



Features:

1. Wide input range (85-305VAC, 100-430VDC)
2. 69.5*35*24mm compact size
3. No load power consumption < 0.3W
4. Protection type: short circuit/ over load/ over voltage/ over temperature
5. Operating temperature range: -40°C to +85°C
6. 4000V isolation voltage, CLASS III over voltage level
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 (%)
QM30-23B03R2	85-305VAC 100-430VDC	19.8	3.3	6	50	84
QM30-23B05R2		30	5	6	50	84
QM30-23123R2		30	12	2.5	50	84
QM30-23B15R2		30	15	2	50	84
QM30-23B24R2		30	24	1.25	50	86
QM30-23B48R2		30	48	0.625	50	86

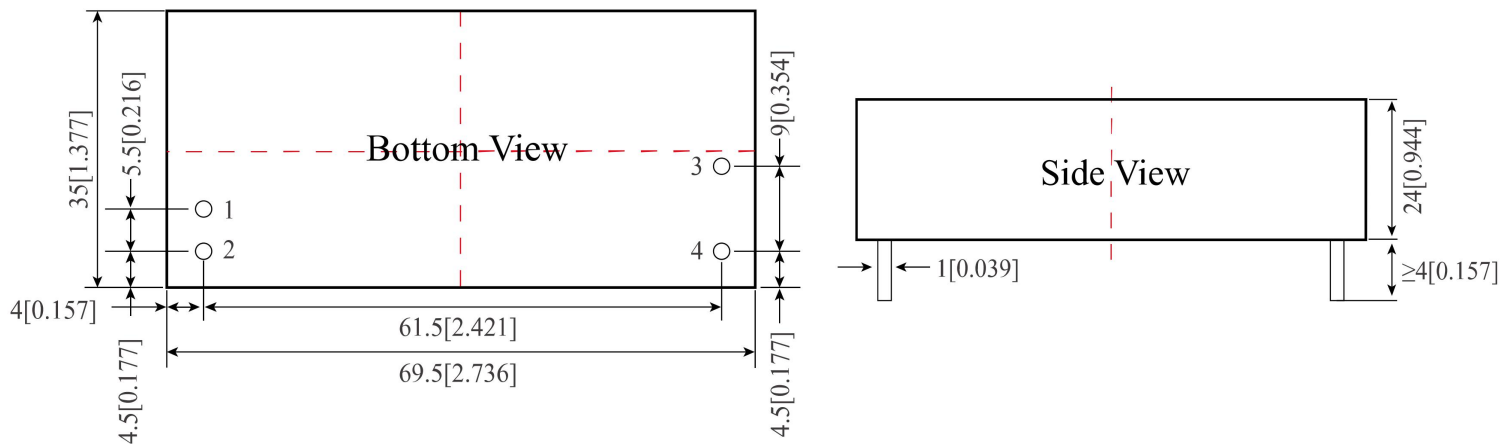
Specifications

OUTPUT	Voltage Tolerance	±2.0%					
	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.)	100mV					
INPUT	Voltage Range	85-305VAC 100-430VDC					
	Frequency Range	47-440Hz					
	Current (Typ.)	600mA/115VAC 300mA/230VAC					
	Inrush Current (Typ.)	40A/230VAC					
	External Fuse Recommended	T2A/250V					
	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 Temperature	Output off, recovers automatically after fault condition is removed					
	Over Voltage (Note 4.)	Output voltage clamp or hiccup					
		Voltage	3.3/5VDC	12VDC	15VDC	24VDC	48VDC
		Range	≤7.5VDC	≤16VDC	≤20VDC	≤32VDC	≤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	EN62368-1, 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 10V/m (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 line to line ±2kV					
OTHERS	MTBF	200K hrs min. MIL-HDBK-217F (25°C)					
	Dimension	ZPR30-SXX: 69.5*35*24mm ZPR30-SXXA/D: 90.0*35.0*29.5mm					
	Weight	94g/PCS 10.8kg/Carton					
	Package	108PCS/Carton					
	Carton Size	360*300*250mm					

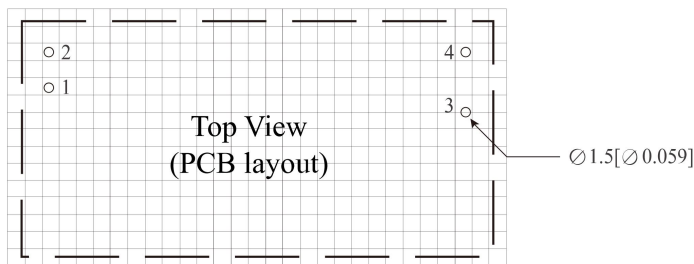
NOTE	1. All parameters not specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
	2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor and connected according to "typical application". 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.

