Product Feature

1. Ultra-wide input voltage range：85-264VAC（100-370VDC）
2. Operating temperature range：-40℃ - +70℃
3. Small size, high efficiency
4. Output short-circuit protection
5. Low power consumption, environmental protection
6. Industrial product technical design

RoHS CE 3 years Warranty

Selection Guide

Part No.	Input Voltage (VAC)	Out Power (W)	Out Voltage (VDC)	Out Current (mA)MAX	Full Load Efficiency %（230VAC,Typ.）	Capacitive Load(μF) Max.
QME05-10B05	85-264	5	5	1000	78	3000
QME05-10B09		5	9	550	80	1000
QME05-10B12		5	12	420	80	820
QME05-10B15		5	15	330	81	680
QME05-10B24		5	24	210	82	220

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage	AC Input	85	--	264	VAC
	DC Input	100	--	370	VDC
Input Current	110VAC	--	0.11	--	A
	230VAC	--	0.07	--	
Input Frequency		47	--	63	Hz
Fuse		1A，slow-blow, required			
Leakage Current		0.3mA RMS typ. 230VAC/50Hz			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	10% - 100%load	--	±2	--	%
Linear Regulation	Rated load	--	±0.5	--	
Load Regulation	10% - 100%load	--	±1.0	--	
Ripple & Noise	20MHz bandwidth, 10% - 100%load	--	60	120	mV
Temperature Coefficient		--	±0.02	--	%/℃
Stand-by Power Consumption	230VAC	--	0.1	--	W
Min. Load		0	--	--	%
Over Current Protection		110	--	--	%Io
Short-Circuit Protection		Continuous, Self-Recovery			
Hold-up Time	230VAC	--	50	--	ms

General Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Isolation Voltage	Input-output, test time 1 minute, leakage current less than 5mA		3000	--	--	VAC
Insulation Resistance	Input-output, insulated voltage 500VDC		1000	--	--	MΩ
Power Derating	-40℃ - -25℃		2.8	--	--	
	+55℃ - +85℃	5V/9V/24V	2.2	--	--	%℃
	+55℃ - +85℃	12V/15V	3.0	--	--	
	85VAC - 100VAC		1.0	--	--	%/VAC
Operating Temperature			-40	--	+70	℃
Storage Temperature			-40	--	+90	
Storage Humidity			--	--	95	%RH
Soldering Profile	Wave-soldering		260 ± 5℃; time：5 - 10B			
	Manual-welding		360 ± 5℃; time：3 - 5s			
Safety Standard			IEC/UL62368-1			
Safety Class			CLASS ‖			
MTBF	MIL-HDBK-217F@25℃		>2000,000h			

Mechanical Specification

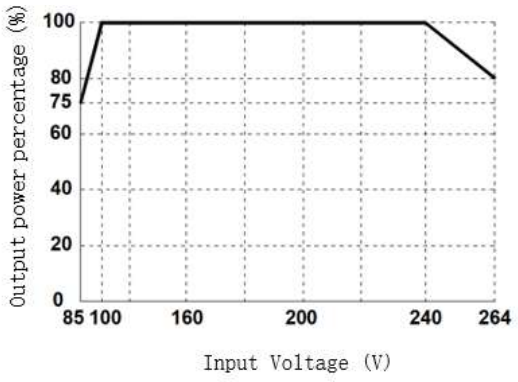
Package Dimensions	50.8 x 25.40 x 15.16 mm
Weight	45.6g (TYP.)
Cooling Method	Free air convection

EMC Specifications

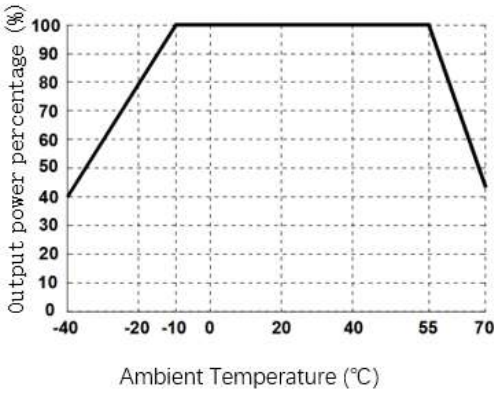
EMI	CE	CISPR32/EN55032 CLASS B	
	RE	CISPR32/EN55032 CLASS B	
EMS	RS	IEC/EN61000-4-3 10V/m	perf. Criteria A
	EFT	IEC/EN61000-4-4 ±4KV	perf. Criteria B
	Surge	IEC/EN61000-4-5 line to line ±1KV	perf. Criteria B
		IEC/EN61000-4-5 line to line ±2KV（application circuit 2）	perf. Criteria B
	CS	IEC/EN61000-4-6 10Vr.m.s	perf. Criteria A
	ESD	IEC/EN61000-4-2 Contact ±6KV/±8KV	perf. Criteria B

