 2kV/4kV				
OTHERS	MTBF	300K hrs min. MIL-HDBK-217F (25°C)				
	Dimension	70*48*23.5mm (L*W*H)				
	Weight	120g/PCS				
	Package	112 PCS				
	Carton	360*300*250mm				

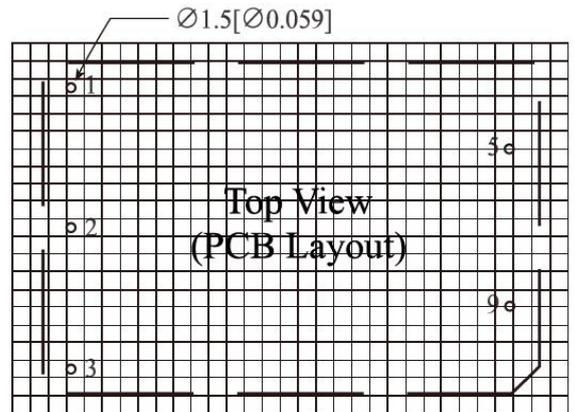
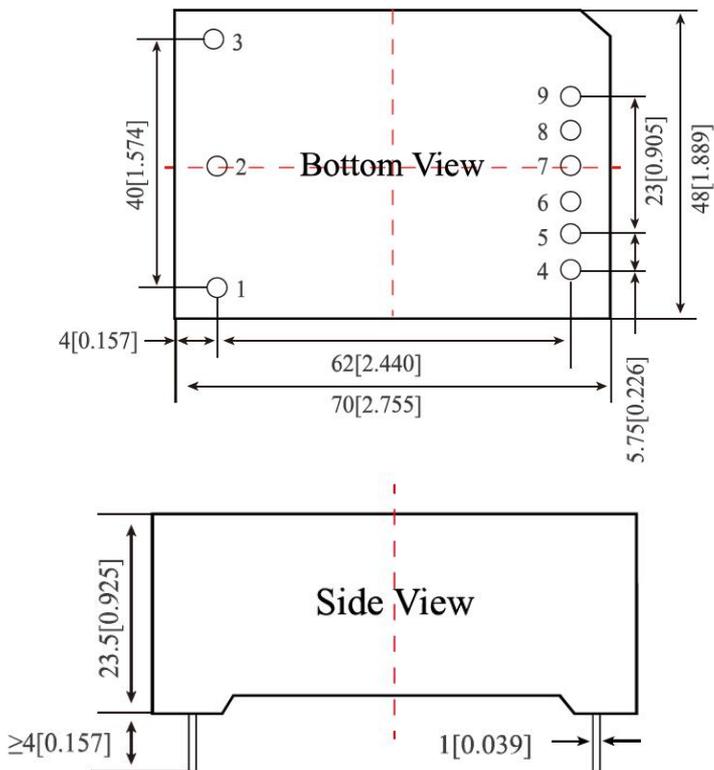
NOTE	1. All parameters not specially mentioned, are measured when TA=25°C, humidity<75%, input nominal voltage and output rated load.
	2. Measurement method of ripple & noise: Parallel line test method shall be adopted. Meanwhile, 0.1uF high-frequency ceramic capacitor and one 47uF electrolytic capacitor shall be connected in parallel at the terminal for measurement under 20Mhz bandwidth and connected according to "typical application". Element parameters shall be the same as those measured in the table.
	3. The power supply is regarded as a component in the system, and electromagnetic compatibility shall be confirmed in combination with the terminal equipment.
	4. This series of overvoltage protection protects the subsequent circuit in case of module abnormality through the peripheral TVS tube.

### Derating Curve



### Dimensions & Function

Third Angle Projection

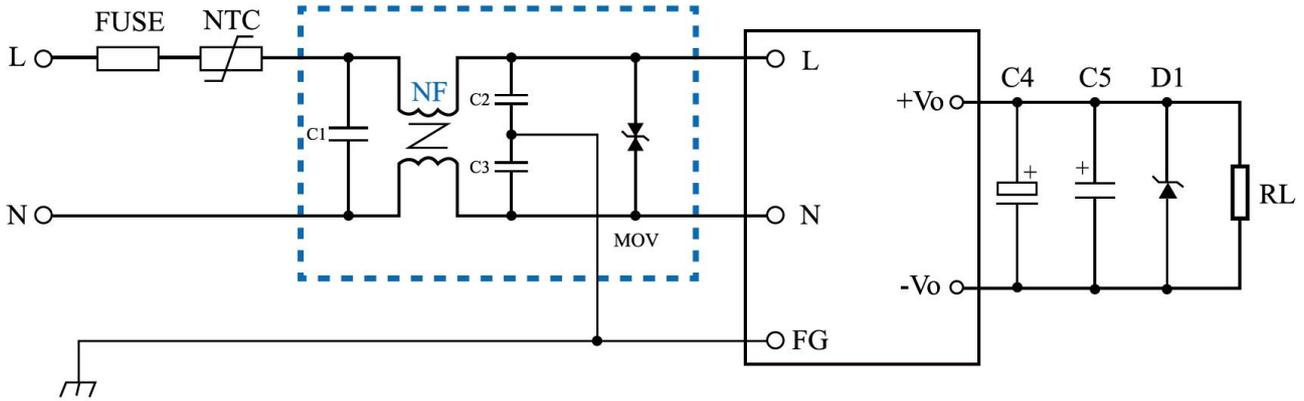


Note: Grid Spacing 2.54 \* 2.54mm

Pin	Function
1	FG
2	AC(N)
3	AC(L)
4	No Pin
5	-Vo
6	No Pin
7	No Pin
8	No Pin
9	+Vo

NOTE: Unit size: mm[inch] Terminal tolerance: ±0.1mm Unmarked tolerances: ±0.5mm

### Typical Application



**NOTE:**

1. Output filter capacitor C4 is electrolytic capacitor. It is recommended to use high-frequency low-resistance electrolytic capacitor. Refer to technical specifications provided by manufacturers for capacity and current. Capacitor withstand voltage derating is more than 80%. C5 is to remove high frequency noise. D1 is the TVS tube recommended to be used for protecting the post-stage circuit (in case of module abnormality).
2. The dotted box is the EMC filter accessed to meet higher EMC requirements, which can be omitted in general applications.
3. In order to meet the needs of customers, we have made the circuit in the dashed box into a product named: FA01/FA02, Used as a support for customers. See FA01 and FA02 Technical Manual for details. For technical support, please contact our engineer.

### List Of Components

Position Model	FUSE	R	NF	MOV	C1	C2/C3	C5	C4	D1
QH25-20B05MU	T2A/250V	Thermistor 10D-9	Common mode inductance Inductance value 3-10mH Current 0.2-0.5A	14D471K	104K/275V	471K/400 VAC	104K/50V	470uF/16V	P6KE7.5A
QH25-20B12MU								120uF/16V	P6KE16A
QH25-20B15MU								120uF/16V	P6KE20A
QH25-20B24MU								120uF/25V	P6KE30A
QH25-20B48MU								100uF/35V	P6KE60A