Dimensions & Function

Standard type package



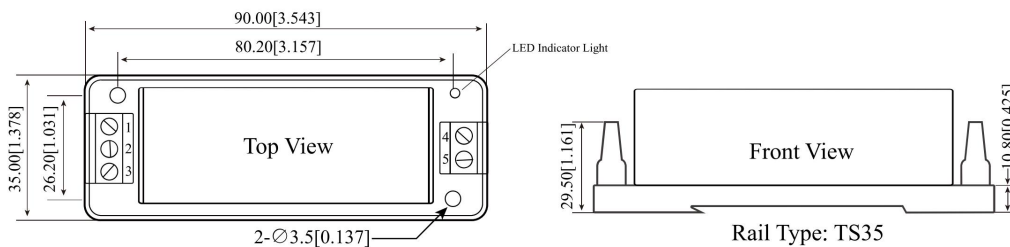
Third Angle Projection



Note: Grid Spacing 2.54 * 2.54mm

Pin	Function
1	AC(N)
2	AC(L)
3	+Vo
4	-Vo

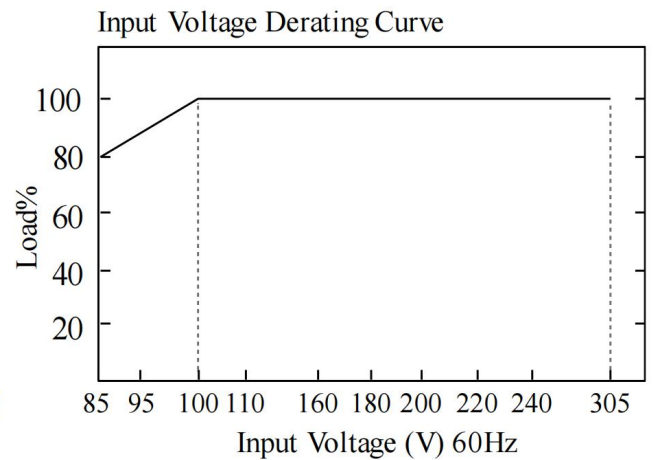
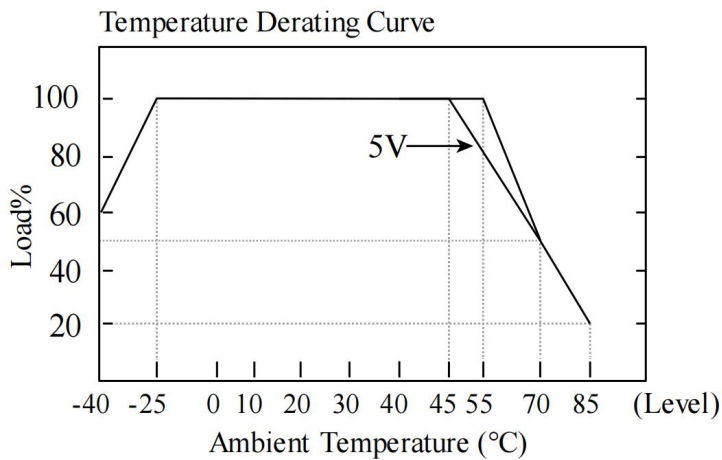
PCB mounting style/Rail-type package style



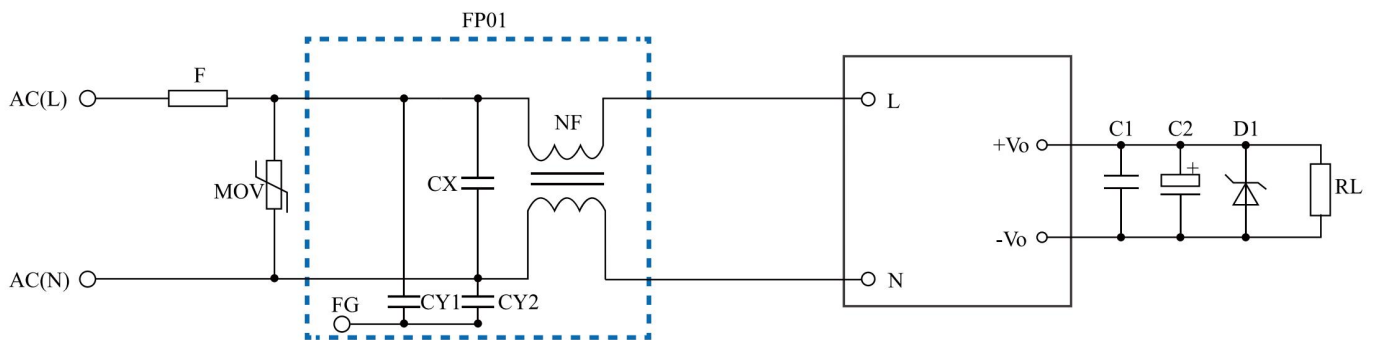
Pin	Function
1	AC(N)
2	No Pin
3	AC(L)
4	+Vo
5	-Vo

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

Derating Curve



Typical Application



NOTE:

1. 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.
2. The dotted box in the figure shows the EMC filter connected to meet the higher EMC requirements. It can be omitted in general applications.
3. 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	F	MOV	FP01	C1	C2	D1
QM30-23B03R2	T2A/250V	Varistors 14D471K	Filter Type FP01	104K/50V (Ceramic capacitor)	220uF-1000uF/16V	P6KE7.5A
QM30-23B05R2					220uF-1000uF/16V	P6KE7.5A
QM30-23123R2					100uF-470uF/16V	P6KE16A
QM30-23B15R2					100uF-330uF/25V	P6KE20A
QM30-23B24R2					100uF-220uF/35V	P6KE32A
QM30-23B48R2					100uF-470uF/63V	P6KE60A

Notes:

1. If the product works under the minimum required load, it cannot guarantee that the performance of the product complies with all the performance indicators in this manual;
2. The maximum capacitive load is tested under the input voltage range and full load condition;
3. Unless otherwise stated, all indexes in this manual are measured at Ta=25°C, humidity <75%RH, nominal input voltage and rated output load;
4. All index testing methods in this manual are based on the enterprise standards of the company;
5. Our company can provide product customization, specific needs can directly contact our technical staff;
6. AMCHARD reserves the right to make changes to the product at any time without notice.