

Panel Mount

# KS33

Solid State Relay

CE



## DESCRIPTION

KS33 is an SPST-NO DC output panel mount type SSR. It offers 3~32VDC (without LED indicator) or 4~32VDC (with LED indicator) input voltage option and seven DC output voltage options from 30V to 500V as well as eight output current ratings from 7A to 100A 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.

PCB Mount

Panel Mount

DIN Rail Mount

Motor Reversing Module

Intelligent SSR

SSR Accessories

## 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: 3~32VDC (Without LED)	30: 30V 50: 50V 100: 100V	D: DC	7: 7A 10: 10A 12: 12A	L: Included  Nil: Not included	
	4~32VDC (With LED)	150: 150V 200: 200V 400: 400V 500: 500V		20: 20A 40: 40A 50: 50A 80: 80A 100: 100A		

Note: Available parts are:KS33/D-30D50-□, KS33/D-30D100-□, KS33/D-50D40-□, KS33/D-50D80-□, KS33/D-100D20□, KS33/D-100D40-□, KS33/D-100D80-□, KS33/D-150D50-□, KS33/D-200D10-□, KS33/D-200D40-□, KS33/D-400D10-□, KS33/D-500D7-□, KS33/D-500D12-□.

### INPUT SPECIFICATIONS (Ta = 25°C)

Control voltage range	3 ~ 32VDC (without LED) 4 ~ 32VDC (with LED)
Must turn-on voltage	3VDC (without LED) 4VDC (with LED)
Must turn-off voltage	1.0VDC
Max. input current	28mA (32VDC)
Max. reverse protection voltage	-32VDC

### OUTPUT SPECIFICATIONS (Ta = 25°C)

	D-30D□-□		D-50D□-□		D-100D□-□			D-150D□-□	D-200D□-□		D-400D□-□	D-500D□-□	
	50	100	40	80	20	40	80	50	10	40	10	7	12
Load voltage range	3 ~ 30VDC		3 ~ 50VDC		3 ~ 100VDC			3 ~ 150VDC	3 ~ 200VDC		3 ~ 400VDC	3 ~ 500VDC	
Load current range	0.02 ~ 50A	0.02 ~ 100A	0.02 ~ 40A	0.02 ~ 80A	0.02 ~ 20A	0.02 ~ 40A	0.02 ~ 80A	0.02 ~ 50A	0.02 ~ 10A	0.02 ~ 40A	0.02 ~ 10A	0.02 ~ 7A	0.02 ~ 12A
Max. off-state leakage current	0.1mA		0.1mA		0.1mA			0.1mA	0.1mA		0.1mA	0.1mA	
Max. on-state voltage drop	0.35V	0.35V	0.64V	0.64V	1.5V	1.5V	1.6V	0.75V	1V	1.2V	2.4V	1.9V	1.5V
Max. on-state resistance	7mΩ	3.5mΩ	16mΩ	8mΩ	75mΩ	37.5mΩ	20mΩ	15mΩ	0.1Ω	30mΩ	0.24Ω	0.26Ω	0.125Ω
Max. turn-on time													1ms
Max. turn-off time													0.5ms
Max. surge current (10ms)	120 Apk	240 Apk	100 Apk	200 Apk	80 Apk	160 Apk	240 Apk	200Apk	40 Apk	130 Apk	40Apk	30 Apk	40 Apk

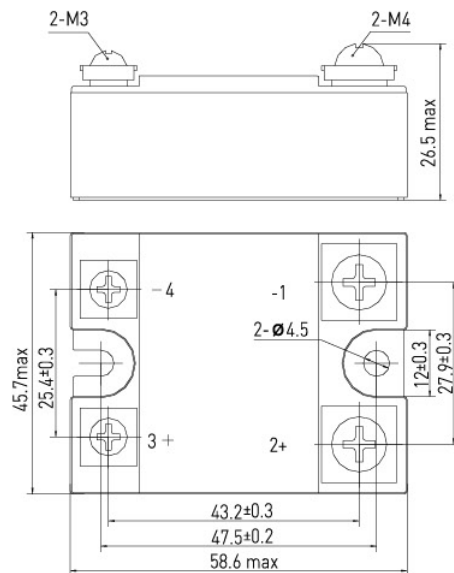
## GENERAL SPECIFICATIONS (Ta = 25°C)

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

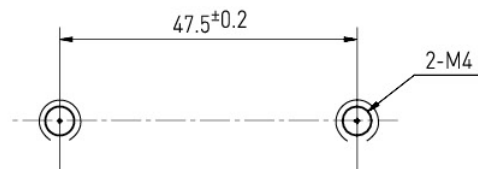
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND MOUNTING HOLES

Unit: mm

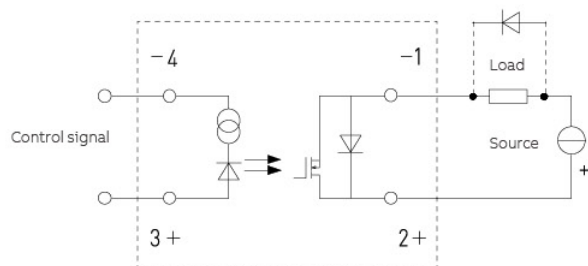
Outline Dimensions



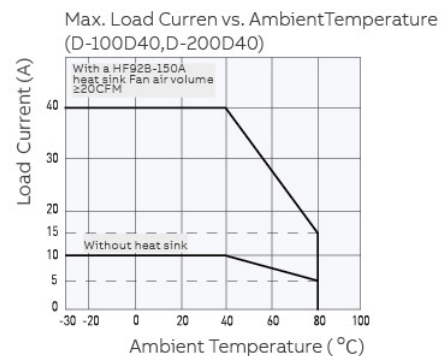
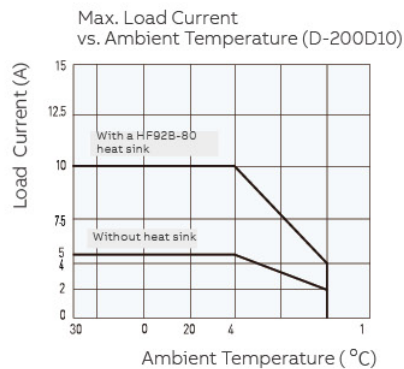
Mounting Holes



