

Features

1. Rated power: 40W Max
2. Universal input: 85~305VAC, 47~63Hz
3. Regulated single output Isolation voltage 4200VAC Typical efficiency 86 ... 90%
4. Energy saving, standby power only less than 0.3W
5. Operating temperature range: -40~+85°C
6. RoHS compliance Compact DIP package
7. Over voltage, over current and short circuit protection
8. Meet CISPR32, EN55032 Class
9. B without external component
10. *Meet IEC/EN/UL62368 OVC III, IEC EN 60335, IEC EN 61558, UKCA, FCC etc.
11. 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.
QM40-23B05R2	85~305VAC 100~430VDC	5	7000	86	6600
QM40-23B12R2		12	3330	89	4400
QM40-23B15R2		15	2666	90	3300
QM40-23B24R2		24	1670	89	1000
QM40-23B48R2		48	833	90	470

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

Input & Output Specification

Unless otherwise indicated, specifications are measured at TA=25°C, humidity<75%, nominal input voltage and rated output load.

Parameters	Condition	Min.	Typ.	Max.	Unit	Note
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	-	-	1 0.6	A	
Inrush current Cold start	115VAC 230VAC	-	30 60	-	A	
Leakage current	277VAC, 50Hz	-	-	0.1	mA RMS	
Output voltage accuracy		-	±2	-	%	
Line regulation	Full load	-	±0.5	-	%	
Load regulation	VOUT=5.0V	-	±2.0	-	%	
IOUT=0%~100% of IOUT, rated	Others		±1.0			
Ripple and noise 20MHz bandwidth, peak to peak		-	100	150	mV	
Temperature coefficiency		-	±0.02	-	%/°C	
Standby power consumption	230VAC	-	0.3	0.55	W	
Hold up time Full load	115VAC 230VAC	-	8 50	-	mS	
Over voltage protection Hiccup or clamping by Zener diode	VOUT=5V VOUT=12V VOUT=15V VOUT=24V VOUT=48V	-	-	6.3 16 25 35 60	VDC	
Over current protection	Automatic recovery	130	-	-	% IOUT	
Short circuit protection		Continuous, hiccup mode, automatic recovery				
Build-in fuse		3.15A, 300V slow blow				
Minimum load		No minimum load is required				

* 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.

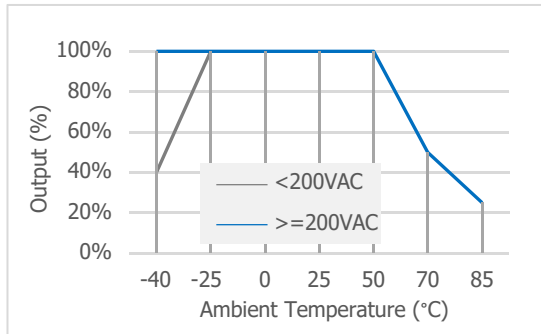
General Specifications

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	> 1,000,000 Hours, 25°C				
Design based on standards		RoHS & REACH directives, IEC/EN/UL 62368, OVC III, FCC, UKCA, IEC EN 60335, IEC EN 61558				
*Safety certifications		IEC/EN/UL 62368, OVC III, FCC, UKCA, IEC EN 60335, IEC EN 61558				
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, Criteria B IEC/EN61000-4-6, 10Vrms, Criteria A IEC/EN61000-4-11, 0%, 70%, Criteria B				
Size, and Weight		69.5x39.0x24mm, 100g				

