

Features

1. Wide input range (85-305VAC, 100-430VDC)
2. 62*45*23mm compact size
3. No load power consumption<0.2W
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

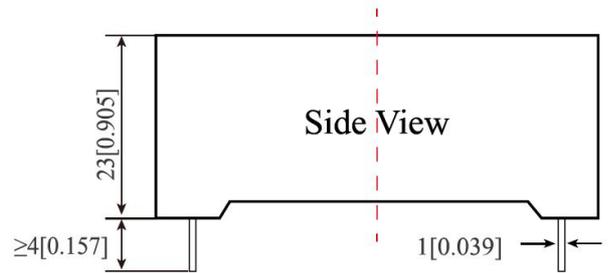
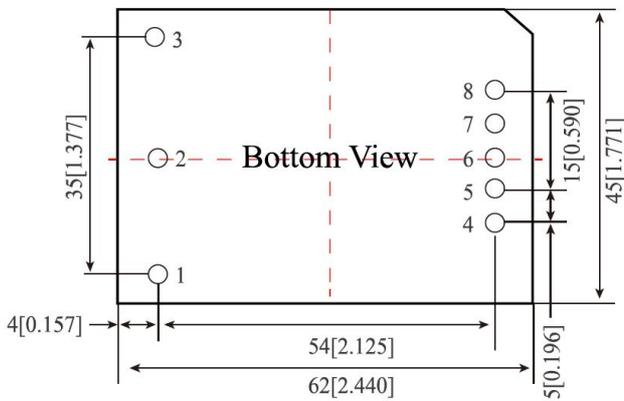
Model	Input Voltage	Rated Power (W)	Output Voltage (V)	Output Current (A)	Ripple & Noise (mVp-p)	Efficiency (%)
QH15-23B05MU	85-305VAC 100-430VDC	15	5	3	50	77
QH15-23B12MU		15	12	1.25	50	86
QH15-23B15MU		15	15	1	50	83
QH15-23B24MU		15	24	0.625	50	86
QH15-23B48MU		15	48	0.3125	50	88

Specifications

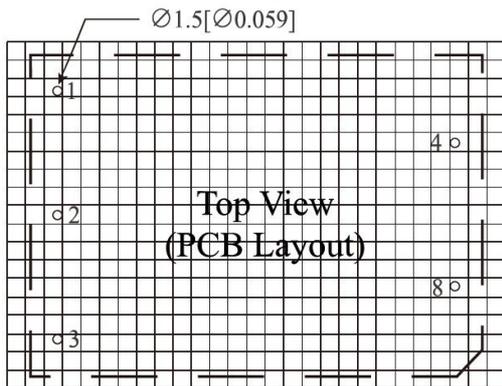
OUTPUT	Voltage Tolerance	±2.0%					
	Line Regulation	±1.0%					
	Load Regulation	±1.0%					
	Setup, Rise Time (Typ.)	1500ms, 40ms/230VAC 3000ms, 50ms/115VAC at full load					
	Hold Up Time (Typ.)	40ms/230VAC 15ms/115VAC at full load					
	Ripple & Noise (Max.) (Note 2.)	100mV					
INPUT	Voltage Range	85-305VAC 100-430VDC					
	Nominal Voltage	100-277VAC					
	Frequency Range	47-440Hz					
	Current (Typ.)	330mA/115VAC 200mA/230VAC					
	Inrush Current (Typ.)	Cold boot 20A/115VAC 50A/230VAC					
	External Fuse Recommended	T2A/250V(Slow-Blow)					
	Leakage Current (Typ.)	<0.1mA/230VAC/50Hz					
PROTECTION	Over Load	≥110% load, self-recovery after troubleshooting					
	Short Circuit	Hiccup mode, self-recovery after troubleshooting					
	Over Voltage (Note 4.)	Voltage	5VDC	12VDC	15VDC	24VDC	48VDC
		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: 4.0kVAC I/P-FG: 1.5kVAC O/P-FG: 0.5kVAC					
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: >100M Ohms/500VDC 25°C 70% RH					
	Conducted & Radiated Emissions	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 (Refer to "Typical Application")					
OTHERS	MTBF	300K hrs min. MIL-HDBK-217F (25°C)					
	Dimension	62*45*23mm (L*W*H)					
	Weight	80g/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.

