Product Description

The PWM controller identifies the analog signal and outputs PWM signals with varying duty cycles to control the SSR, thereby regulating the power output of the load.

Product Selection

KSN	480	D	50	-L	(447)
KSN Series	Load Voltage 480: 480VAC	Control Mode D: DC Control	Load Current 50: 50Amp 100: 100Amp	L: LED	Customized Code

Technical Specifications

Input Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Control Voltage		U_c		4	24	32	VDC
Input Current (Tpy)	@U_c	I_c				21	mA
Must Turn-on Voltage		U_{c_on}			4		VDC
Must Turn-off Voltage		U_{c_off}			1		VDC

Output Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Load Voltage		U_e		24		530	VAC
Load Current		I_e		100			mA
Turn-On Time		t_{on}				1/2cycle+1ms	ms
Turn-Off Time		t_{off}				1/2cycle+1ms	ms
On-State Voltage Drop	@ Rated Load Current	U_d			1.1	1.5	Vrms
Off-State Leakage Current	@ Rated Load Voltage	I_{lk}			3		mA
On-State Resistance		f		47		63	Hz
Non-repetitive Surge Current	@10ms	I_{TSM}	50A		500		A
			100A		1100		A
Maximum I^2t for Fusing	@10ms	I^2t	50A		1250		A^2s
			100A		6050		A^2s
Transient Overvoltage		U_P			1200		Vpk
Minimum Off-State		dv/dt			500		V/μs
Minimum Power Factor		cosφ			0.5		

General Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Dielectric Strength	50/60Hz, Input/Output	V_{ISO}			4000		Vrms
	50/60Hz, Input,Output/Base				4000		Vrms
Insulation Resistance	@500VDC	R_{ISO}			100		MΩ
Operating Temperature		T_{OPR}		-30		+80	°C
Storage Temperature		T_{SPR}		-30		+100	°C
Wight					80		g

Product Selection

PWM	-E	W	-1
PWM Series	Auxiliary Power Supply E:24VAC/DC	Control Signal W:0-10V or 4-20mA or 0-5V or potentiometer	Output PWM Signal 1: 1 channel

Electrical parameters of auxiliary power supply

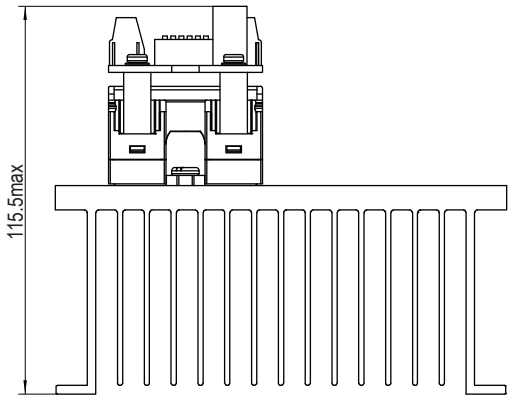
Voltage range of auxiliary power supply	(19.2~28.8)VAC/DC			
Input current of auxiliary power supply	<65mA			
Control Mode	0-5V	0-10V	4-20mA	Potentiometer
Cycle Time	200ms	1s	10s	100s

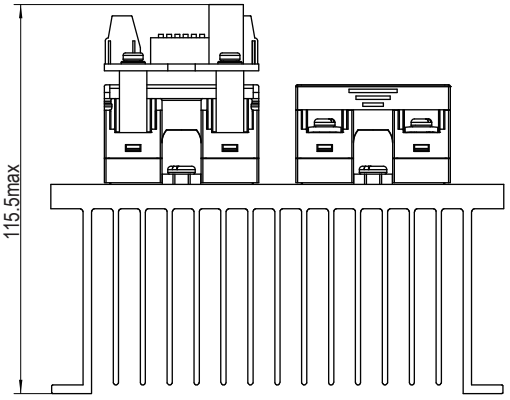
Load Matching Table

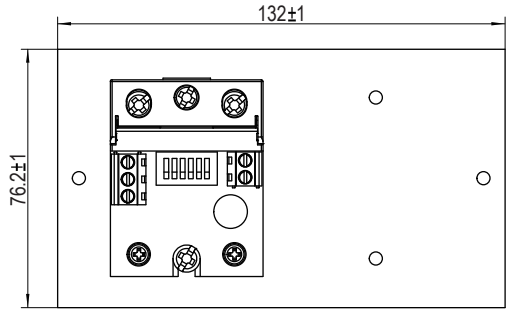
Load Type	Ambient Temperature	Load Voltage	Load Current(RMS)	Matching SSR Part Numbers	Dimensions
Single phase	55°C	24~530VAC	40A	KSN480D50-L+PWM-EW-1 +KHS-U76-1	132x76.2x115.5mm
Single phase	50°C	24~530VAC	50A	KSN480D100-L+PWM-EW-1 +KHS-U76-1	132x76.2x115.5mm
Three phase	40°C	24~530VAC	40A	KSN480D50-L×2+PWM-EW-1 +KHS-U76-1	132x76.2x115.5mm
Three phase	40°C	24~530VAC	48A	KSN480D100-L×2+PWM-EW-1 +KHS-U76-1	132x76.2x115.5mm

