TACT Switch[™] 6.1 × 3.7mm Compact High-speed Mounting (Surface Mount Type)

SKQY Series



Compact switch with contact sealing structure, also available with ground terminal.



Push

Slide

Rotary

Encoders

Power

Dual-in-line

| Package | Туре |
|---------|------|
| | |

| IACI Switch | |
|-------------|--|
| 0 | |

| Custom- | |
|----------|--|
| Products | |

| Product L Vertical Type | ine | | | | | | | |
|----------------------------|--------------------|---------------------|------------------|------------------|------------------|-------------------------------|-------------------------------|--------------------------------|
| Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Minimum order unit (pcs.) |
| SKQYACE010 | 0.98N | | | | | | | |
| SKQYAAE010 | 1.57N | Vertical | 0.25 | 50mA 12V DC | 10 <i>µ</i> A | 50,000cycles | 500m max. | 3.000 |
| SKQYABE010 | 2.55N | vertical | 0.25 | | 1V DC | 50,000Cycles | | 3,000 |
| SKOYAFE010 | 3.14N | 1 | | | | | | |

With Ground Terminal Type

| with Ground 1 | erinnar Type | | | | | | | |
|---------------|--------------------|---------------------|------------------|------------------|------------------|-------------------------------|-------------------------------|--------------------------------|
| Product No. | Operating force | Operating direction | Travel (mm) | Rating (max.) | Rating (min.) | Operating life (5mA 5V DC) | Initial contact resistance | Minimum order unit (pcs.) |
| SKQYPCE010 | 0.98N | | | | | | | |
| SKQYPAE010 | 1.57N | Vertical | 0.25 | 50mA 12V DC | 10µA 1V DC | 50,000cycles | 500m max. | 3,000 |
| SKQYPBE010 | 2.55N | vertical | 0.25 | | | | | |
| SKQYPDE010 | 3.14N | | | | | | | |

Specification of Embossed Taping Package (Taping Packaging for Auto-insertion)

Sharp Feeling Soft Feeling Snap-in Туре

Surface Mount Type Radial

Type



| Num | T . 161 | | |
|--------|------------------|---------------------------|--------------------|
| 1 reel | 1 case /Japan | 1 case /export packing | Tape width (mm) |
| 3,000 | 30,000 | 30,000 | 12 |

Dimensions



Circuit Diagram



Note

1. Please place purchase orders for taping products per minimum order unit (1 reel or a case).

2. For 330mm diameter reel requirements, please contact us.

Refer to P.306 for soldering conditions.

