

KEY FEATURES

- *Universal Input 85 to 305 Vac
- *Compact Size
- *High Reliability
- *Isolation Voltage 3000 Vac
- *Single line package

ELECTRICAL SPECIFICATIONS

INPUT

- *Input range----- 85-305 Vac (100-430Vdc)
- *Frequency----- 47-63 Hz
- *Input current----- 0.4A max (Full load @115Vac)
- *Inrush current----- 18A max (Cold start@115Vac,25°C)
- *Efficiency----- (Refer next page)

OUTPUT

- *Rating power----- (Refer next page)
- *Voltage accuracy--- +/-3% max.
- *Line regulation----- +/-0.5% (@full load)
- *Load regulation----- +/-2%
- *Over load protection
- *Short circuit protection

EMC

- *Conduction ----- EN55032
- *Radiation----- EN55032

PHYSICAL

- *Dimensions----- 44.5 x 15.0 x 22.0 mm

APPLICATIONS

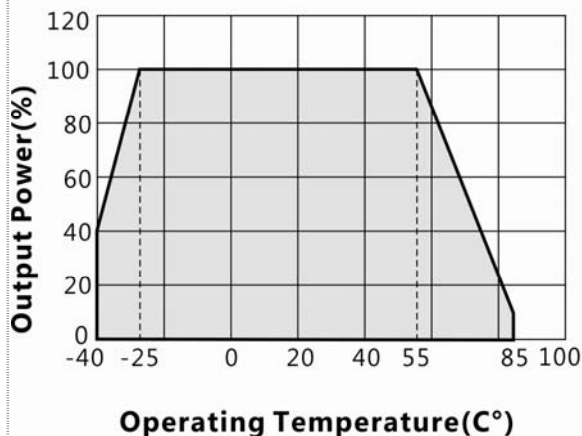
- *Telecommunications
- *Test & industrial equipments

ENVIRONMENTAL

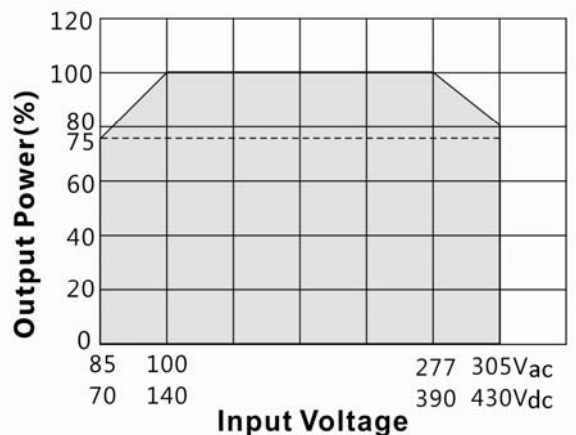
- *Operating temperature:
-40 to +85°C ambient
- *Humidity:
Operating; non-condensing, 20% to 95%
- *Storage temperature:
-40 to +105°C
- * Dielectric Strength(Hi-pot)
Primary to Secondary: 3000Vac/5mA max / 5 second

DERATING

TEMPERATURE DERATING CURVE



INPUT VOLTAGE DERATING CURVE(25°C)

