

Features

1. Rated power: 30W Max
2. Universal input: 85~305VAC, 47~63Hz
3. Regulated single output
4. Isolation voltage 4200VAC
5. Typical efficiency 85 ... 90%
6. Energy saving, standby power only less than 0.1W
7. Operating temperature range: -40~+85°C
8. RoHS compliance
9. Compact DIP package
10. Over voltage, over current and short circuit protection
11. Meet CISPR32, EN55032 Class B without external component
12. *Meet to IEC/EN/ UL62368 OVC III, and UKCA, EN 60335, EN 61558, FCC etc.
13. 3 year warranty



3 years
Warranty

Selection Guide

Model Number	Input Voltage [VAC]	Output Voltage [VDC]	Output Current [mA] Max.	Efficiency [%] Typ.	Capacitive Load [uF] Max.
QM30-23B03R2-M	85~305VAC 100~430VDC	3.3	6000	85	6600
QM30-23B05R2-M		5	6000	86	6600
QM30-23B09R2-M		9	3400	88	4400
QM30-23B12R2-M		12	2500	90	4400
QM30-23B15R2-M		15	2000	90	3300
QM30-23B24R2-M		24	1300	88	1000
QM30-23B48R2-M		48	625	90	470

Input & Output Specification

Parameters	Condition	Min.	Typ.	Max.	Unit	Note
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 230VAC	-	-	0.75 0.50	A	
Inrush current Cold start	115VAC 230VAC	-	20 50	-	A	
Leakage current	277VAC, 50Hz	-	-	0.1	mA RMS	
Output voltage accuracy	V _{OUT} =3.3V others	-	±3 ±2	-	%	
Line regulation	Full load	-	±0.5	-	%	
Load regulation I _{OUT} =0%~100% of I _{OUT, rated}	V _{OUT} =3.3V V _{OUT} =5V others	-	±2.0 ±1.5 ±1.0	-	%	
Ripple and noise 20MHz bandwidth, peak to peak	V _{OUT} =24, 48V others	-	-	150 100	mV	
Temperature coefficient		-	±0.02	-	%/°C	
Standby power consumption	V _{OUT} =24, 48.0V Others	-	0.15 0.10	0.2 0.12	W	
Hold up time Full load	115VAC 230VAC	-	10 50	-	mS	
Over voltage protection Hiccup or clamping by zener diode	V _{OUT} =3.3V V _{OUT} =5, 9, 12V V _{OUT} =15V V _{OUT} =24V V _{OUT} =48V	-	-	6.3 16 25 35 60	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		2A, 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

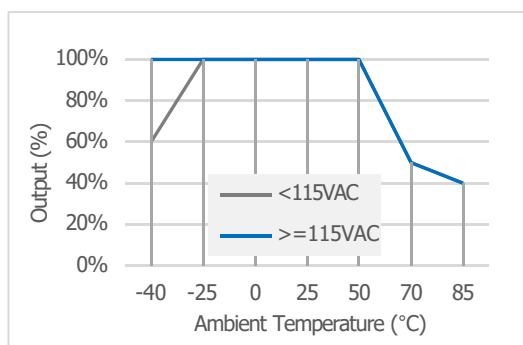
Parameters	Condition	Min.	Typ.	Max.	Unit	Note
Isolation voltage Tested for 1 minute	I/P to O/P	4200	-	-	VAC	
Isolation resistance 500VDC, 25°C, 70%RH	I/P to O/P	100	-	-	M Ohm	
Switching frequency		-	65	-	KHz	
Operating temperature range	See "Derating Curve"	-40	-	85	°C	
Storage temperature		-40	-	85	°C	
Storage humidity		10	-	95	%RH	
Maximum case temperature		-	-	95	°C	
Soldering temperature	Wave Manual	-	260 360	-	°C	
Case material		Black plastic UL94-V0				
Cooling method		Free air convection				
Vibration		10Hz to 55Hz, 5G, 30 minutes along X, Y and Z axis				
Class II power		Yes, no FG				
MTBF	MIL-HDBK-217F	> 1,500,000 Hours, 25°C				
Design based on standards		RoHS5 compliant, REACH 241				
Safety certifications		Meet IEC/EN/UL 62368-1 OVC III, EN 60335, EN 61558, UKCA, FCC				
EMC		CISPR32, EN55032 Class B with NO external circuit IEC/EN61000-4-2, 3, 4, 5, 6, 8, 11				
Size, and Weight		69.5x39.0x24mm, 100g				