Note:
1) Ratings based upon 100% duty cycle for 20 minutes or 80% duty cycle continuous.
2) Ratlings based upon relays being mounied ether individually.

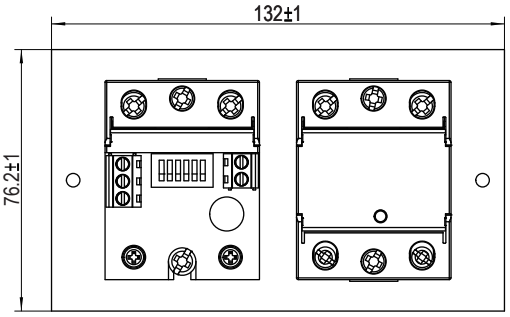
Outline Dimensions



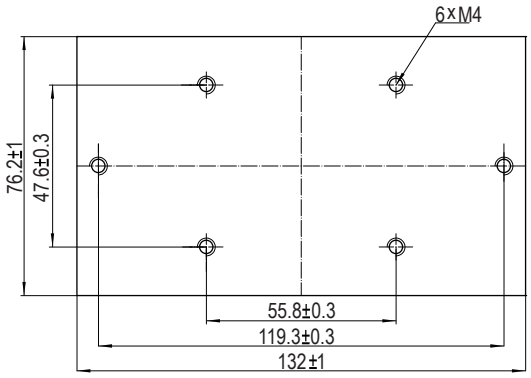


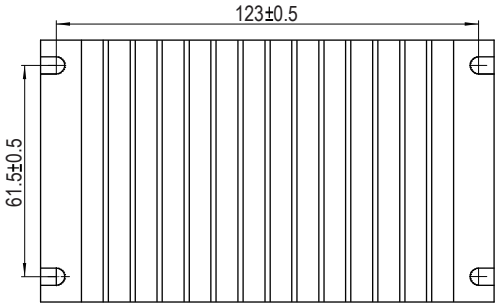


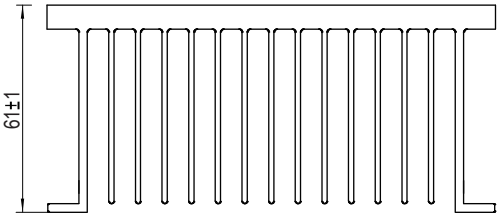
Single Phase



Three Phase

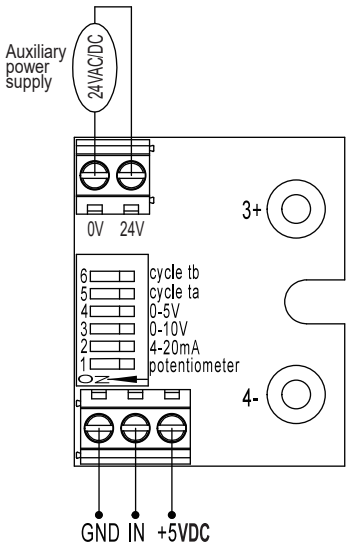




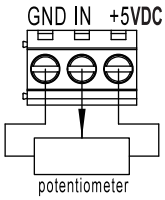


KHS-U76-1

Wiring Diagram



cycle time	5(cycle ta)	6(cycle tb)
200ms	OFF	OFF
1s	OFF	ON
10s	ON	OFF
100s	ON	ON

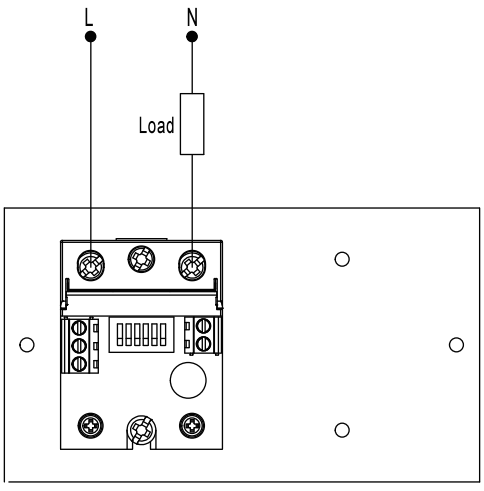


Dial switch is shown in the table below

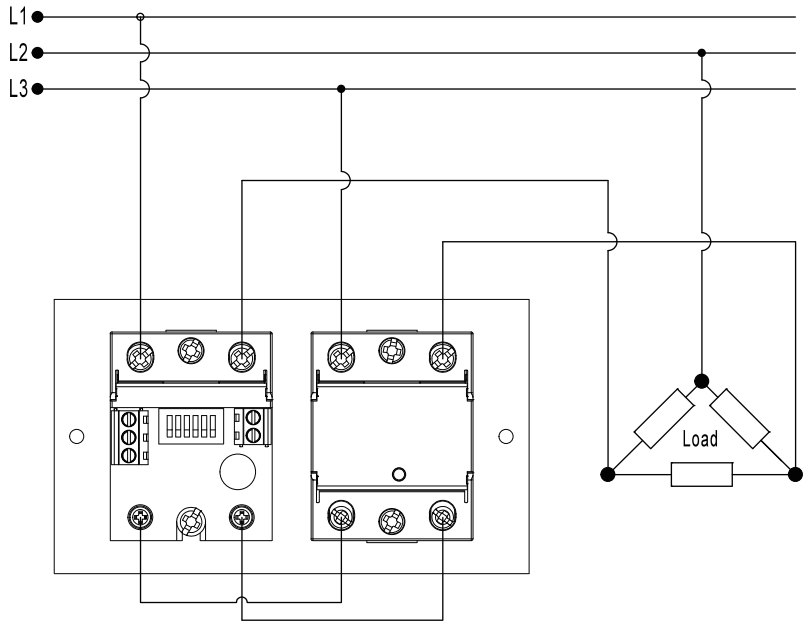
