Features

1. Rated power: 15W Max
2. Universal input: 85~305VAC, 47~63Hz
3. Regulated single output Isolation voltage 4000VAC Typical efficiency 81 … 87%
4. Energy saving, standby power only less than 0.1W
5. Operating temperature range:-40~+85°C
6. RoHS compliance
7. No external components required for operating
8. Over voltage, over current and short circuit protection
9. Meet to IEC/EN/UL62368-1, OVC III, EN60335-1, EN61558-1, FCC, UKCA, CISPR32, EN55032 Class B with NO externals
10. 3 year warranty



RoHS CE 3 years Warranty

Selection Guide

Model Number	Input Voltage [VAC]	Output Voltage [VDC]	Output Current [mA] Rated	Output Current [mA] Max.	Efficiency [%] Typ.	Capacitive Load [uF] Max.
QM15-23B03R2-M	85~305VAC 100~430VDC	3.3	4000	4500	81	8000
QM15-23B05R2-M		5	3000	4000	85	8000
QM15-23B09R2-M		9	1670	2200	85	5400
QM15-23B12R2-M		12	1250	1670	86	4000
QM15-23B15R2-M		15	1000	1330	87	3000
QM15-23B24R2-M		24	625	830	87	1000

* Only typical models are listed, other models may be available, upon request.

Input & Output Specification

Parameters	Condition	Min.	Typ.	Max.	Unit
Input voltage range	AC in DC in	85 100	-	305 430	VAC VDC
Input frequency		47	-	63	Hz
Nominal input voltage		100	-	277	VAC
Input current	115VAC 230VAC	-	-	0.5 0.3	A
Inrush Current Cold start	115VAC 230VAC	-	20 45	-	A
Leakage current	277VAC, 50Hz	-	-	0.1	mA RMS
Output voltage accuracy		-	±3	-	%
Line regulation	Full load	-	±0.5	-	%
Load regulation I_{OUT}=0%~100% of $I_{OUT, rated}$		-	±1.0	-	%
Ripple and noise 20MHz bandwidth, peak to peak		-	100	150	mV
Temperature coefficiency		-	±0.02	-	%/°C
Standby power consumption		-	0.1	-	W
Hold up time Full load	115VAC 230VAC	-	10 50	-	mS
Over voltage protection Hiccup or clamping by zener diode	V_{OUT}=3.3, 5.0V V_{OUT}=9.0V V_{OUT}=12.0, 15.0V V_{OUT}=24.0V	-	-	7.5 15 20 30	VDC
Over current protection	Automatic recovery	110	-	-	% I_{OUT}
Short circuit protection		Continuous, hiccup mode, automatic recovery			
Minimum load		No minimum load is required			
Built in fuse		3.15A, 300V slow blow			

* Ripple and noise measured at 20MHz of bandwidth by using a 12” twisted pair-wire terminated with a 1uF ceramic capacitor and a 10uF electrolytic capacitor in parallel.

