

Product Feature

- ◆ Universal Input: 85-305VAC/100-430VDC
- ◆ Package Type: DIP
- ◆ Operating Temperature Range: -40°C - +85°C
- ◆ Isolation Voltage: 4000VAC
- ◆ Full Load Efficiency: 86% (Typ.)
- ◆ Bare metal can meet EMI: CLASS B
- ◆ OVC III (meet EN61558-1)
- ◆ Output short circuit and overcurrent protection functions
- ◆ High efficiency,low power consumption
- ◆ Safety certification IEC/EN61558,IEC/EN60335



Selection Guide

Certification	Part No.	Input Voltage (VAC)	Out Power (W)	Out Voltage (VDC)	Out Current (mA)MAX	Full Load Efficiency %(Typ.)	Capacitive Load (μF)Max.
UL/EN/IEC	SLD15-23B03R4	85-305	13.2	3.3	4000	83	6600
	SLD15-23B05R4	85-305	15	5	3000	85	5000
	SLD15-23B09R4	85-305	15	9	1670	83	3000
	SLD15-23B12R4	85-305	15	12	1250	84	2000
	SLD15-23B15R4	85-305	15	15	1000	85	1500
	SLD15-23B18R4	85-305	15	18	834	85	1000
	SLD15-23B24R4	85-305	15	24	625	86	680
Note: 1. All the above data were tested within the parameter range of typical application circuits; 2.Adding "A2S" to the product model suffix indicates an extension for wired packaging,while adding "A4S" to the suffix indicates an extension for rail-mounted packaging. 3.The product images are for reference only. Please refer to the actual product for details.							

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage	AC Input	85	--	305	VAC
	DC Input	100	--	430	VDC
Input Current	115VAC	--	--	0.45	A
	230VAC	--	--	0.30	
Inrush Current	115VAC	--	30	--	A
	230VAC	--	60	--	
Input Frequency		47	--	63	Hz
Fuse		2A/300V,Slow-blow,Required			
Leakage Current	230VAC/50Hz	0.1mA RMS MAX.			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		--	±2	--	%
Linear Regulation Rate	Vin=Min. to Max. @Full Load	--	±0.5	--	%
Load Regulation Rate	0%-100% load	--	±1.0	--	%
Ripple Noise	20MHz bandwidth,5%- 100% load	--	80	150	mV
Temperature Drift Coefficient		--	±0.02	--	%/°C
Stand-By Power Consumption	230VAC	--	--	0.12	W
Min. Load		0	--	--	%
Over Current Protection		110	--	--	%Io
Short-Circuit Protection		Continuous,Self-Recovery			
Hold-Up Time	230VAC	--	56	--	ms
Note: The ripple and noise test method is based on the reliability method,and the output is a parallel 10uF electrolytic capacitor and a 1uF ceramic capacitor.					

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Insulation Voltage	Input-output,test time 1 minute,leakage current less than 5mA	4000	--	--	VAC
Insulation Resistance	Input-output,insulated voltage 500VDC	100	--	--	MΩ
Power Derating	+50°C - +85°C	3.3/5V	2.28	--	--
	+55°C - +85°C	9/12/15/18/24V	2.0	--	--
	85VAC - 100VAC	1.66	--	--	%VAC
	277VAC - 305VAC	1.4	--	--	
Operating Temperature		-40	--	+85	°C
Storage Temperature		-40	--	+85	°C
Storage Humidity		--	--	95	%RH
Soldering Profile	Wave-soldering	260 ± 5°C; time: 5 - 10s			
	Manual-welding	360 ± 10°C; time: 3 - 5s			
Safety Standard		EN62368-1,EN60335-1,EN61558-1			
Safety Class		CLASS II			
MTBF	MIL-HDBK-217F@25°C	>3,200,000h			

