



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

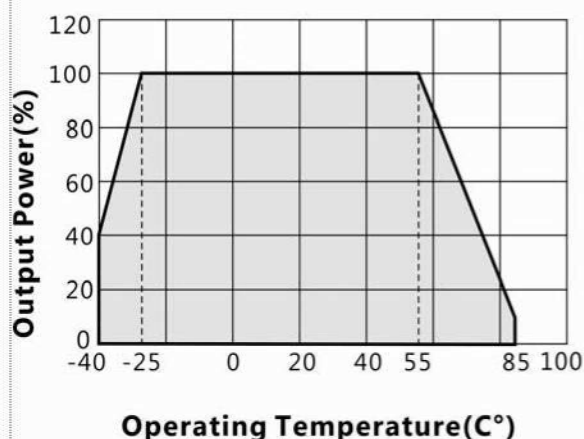
- *Telecommunications
- *Test & industrial equipments

ENVIRONMENTAL

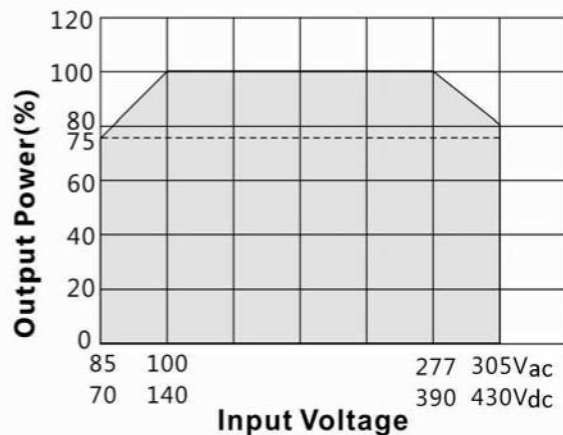
- *Operating temperature:
-40 to +85°C ambient
- *Humidity:
Operating; non-condensing, 20% to 95%
- *Storage temperature:
-40 to +105°C
- * Dielectric Strength(Hi-pot)
Primary to Secondary: 3000Vac/5mA max / 5 second

DERATING

TEMPERATURE DERATING CURVE



INPUT VOLTAGE DERATING CURVE(25°C)



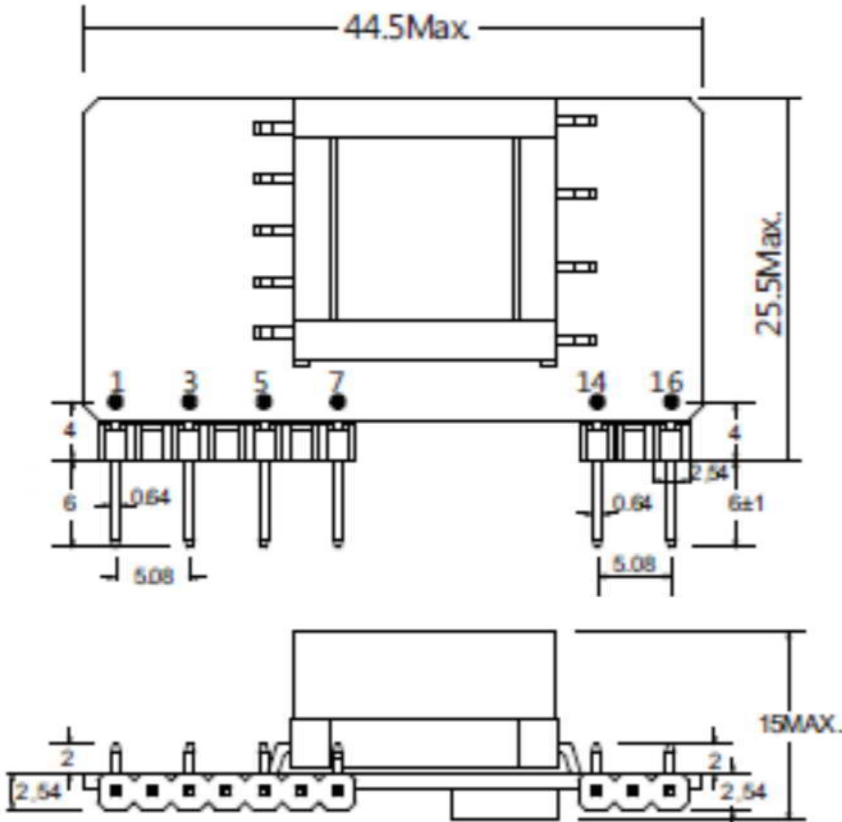
MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	OUTPUT POWER	RIPPLE & NOISE	EFFICIENCY (Typ.)	CAPACITOR LOAD (MAX.)
MODEL SELECTION CHART						
PSO15-0	3.3V	3000mA	9.9W	150mV	75%	20000uF
PSO15-1	5V	2800mA	14W	150mV	77%	15000uF
PSO15-2	9V	1670mA	15W	150mV	82%	5000uF
PSO15-3	12V	1250mA	15W	150mV	82%	4000uF
PSO15-4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