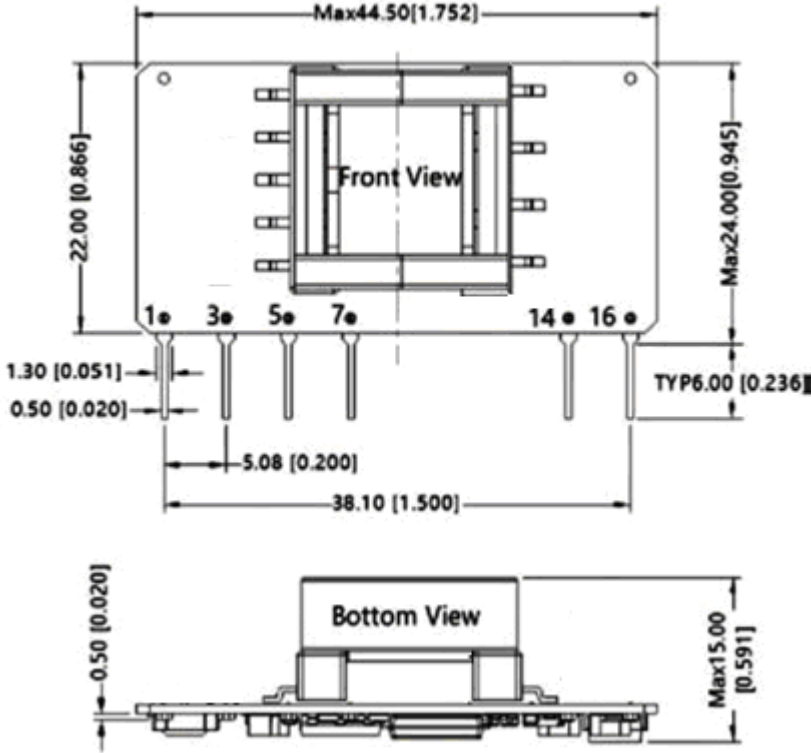


MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	OUTPUT POWER	RIPPLE & NOISE	EFFICIENCY (Typ.)	CAPACITOR LOAD (MAX.)
MODEL SELECTION CHART						
PSO15-0	3.3V	3000mA	9.9W	150mV	75%	20000uF
PSO15-1	5V	2800mA	14W	150mV	77%	15000uF
PSO15-2	9V	1670mA	15W	150mV	82%	5000uF
PSO15-3	12V	1250mA	15W	150mV	82%	4000uF
PSO15-4	15V	1000mA	15W	150mV	84%	2000uF
PSO15-6	24V	625mA	15W	150mV	85%	1000uF

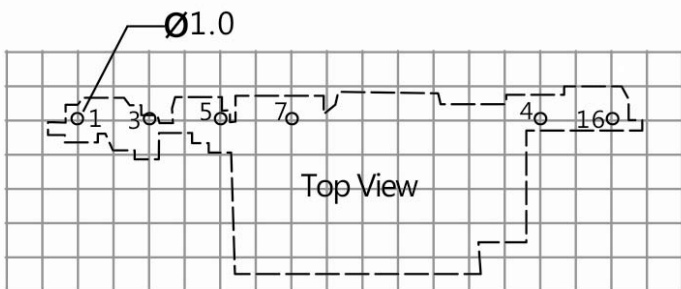
NOTE: Additional mounting type with bent pins for option and “-B” in the suffix.

MECHANICAL DIMENSIONS

units: mm [inch]
 pin section tolerance: ± 0.10 [± 0.004]
 general tolerance: ± 0.50 [± 0.020]



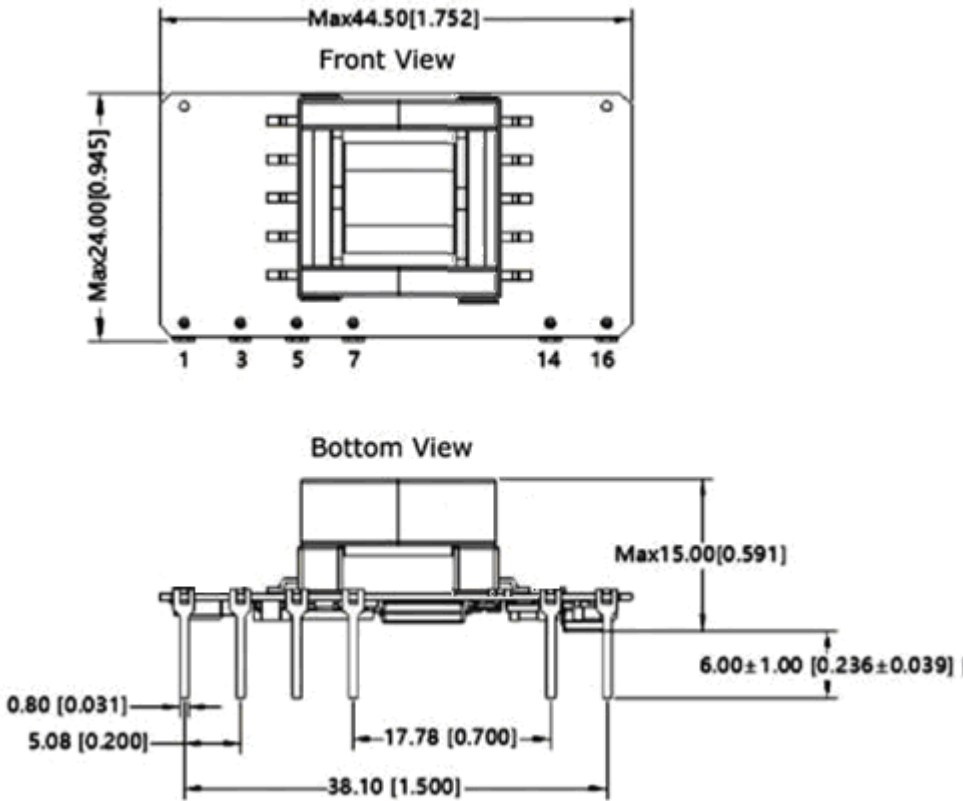
PIN CONNECTIONS	
PIN	Function
1	AC (N)
3	AC (L)
5	+V (cap)
7	-V (cap)
14	-Vo
16	+Vo