General Specifications

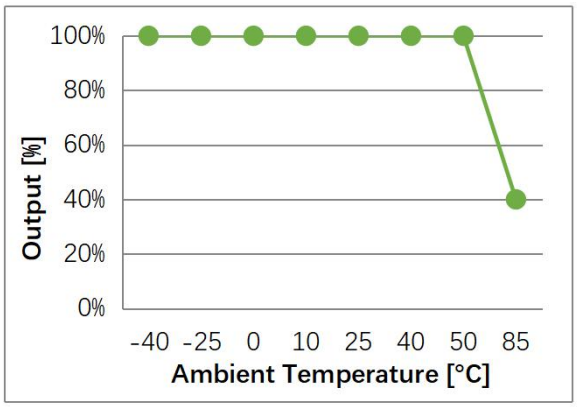
Parameters	Condition	Min.	Typ.	Max.	Unit
Isolation voltage Tested for 1 minute	I/P to O/P	4000	-	-	VAC
Isolation resistance 500VDC, 25°C, 70%RH	I/P to O/P	100	-	-	MOhm
Switching frequency		-	65	-	KHz
Operating temperature range	See "Derating Curve"	-40	-	85	°C
Storage temperature		-40	-	105	°C
Storage humidity		10	-	95	%RH
Maximum case temperature		-	-	95	°C
Soldering temperature		-	260	-	°C
Case material		Black plastic UL94-V0			
Cooling method		Free air convection			
Class II power		Yes, no FG			
Vibration		10Hz to 55Hz, 5G, 30 minutes along X, Y and Z axis			
MTBF	MIL-HDBK-217F	> 1,000,000 Hours, 25°C			
Design based on standards		RoHS & REACH directives, IEC/EN/UL 62368-1, OVC III, EN 60335-1, EN 61558-1, UKCA			
Safety certifications		IEC/EN/UL 62368-1, EN 60335-1, EN 61558-1, FCC, UKCA			
EMC	CE ESD RS EFT Surge CS DIP	CISPR32, EN55032 Class B with "NO External Circuit" IEC/EN61000-4-2, Contact ±6kV, Air ±8kV, Criteria B IEC/EN61000-4-3, 10V/m, Criteria A IEC/EN61000-4-4, ±2kV, Criteria B IEC/EN61000-4-5, Line to Line ±2kV,CriteriaB IEC/EN61000-4-6, 10Vrms, Criteria A IEC/EN61000-4-11, 0%, 70%, Criteria B			
Size, and Weight		52.4x27.2x24mm, 55g			
Packing		200pcs/Carton, size: 335x345x210mm, 12.5Kg G.W.			