Wiring Diagram

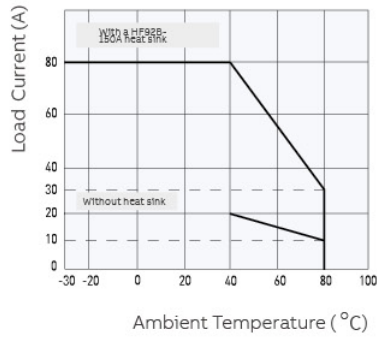


## CHARACTERISTIC CURVES

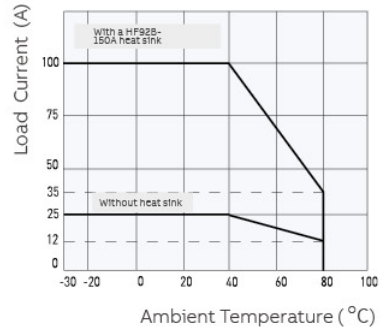


## CHARACTERISTIC CURVES

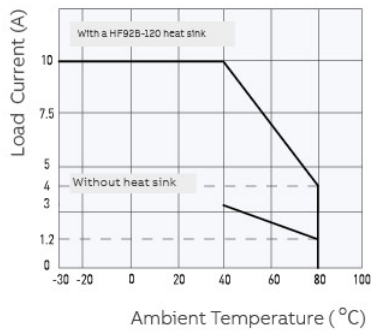
Max. Load Current vs. Ambient Temperature (D-50D80)



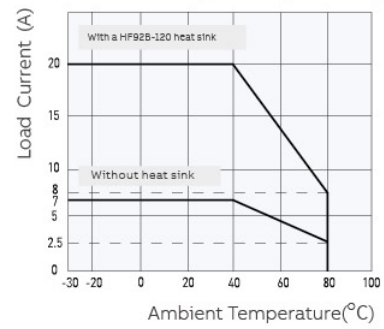
Max. Load Current vs. Ambient Temperature (D-30D100)



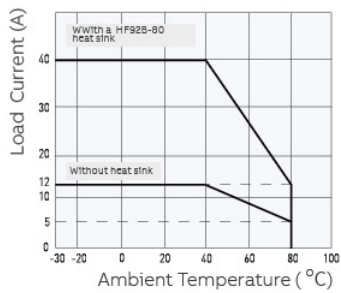
Max. Load Current vs. Ambient Temperature (D-400D10)



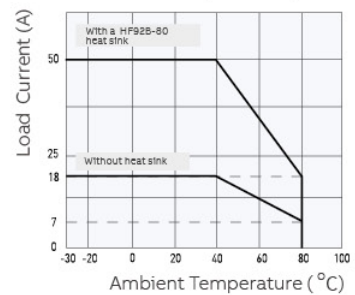
Max. Load Current vs. Ambient Temperature (D-100D20)



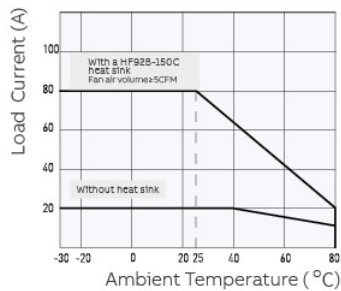
Max. Load Current vs. Ambient Temperature (D-50D40)



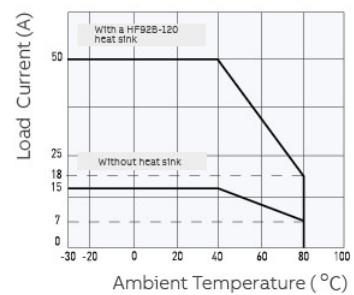
Max. Load Current vs. Ambient Temperature (D-30D50)



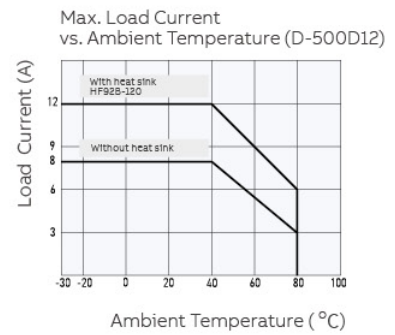
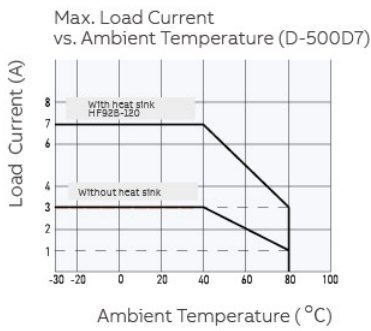
Max. Load Current vs. Ambient Temperature (D-100D80)



Max. Load Current vs. Ambient Temperature (D-150D50)



## CHARACTERISTIC CURVES



## CHARACTERISTIC CURVES

