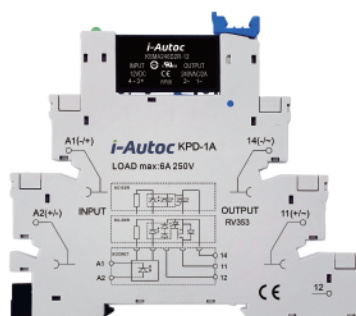


Product Description

- ◆ TRIAC Output
- ◆ Optocoupler Isolation
- ◆ PCB or Socket Mounted
- ◆ Load Current: 1A, 2A
- ◆ Load Voltage: 240VAC
- ◆ Dielectric Strength: 2500VACrms
- ◆ RoHS Compliant



Product Selection

KSM	A	240	D	1	R	-5	D
KSM Series	Load Type A: AC Load	Load Voltage 240: 240VAC	Control Mode D: DC Control	Load Current 1: 1Amp 2: 2Amp	Switching Mode Blank: Zero Crossing R: Random-on	Control Voltage 5: 5VDC 12: 12VDC 24: 24VDC	Accessories Blank: Without the base P: With the PCB base(KPD-7A) D: With the rail base(KPD-1A)

Available Part Numbers

Control Mode	1A			2A		
5VDC	KSMA240D1-5	KSMA240D1R-5	KSMA240D2-5	KSMA240D2R-5		
	KSMA240D1-5D	KSMA240D1R-5D	KSMA240D2-5D	KSMA240D2R-5D		
12VDC	KSMA240D1-12	KSMA240D1R-12	KSMA240D2-12	KSMA240D2R-12		
	KSMA240D1-12D	KSMA240D1R-12D	KSMA240D2-12D	KSMA240D2R-12D		
24VDC	KSMA240D1-24	KSMA240D1R-24	KSMA240D2-24	KSMA240D2R-24		
	KSMA240D1-24D	KSMA240D1R-24D	KSMA240D2-24D	KSMA240D2R-24D		

Technical Specifications

Input Specifications (Ta=25°C)	Condition	Symbol	KSMA...-5...			KSMA...-12...			KSMA...-24...			Unit
			Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
Control Voltage ⁽¹⁾		U_c	4	5	6	9.6	12	14.4	19.2	24	28.8	VDC
Input Current (Typ)	@ U_c	I_c	10.5	14.2	17.9	10.4	13.3	16.3	10.2	13	15.7	mA
Must Turn-off Voltage		$U_{c\ off}$	1			1			1			VDC
Input Impedance ⁽²⁾			268			812			1767			Ω

Note: (1) For KSMA with control voltage at 12V, 24V that operating with the socket, the must control voltage should increase 1.4V, for example, for KSMA240D2-12D, please ensure that the control voltage is 9.6V+1.4V=11V Min.

(2) Input impedance is factory pre-matched. Do not add external resistors, which may cause device failure or damage.

Output Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Load Voltage		U_e		24		280	VAC
Load Current		I_e	1A	0.1		1	A
			2A	0.1		2	A
Turn-On Time		t_{on}	Zero Crossing			1/2cycle+1ms	ms
			Random-on			1	ms
Turn-Off Time		t_{off}				1/2cycle+1ms	ms
Off-State Leakage Current	@ Rated Load Voltage	I_{lk}				1.5	mA

