KS34 Solid State Relay

Certificate NO.: E365647

Certificate NO.: B110774964004

Certificate NO.: CQC13001088066

Features

- Photoelectric isolation
- Removable protective cover avaliable
- Dielectric strength 4000V
- Zero or random turn-on
- Panel mount
- DC or AC control
- SCR output

Input Parameter (Ta = 25˚C)

Control voltage range(DC input)	(3 ~ 32)VDC (Without LED) (4 ~ 32)VDC (With LED)
Control voltage range(AC input)	(90 ~ 280)VAC
Must turn-on voltage(DC input)	3 VDC (Without LED) 4 VDC (With LED)
Must turn-on voltage(AC input)	90VAC
Must turn-off voltage(DC input)	1VDC
Must turn-off voltage(AC input)	10VAC
Max.input current(DC input)	25mA
Max.input current(AC input)	10mA
Max.reverse protection voltage(DC input type)	- 32VDC

GENERAL(Ta = 25˚C)

Dielectric strength (50Hz/60Hz)	input,output to base 2500VAC, 1min input to output 4000VAC, 1min
Insulation resistance	1000MΩ (500VDC)
Max.capacitance(input to output)	8pF
Operating Temperature	-30˚C ~ 80˚C
Storage Temperature	-30˚C ~ 100˚C
Ambient humidity	45% ~ 85% RH
Unit weight	25A type approx 80g
	40A~80A type approx 95g

Output Parameter (Ta = 25˚C)

	A -24 D -24	D -38	A -48 D -48	D -60
Load voltage range	(48 ~ 280)VAC	(48 ~ 440)VAC	(48 ~530)VAC	(48 ~660)VAC
Max.transient voltage	600Vpk	800Vpk	1200Vpk	1600Vpk

Load current range	25A	40A	50A	60A	70A	80A
Max.surge current (10ms)	300Apk	400Apk	500Apk	600Apk	700Apk	800Apk
Max.I^2t for fusing(10ms, A^2s)	312	800	1250	1800	2450	3200

Max.off-state leakage current		10mA
Max.on-state voltage drop		1.7Vr.m.s.
Min.power factor		0.5
Max.turn-on time	Random(DC input)	1ms
	Zero cross(DC input)	1/2cycle+1ms
	AC input type	20ms
Max.turn-off time	DC input type	1/2cycle+1ms
	AC input type	40ms
Frequency range		(47 ~ 63)Hz
Min.off-state dv/dt		500V/μs

DESCRIPTION

KS34 is a high power solid state relay, offer (3~32)VDC or (90~280)VAC input voltage control, with output current range from 25A to 80A and load voltage range from 48VAC to 600VAC. SCR output provides high dv/dt capability more than 500v/μs. The relays provide 4000VAC opto-isolation between input and output. Encapsulating with epoxy resin. Outline dimension is 58.6mmX45.7mmX26.5mm.

PRECAUTIONS

1.When choosing a SSR,please pay more attention to actual load current and ambient temperature. When the SSR is used for full load operation, we'd better install an adequate heatsink or take other effective cooling measures. When the ambient temperature is high, the load current must be reduced. Please refer to the curve of Max. Load Current vs Ambient Temperature.

2.Apply heat-conducting silicon grease or a thermal transfer pad on the space between SSR and heat sink. Then, screw the heatsink firmly. In that case, it would keep the SSR from damaging by overheat.

3.Tighten the SSR terminal screws properly. If the screws are loose, the SSR will be damaged by heat generated from connections. Also, excessive screw mounting torque may damage relay internal components. We recommended screw installation torque as follows : M4 screw mounting torque range is (0.98~1.37)N • m, M3 screw mounting torque range is (0.58~0.98)N • m.

4.It's recommended to use the matched heatsink by Jinxinrong. If the user needs to use home-made heatsink, it's needed to ensure that the SSR base temperature does not exceed 85°C.

5.KS34 relay use for inductive load, it is suggested to select random turn-on(i.e., a model with "P" letter) products; KS34 relay use for capacitive load, do not choose products with varistor protection(i.e., a model with "Y" letter) .

