

# KSJ Series Spherical Actuator Tact Switches

## Features/Benefits

- Spherical actuator allows actuation force off center  $\pm 30^\circ$  with regard to vertical
- Total travel 1.6 mm
- Sealed against flux

## Typical Applications

- Automotive
- Cranes, off road, railway
- Factory automation
- Security systems



Tactile Switches

## Specification

FUNCTION: Momentary action  
 CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.  
 DISTANCE BETWEEN BUTTON CENTERS (min.): 7.62 (0.300)  
 TERMINALS: PC pins

## Environmental

|                        |               |                |
|------------------------|---------------|----------------|
|                        | Silver        | Gold           |
| OPERATING TEMPERATURE: | -40°C to 90°C | -40°C to 125°C |
| STORAGE TEMPERATURE:   | -40°C to 85°C | -55°C to 125°C |

## Packaging

Delivered in boxes of 500 pieces.

## Mechanical

| Type     | Actuation force<br>N (grams) | Operating life<br>(operations)<br>axial | Operating life<br>(operations)<br>radial | Travel to<br>make |
|----------|------------------------------|---|--|-------------------|
| KSJ0M211 | 2.0 (200)                    | 100,000                                 | 30,000                                   | 0,7 $\pm$ 0,25    |
| KSJ0M411 | 3.0 (300)                    | 100,000                                 | 30,000                                   | 0,55 $\pm$ 0,25   |

## Electrical

|                  |        |        |
|------------------|--------|--------|
|                  | Silver | Gold   |
| MAXIMUM POWER:   | 1 VA   | 0.2 VA |
| MAXIMUM VOLTAGE: | 50 VDC | 50 VDC |
| MINIMUM VOLTAGE: | 20 mV  | 20 mV  |
| MAXIMUM CURRENT: | 50 mA  | 50 mA  |
| MINIMUM CURRENT: | 1 mA   | 1 mA   |

DIELECTRIC STRENGTH (50 Hz, 1 min.):  $\geq 300$  Vrms  
 CONTACT RESISTANCE:  $\leq 50$  m $\Omega$   
 INSULATION RESISTANCE (100V):  $> 10^{11}$   $\Omega$   
 BOUNCE TIME:  $< 1$  ms

## Process

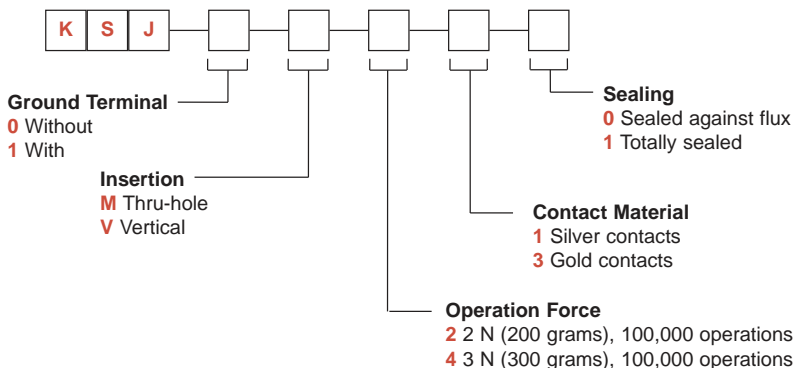
SOLDERING: Protected against flux and is compatible with the following soldering processes:

- Fluxing of PCB bottom side
- Preheating at 85°C
- Wave soldering (Tin/Lead 40-60) 250°C for 2 sec.
- Cooling down to ambient temperature.
- Eventual cleaning by brushing on soldered side. TMS Freon to be avoided.

**NOTE:** Part numbers listed above do not represent all possible configurations. For information on specific and custom switches, consult Customer Service Center.

