

Panel Mount

# KS33

## Solid State Relay

CE



### DESCRIPTION

KS33 is an SPST-NO DC output panel mount type SSR. It offers 4~32VDC input voltage option and seven DC output voltage options from 50V to 400V as well as eight output current ratings from 10A to 80A for selection. The SSR adopts MOSFET output and provides photoelectric isolation between input and output with dielectric strength 2500V.

### FEATURES

- ◆ MOSFET output
- ◆ Photoelectric isolation
- ◆ Low on-state resistance
- ◆ Dielectric strength 2500V
- ◆ Panel mount
- ◆ DC control

### PRECAUTIONS

1. Inductive loads must be diode suppressed.
2. Please pay special attention to the actual load current and the ambient temperature when doing the type selection. And the SSR requires proper heat sinking for heat dissipation in full load. For ambient temperature above 40°C, the load current must be derated. Please refer to the curve of Max. Load Current vs. Ambient Temperature for derating.
3. The heat produced by the SSR during the working process must be dissipated via the metal base of the SSR. Please coat the SSR metal base with some thermal grease or a thermal pad, and then firmly press the SSR against the heatsink to

ensure the full adherence.

4. Tighten the SSR screw terminals properly. If the screws are loose, the SSR would be damaged by heat generated from connection. Also excessive screw mounting torque may damage the SSR's internal components. Please refer to the recommended screw mounting torque as follows: the M4 screw mounting torque range is 0.98~1.37N·m, and the M3 screw mounting torque range is 0.58~0.98N·m.
5. Please do not use the SSR exceeding the limitation which is specified on this datasheet.

## SELECTION GUIDE

KS33 /	D-	50	D	40	-L	(XXX)
Type	Control voltage	Load voltage	Load voltage mode	Load current	LED indicator	Customer special code
	D: 4 ~ 32VDC	50: 50V 100: 100V 400: 400V	D: DC	10: 10A 40: 40A 80: 80A	L: Included Green LED indicator	

Note: Available parts are:KS33/D-50D40-L, KS33/D-50D80-L, KS33/D-100D40-L, KS33/D-100D80-L, KS33/D-400D10-L.

## INPUT SPECIFICATIONS (Ta = 25°C)

Control voltage range	4 ~ 32VDC
Must turn-on voltage	4VDC
Must turn-off voltage	1.0VDC
Max. input current	28mA
Max. reverse protection voltage	-32VDC

## OUTPUT SPECIFICATIONS (Ta = 25°C)

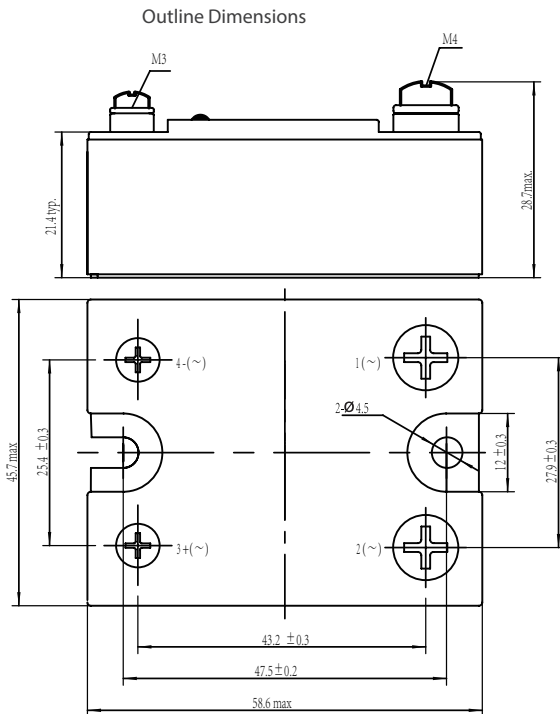
	D-50D □ -L		D-100D □ -L		D-400D10-L
	40	80	40	80	10
Load voltage range	3 ~ 50VDC		3 ~ 100VDC		3 ~ 400VDC
Load current range	0.02 ~ 40A	0.02 ~ 80A	0.02 ~ 40A	0.02 ~ 80A	0.02 ~ 10A
Max. off-state leakage current	0.1mA		0.1mA		0.1mA
Max. on-state voltage drop	0.64V	0.64V	1.5V	1.6V	2.4V
Max. on-state resistance	16mΩ	8mΩ	375mΩ	20mΩ	0.24Ω
Max. turn-on time	2ms				
Max. turn-off time	2ms				
Max. surge current (10ms)	100Apk	200Apk	160Apk	240Apk	40Apk

## GENERAL SPECIFICATIONS (Ta = 25°C)

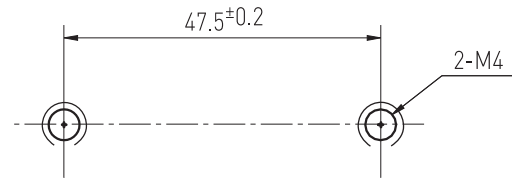
Dielectric strength	2500VAC, 50~60Hz, 1min, Input/Output/Base
	2500VAC, 50~60Hz, 1min, Input/Output
Insulation resistance	1000MΩ (500VDC)
Vibration resistance	10 ~ 55Hz, 1.5mm, DA
Shock resistance	980m/s <sup>2</sup>
Operating temperature	-30 ~ 80°C
Storage temperature	-30 ~ 100°C
Unit weight	Approx. 100g