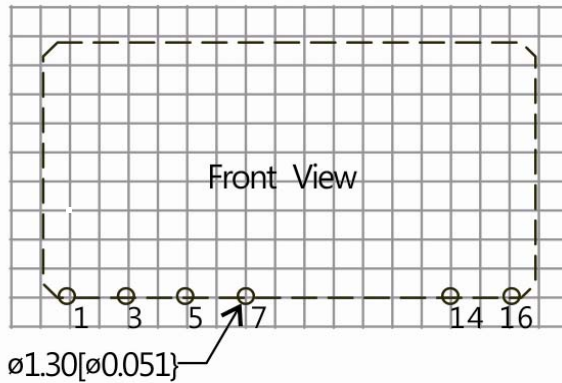
Note: Grid 2.54*2.54mm

Note: The separation between all primary and secondary circuits must be maintained
 As follows to maintain the safety requirements:
 Creepage: > 6.4 mm
 Crearance: > 4.0 mm

Suffix "B" for Bent Pins

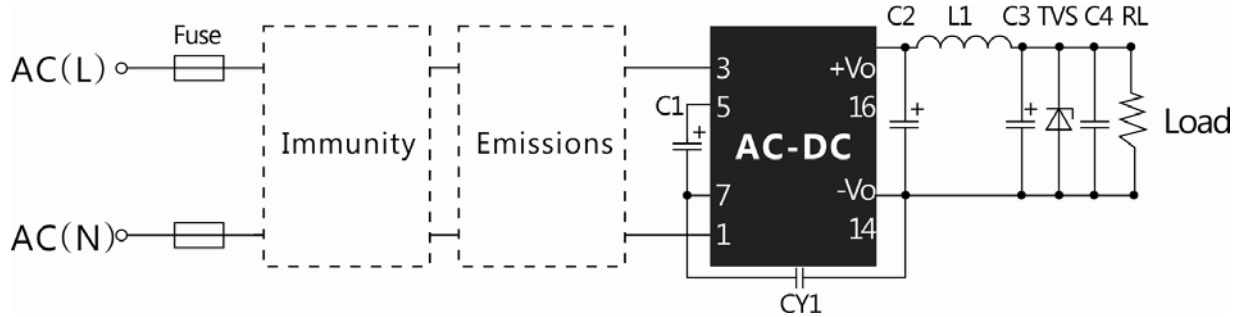


PIN CONNECTIONS	
PIN	Function
1	AC (N)
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5	+V (cap)
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14	-Vo
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Note: The separation between all primary and secondary circuits must be maintained
 As follows to maintain the safety requirements:
 Creepage: >6.4mm
 Crearance: >4.0mm

APPLICATION DESIGN REFERENCE



Note: All applications must follow this minimum circuit implementation. Additional environmental and application-specific variations are listed in the following pages.

