

Product Features

- 1) Rated power: 10W Max
- 2) Universal input: 85~305VAC 47~63Hz
- 3) Regulated single output
- 4) Isolation voltage 4000VAC
- 5) Typical efficiency 78 ~ 84%
- 6) Energy saving, standby power only about 0.1W
- 7) Operating temperature range: -40~+85° C
- 8) RoHS compliance
- 9) No external components required for operating
- 10) Over voltage, over current and short circuit protection
- 11) Certified to UL62368-1,
- 12) IEC/EN62368-1, CISPR32, EN55032 Class B
- 13) 3 year warranty



3 years
Warranty

Selection Guide

Model Number	Input Voltage	Output Voltage [VDC]	Output Current	Ripple & Noise [mVp-p] Max.	Efficiency	Capacitive Load [uF] Max.
	[VAC]		[mA] Max.		[%] Typ.	
QM10-23B03R2-M	85~305VAC 100~430VDC	3.3	2500	200	78	6600
QM10-23B05R2-M		5	2000	200	82	5000
QM10-23B09R2-M		9	1111	200	84	3000
QM10-23B12R2-M		12	833	200	85	2000
QM10-23B15R2-M		15	666	200	85	1500
QM10-23B24R2-M		24	416	200	85	680

Electrical Specifications

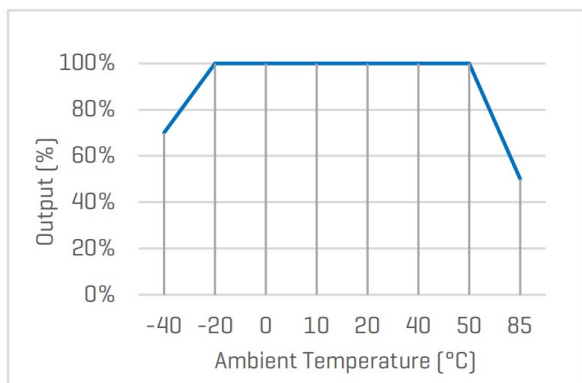
Parameters	Condition	Min.	Typ.	Max.	Unit
Input voltage range	AC in	85		305	VAC
	DC in	100	-	430	VDC
Input frequency		47	-	63	Hz
Nominal input voltage		100	-	277	VAC
Input current	115VAC			0.18	A
	230VAC	-	-	0.12	
Inrush current	115VAC		35		A
Cold start	230VAC	-	70	-	
Leakage current	230VAC, 50Hz	-	-	0.6	mA RMS
Output voltage accuracy		-	±3	-	%
Line regulation	Full load	-	±0.5	-	%
Load regulation	IOUT=0%~100% of IOUT, rated	-	±1.0	-	%
Ripple and noise	20MHz bandwidth, peak to peak		150	200	mV
Temperature coefficient		-	±0.03	-	%/°C
Standby power consumption		-	0.1	-	W
Hold up time Full load	115VAC		10		mS
	230VAC	-	50	-	
Over load protection		115	-	190	% IOUT, rated
Over voltage protection	VOUT=3.3, 5V	-	-	8.5	
	VOUT=9, 12V			20	
	VOUT=15V			24	VDC
	VOUT=24V			34	
Short circuit protection		Hiccup mode, automatic recovery			
Internal fuse		2A, 300V, slow blow			
Minimum load		No minimum load is required			

General Specifications

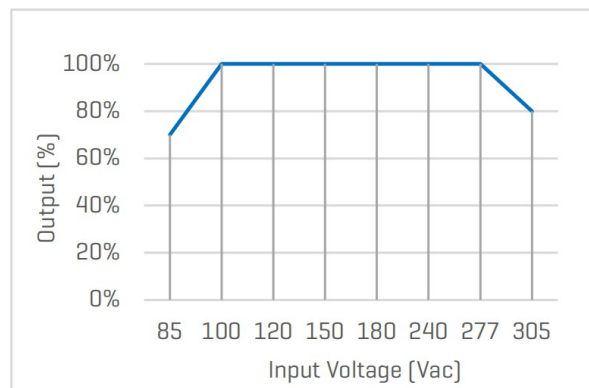
Parameters	Condition	Min.	Typ.	Max.	Unit
Isolation voltage	I/P to O/P	4000			VAC
Tested for 1 minute			-	-	
Isolation resistance	I/P to O/P	100			M Ohm
500VDC, 25°C, 70%RH			-	-	
Switching frequency		-	65	-	KHz
Operating temperature range	See "Derating Curve"	-40	-	85	°C
Storage temperature		-40	-	105	°C
Storage humidity		10	-	95	%RH
Maximum case temperature		-	-	95	°C
Case material		Black plastic UL94-V0			
Cooling method		Free air convection			
Soldering temperature	Wave soldering	260°C, 5~10 seconds			
Vibration		10Hz to 55Hz, 5G, 30 minutes along X, Y and Z axis			
Class II power		Yes, no FG			
MTBF	MIL-HDBK-217F	> 300,000 Hours, 25°C			
Design based on standards		RoHS5 compliant, all materials meet UL94V-0, product designed to meet UL62368-1, IEC/EN62368-1, EN55032			
Safety certifications		IEC/EN62368-1, UL62368-1			
EMC		CISPR32, EN55032 Class B with NO external circuit			
		IEC/EN61000-4-2, 3, 4, 5, 6, 8, 11			
Size, and Weight	Default Package	45.7x25.4x21.5mm, 37g			
Packing		350pcs/carton, size: 460x350x285mm, 14Kg G.W.			

