

ALR-5 Series, 5Watt

FEATURES:

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



Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (mA)	Output power (W)
ALR5-5	85-265	5	1000	5
ALR5-9		9	550	5
ALR5-12		12	416	5
ALR5-24		24	208	5
ALR5-D5		±5	±500	5
ALR5-D9		±9	±275	5
ALR5-D12		±12	±210	5
ALR5-D24		±24	±100	5

Note : Above models are default to plastic case, you may request for the models with metal case, plus "M" in the suffix.

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	--	80	--	%

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	--	%

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ELECTRICAL
Output

Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Ripple	V_{ripple}	--	--	1%	--	mVp-p
Turn-on delay time	--	--	--	1	--	S

Protection

Over current	Continuous Automatic Recovery
Short circuit	Continuous Automatic Recovery

Environment

Storage	$T_{storage}$	Humidity: 5% RH 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}	--	--	--	2×10^5	kHrs
Dimension(LxWxH)	55x45x20.5mm					
Weight	107g					

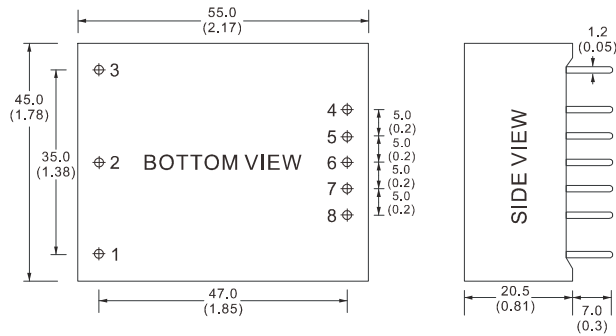
Safety

Isolation Voltage	Input-Output	$2500V_{ac} \leq 1.5mA // 1min$
	Input-Case	$1500V_{ac} \leq 1.5mA // 1min$
	output-Case	$1500V_{ac} \leq 1.5mA // 1min$

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

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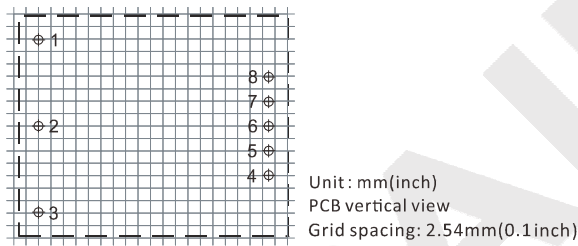
MECHANICAL



CONNECTION

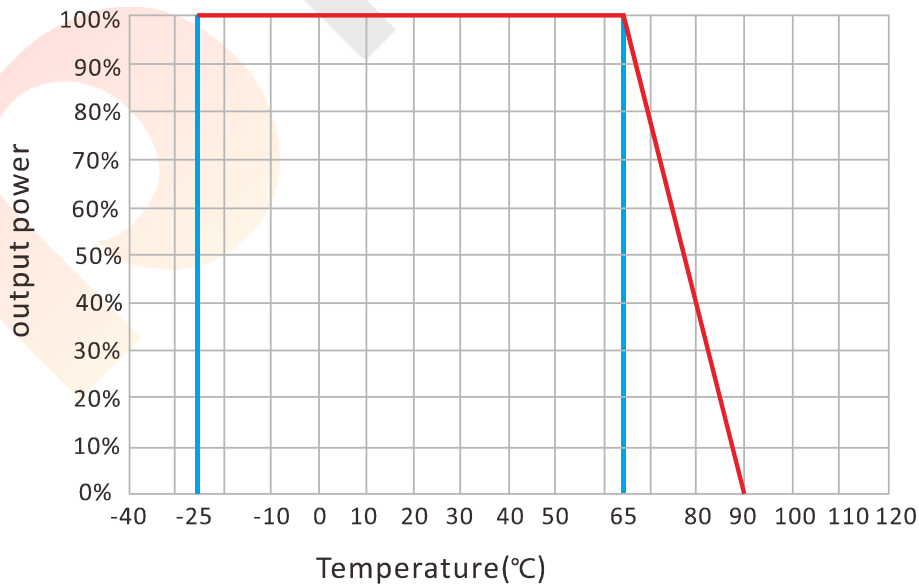
PIN #	SINGLE	DUAL
1	FG	FG
2	AC(N)	AC(N)
3	AC(L)	AC(L)
4	+Vo	+Vo1
5	No Pin	No Pin
6	No Pin	COM
7	No Pin	No Pin
8	GND	-Vo2

LAYOUT



Note: Unit is mm(inch).

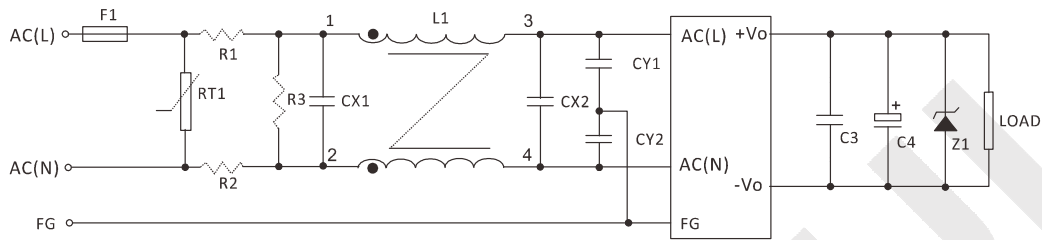
ELECTRICAL CURVE



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NOTE

RECOMMENDED TEST AND APPLICATION CIRCUIT



EMC RECOMMENDED APPLICATION CIRCUIT

	5VDC	9VDC	12VDC	24VDC
F1			T1A/250V	
RT1			7D471K	
R1, R2			2Ω/3W	
R3			1MΩ/2W	
L1			L=3-10mH, I=0.2-0.5A	
CX1, CX2			0.15-1μF/300Vac	
CY1, CY2			102K/400Vac	
C3			1μF/50V	
C4	470uF/16V	150uF/25V	120uF/25V	100uF/35V
Z1	P6KE6.8A	P6KE16A	P6KE16A	P6KE33A