PSO15 Series additional component selection guide								
Part no.	FUSE (required)	C1 (required)	C2 (required)	L1 (required)	C3 ¹ (required)	C4	CY1 (required)	TVS
PSO15-0	1A/300V	33uF/450V	470 uF /16V (solid-state Capacitor)	2.2uH(Max 22mΩ)	220 uF /16V	0.1 uF /50V	2.2nF/400Vac	SMBJ7.0A
PSO15-1								SMBJ7.0A
PSO15-2								SMBJ12A
PSO15-3			SMBJ20A					
PSO15-4			SMBJ20A					
PSO15-6			SMBJ30A					

Note: C3 is Recommended to be a high frequency electrolytic capacitor with low ESR.

PSO15 Series Enviromental and EMC selection guide					
Recommended circuit	Typical application	Input voltage range	Enviroment Temperature	Emissions	Immunity
1	General purpose	85~305Vac	-40°C to 85°C	Class A	Class III
2	Smart home, home appliances, intelligent building, intelligent agriculture		-25°C to 55°C	Class B	Class III
3	Indoor industrial		-25°C to 55°C	Class B	Class IV
4	Outdoor, video monitoring, charging point, communications, security		-40°C to 85°C	Class A	Class IV

Circuit 1

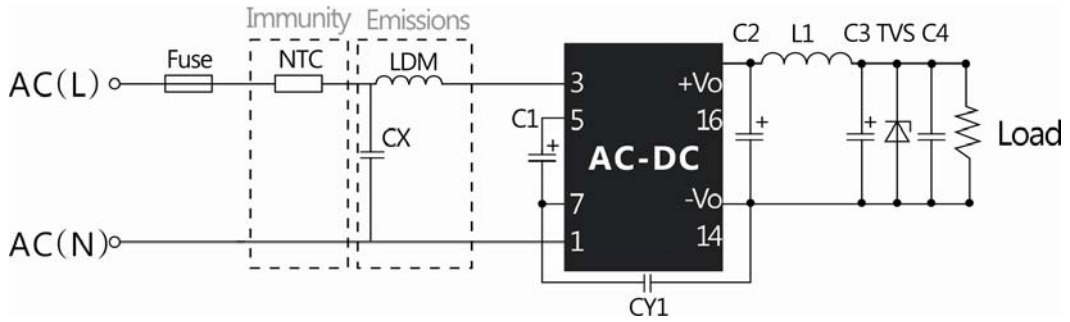


Table 1

Ambient temperature range	Immunity Class	Emissions Class
-40°C~85°C	Class III	Class A
Component	Recommended value	
NTC	10D-10	
LDM	1.2mH(min: 0.4A, max: 4Ω)	
CX	0.1uF/310Vac	
FUSE(required)	1A/300V,slow blow	

