

PCB Mount

# KS40 (DC Output) Solid State Relay

CE



## DESCRIPTION

KS40 is a set of SPST-NO DC output PCB mount DIP type SSR. The SSR has three DC input options 5VDC, 12VDC and 24VDC for selection and includes an LED indicator to display working status. And its rated output current is 2A and it has two output voltage options 50VDC and 100VDC, providing photoelectric isolation between input and output with dielectric strength 2500V.

KS40 can realize the isolation and control of strong current by using the weak current and the level transition as well, and can be easily connected to computer and a variety of digital circuit interfaces. The SSR has been widely applied to the industrial automation fields, such as various DC motors, DC power supplies, electromagnetic devices, intelligent instruments and so on, and it also can be used as the driver for all high power output devices under damp corrosive and explosion proofing conditions.

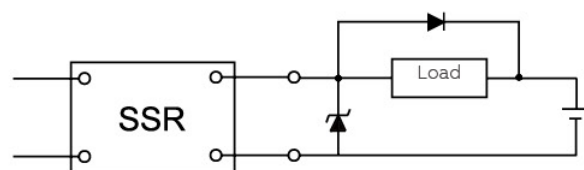
## PRECAUTIONS

1. Soldering must be completed within 10s at 260°C or 5s at 350°C.
2. If poor ventilation is unavoidable, the load current must be derated.
3. Make sure the wiring of input and output and the input polarity are correct so as to avoid any damage to the SSR.
4. Inductive loads (e.g. motors, electromagnetic valves, solenoids, AC contactor coils, etc.) should be diode suppressed so as to absorb the transient inverse electromotive force generated by the inductive load.

## FEATURES

- ◆ Bipolar transistor output
- ◆ Photoelectric isolation
- ◆ LED status indicator
- ◆ Dielectric strength 2500V
- ◆ PCB mount
- ◆ Pin-compatible with standard package EMR

5. Please do not use the SSR exceeding the limitation which is specified on this datasheet.



## SELECTION GUIDE

<b>KS40 /</b>	<b>5-</b>	<b>50</b>	<b>D</b>	<b>2</b>	<b>-L</b>	<b>(XXX)</b>
Type	Control voltage 5: 5VDC 12: 12VDC 24: 24VDC	Load voltage 50: 50VDC 100: 100VDC	Load voltage form D: DC	Load current 2: 2A	LED indicator L: Included	Customer special code

## INPUT SPECIFICATIONS (Ta = 25°C)

Control voltage range	5	4 ~ 6VDC
	12	9.6 ~ 14.4VDC
	24	19.2 ~ 28.8VDC
Must turn-on voltage	5	4VDC
	12	9.6VDC
	24	19.2VDC
Must turn-off voltage		1.0VDC
Max. reverse protection voltage	5	-6VDC
	12	-14.4VDC
	24	-28.8VDC
Max. input current		20mA

## OUTPUT SPECIFICATIONS (Ta = 25°C)

Load voltage range	50D: 3 ~ 50VDC
	100D: 3 ~ 100VDC
Load current range	0.01 ~ 2A
Max. surge current (10ms)	8A <sub>pk</sub>
Max. off-state leakage current	0.1mA
Max. on-state voltage drop	1.5VDC
Max. turn-on time	1ms
Max. turn-off time	1ms
Max. transient voltage	50D: 70V <sub>pk</sub>
	100D: 125V <sub>pk</sub>

PCB Mount

Panel Mount

DIN Rail Mount

Motor/Reversing Module

Intelligent SSR

SSR Accessories

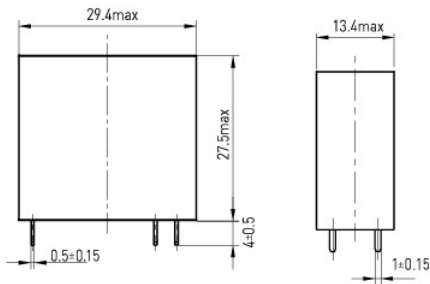
## GENERAL SPECIFICATIONS (Ta = 25°C)

Dielectric strength (input/output)	2500VAC, 50~60Hz, 1min
Insulation resistance	1000MΩ (500VDC)
Max. capacitance (input / output)	8pF
Vibration resistance	10 ~ 55Hz, 1.5mm, DA
Shock resistance	980m/s <sup>2</sup>
Operating temperature	-30 ~ 80°C
Storage temperature	-30 ~ 100°C
Ambient humidity	45% ~ 85% RH
Unit weight	Approx. 18g

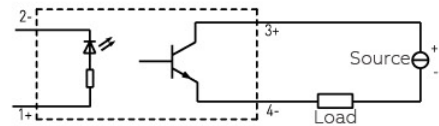
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB LAYOUT

Unit: mm

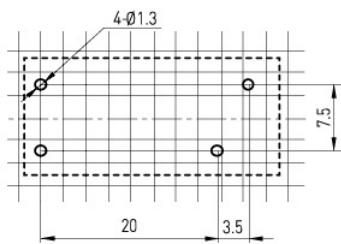
Outline Dimensions



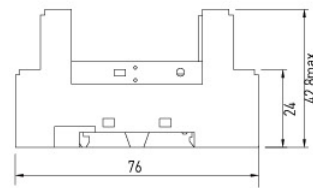
Wiring Diagram



PCB Layout(Bottom view)



Socket Layout  
Socket Model: KR540/SC



## CHARACTERISTIC CURVES

