

ATD-20 Series, 20Watt

FEATURES:

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



Model	Input voltage (Vac)	Output voltage (Vdc)	Output current (mA)	Output power (W)	Efficiency (%)
ATD20-5	85-265	5	4000	20	80
ATD20-12		12	1667	20	86
ATD20-15		15	1333	20	87
ATD20-24		24	833	20	88

Notes: Other output models may available on request.

ELECTRICAL

Input						
Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Input voltage	V_{in}	--	85	220	265	Vac
			120	310	380	Vdc
Input frequency	F_{line}	--	47	50	63	Hz
Input current	--	Vin=115Vac		0.45		A
		Vin=220Vac		0.25		A
Inrush current	--	Vin=115Vac		10		A
		Vin=220Vac		20		A
Leakage current	--	Vin=230Vac, 50Hz		0.5		mA
Efficiency	η	Full voltage, full load	76	--	83	%
External fuse recommend						3.15A-5A/250VAC slow break

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Output

Parameters	Symbols	Test Conditions / Comment	Min.	Typ.	Max.	Units
Output voltage accuracy	--	Full input voltage range	--	±1.0	±2.0	%
Line regulation	$V_{out-line}$	V_{in} from 100Vac to 240Vac	--	--	±0.5	%
Load regulation	$V_{out-load}$	20%-100% load	--	--	±1.0	%
No load power consumption	--	--	--	--	0.1	W
Ripple	V_{ripple}	--	--	100	--	mV
Turn-on delay time	--	--	--	500	--	ms

Protection

Over current	≥130% I_o , continuous automatic recovery					
Over voltage	Yes					
Short circuit	Continuous automatic recovery					

Environment

Storage	$T_{storage}$	Humidity: 5% RH to 95% RH	-40	--	+85	°C
Ambient operating temperature	T_a	--	-40	--	+75	°C
Operating relative humidity	H_a	Non condensing	10	--	90	%
MTBF	T_{MTBF}	--	300	--	--	kHrs

Dimension(LxWxH) 70.0x48.0x23.5mm

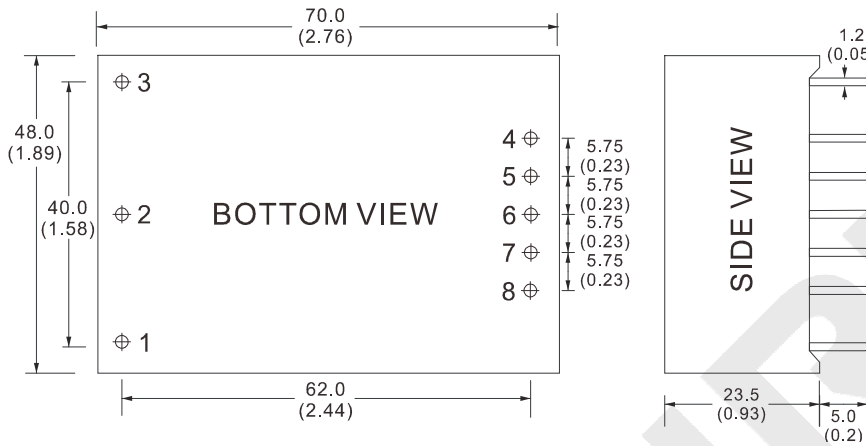
Safety

Isolation Voltage	Input-Output: 3800Vac≤1.5mA//1min					
Isolation resistance	Input-Output: 100MΩ@500Vdc					