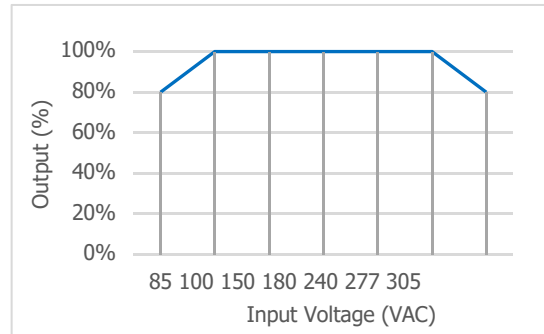
Characteristic Curves

Derating Curves

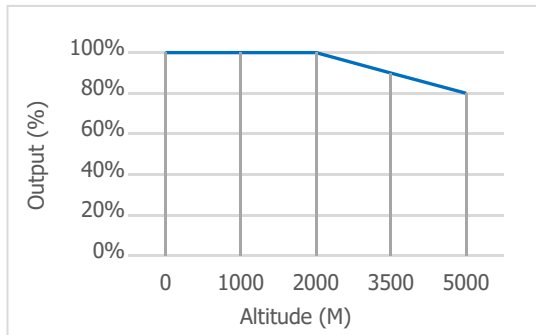
Output vs Ambient Temperature



Output vs Input Voltage

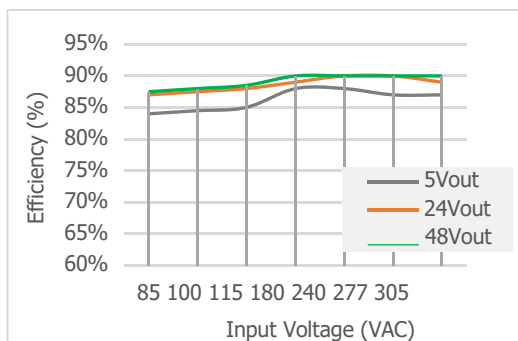


Output vs Altitude

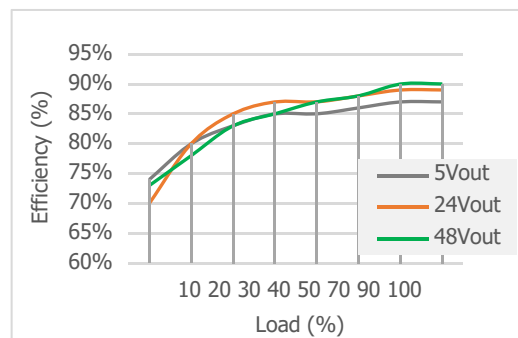


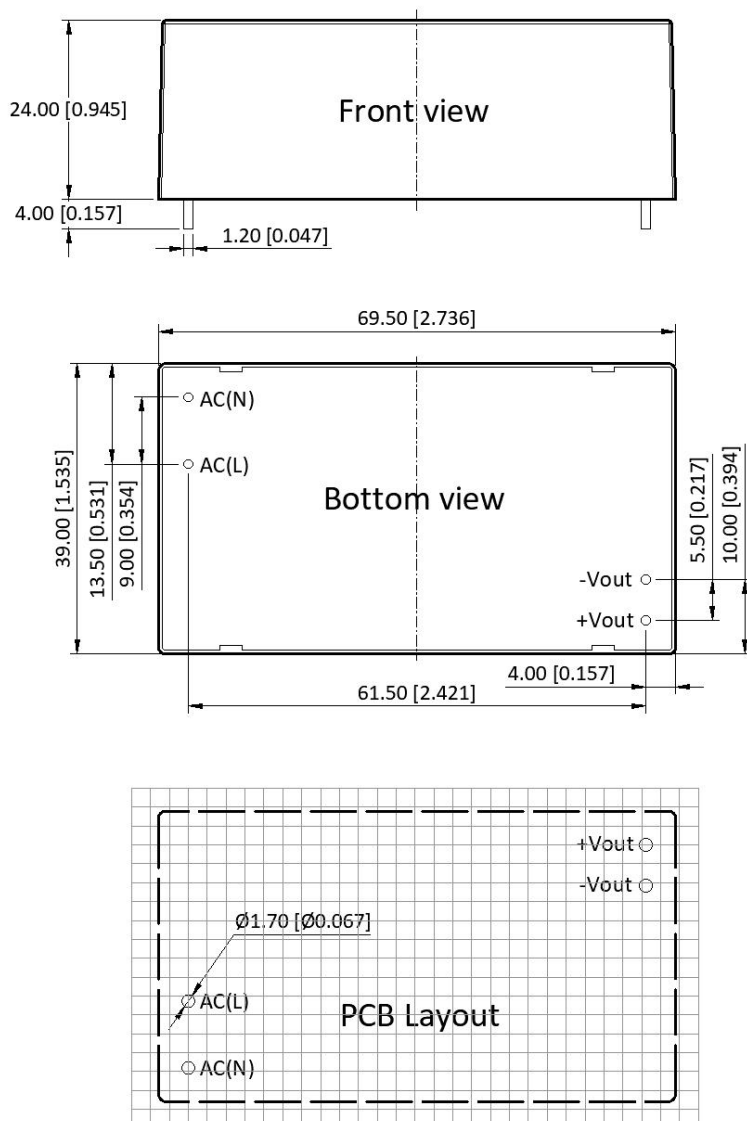
Efficiency Curves

Efficiency vs Input Voltage



Efficiency vs Load





Pin Definition

Pin#	Dual 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

Note:

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 $T_a=25^{\circ}\text{C}$, humidity $<75\%\text{RH}$, 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;

GUANGZHOU AMCHARD-POWER TECHNOLOGY CO., LTD.

www.amchard-power.com

Mail:info@amchard-power.com