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

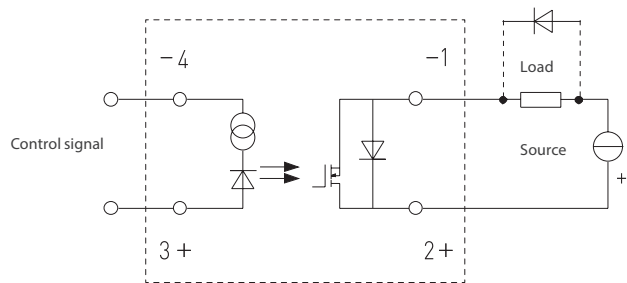
Unit: mm



**Mounting Holes**

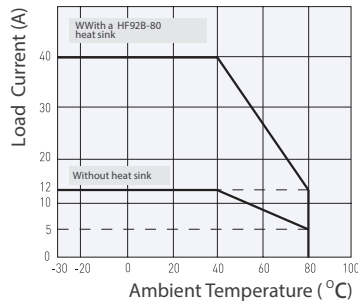


**Wiring Diagram**

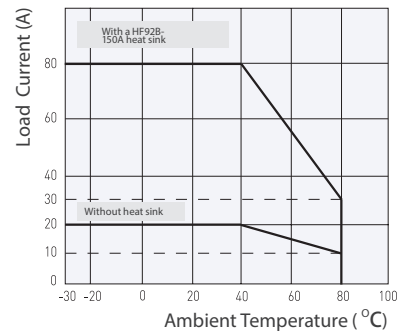


## CHARACTERISTIC CURVES

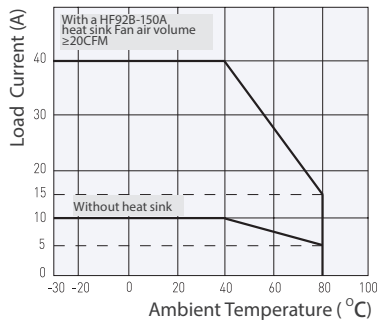
**Max. Load Current vs. Ambient Temperature (D-50D40-L)**



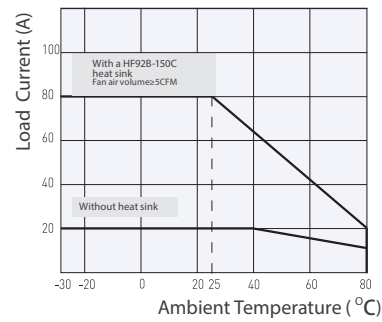
**Max. Load Current vs. Ambient Temperature (D-50D80-L)**



**Max. Load Current vs. Ambient Temperature (D-100D40-L)**

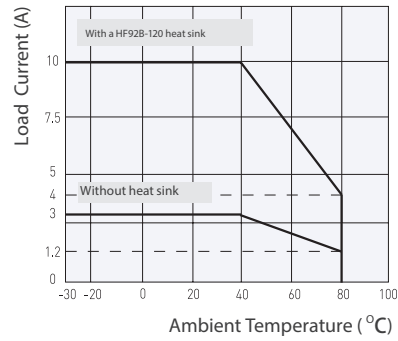


**Max. Load Current vs. Ambient Temperature (D-100D80-L)**

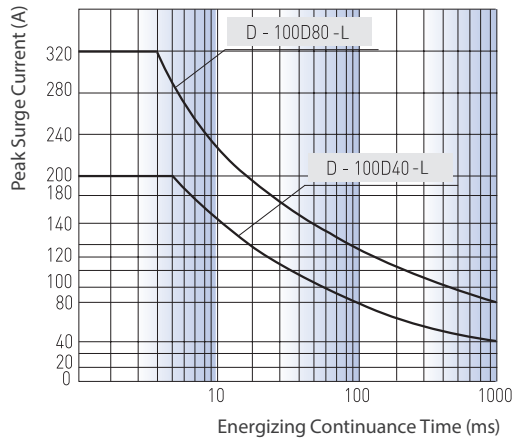


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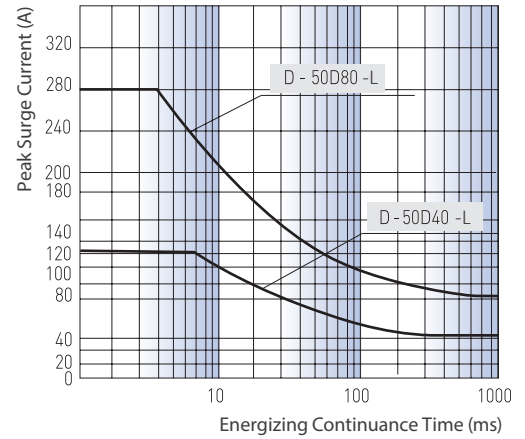
Max. Load Current  
vs. Ambient Temperature (D-400D10-L)



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



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



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