Command Input	1	2	3	4
Potentiometer	ON	OFF	OFF	OFF
4-20mA	OFF	ON	OFF	OFF
0-10V	OFF	OFF	ON	OFF
0-5V	OFF	OFF	OFF	ON

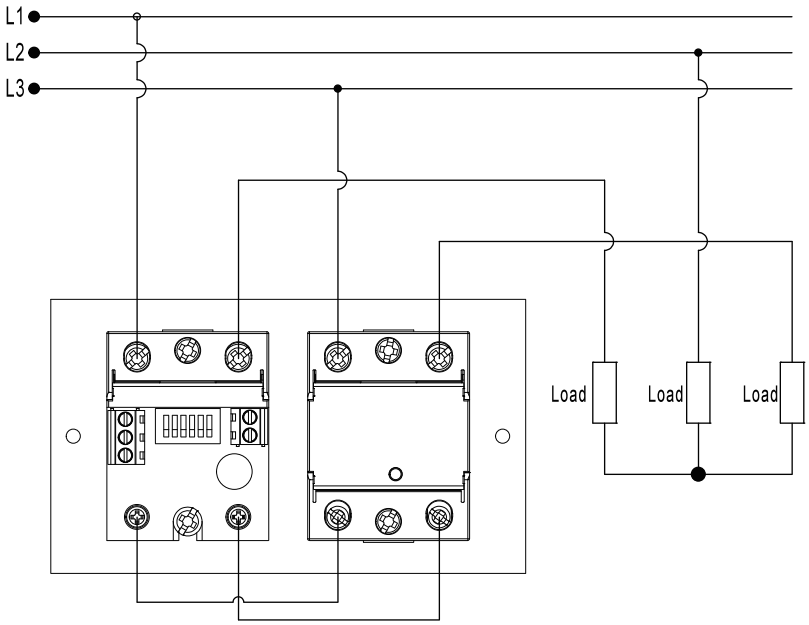
Note:

1) GND is connected to the negative pole of the analog input, Terminal 0V and GND are shorted internally.
2) Connect IN to the positive pole of the analog input.
3) 3+ and 4- are respectively connected to the positive and negative poles of the SSR input terminal.
4) The dial switch can only select one control mode. Multiple control modes is not available.
5) When wiring, pay attention to distinguish the positive and negative poles of the control signal to avoid reverse connection, which may cause product damage.