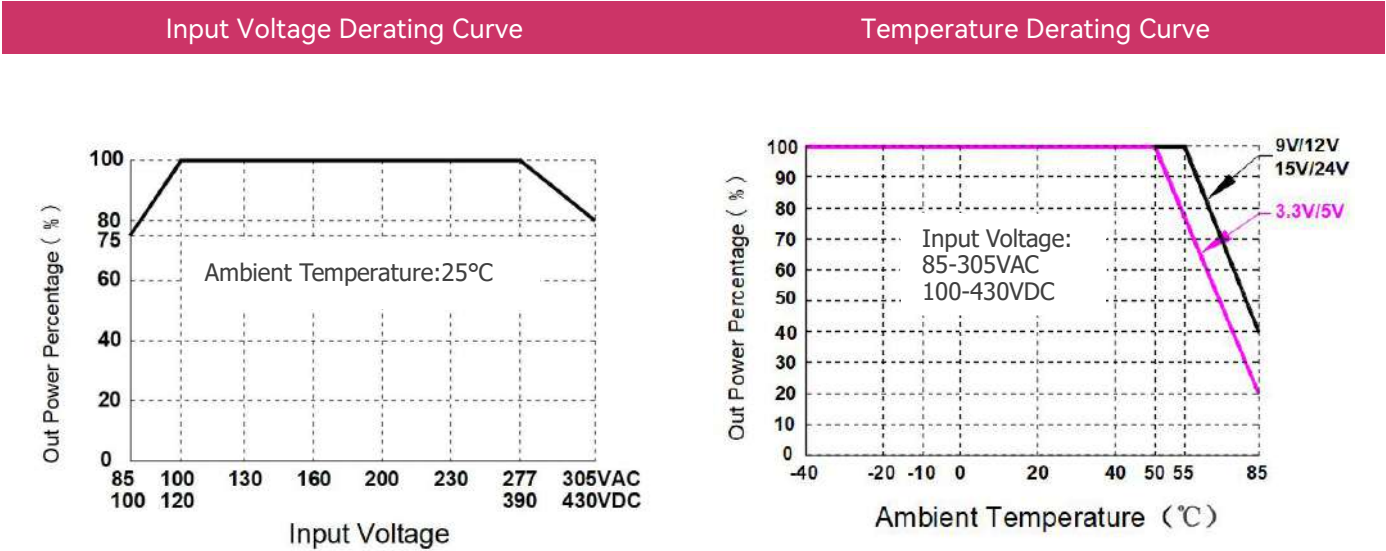
Mechanical Specifications

Case Material	Black plastic; flame-retardant and heat-resistant (UL94V-0)
Package Dimensions	45.70 x 25.40 x 21.50mm
Weight	39.6g (Typ.)
Cooling Method	Free air convection

