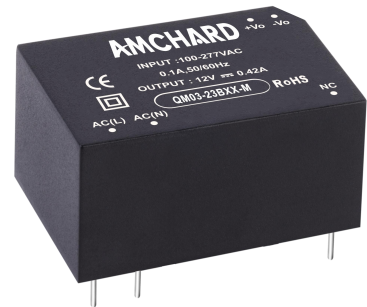


Features:

1. Wide input range (85-305VAC, 100-430VDC)
2. Compact size 37.0*24.5*15.5mm
3. No load power consumption<0.05W
4. Protection type: short circuit/over load/over voltage
5. Operating temperature range: -40°C to +85°C
6. 4000V isolation voltage
7. 100% high temperature burn-in and function test
8. 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 (%)
QM03-23B03-M(A/D)	85-305VAC 100-430VDC	3.3	3.3	1	100	68
QM03-23B05-M(A/D)		5	5	1	100	75
QM03-23B09-M(A/D)		5	9	0.56	100	77
QM03-23B12-M(A/D)		5	12	0.42	100	79
QM03-23B15-M(A/D)		5	15	0.33	100	79
QM03-23B24-M(A/D)		5	24	0.21	100	81

Noted:

1. Without A/D: Standard package
2. A: wired mounting
3. D: DIN rail mounting

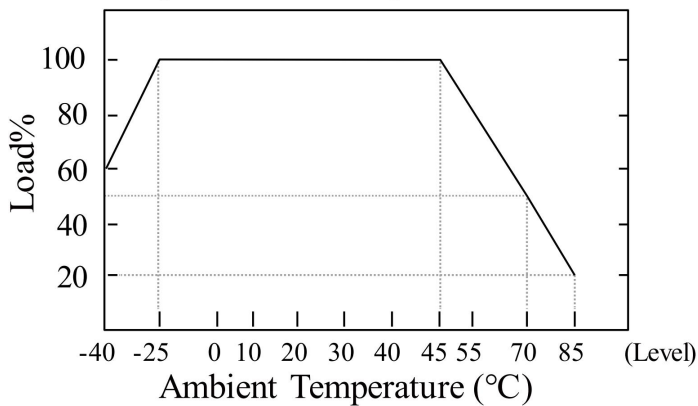
Specifications

OUTPUT	Voltage Tolerance	±5.0%					
	Line Regulation	±1.0%					
	Load Regulation	±1.0%					
	Setup, Rise Time (Typ.)	1000ms, 50ms/230VAC 2000ms, 50ms/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.)	100mA/115VAC 60mA/230VAC					
	Inrush Current (Typ.)	30A/230VAC					
	External Fuse Recommended	10Ω/1W					
	Leakage Current (Typ.)	<0.1mA/265VAC/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.)	Output voltage off or clamp					
		Voltage	3.3/5VDC	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	EN62368, IEC62368, UL62368					
	Isolation Voltage	I/P-O/P: 4000VAC					
	Isolation Resistance	I/P-O/P: >100M Ohms/500VDC 25°C 70% RH					
	EMC Emission & Immunity	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 3 1kV					
OTHERS	MTBF	300K hrs min. MIL-HDBK-217F (25°C)					
	Dimension	QM03-23BXX-M: 37.0*24.5*15.5mm QM03-23BXX-M(A/D): 90.0*35.0*29.5mm					
	Weight	20g/PCS					

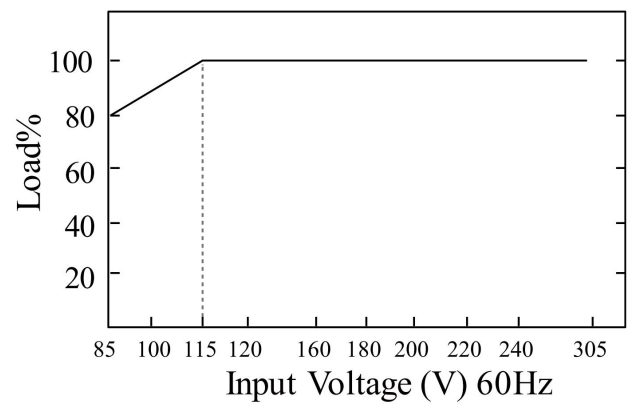
NOTE	1. All parameters not specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
	2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor and connected according to "typical application". Element parameters shall be the same as those measured in the suggestion form.
	3. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives.
	4. This series of overvoltage protection protects the subsequent circuit in case of module abnormality through the peripheral TVS tube.