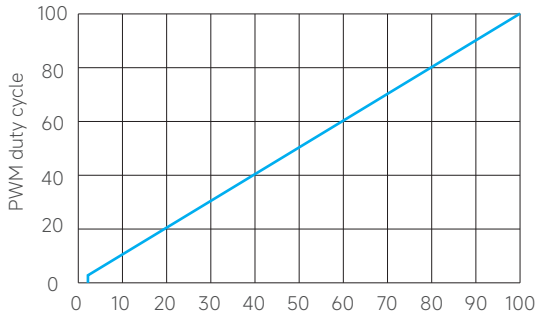
Single Phase

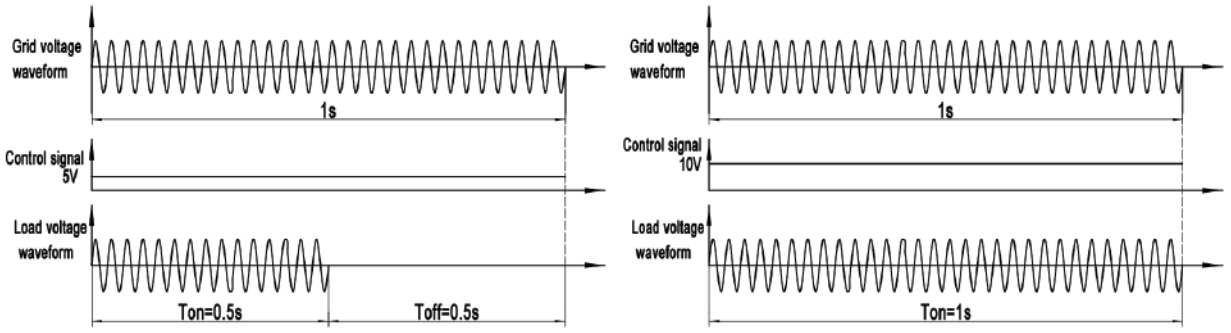




Three Phase

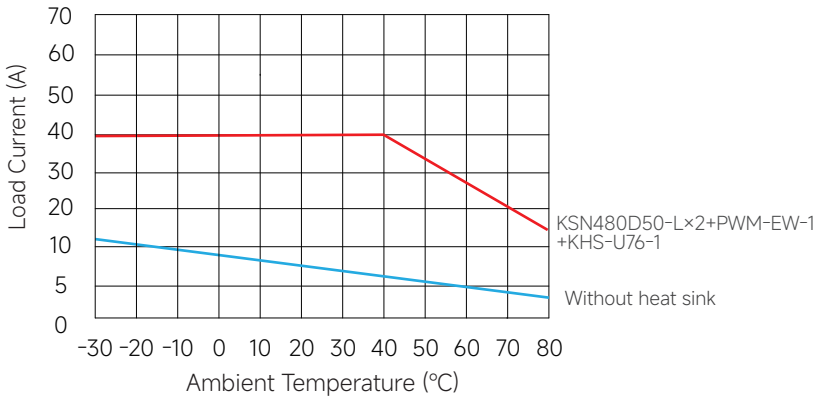
Control/Propotion and mode

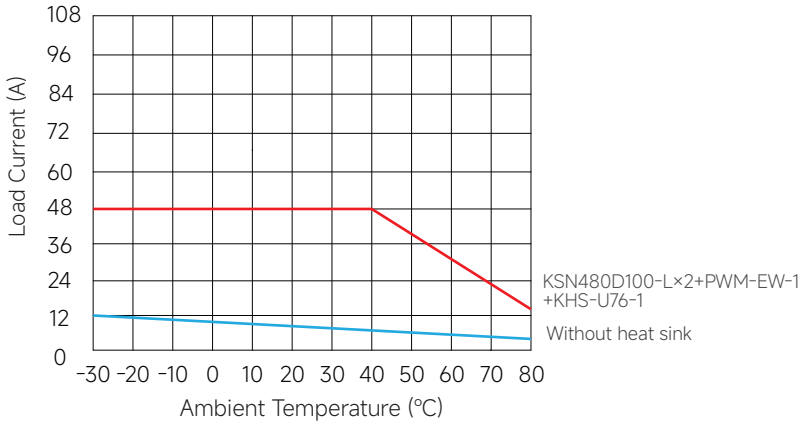




Output wave form of different control voltage (Ex. Input mode 0-10V, output cycle 1s)

Thermal Derating Curve





General Notes

1. Make sure the teminals are firm wiring, otherwise the loose wiring can cause abnormal heating and damage to the product.
2. When connection wiring to SSR, please ensure screws are torqued down properly (output 0.98-1.37 N · m).
3. When the operation temperature is above 40deg.C, please consider the derating. Please contact us for technical support.

! Warnings

1. The product's side panels may be hot, allow the product to cool before touching.
2. Disconnect all power before installing or working with this equipment.
3. Verify all connections and replace all covers before turning on power.