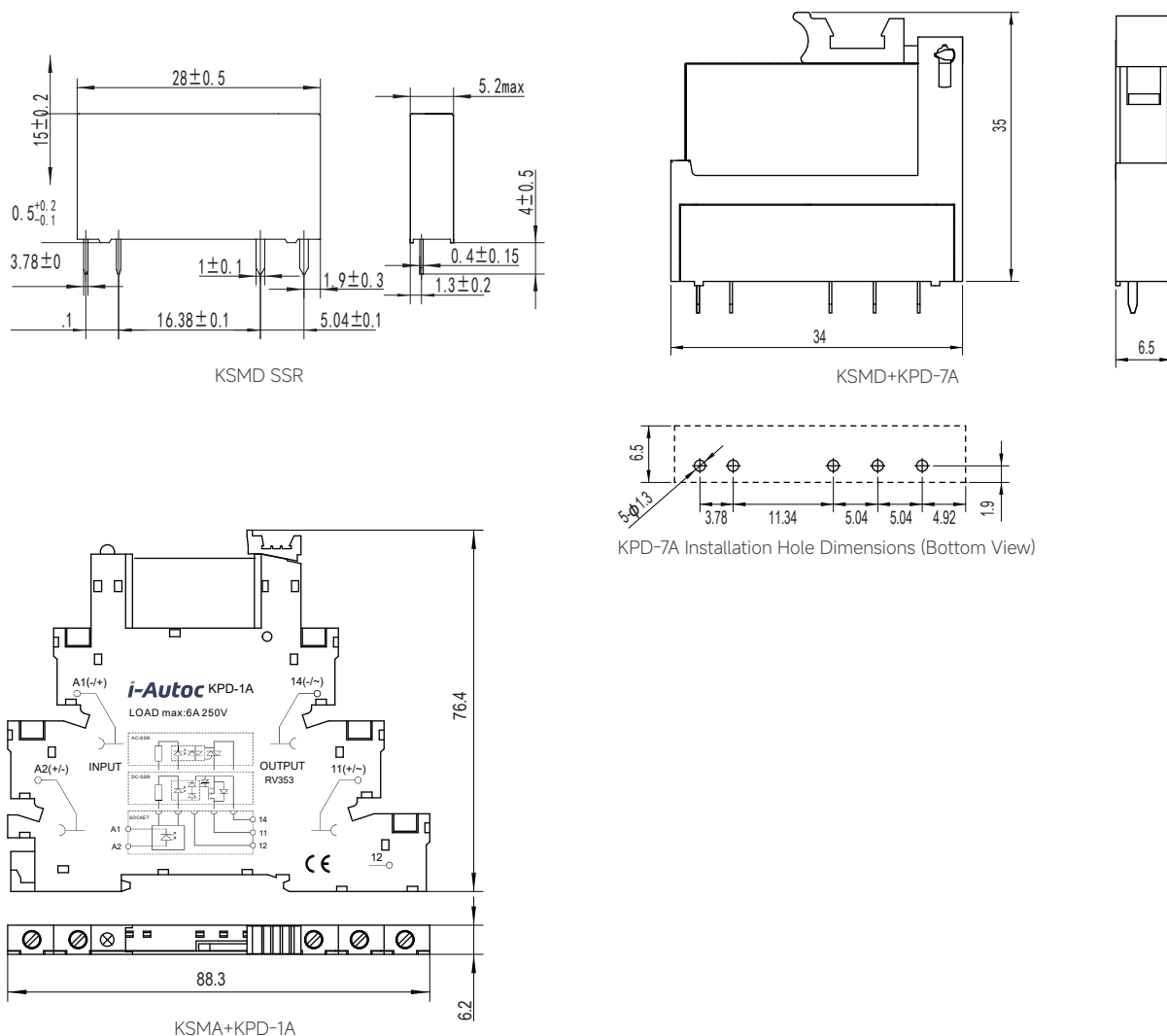
Output Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
On-State Voltage Drop	@ Rated Load Current	U_d			0.9	1.5	Vrms
Operational Frequency				47		63	Hz
Maximum Transient Overvoltage		U_P			600		Vpk
Non-repetitive Surge Current	@10ms	I_{TSM}	1A		30		Apk
			2A		40		Apk
Maximum I^2t for Fusing	@10ms		1A		4.5		A ² s
			2A		8		A ² s
Minimum Off-State dv/dt		dv/dt			200		V/μs

General Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Dielectric Strength	50/60Hz, Input/Output	V_{ISO}			2500		Vrms
Insulation Resistance	@500VDC	R_{ISO}			1000		MΩ
Operating Temperature		T_{OPR}		-30		+80	°C
Storage Temperature		T_{SPR}		-30		+100	°C
Weight			Without socket		4		g
			With socket		30		g

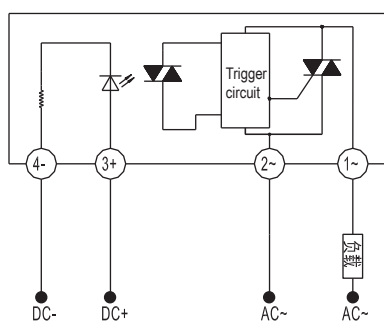
Applications

Suitable for high density PCB mounting, PLC control applications, and etc.

