

ALR-50 Series, 50Watt
FEATURES:

- ✓ Universal AC input range
- ✓ Short circuit, and over current protections
- ✓ Board in-line type installation
- ✓ High voltage isolation
- ✓ Metal case



Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (mA)	Output power (W)
ALR50-5	85-265	5	10000	50
ALR50-12		12	4200	50
ALR50-24		24	2080	50
ALR50-D5		±5	±5000	50
ALR50-D12		±12	±2080	50
ALR50-D24		±24	±1040	50

Notes: Above models are default to metal case.

ELECTRICAL

Input						
Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Input voltage	V_{in}	--	85	--	265	Vac
Input frequency	F_{line}	--	47	--	63	Hz
Efficiency	η	Full voltage, full load	--	82	--	%
Output						
Output voltage Accuracy	--	$V_{in}=100-240Vac$	--	1	--	%
Line regulation	$V_{out-line}$	V_{in} from 100Vac to 240Vac	--	0.2	--	%
Load regulation	$V_{out-load}$	20%-100% load	--	0.5	--	%
Ripple	V_{ripple}	--	--	--	120	mV
Turn-on delay time	--	--	--	1	--	S

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ELECTRICAL
Protection

Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Over current		Continuous Automatic Recovery				
Short circuit		Continuous Automatic Recovery				

Environment

Storage	T_{storage}	Humidity: 5% to 95% RH	-40	--	+105	°C
Ambient operating temperature	T_a	--	-25	--	+65	°C
Case temperature	T_c	--	--	--	+90	°C
Operating relative humidity	H_a	Non condensing	10	--	90	%
MTBF	T_{MTBF}	--	--	--	200	kHrs
Dimension(LxWxH)			76.2x76.2x20mm			
Weight			191g			

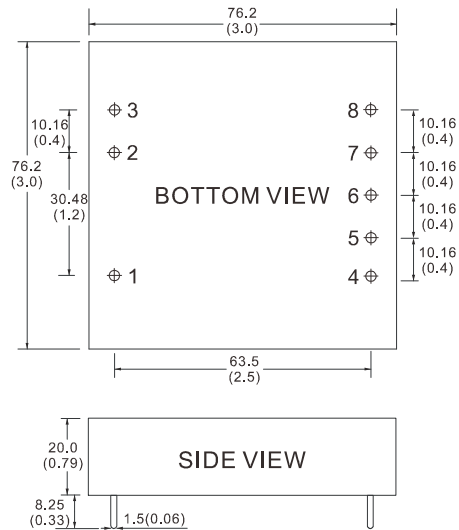
Safety

Isolation Voltage	Input-Output: 2500Vac \leq 1.5mA//1min					
	Input-Case: 1500Vac \leq 1.5mA//1min					
	output-Case: 1500Vac \leq 1.5mA//1min					

Notes: Unless otherwise specified, all the above parameters are measured at ambient temperature of 25°C and $V_{\text{in}} = 100\text{Vac}$ to 240Vac.

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MECHANICAL

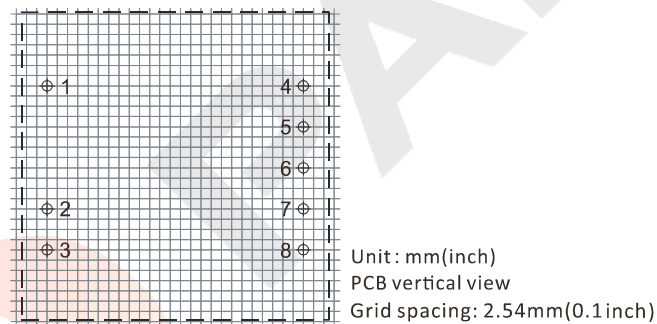


CONNECTION

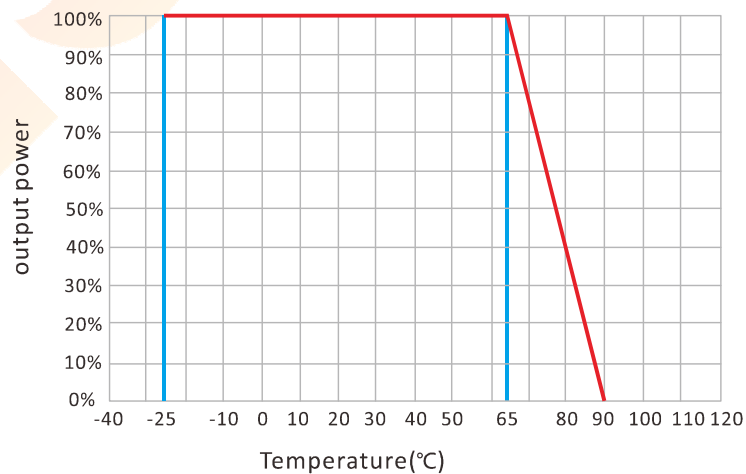
PIN #	SINGLE	DUAL
1	FG	FG
2	AC(N)	AC(N)
3	AC(L)	AC(L)
4	-S	-Vo2
5	TRIM	No Pin
6	+S	COM
7	GND	No Pin
8	+Vo	+Vo1

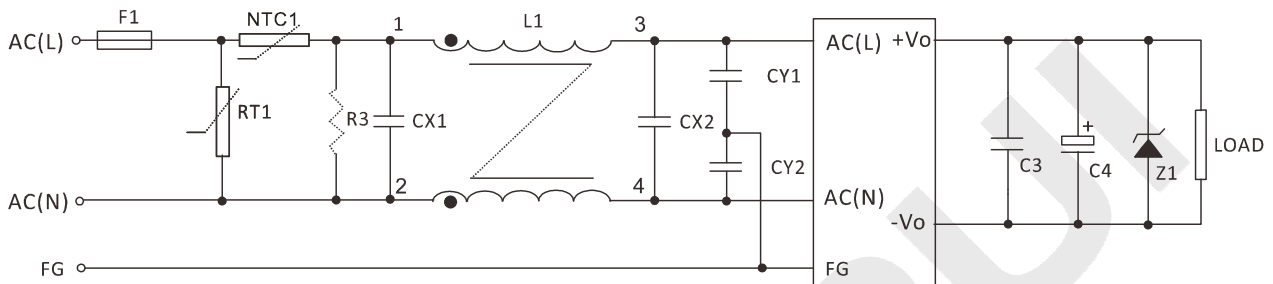
Note: Unit is mm(inch).

LAYOUT



ELECTRICAL CURVE



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NOTE
RECOMMENDED TEST AND APPLICATION CIRCUIT

EMC RECOMMENDED APPLICATION CIRCUIT

	5VDC	12VDC	24VDC
F1		T3.15A/250V	
RT1		14D417K	
NTC1		5D-14	
R3		1MΩ/2W	
L1		L=3-10mH, I=0.2-0.5A	
CX1, CX2		0.15-3.3μF/300Vac	
CY1, CY2		102K/400Vac	
C3		1μF/50V	
C4	470uF/16V	120uF/25V	100uF/35V
Z1	P6KE6.8A	P6KE20A	P6KE33A