

## Features

1. Wide input range (85-305VAC, 100-430VDC)
2. 45.0\*25.4\*15.5mm compact size
3. No load power consumption<0.1W
4. Protection type: short circuit/over load/over voltage
5. Operating temperature range: -40°C to +85°C
6. 4000V isolation voltage
7. Medical level safety certification (level 2 MOPP patient protection)
8. 100% high temperature burn-in and function test
9. 3 years warranty



3 years  
Warranty

## Selection Guide

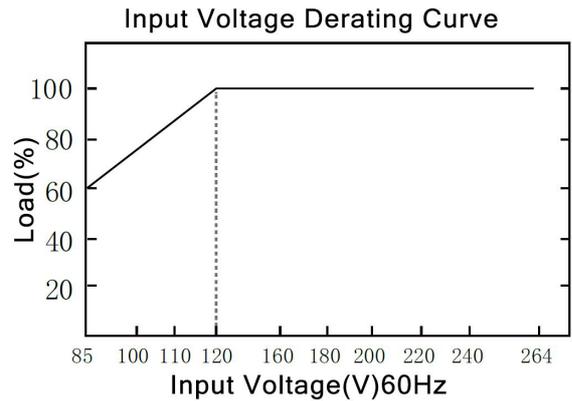
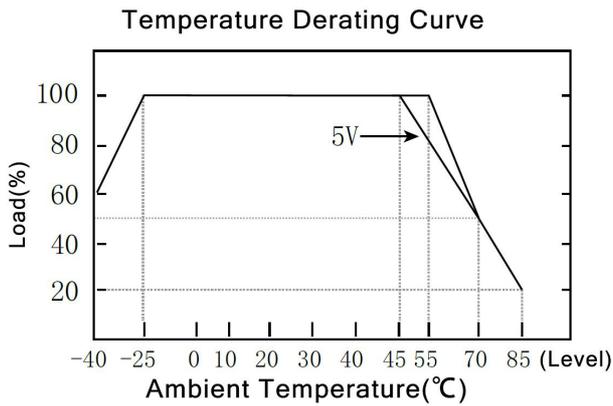
Model	Input Voltage	Rated Power (W)	Output Voltage (V)	Output Current (A)	Ripple & Noise (mVp-p)	Efficiency (%)
QH10-23B05MU	85-305VAC 100-430VDC	10	5	2	100	78
QH10-23B09MU		10	9	1.05	100	80
QH10-23B12MU		10	12	0.83	100	84
QH10-23B15MU		10	15	0.66	100	84
QH10-23B24MU		10	24	0.42	100	86

**Specifications**

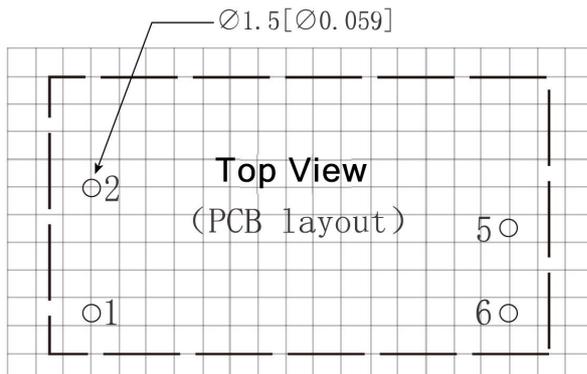
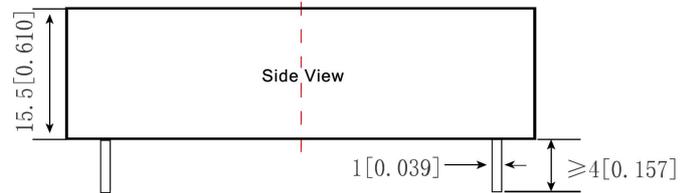
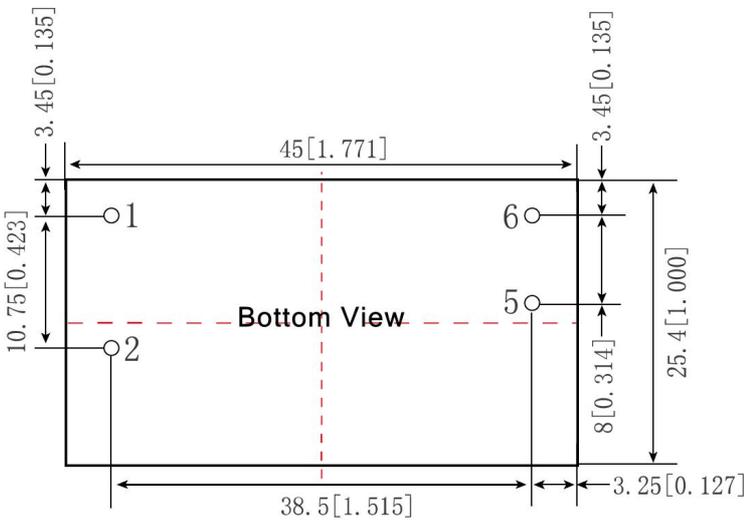
OUTPUT	Voltage Tolerance	±3.0% (±5.0% max)					
	Line Regulation	±1.0%					
	Load Regulation	±1.0%					
	Setup, Rise Time (Typ.)	100ms/230VAC 200ms/115VAC at full load					
	Hold Up Time (Typ.)	40ms/230VAC 15ms/115VAC at full load					
	Ripple & Noise (Max.) (Note 2.)	150mV					
INPUT	Voltage Range	85-305VAC 100-430VDC					
	Nominal Voltage	100-277VAC					
	Frequency Range	47-440Hz					
	Current (Typ.)	230mA/115VAC 110mA/230VAC					
	Inrush Current (Typ.)	18A/115VAC 38A/230VAC					
	External Fuse Recommended	T1A/250V					
	Leakage Current (Typ.)	<0.1mA/265VAC/50Hz					
PROTECTION	Over Load	≥110% load, self-recovery after troubleshooting					
	Short Circuit	Hiccup mode, self-recovery after troubleshooting					
	Over Voltage (Note 4.)	Voltage	5VDC	9VDC	12VDC	15VDC	24VDC
		Range	≤7.5VDC	≤15VDC	≤16VDC	≤20VDC	≤30VDC
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					
	Isolation Resistance	I/P-O/P: >100M Ohms/500VDC 25°C 70% RH					
	Conducted & Radiated Emissions	EN55011, EN55032 (CISPR32) CLASS B (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 (Refer to "Typical Application")					
OTHERS	MTBF	300K hrs min. MIL-HDBK-217F (25°C)					
	Dimension	45.0*25.4*15.5mm					
	Weight	25g/PCS					
	Package	580 PCS					
	Carton	360*300*250mm					