Characteristic Curves

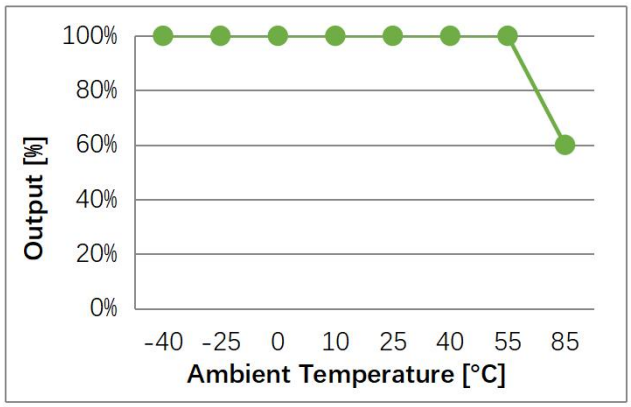
Derating Curve

Output vs Ambient Temperature

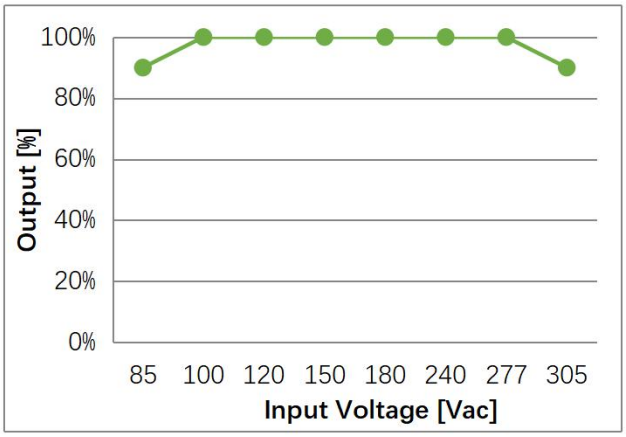
V_{OUT}=3.3...9 V



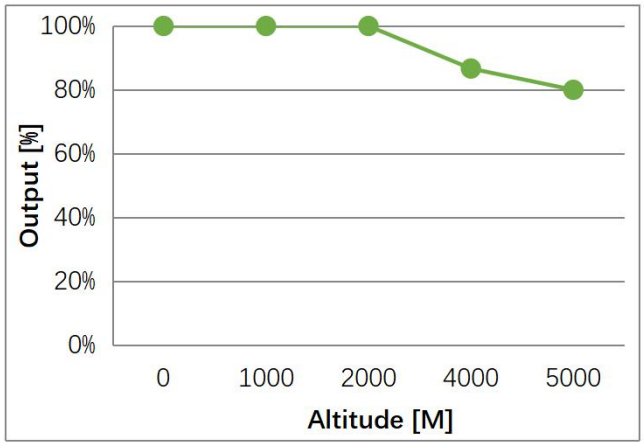
V_{OUT}=12..24V



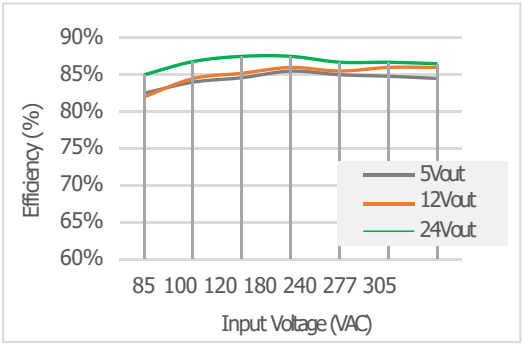
Output vs Input Voltage



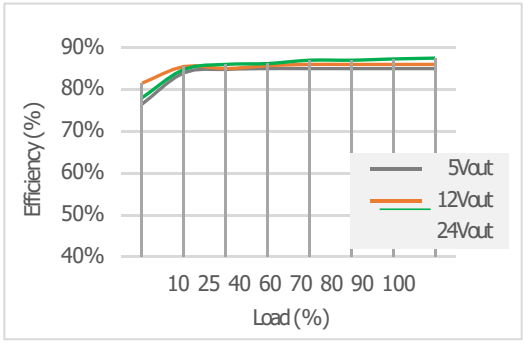
Output vs Altitude



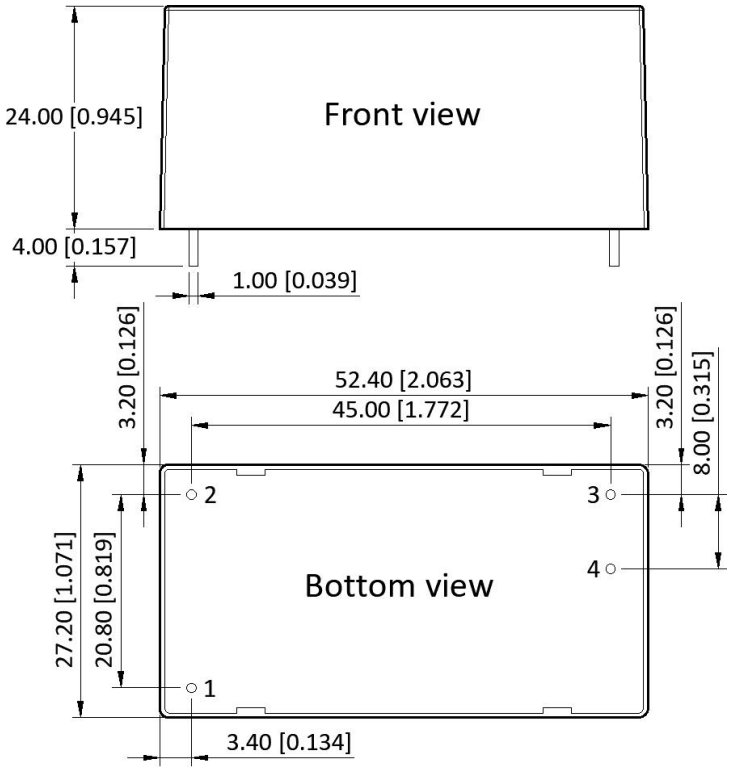
Efficiency Curves Efficiency vs Input Voltage

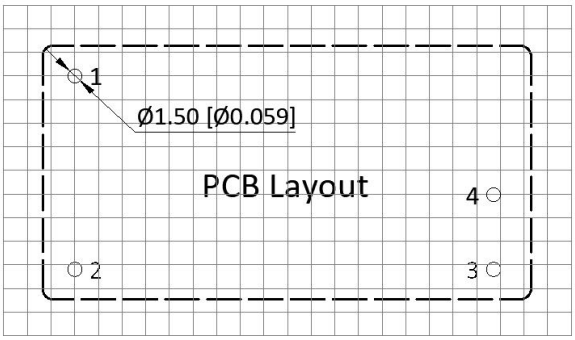


Efficiency vs Load



Mechanical Specifications





Pin	Single Out
1	AC (L)
2	AC (N)
3	-VOUT
4	+VOUT

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

Notes & Instructions

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.