6.Listed parameters are based on resistive load. Please do not use the relay beyond the descriptions in the datasheet.

ORDERING INFORMATION

KS34 /	D-	24	Z	40	-Y	L	(XXX)

Type	
Control voltage	D: (3 ~ 32)VDC (Without LED) (4 ~ 32)VDC (With LED) A: (90 ~ 280)VAC
Load voltage	24: 240VAC 38: 380VAC 48:480VAC 60: 600VAC
Zero cross function	Z: Zero cross turn-on P: Random turn-on
Load current	25: 25A 40: 40A 50: 50A 60: 60A 70: 70A 80: 80A
Overvoltage protection	Y:With varistor protection Nil: Without overvoltage protection
LED indicator	L: With LED Nil: Without LED
Customer special code	

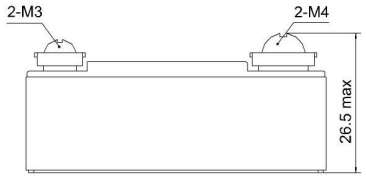
Notes: (1) With Overvoltage Protection function, the relay would switch on automatically when the load peak voltage achieve the protected value. Overvoltage range for different loads are as follows: D-24 type protective voltage is 400VDC to 600VDC, D-38 type protective voltage is 600VDC to 800VDC, D-48/D-60 type protective voltage is 850VDC to 1200VDC. This product is not suitable for capacitive load.

(2) Available parts are.

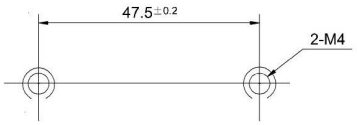
KS34/D-24□□□-□□	KS34/D-38□□□-□□	KS34/D-48Z40-□□	KS34/D-48Z50-□□	KS34/D-48Z60-□□
KS34/D-48Z70-□□	KS34/D-48Z80-□□	KS34/D-60Z40-□□	KS34/D-60Z50-□□	KS34/D-60Z60-□□
KS34/D-60Z70-□□	KS34/D-60Z80-□□	KS34/A-24Z40-□□	KS34/A-24Z50-□□	KS34/A-24Z60-□□
KS34/A-24Z70-□□	KS34/A-24Z80-□□	KS34/A-48Z40-□□	KS34/A-48Z50-□□	KS34/A-48Z60-□□
KS34/A-48Z70-□□	KS34/A-48Z80-□□			

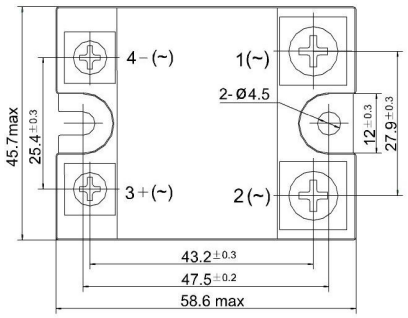
OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES LAYOUT Unit:mm

Outline Dimensions

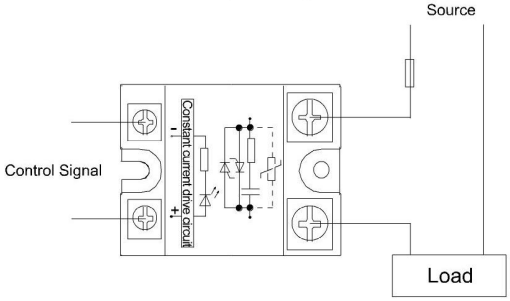


Mounting Holes



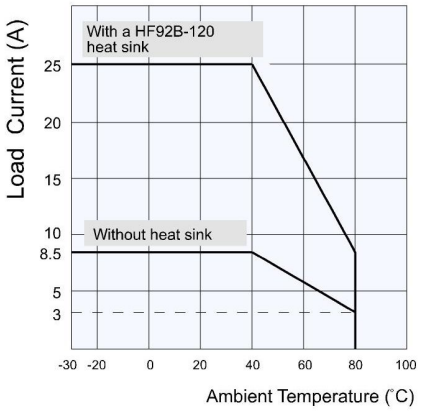


Wiring Diagram

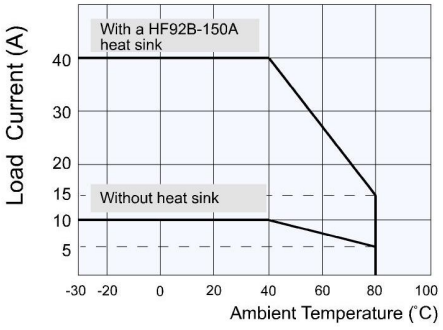


CHARACTERISTIC CURVES

Max. Load Current vs. Ambient Temperature (25A)