Unit:mm



List of Varieties

Sharp Feeling Type

| 511 | | sing i | ype | | i | | | | | | | | | |
|--------------------------------------|-----------------------------|----------------|--|----------------------------|-----------------------------|-----------------------|-----------------------------|--------------------------------------|-------|----------|------------------|------|------------------------------------|--|
| | Series | | SKSD | SKRN | SKSE | SPEE | SKRK | SKRP | SKQM | SKQY | SKRA | SKHM | SKHU | |
| | Photo | | | \diamond | 101 | Ser. | | | | | C. | | C. | |
| | Туре | | Surface mount | | | | | | | | | | | |
| F | eature | s | Double | e action | Horizor Double | ntal type e action | Compact size Low-profile | High operation force Compact size | Compa | act size | Middle stroke | | Dust-proof type is available | |
| Oper dire | Vert | tical | | | | | | | | | | | | |
| Operating direction | Horiz | ontal | | • | | | | | | | • | | | |
| | | w | 4.1 | 6 | 5.9 | 4 | 3.9 | 4.2 | 6 | 6.1 | 6.2 | 6 | .2 | |
| | nsions m) | D | 3.9 | | 2.87 | 5 | 2.9 | 3.2 | 3.5 | 3.7 | 0.2 | 6 | 3.5 | |
| | | Н | 0.6 | 0.9 | 3 | 1.22 | 1.5 | 2.5 | 4.3 | 2.5 | 3.4 | 3.1 | 2.5 | |
| 1N Operation force coverage | | | See the | e relevant p product de | ages for res escriptions | spective | \$ | Ì | Ĵ | ↓ ↓ | Ì | 1 | ↓ ↓ | |
| Grou | nd terr | 5N ninal | | | | | | | | | | | | |
| | peratin nperatu range | | | | | -10 to +60 | | | | | | 1 | | |
| Electrical | Insul resist | ation tance | 100M | min. 10 | 00V DC | 10M min. 100V DC | | | 100M | min. 10 | 00V DC | | | |
| trical: | Volt pro | | | V AC for 1 : 100V AC | | 100V AC for 1min. | 250V AC for 1min. | | | | | | | |
| | Vibra | ation | 10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2hours respectively | | | | | | | | | | | |
| Durability | Lifet | time | Shall be in accordance with individual specifications. | | | | | | | | | | | |
| Envi | Co | old | $\begin{array}{ c c c c c }\hline -30 \pm 2 & \text{for 96h} \\ \hline & -30 \pm 2 & \text{for 96h} \\ \hline & & -30 \pm 2 & \text{for 96h} \\ \hline \end{array}$ | | | | | | | | | | | |
| Environmenta | Dry | heat | 80 | ±2 for 9 | 96h | 85 ± 2 for 96h | | | 80 | ±2 for | 96h | | | |
| ental | Damp | heat | t $\begin{array}{c} 60 \pm 2 & , 90 \text{ to } 95\% \text{RH for} \\ 96h & & \\ 95\% \text{RH for } 96h \end{array}$ $\begin{array}{c} 40 \pm 2 & , 90 \text{ to} \\ 95\% \text{RH for } 96h & & \\ 60 \pm 2 & , 90 \text{ to } 95\% \text{RH for } 96h & & \\ \end{array}$ | | | | | | | | | | | |
| | Page | | 278 | 279 | 280 | 84 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | |
| | | | | | | • | | | | · | | | | |

W : Width. The most outer dimension excluding terminal portion.
D : Depth. The most outer dimension excluding terminal portion.
H : Height. The minimum dimension if there are variances.

Note

The automotive operating temperature range to be individually discussed upon request.

Soldering Conditions

Condition for Reflow

Available for Surface Mount Type.

- 1. Heating method: Double heating method with infrared heater.
- 2. Temperature measurement: Thermocouple 0.1 to 0.2 CA(K) or CC(T) at solder joints (copper foil surface). A heat resistive tape should be used to fix thermocouple.

Push 3. Temperature profile

Slide

Detector

Rotary

Encoders

Power

Dual-in-line Package Type

TACT Switch[™]

Custom-Products



Time inside soldering equipment

Note

- 1. The above temperature shall be measured on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the material, size, thickness of PC boards and others. The above-stated conditions shall also apply to switch surface temperatures.
- 2. Soldering conditions differ depending on reflow soldering machines. Prior verification of soldering condition is highly recommended.

| Sharp Feeling |
|-----------------------|
| Soft Feeling |
| Snap-in Type |
| Surface Mount Type |
| Radial Type |

nıgr

Conditions for Auto-dip Available for Snap-in Type and Radial Type

(Except SKHJ, SKHL, SKQJ, SKQK, SKEG series)

| ltems | Condition |
|------------------------|--|
| Flux built-up | Mounting surface should not be exposed to fluk |
| Preheating temperature | Ambient temperature of the soldered surface of PC board. 100 max. |
| Preheating time | 60s max. |
| Soldering temperature | 260 max. |
| Duration of immersion | 5s max. |
| Number of soldering | 2times max. |

Manual Soldering (Except SKRT Series)

| Items | Condition |
|----------------------------|-----------|
| | |
| Soldering temperature | 350 max. |
| Duration of soldering | 3s max. |
| Duration of soldering | 3s max. |
| Capacity of soldering iron | 60W max. |
| | |

Notes

- 1. Consult with us for availability of TACT Switch[™] washing.
- 2. Prevent flux penetration from the top side of the TACT Switch[™].
- 3. Switch terminals and a PC board should not be coated with flux prior to soldering.
- 4. The second soldering should be done after the switch is stable with normal temperature.
- 5. Use the flux with a specific gravity of min 0.81.
- (EC-19S-8 by TAMURA Corporation, or equivalents.)