EMC Specifications

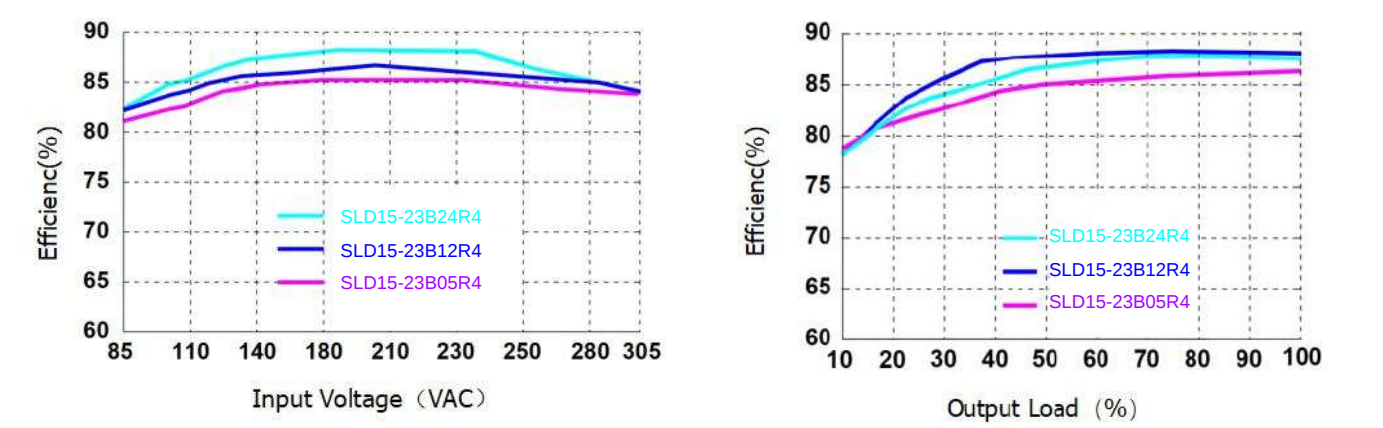
EMI	CE	CISPR32/EN55032 CLASS B CISPR11/EN55011 CLASS B EN55014-1	
	RE	CISPR32/EN55032 CLASS B CISPR11/EN55011 CLASS B EN55014-1	
EMS	RS	IEC/EN61000-4-3 10V/m	perf. Criteria A
		EN55014-2	perf. Criteria A
	EFT	IEC/EN61000-4-4 ±2KV (See Fig.2-1 for EMC recommended circuit)	perf. Criteria B
		IEC/EN61000-4-4 ±4KV (See Fig.2-2 for EMC recommended circuit)	perf. Criteria A
		EN55014-2	perf. Criteria B
	Surge	IEC/EN61000-4-5 line to line ±1KV	perf. Criteria B
		IEC/EN61000-4-5 line to line ±2KV (See Fig.2-2 for EMC recommended circuit)	perf. Criteria B
		IEC/EN61000-4-5 line to line ±2KV/line to PE ±4KV/ (See Fig.2-2 for EMC recommended circuit)	perf. Criteria A
		EN55014-2	perf. Criteria B
	CS	IEC/EN61000-4-6 10Vr.m.s	perf. Criteria A
		EN55014-2	perf. Criteria A
	ESD	IEC/EN61000-4-2 Contact ±8KV / Air ±15KV	perf. Criteria B

Typical Characteristic Curves



Efficiency VS Input Voltage Curve (Full load)

Efficiency VS Output Load Curve (Vin=230VAC)



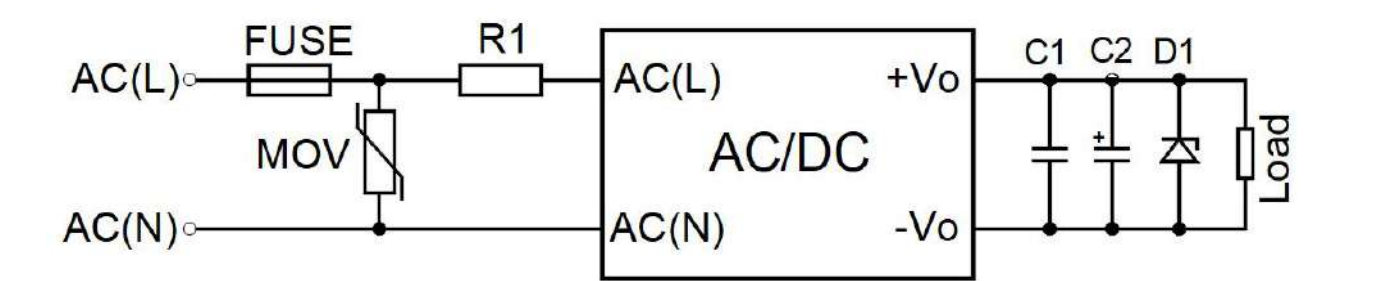
Note:

1. For input voltages of 85-100VAC/277-305VAC,voltage derating should be carried out on the basis of temperature derating.

2.This product is suitable for use in a natural wind-cooled environment.