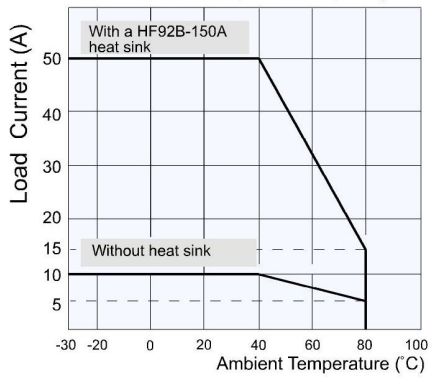


Max. Load Current vs. Ambient Temperature (40A)

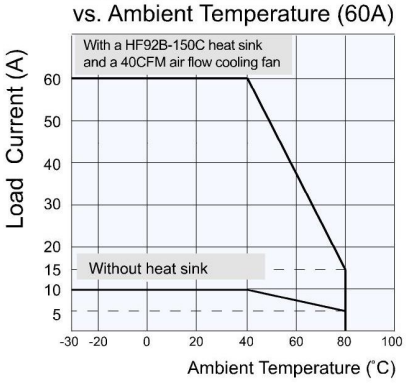


CHARACTERISTIC CURVES

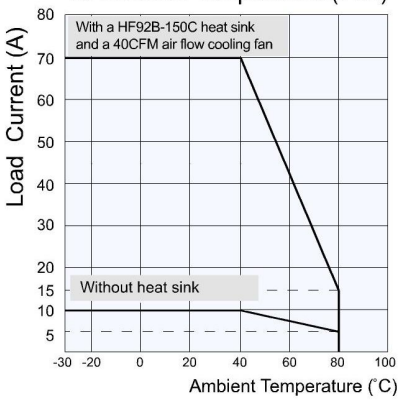
Max. Load Current
vs. Ambient Temperature (50A)



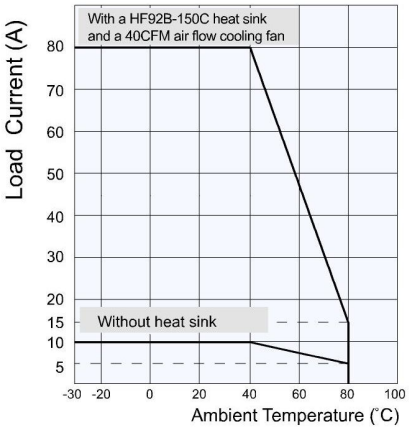
Max. Load Current
vs. Ambient Temperature (60A)



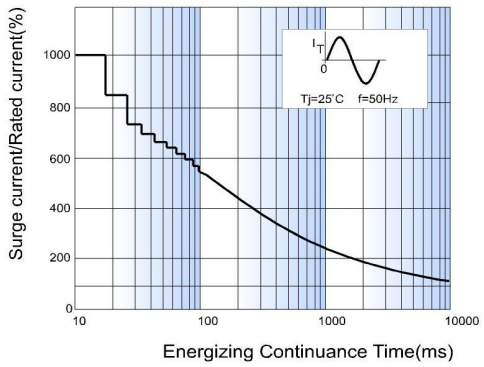
Max. Load Current
vs. Ambient Temperature (70A)



Max. Load Current
vs. Ambient Temperature (80A)



Max. Permissibe Non-repetitive
Peak Surge Current vs. Continuance Time



Disclaimer:

This datasheet is for the customers' reference. All the specifications are subject to change without notice.
Jinxinrong could not evaluate all the performance and all the parameters for every possiable application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact Jinxinrong for the technical service.However, it is the user's responsibility to determine which product should be used only.