Typical Characteristic Curves

Input voltage Derating Curve

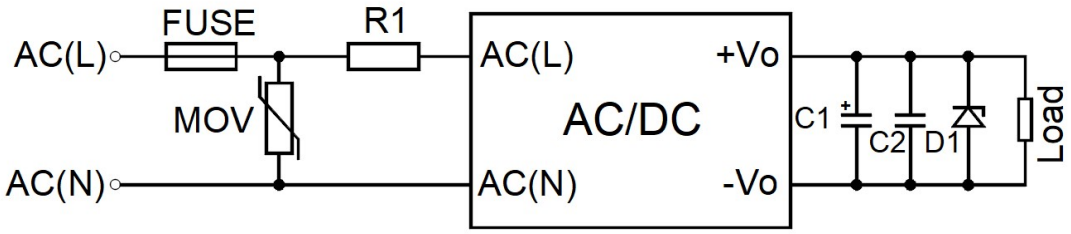


Temperature Derating Curve



Typical Circuit Design And Application

Application circuit（Figure 1）



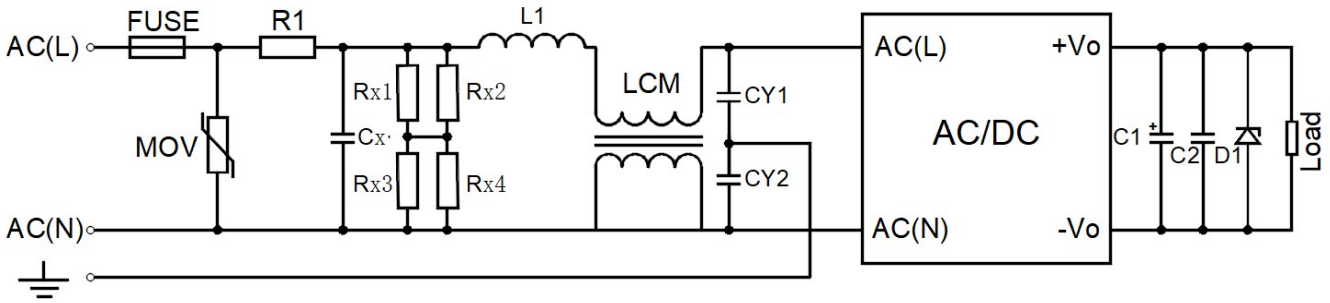
Reference Table for Selection of Peripheral Devices						
Out Voltage	FUSE	MOV	R1	C1	C2	D1
5VDC	1A/300VAC slow-blow, required	10D561K	12Ω/3W (wire-wound resistor, required)	150uF/25V	0.1uF/25V	See Note2
9/12VDC				150uF/25V	0.1uF/25V	
15/24VDC				100uF/35V	0.1uF/50V	

Note：

1. FUSE, Mov and NTC Can be selected based on actual needs.
1. D1 is a TVS transistor that can protect the downstream circuit in case of module abnormalities. It is recommended to choose a model that is 1.2 times the output voltage.

EMS Solutions - Recommended Circuits

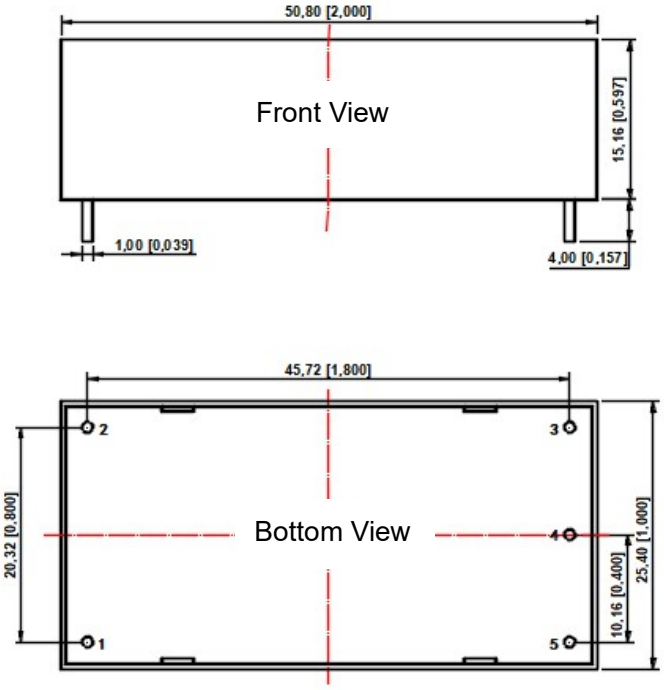
EMS Solutions - Recommended Circuits（Figure 2）



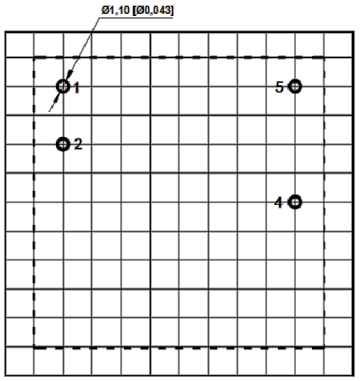
Recommended parameter values for EMC solution circuits	
Model	Recommended value
FUSE	2A/300VAC， slow-blow, required
MOV	14D561K
Cx	0.1uF/275VAC
L1	1.2mH/0.3A
CY1、CY2	1nF/400VAC
LCM	20mHCommon mode Choke
Rx1,Rx2,Rx3,Rx4	2MΩ/1206

Dimensions and Recommended Layout

Dimensions



PCB Printing Layout



Grid size：2.54*2.54mm

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

Note:
Unit: mm[inch]
Pin section tolerances: ±0.10[±0.004]
General tolerances: ±0.50[±0.020]

Note：

1. The input voltage cannot exceed the specified range value, otherwise permanent and irreparable damage may be caused;
2. Unless otherwise specified, the parameters in this datasheet were measured at 25℃, humidity 40%~75%, input nominal voltage and output pure resistance mode under full load;
3. All index test methods are based on our company's enterprise standards.