Typical Circuit Design and Application

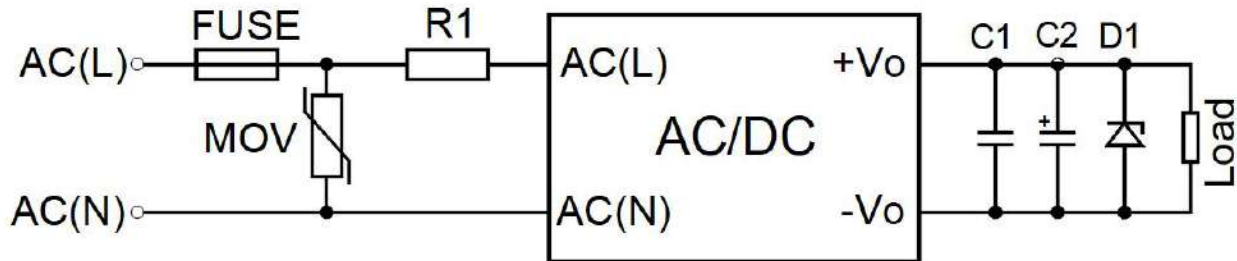
Application circuit (Figure 1)



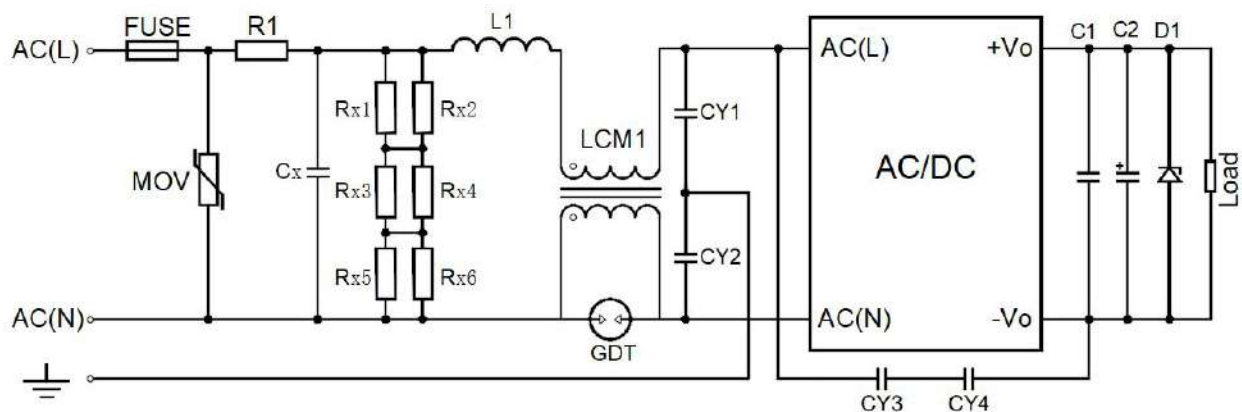
Reference Table for Selection of Peripheral Devices						
Out Voltage	FUSE	MOV	R1	C1	C2	D1
3.3/5VDC	3.15A/300VAC Slow-blow,Required	14D561K	6.8Ω/3W	1uF/16V	220uF/16V	See Note2
9/12/15VDC			Wire-wound resistor,Required	1uF/25V	100uF/25V	
18/24VDC				1uF/35V	100uF/35V	
Note:						
1. FUSE and Mov Can be selected based on actual needs.						
1. D1 is a TVS transistor that can protect the downstream circuit in case of module abnormalities. It is recommended to choose a model that is 1.2 times the output voltage.						