## How To Order

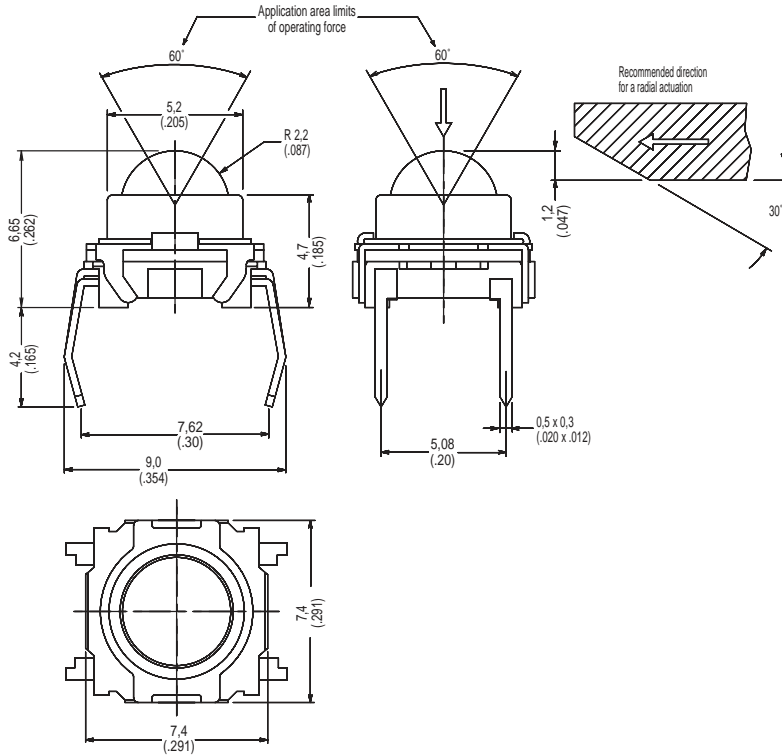
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



# KSJ Series Spherical Actuator Tact Switches

SERIES

KSJ



KSJ0M211



B

Tactile Switches

GROUND TERMINAL

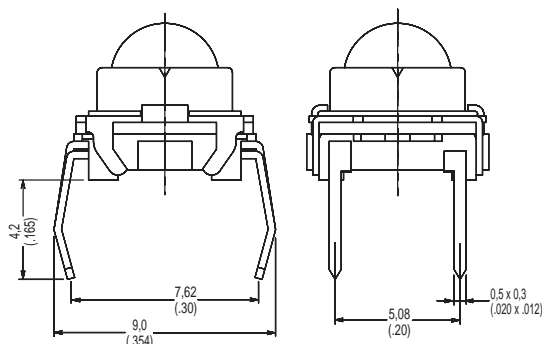
0 WITHOUT

1 WITH

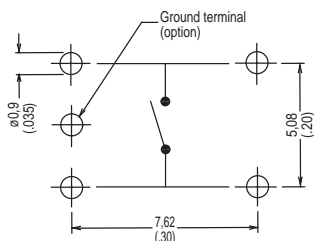
# KSJ Series Spherical Actuator Tact Switches

## INSERTION

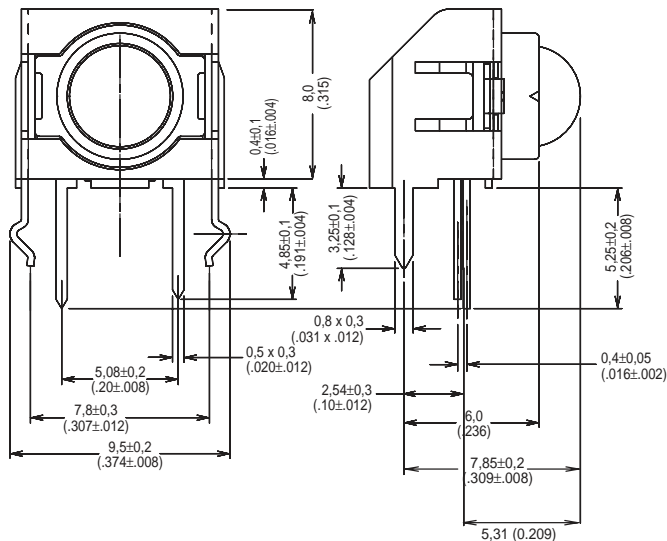
### M THRU-HOLE



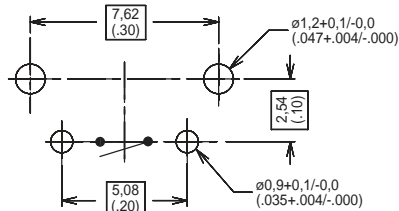
#### PCB LAYOUT



### V VERTICAL



#### PCB LAYOUT



## OPERATING FORCE

| OPTION CODE | OPERATING FORCE |
|-------------|-----------------|
| 2           | 2 N (200 grams) |
| 4           | 3 N (300 grams) |

## CONTACT MATERIAL

| OPTION CODE | CONTACT MATERIAL |
|-------------|------------------|
| 1           | Silver contacts  |
| 3           | Gold contacts    |

## SEALING

| OPTION CODE | SEALING             |
|-------------|---------------------|
| 0           | Sealed against flux |
| 1           | Totally sealed      |