

SLD10-23Sxx



Product Feature

- ◆ Universal Input: 85-305VAC/100-430VDC
- ◆ Package Type: DIP
- ◆ Operating temperature range: -40°C - +85°C
- ◆ Isolation voltage: 4000VAC
- ◆ High efficiency up to: 85% (Type)
- ◆ Bare metal can meet EMI: CLASS B
- ◆ Output short circuit protection, over current protection,
- ◆ OVC III (meet EN61558-1)
- ◆ Designed to meet: IEC/EN62368, IEC/EN55032



UL62368-1



EN62368-1
EN61558-1
EN60335-1



IEC62368-1

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	SLD10-23S03	85-305	8.6	3.3	2600	75	6000
	SLD10-23S05	85-305	10	5	2000	79	5000
	SLD10-23S09	85-305	10	9	1100	81	3600
	SLD10-23S12	85-305	10	12	830	83	2000
	SLD10-23S15	85-305	10	15	660	84	820
	SLD10-23S18	85-305	10	18	556	84	820
	SLD10-23S24	85-305	10	24	410	85	470

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	--	--	0.23	A
	230VAC	--	--	0.15	
Inrush Current	115VAC	--	25	--	A
	230VAC	--	40	--	
Input Frequency		47	--	63	Hz
Fuse		2A/300V, Slow-blow, Required			
Leakage Current	230VAC/50Hz	0.1mA RMS Max.			
Hot Plug		Unavailable			

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Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy	10% - 100% Load	--	±2	--	%
Linear Regulation	Nominal load	--	±0.5	--	
Load Regulation	0% - 100% Load	--	±1.0	--	
Ripple & Noise	20MHz bandwidth	--	60	150	mV
Temperature Coefficient		--	±0.02	--	%/°C
Stand-By Power Consumption	230VAC	--	0.10	--	W
Min. Load		0	--	--	%
Over Current Protection		110	--	--	%Io
Short-Circuit Protection		Continuous, Self-Recovery			
Hold-Up Time	230VAC	--	40	--	ms

Note: The test method for ripple and noise adopts the proximity test method, with a 10uF electrolytic capacitor and a 1uF ceramic capacitor.

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Isolation 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	1.71	--	%°C
	+55°C - +85°C	9/12/15/18/24V	2.0	--	
	85VAC - 100VAC		1	--	%VAC
	277VAC - 305VAC		0.54	--	
Operating Temperature		-40	--	+85	°C
Storage Temperature		-40	--	+85	°C
Storage Humidity	Non-condensing	--	--	95	%RH
Soldering Profile	Wave-soldering	260 ± 5°C; time: 5 - 10s			
	Manual-welding	360 ± 10°C; time: 3 - 5s			
Safety Standard	IEC/EN/BS EN62368-1, EN61558-1, EN60335-1; UL62368-1				
Safety Class	CLASS II				
MTBF	MIL-HDBK-217F@25°C	>3,200,000h			

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Mechanical Specification

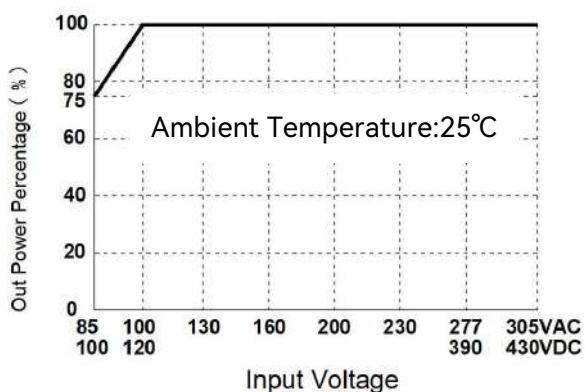
Case Material	Black plastic, flame-retardant and heat-resistant (UL94V-0)
Package Dimensions	40.00 x 25.40 x 21.50mm
Weight	36.6g (Typ.)
Cooling Method	Free air convection

EMC Specifications

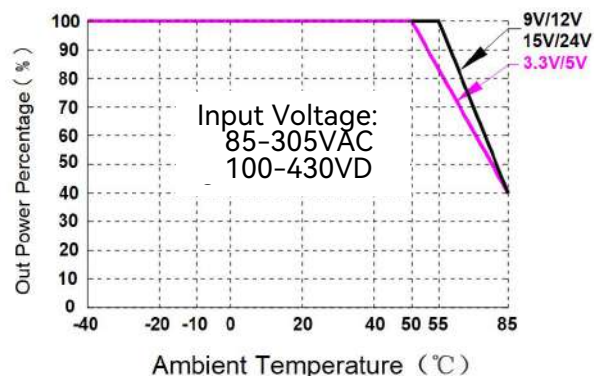
EMI	CE	CISPR32/EN55032 CLASS B EN55014-2	
	RE	CISPR32/EN55032 CLASS B EN55014-2	
EMS	RS	IEC/EN61000-4-3 10V/m	perf. Criteria A
		EN55014-2	perf. Criteria A
	EFT	IEC/EN61000-4-4 ±2KV (EMC Solutions - Recommended Circuit (2-1))	perf. Criteria B
		IEC/EN61000-4-4 ±4KV (EMC Solutions - Recommended Circuit (2-2))	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 (EMC Solutions - Recommended Circuit (2-2))	perf. Criteria B
		IEC/EN61000-4-5 line to line ±2KV/line to PE ±4KV/ (EMC Solutions - Recommended Circuit (2-2))	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