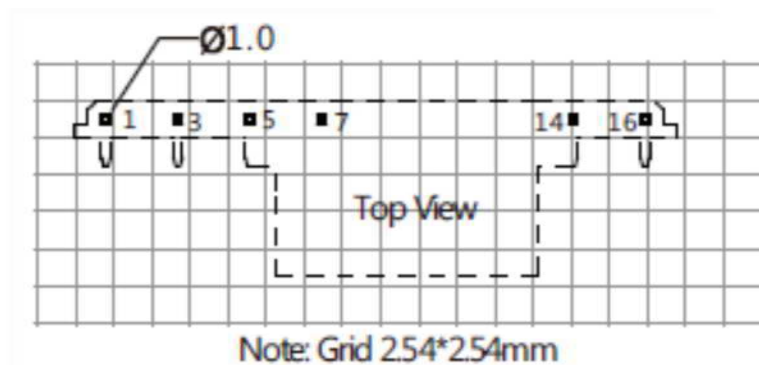
MECHANICAL DIMENSIONS

(units : mm) Pin section tolerance : ± 0.30

General tolerance : ± 0.50

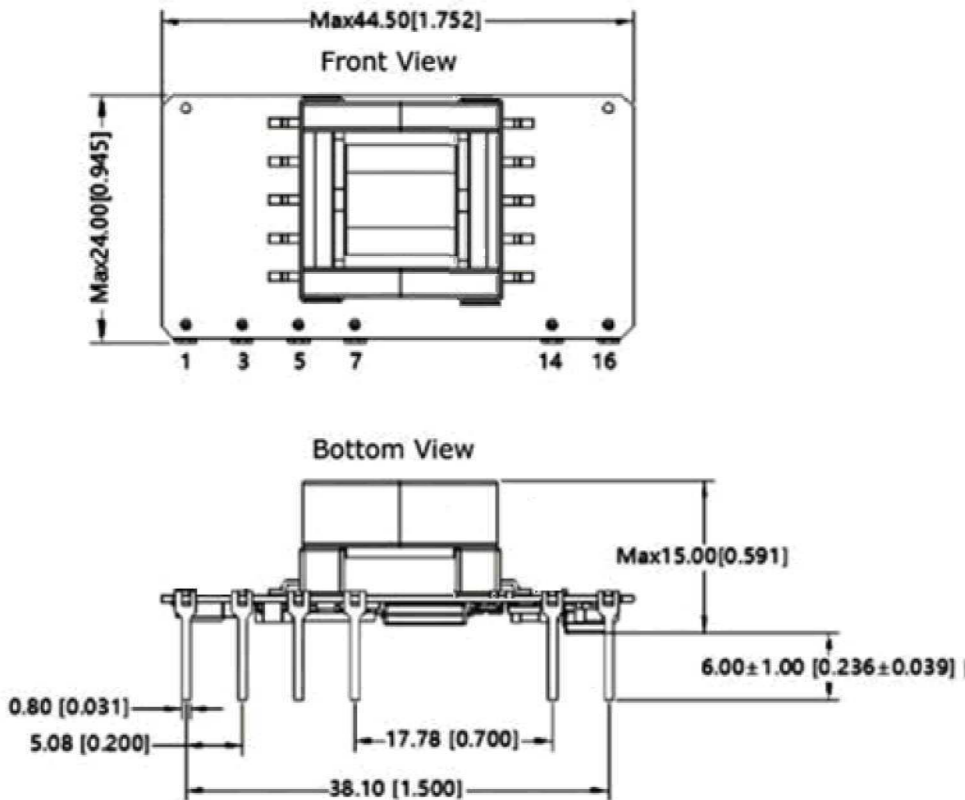


PIN CONNECTIONS	
PIN	Function
1	AC (N)
3	AC (L)
5	+V (cap)
7	-V (cap)
14	-Vo
16	+Vo

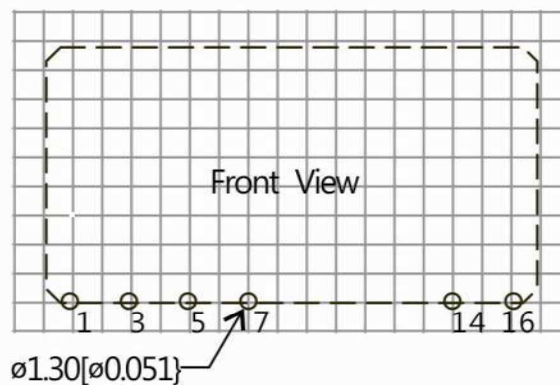


Note: The separation between all primary and secondary circuits must be maintained
As follows to maintain the safety requirements:
Creepage: >6.4mm
Crearence: >4.0mm

Suffix “B” for Bent Pins

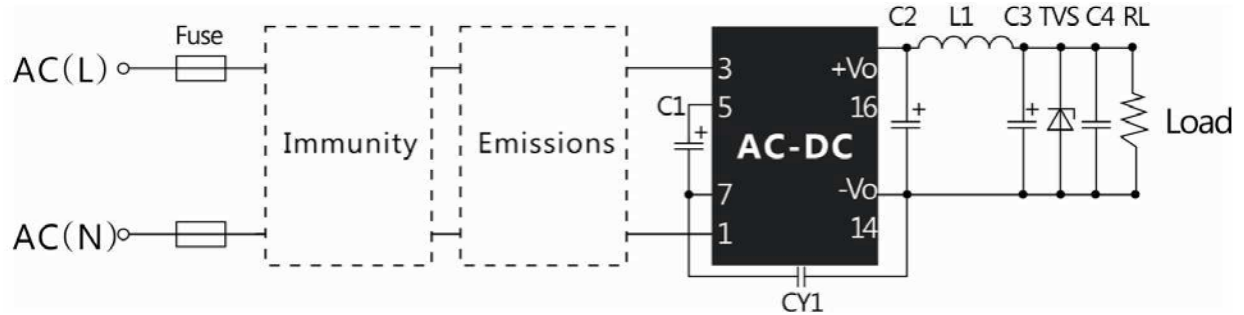


PIN CONNECTIONS	
PIN	Function
1	AC (N)
3	AC (L)
5	+V (cap)
7	-V (cap)
14	-Vo
16	+Vo



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

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

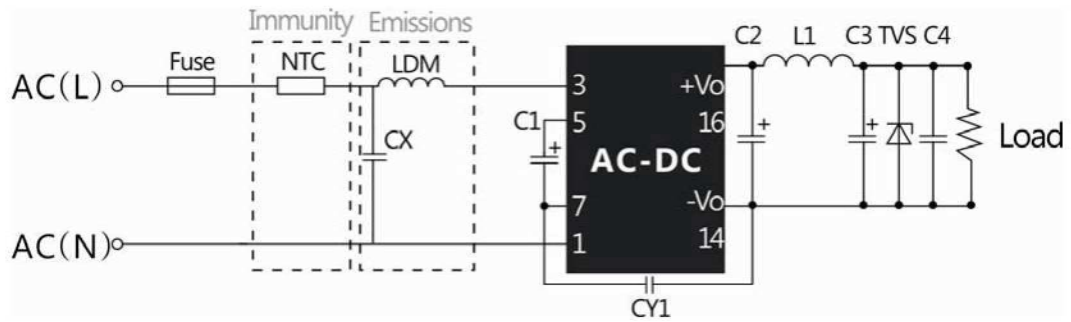


Table 1

Ambient temperature range	Imunity 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