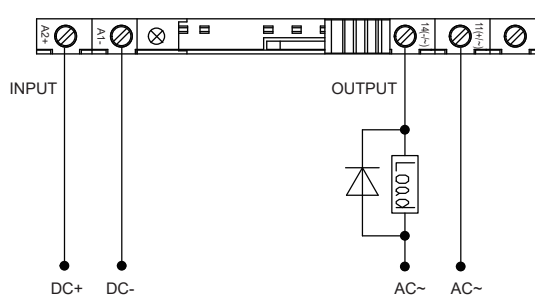
Outline Dimensions



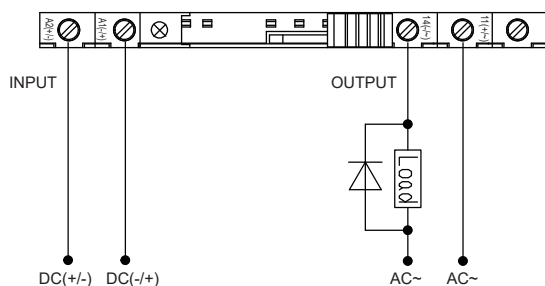
Wiring Diagram



KSMA SSR

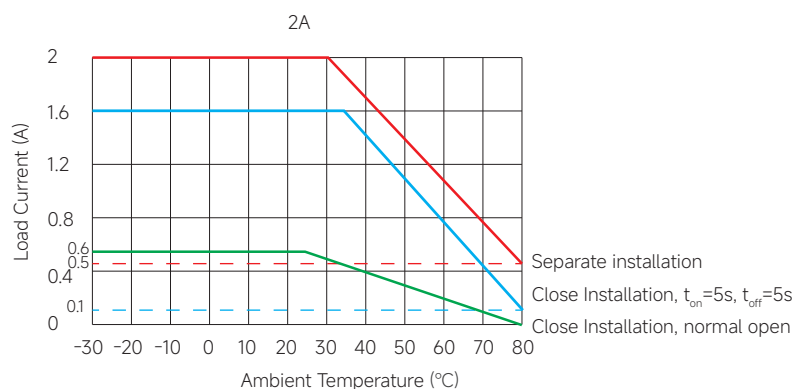
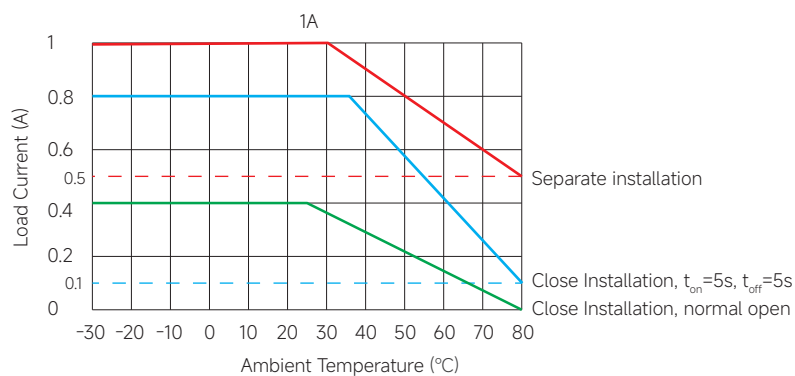


KSMA...-5D



KSMA...-12/24D

Thermal Derating Curve



Installation Instructions

1. Install the relay

Set the blue clip of socket in the open state (see Figure 1), and insert the relay into the socket cavity (see Figure 2). Then press the relay down until the relay is fully installed in the socket (see Figure 3).

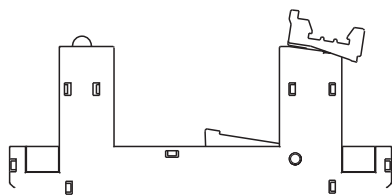


Figure 1

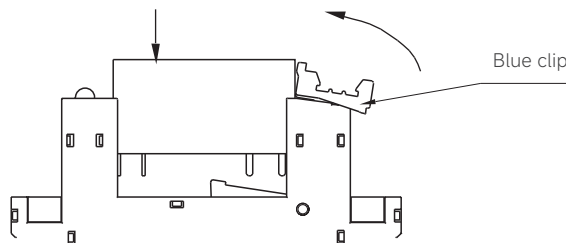


Figure 2

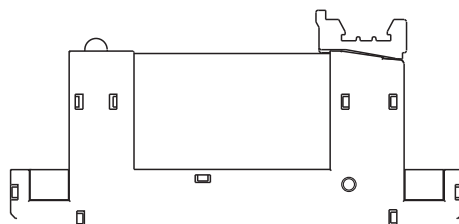


Figure 3

2. Remove the relay

Pull the blue clip of socket to remove the relay (see Figure 4-6).

