

# SJ1 Series Single Axis Joystick

## Product Features

- Single-axis finger operated, forward and backward directional operated.
- Spring return.
- The appearance of small, easy to install.
- Potentiometer or uncontact hall effect sensor.
- Various output voltage range optional.

## Application

Typical application on remote control unit, off-highway vehicle and industrial panel control.

## Technical Information

### Electrical data

| Potentiometer             |  |
|---------------------------|--|
| Power supply              | <32Vdc   |
| Total resistance          | 4K $\Omega$ or 5K $\Omega$   |
| Resistance tolerance      | <20%   |
| Electrical angle          | $\pm 28^\circ$   |
| Centertap angle           | $\pm 2.5^\circ$  |
| Dissipation(max)          | 0.25W (25°C, Non-load)   |
| Center tap output voltage | 48%~52% ( $\pm 2\%$ )  |
| Directional switch        | Power supply: <35Vdc<br>Maximum current: 2mA<br>Breakout angle: $\pm 3^\circ$<br>Contact resistance: <500 $\Omega$ |

### Hall

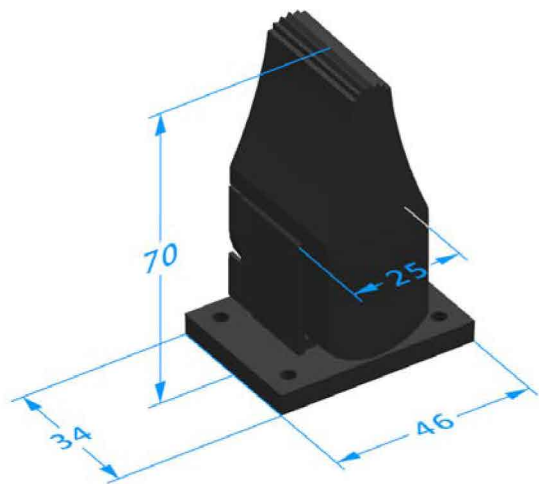
|                                    |                             |
|------------------------------------|-----------------------------|
| Power supply                       | 5.0 $\pm$ 0.5Vdc            |
| Power supply current               | <9mA; 18mA (redundant hall) |
| Maximum allowance overload voltage | 30Vdc                       |
| Reverse polarity voltage(max)      | -10Vdc                      |
| Load resistance                    | >10K $\Omega$               |
| Resistance tolerance               | 2.5 $\pm$ 0.1V              |
| Output linearity tolerance         | < $\pm 5\%$                 |

### Environmental data

|                       |                     |
|-----------------------|---------------------|
| Operating Temperature | -30°C~+70°C         |
| Storage Temperature   | -40°C~+85°C         |
| Protection level      | IP66 (Above flange) |



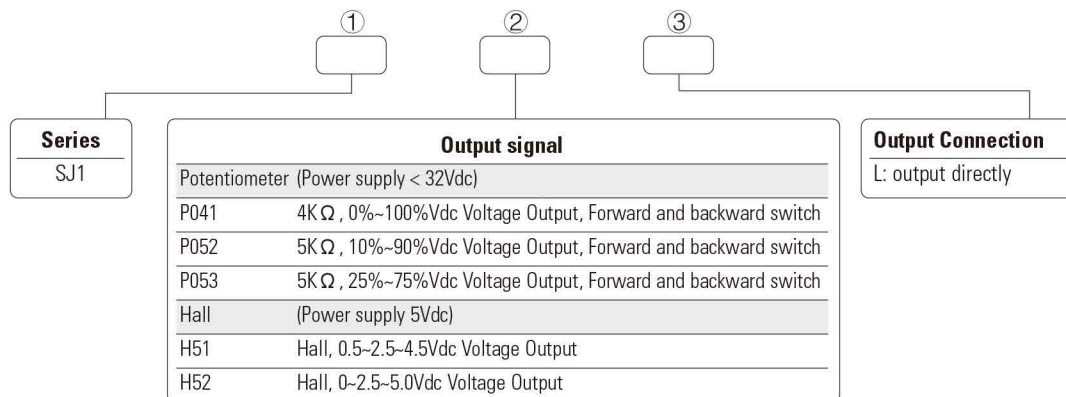
## Dimensions



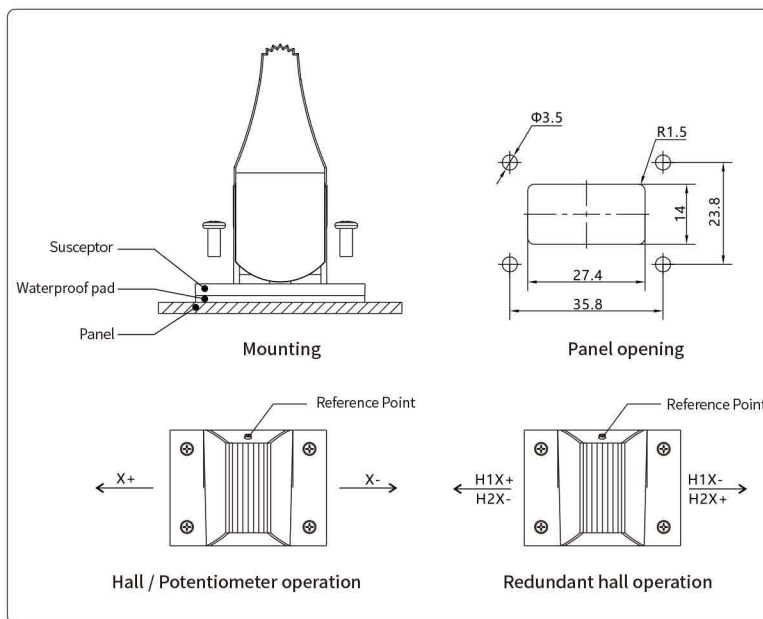
### Mechanical features

|                         |   |
|-------------------------|---|
| Travel angle            | about $\pm 30^\circ$  |
| Operating type          | Spring return   |
| Breakout force          | 1.3N  |
| Operating force(max)    | 3N  |
| Maximum allowable force | >50N  |
| Expecting life          | >2 million cycles (Potentiometer)<br>>5 million cycles (Hall) |
| Weight                  | 45g   |

## Product Configuration



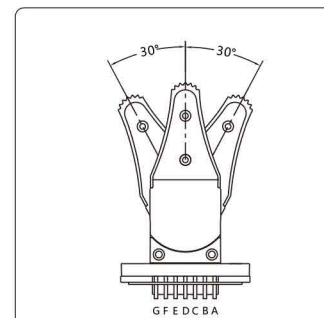
## Product Installation



## Electrical Connections

### Connection plug (FCI DUBOX™ 7 Pin Connection plu 76382-307)

| Pin | Potentiometer        | Hall | Redundant hall | Color  |
|-----|----------------------|------|----------------|--------|
| A   | Center tap           | NA   | Aout           | Red    |
| B   | VCC                  | VCC  | VCC            | Blue   |
| C   | Wiper output signal  | Bout | Bout           | Black  |
| D   | GND                  | GND  | GND            | White  |
| E   | Switch terminal (X+) | NA   | NA             | Yellow |
| F   | Switch terminal (X-) | NA   | NA             | Green  |
| G   | COM                  | NA   | NA             | Gray   |



**Note:** Mating terminal: FCI DUBOX™ 65240-007 Series Connector, Cable Length 20cm