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

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MECHANICAL

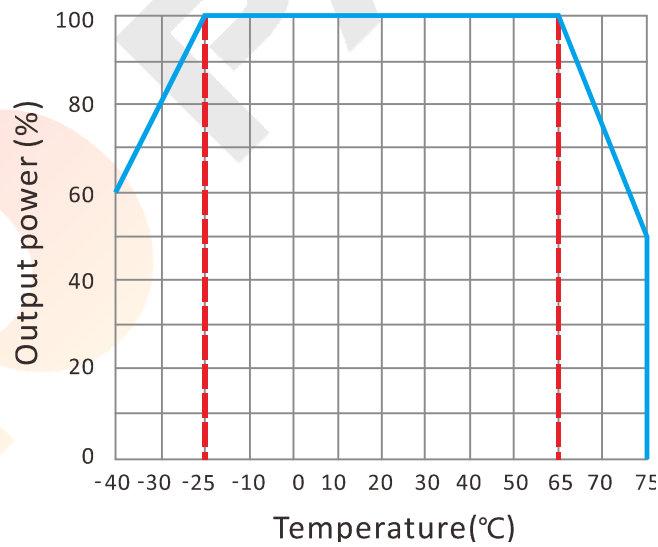


CONNECTION

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

Note: Unit is mm(inch).

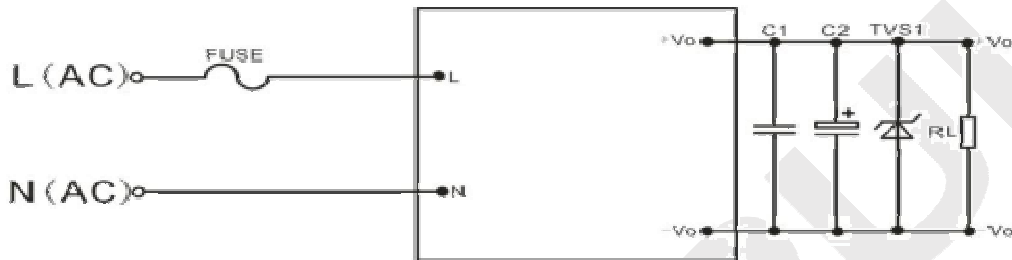
ELECTRICAL CURVE



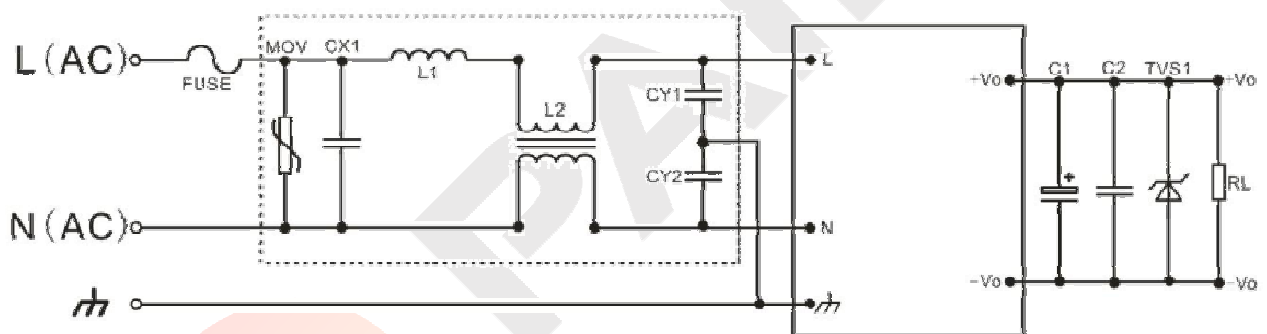
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NOTE

RECOMMENDED TEST AND APPLICATION CIRCUIT



RECOMMENDED TEST AND APPLICATION CIRCUIT for EMC



EMC RECOMMENDED APPLICATION CIRCUIT

	5V	12V	15V	24V
MOV				14D511K
C2	470 μ F	330 μ F	220 μ F	100 μ F
TVS1	SMBJ7.0A	SMBJ15A	SMBJ20A	SMBJ30A
CX1		0.22 μ F/275Vac		
FUSE		3.15A/250Vac, slow break		
L1		2.0 μ H/2.5A		
L2		15mH/2.5A		
CY1, CY2		102M/400Vac		