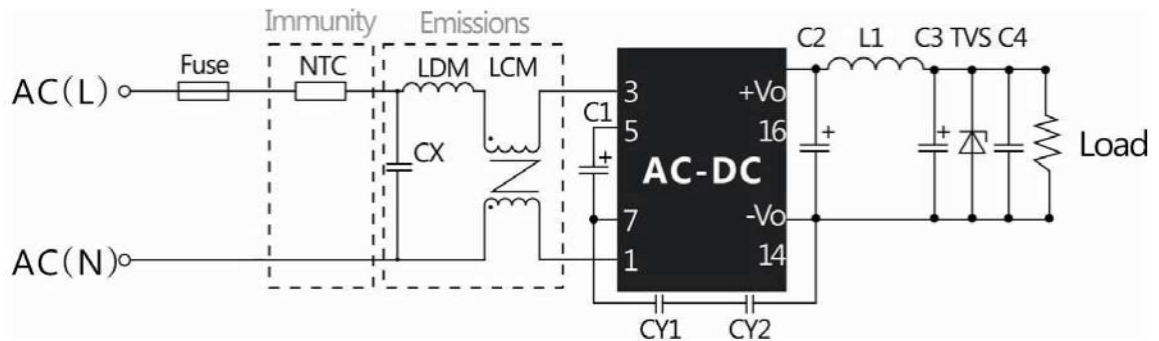


Table 2

Ambient temperature	Imunity 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

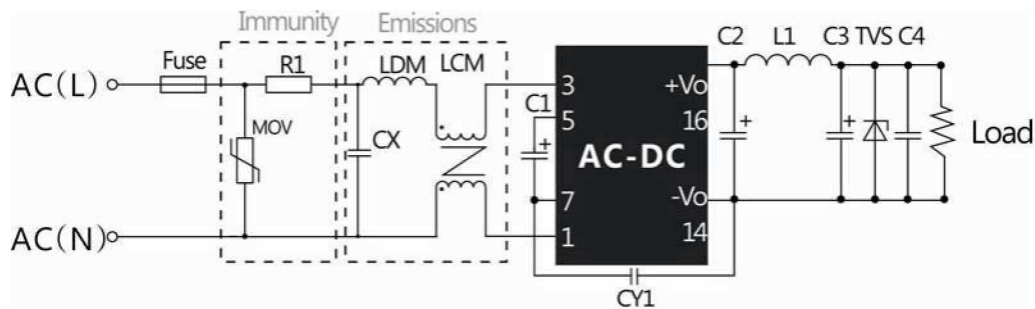


Table 3

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

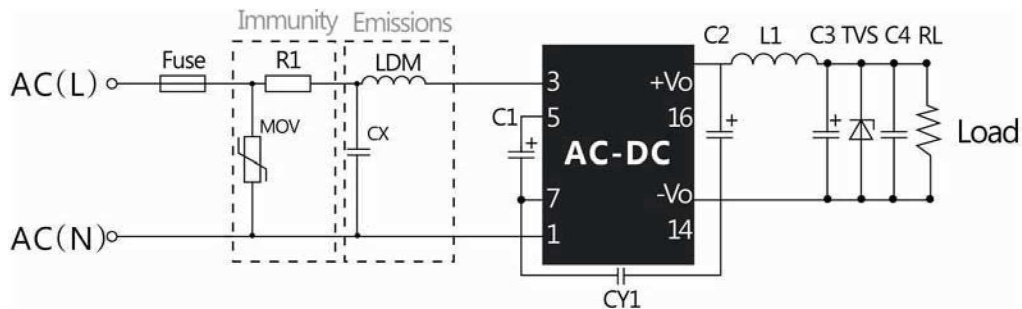


Table 4

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