Derating Curve

Temperature Derating Curve

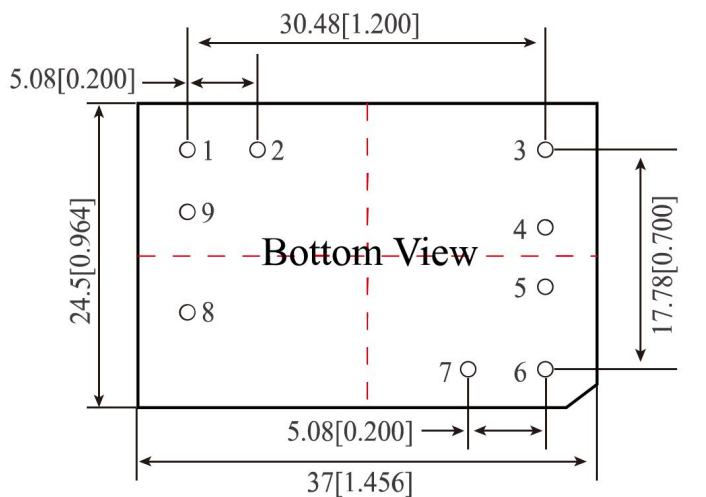


Input Voltage Derating Curve

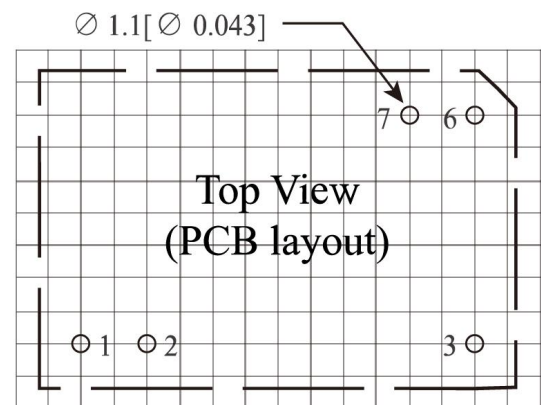


Dimensions & Function

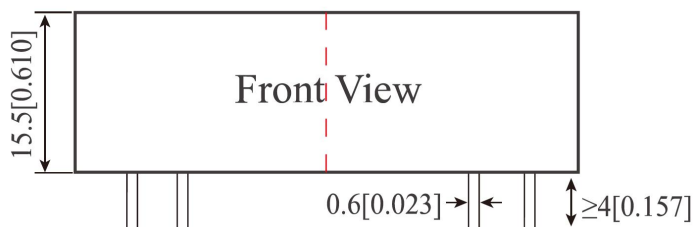
Standard package



Third Angle Projection

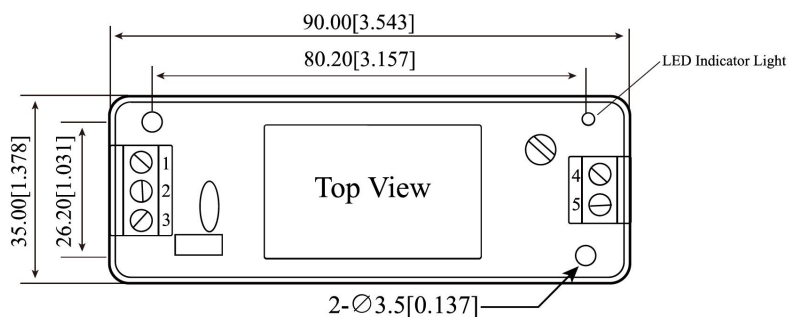


Note: Grid Spacing 2.54 * 2.54mm

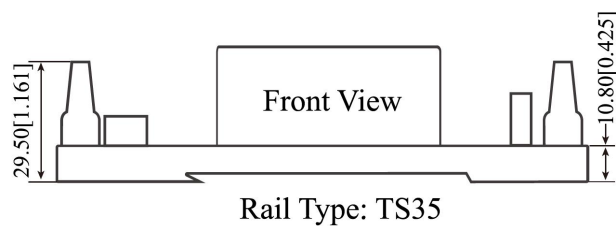


Pin	Function
1	AC(L)
2	AC(N)
3	NC
4/5	No Pin
6	-Vo
7	+Vo
8/9	No Pin

wired mounting package



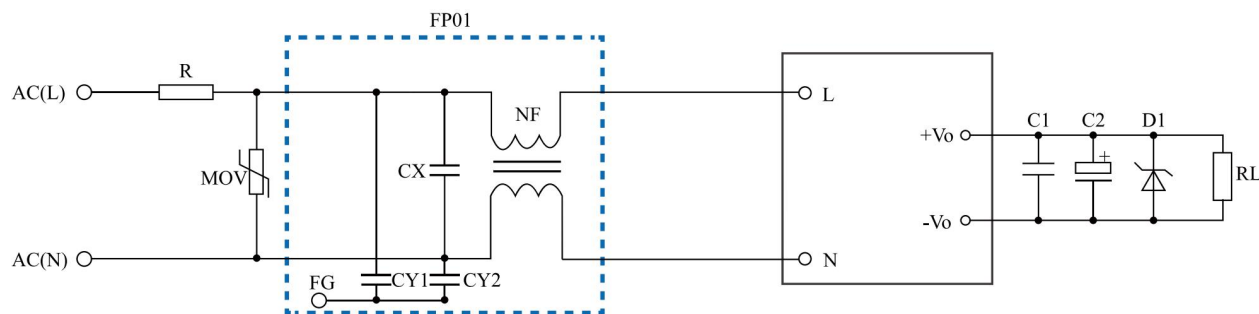
DIN rail mounting package



NOTE: Unit size: mm[inch] Terminal tolerance: $\pm 0.1\text{mm}$ Unmarked tolerances: $\pm 0.5\text{mm}$

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

Typical Application



NOTE:

- Output filter capacitor C2 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. C1 is to remove high frequency noise.
- The dotted box in the figure shows the EMC filter connected to meet the higher EMC requirements. It can be omitted in general applications.
- Our company has formed a filter with L1, CX and NF in the dashed box for customers to use. The model is FP01.

List Of Components

Position Model	R	MOV	FP01	C1	C2	D1
QM03-23B03-M(A/D)	10Ω/1W	Varistors 14D561K	Filter Type FP01	104K/50V (Ceramic capacitor)	220uF-1000uF/16V	P6KE7.5A
QM03-23B05-M(A/D)					220uF-1000uF/16V	P6KE7.5A
QM03-23B09-M(A/D)					150uF-680uF/16V	P6KE15A
QM03-23B12-M(A/D)					100uF-470uF/16V	P6KE16A
QM03-23B15-M(A/D)					100uF-330uF/25V	P6KE20A
QM03-23B24-M(A/D)					100uF-220uF/35V	P6KE30A