EMC Solutions – Recommended Circuitst

EMC Solutions – Recommended Circuitst (Figure 2)



EMC Recommended Circuit (2-1)



EMC Recommended Circuit (2-2)

(When the output of the product needs to be connected to PE or connected to PE through Y capacitor, Recommended)

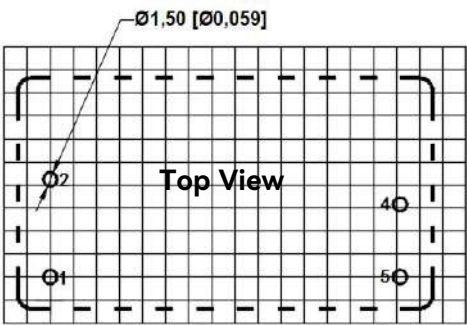
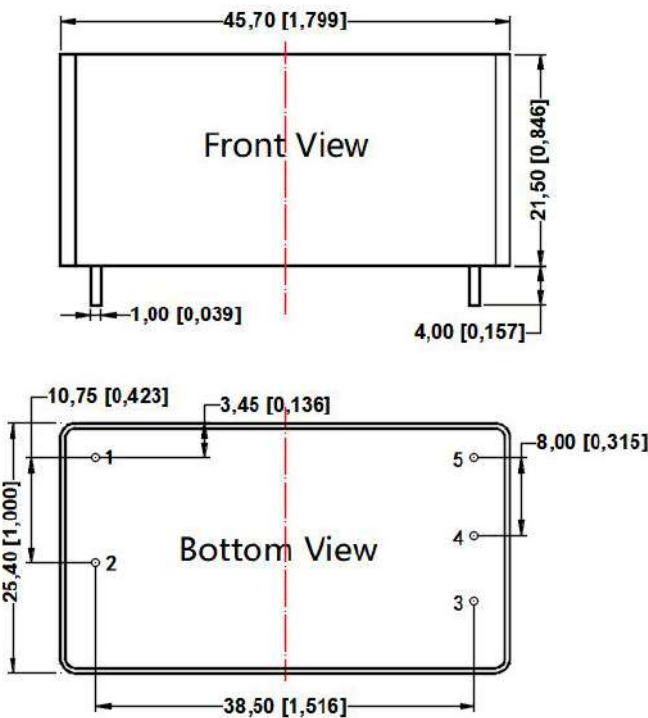
Recommended parameter values for EMC solution circuits

Model	Recommended value
FUSE	3.15A/300VAC,Slow-blow,Required
MOV	14D561K
R1	12Ω/5W Wire-wound resistor,Required
Cx	0.33uF/305VAC
L1	1.2mH/0.5A
CY1,CY2	2.2nF/400VAC
CY3,CY4	1.0nF/400VAC
GDT	300V/1KA
LCM1	20mH,Common mode inductance
Rx1,Rx2,Rx3,Rx4,Rx5,Rx6	1.5MΩ/1206
C1,C2,D1	Refer to typical circuit design and application