NOTE	1.All parameters not specially mentioned, are measured when TA=25°C, humidity<75%, input nominal voltage 230VAC 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

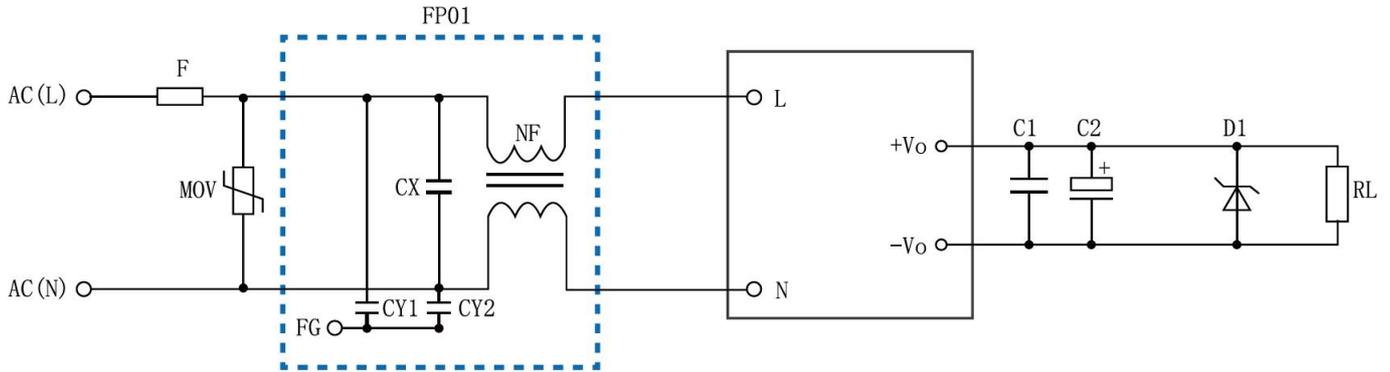


## Dimensions & Function



Pin	Function
1	AC(N)
2	AC(L)
5	+Vo
6	-Vo

### Typical Application



#### NOTE:

1. The output filter capacitor C2 is an electrolytic capacitor. It is recommended to use a high-frequency, low-impedance electrolytic capacitor. Please refer to the technical specifications provided by each manufacturer for the capacitance value and the current flowing through it. C1 is used to remove high-frequency noise.
2. The EMC filter inside the dotted line is added to meet higher EMC requirements. For general applications, it can be omitted.
3. Our company has integrated L1, CX, and NF within the dotted line into a single filter (Model: FP01) for customer use as a matching component.

### List Of Components

Position Model	F	MOV	FP01	C1	C2	D1
QH10-23B05MU	T2A/250V	14D561K	CFilter, Model FP01, Inside the dotted line is the internal schematic diagram of FP01	104K/50V	220uF-1000uF/16V	P6KE7.5A
QH10-23B09MU					150uF-680uF/16V	P6KE15A
QH10-23B12MU					100uF-470uF/16V	P6KE16A
QH10-23B15MU					100uF-330uF/25V	P6KE20A
QH10-23B24MU					100uF-220uF/35V	P6KE30A