Typical Characteristic Curves

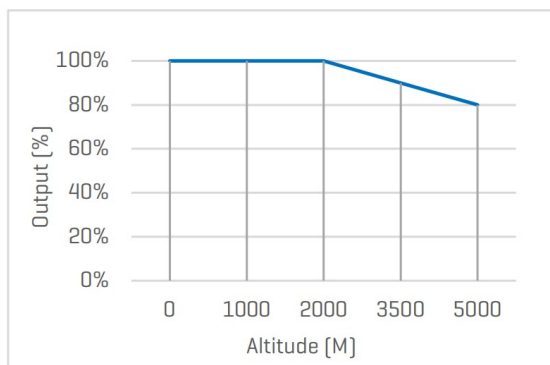
Output vs Ambient Temperature



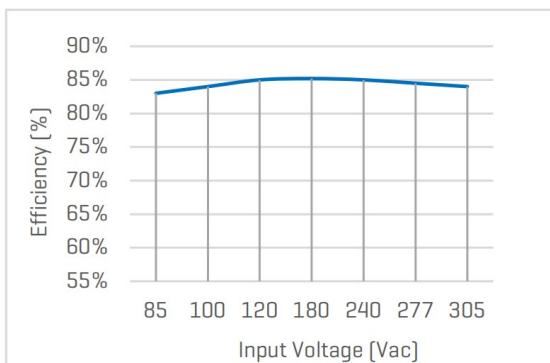
Output vs Input Voltage



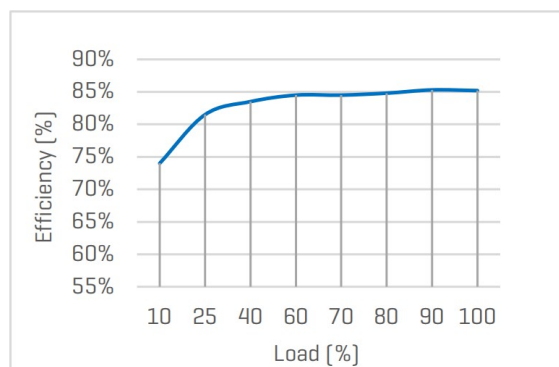
Output vs Altitude



Efficiency vs Input Voltage (Full load) QM10-23B12R2-M

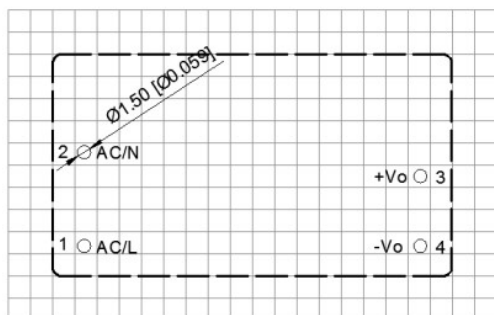
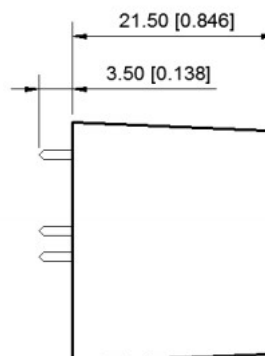
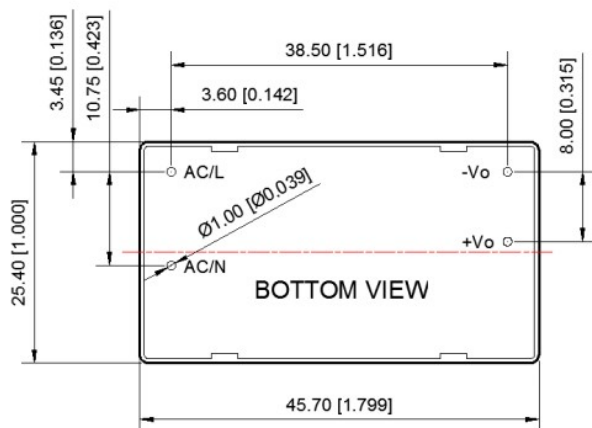


Efficiency vs Load(230VAC) QM10-23B12R2-M



Dimensions and Recommended Layout

Dimensions



Recommended Footprint

Grid size: 2.54*2.54mm

Pin Function Table

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

Note:

Unless otherwise specified unit: mm [inch]

General tolerance: ± 1.00 [± 0.040]

Pin thickness: ± 0.15 [± 0.006]

Pin distance: ± 0.50 [± 0.020]

Footprint grid 2.54 x 2.54 mm

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