Dimensions and Recommended Layout

Dimensions

PCB Printing Layout



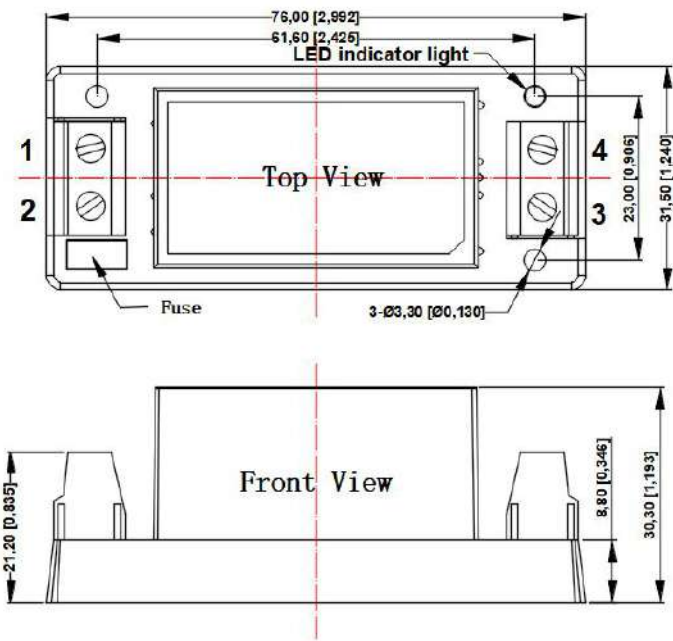
Grid size: 2.54 x 2.54mm

Pin FunctionTable	
Pin	Function
1	AC(N)
2	AC(L)
3	No Pin
4	+Vo
5	-Vo

Note:
Unit: mm[inch]
Pin section tolerances:±0.10[±0.004]
General tolerances:±0.50[±0.020]

A2S Dimensions

Pin FunctionTable

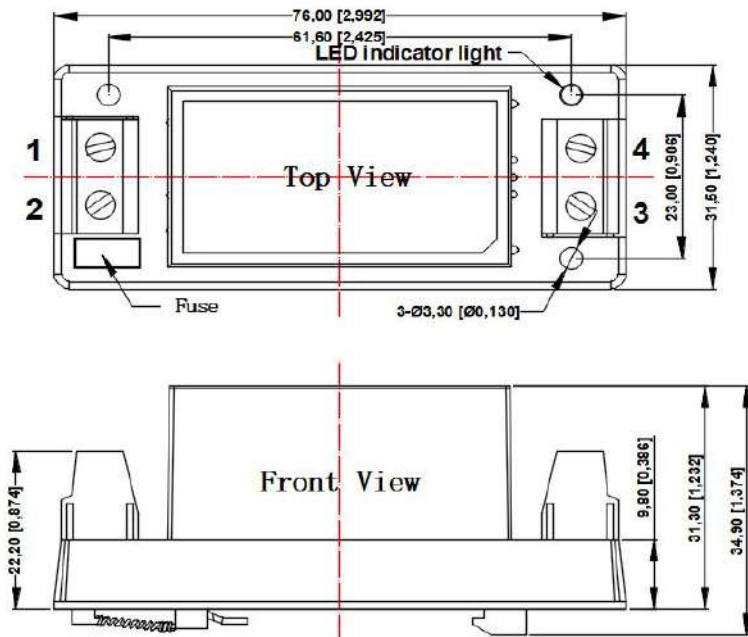


Terminal	Function
1	AC(L)
2	AC(N)
3	-Vo
4	+Vo

Note:
Unit: mm[inch]
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N·m
General tolerances: +1.00[+0.039]

A4S Dimensions

Pin FunctionTable



Terminal	Function
1	AC(L)
2	AC(N)
3	-Vo
4	+Vo

Note:

Unit: mm[inch]

Wire range: 24-12 AWG

Tightening torque: Max 0.4 N·m

Mounting rail: TS35,rail needs to connect safety ground

General tolerances: +1.00[+0.039]

Packaging instructions

Pearl Cotton Packaging Information Preview Form

Model series	Pearl Cotton (pcs/ Cotton)	Inner box (pcs/ box)	Full box Quantity (pcs)
SLD15-23BxxR4	35	105	210
SLD15-23BxxR4 A2S	28	56	112
SLD15-23BxxR4 A4S	28	56	112

Note:

- ✧ The input voltage should not exceed the specified range value,otherwise it may cause permanent and irreparable damage;
- ✧ It is recommended to use at a load of over 5%. If the load is below 5%,the ripple index of the product may exceed the specifications,but it does not affect the reliability of the product;
- ✧ The maximum capacitive load is tested within the input voltage range and under full load conditions;
- ✧ Unless otherwise specified,all indicators in this manual are measured at Ta=25 °C,humidity<75% RH,nominal input voltage,and output rated load;
- ✧ All indicator testing methods in this manual are based on our company's corporate standards;
- ✧ Our company can provide product customization,and specific requirements can be directly contacted by our technical personnel;
- ✧ Product specifications are subject to change without prior notice.