Input Voltage Derating Curve

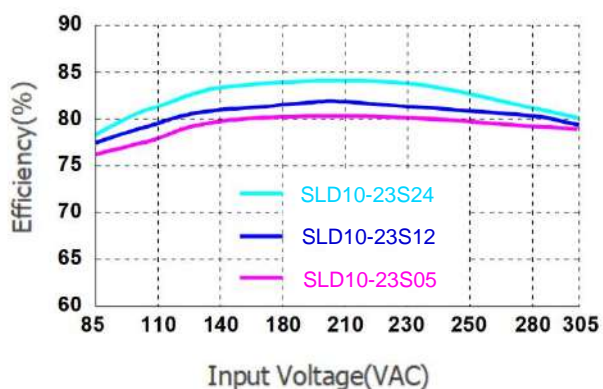


Temperature Derating Curve

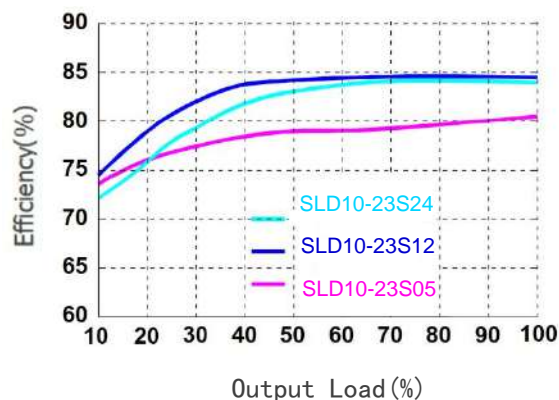


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Efficiency VS Input Voltage (Full load)



Efficiency VS Out Load (Vin=230VAC)

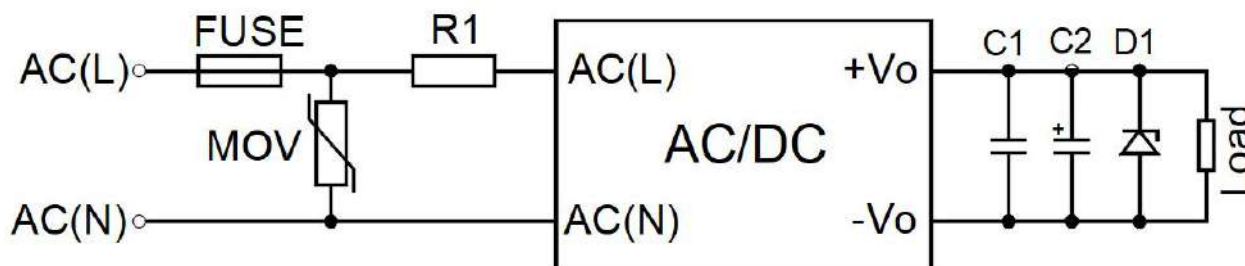


Note:

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	2A/300VAC Slow-blow, Required	14D561K	12Ω/5W (Wire-wound resistor, Required)	1uF/16V	220uF/16V	See Note 2
9/12/15VDC				1uF/25V	100uF/25V	
18/24VDC				1uF/50V	100uF/35V	

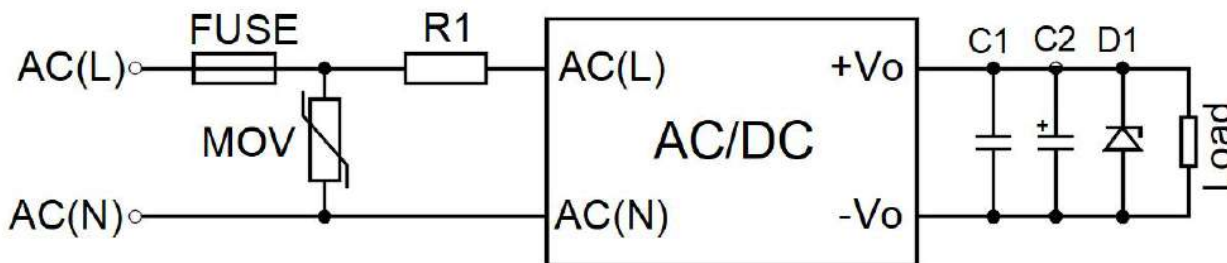
Note:

1. FUSE and Mov Can be selected based on actual needs.
2. 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.

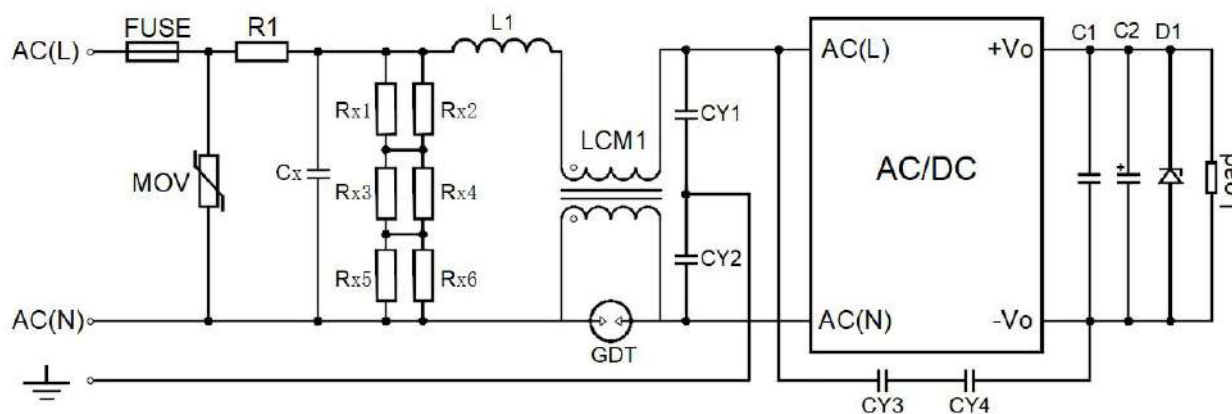
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EMS Solutions - Recommended Circuits

EMC Solutions - Recommended Circuits (Figure 2)



EMC Recommended Circuit (2-1)



EMC Recommended Circuit (2-2)

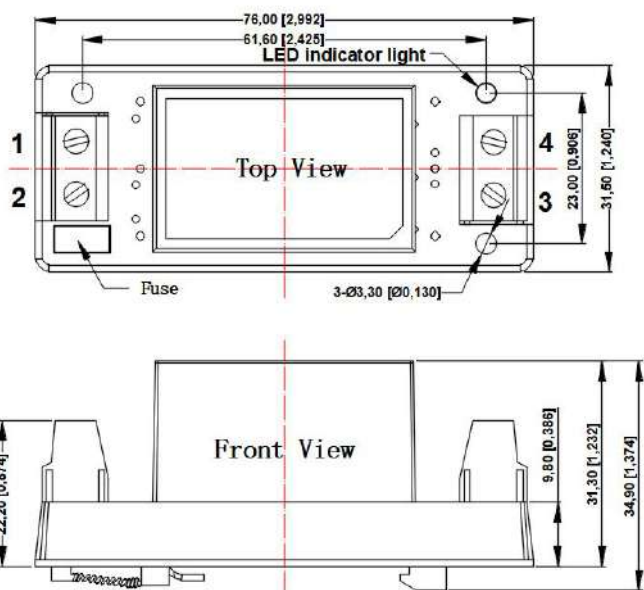
(When the output of the product needs to be connected to PE or connected to PE through Y capacitor, Recommended)

Recommended parameter values for EMC solution circuits

Model	Recommended value
FUSE	2A/300VAC, Slow-blow, Required
MOV	14D561K
Cx	0.33uF/305VAC
R1	12Ω/5W (Wire-wound resistor, Required)
L1	1.2mH/0.5A
CY1, CY2	2.2nF/400VAC
CY3, CY4	1.0nF/400VAC
GDT	300V/1KA
LCM	22mH Common mode Choke
Rx1, Rx2, Rx3, Rx4	1.5MΩ/1206

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A4S Dimensions Pin Function Table



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

Note:

Size unit: mm[inch]
 Wire diameter: 24-12AWG
 Tightening torque: Max 0.4 N · m
 Mounting rail: TS35, rail needs to connect safety ground
 Unmarked tolerance: ±1.00[±0.039]

Packaging instructions

Packaging Information

Model series	Product quantity (pcs/ tray)	Inner carton quantity(pcs/carton)	Outer carton quantity (pcs/carton)
SLD10-23SXX	48	144	288
SLD10-23SxxA2S	28	56	112
SLD10-23SXXA4S	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.