Dimensions & Function



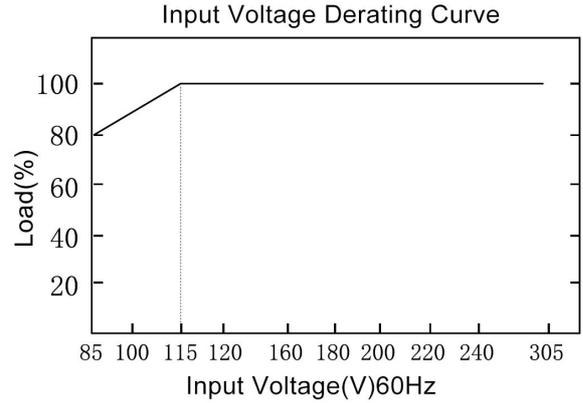
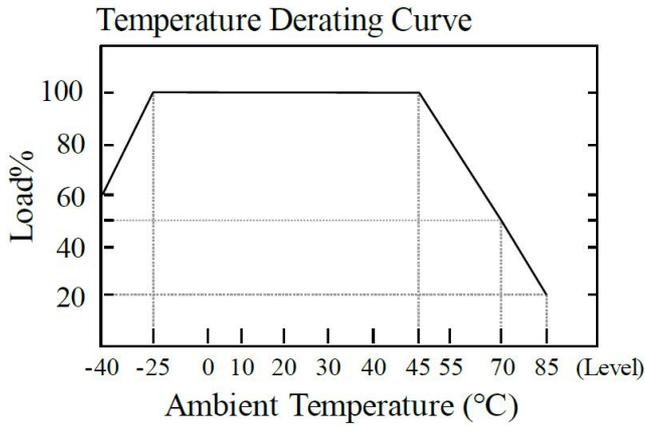
Third Angle Projection



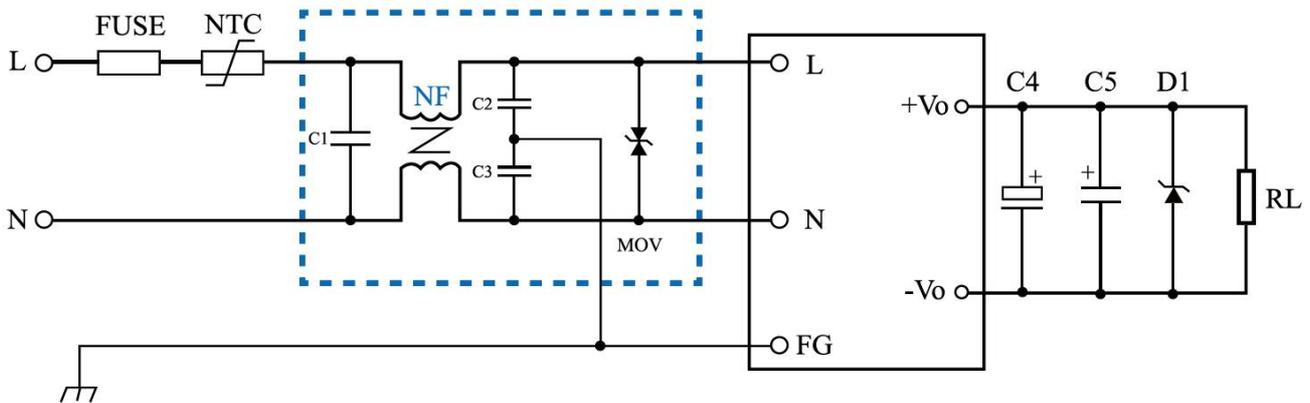
Note: Grid Spacing 2.54 * 2.54mm

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

Derating Curve



Typical Application



NOTE:

- 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).
- The dotted box is the EMC filter accessed to meet higher EMC requirements, which can be omitted in general applications.
- 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	F	NTC	NF	MOV	C1	C2/C3	C5	C4	D1
QH15-23B05MU	T2A/250V	Thermistor 10D-9	Common mode inductance Inductance value 3-10mH Current 0.2A-0.5A	14D561K	104K/275V	471K/400VAC	104K/50V	470uF/16V	P6KE7.5A
QH15-23B12MU								120uF/16V	P6KE16A
QH15-23B15MU								120uF/16V	P6KE20A
QH15-23B24MU								120uF/25V	P6KE30A
QH15-23B48MU								100uF/35V	P6KE60A