Note: When disassembling the relay, in order to prevent the relay from being ejected and causing it to fall, please be sure to hold the relay and then pull the blue clip to remove the relay.

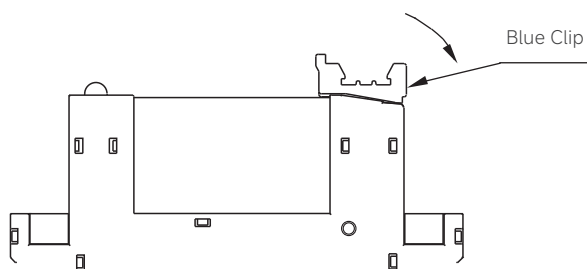


Figure 4

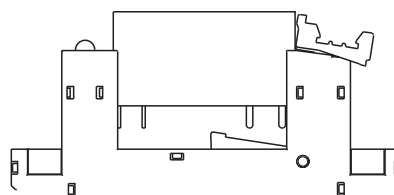


Figure 5

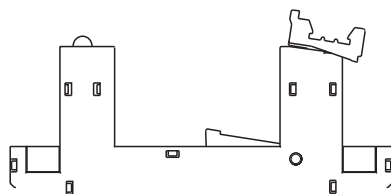


Figure 6

3. Install the socket

Insert part A of the socket into the din-rail first, and then press the socket down in the direction of the arrow(see Figure 7).

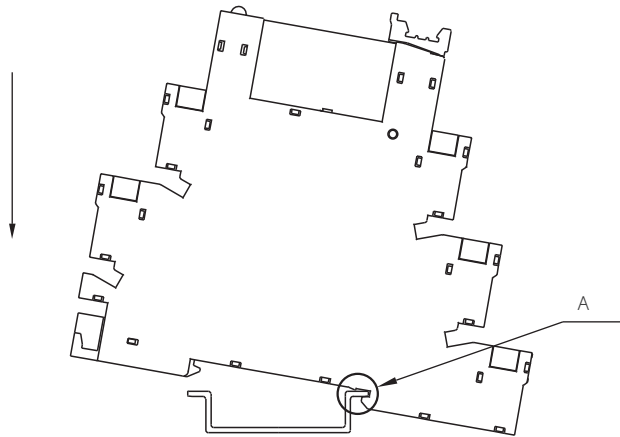


Figure 7

4. Remove the socket

Insert a proper size screwdriver into part B of the socket, turn the screwdriver in the direction of the arrow, and then remove the socket (see Figure 8).

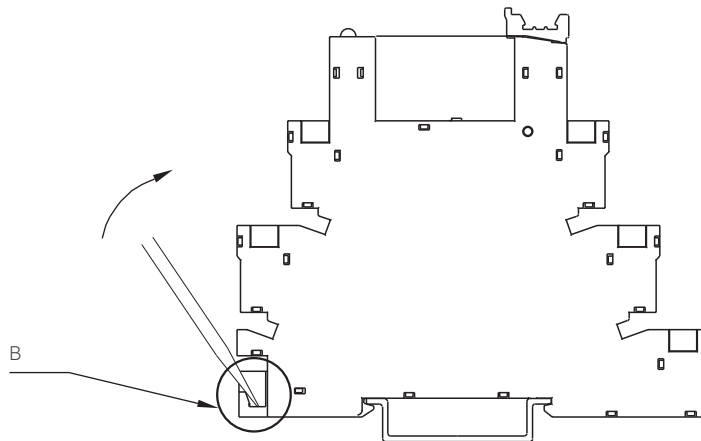


Figure 8

General Notes

1. Soldering must be finished within 10 seconds at 260°C, or finished within 5 seconds at 350°C. Otherwise it may cause damage to the relay.
2. Terminal polarity must be observed. Otherwise it may cause damage to the relay.
3. When the ambient temperature of the product is high, derate the product according to the temperature curve.

! Warnings

1. The product hot during operation, allow it 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.

Certification Standards

Certification	Test Standard
UL	UL508
	C22.2 No. 14-13
CE	EN 60947-1:2007/A2:2014
	EN 60947-5-1:2017
TUV	EN 60947-1:2007/A2:2014
	EN 60947-5-1:2017