Characteristic Curves

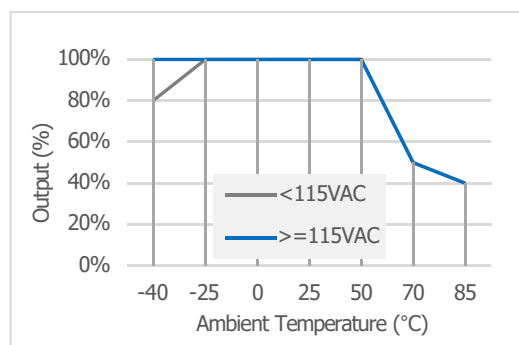
Derating Curve

Output vs Ambient Temperature

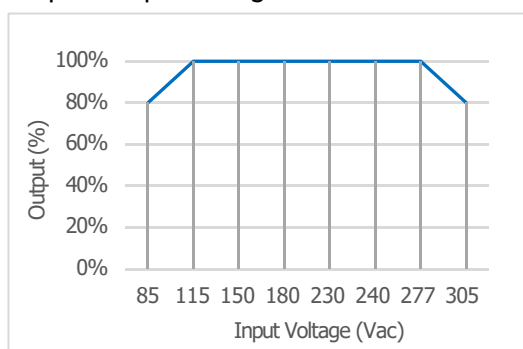
V_{OUT}=5V



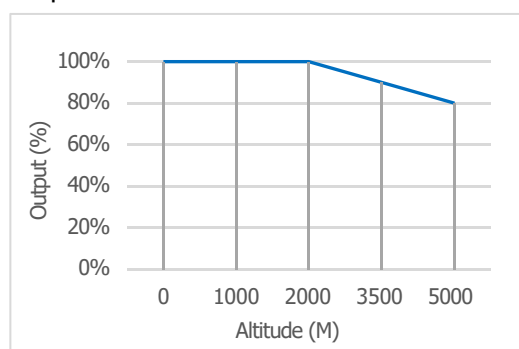
V_{OUT}=others



Output vs Input Voltage

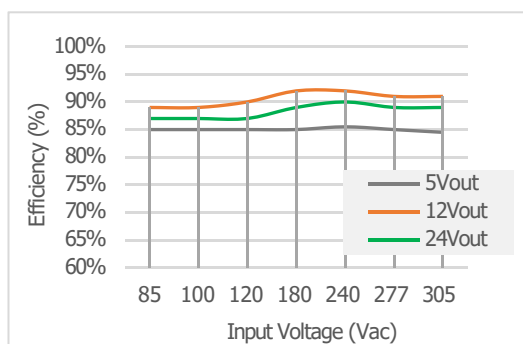


Output vs Altitude

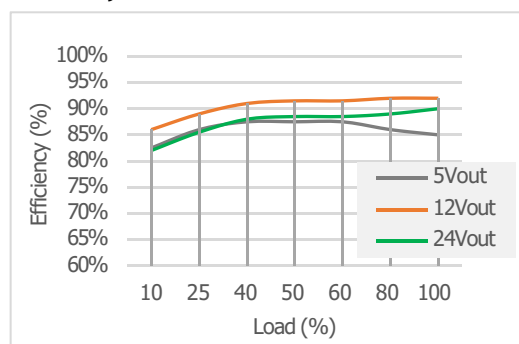


Efficiency Curves

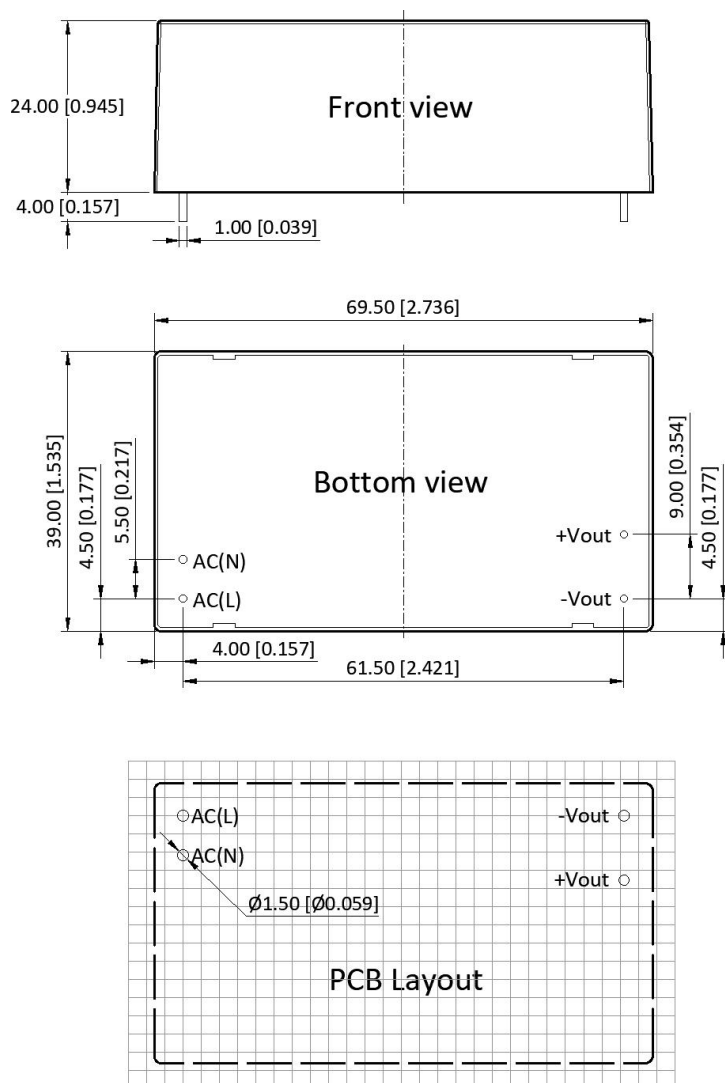
Efficiency vs Input Voltage



Efficiency vs Load



Mechanical Specifications



Pin #	Single Out
1	AC (L)
2	AC (N)
3	+V _{OUT}
4	-V _{OUT}

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.