Circuit 2

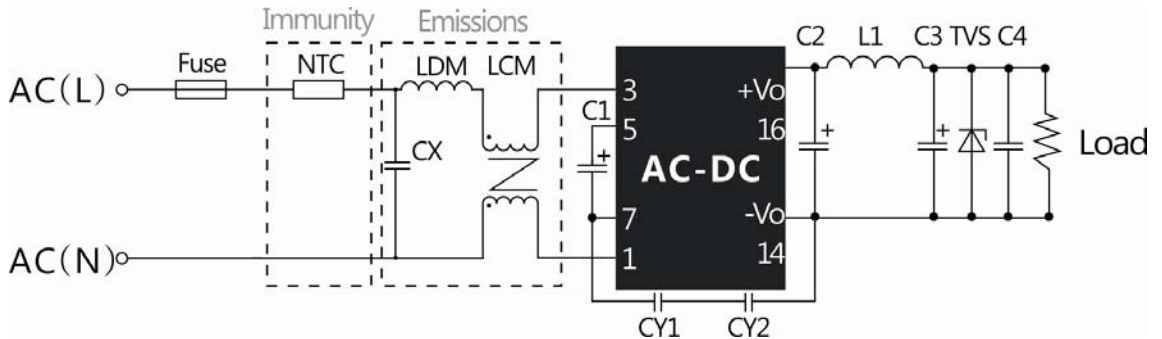


Table 2

Ambient temperature	Immunity Class	Emissions Class
-25°C~55°C	Class III	Class B
Component	Recommended value	
NTC	10D-10	
CY1 (CY2)	2.2 nF/400Vac	
LCM	10mH(min: 0.4A,max: 600mΩ)	
LDM	0.33 mH (min: 0.4A, max:1Ω)	
CX	0.22 uF /310Vac	
FUSE (required)	1A/300V,slow blow	

Note: When designing applications for household use(e.g. Smart Home or Home Appliance application),two Y-Caps(CY1 & CY2 valued at 2.2nF/400Vac each) are required in series to satisfy 60335 household safety requirements. Non-household applications can use one Y-CY1 valued at 2.2nF/400Vac)

Circuit 3

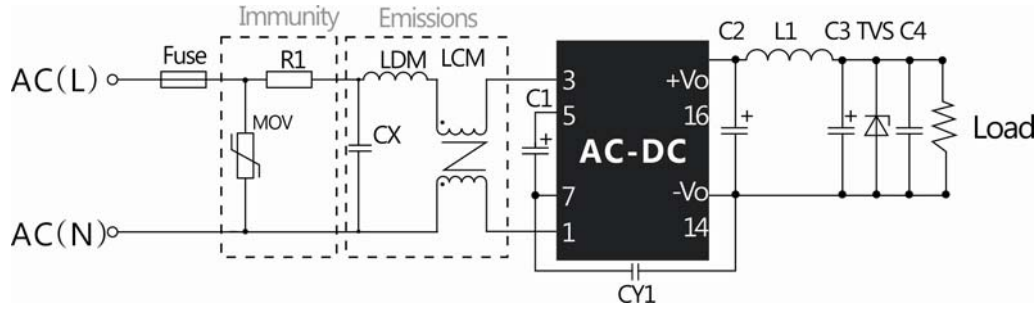


Table 3

Ambient temperature range	Imunity Class	Emissions Class
-25°C~55°C	Class IV	Class B

Component	Recommended value
MOV	S14K350
CY1	2.2nF/400Vac
CX	0.22uF/310Vac
LCM	10mH(min: 0.4A,max: 600mΩ)
LDM	0.33mH (min: 0.4A, max:1Ω)
R1	12Ω/3W
FUSE(required)s	2A/300V,slow blow

Circuit 4

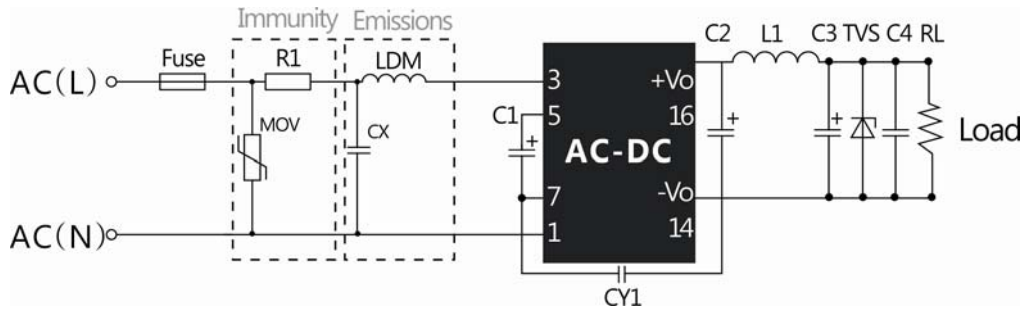


Table 4

Ambient temperature range	Imunity Class	Emissions Class
-40°C~85°C	Class IV	Class A

Component	Recommended value
MOV	S14K350
LDM	1.2mH(min: 0.4A, max: 4Ω)
CX	0.1uF/310Vac
R1	12Ω/3W
FUSE(required)	2A/300V,slow blow