## Specifications

## Ratings

6A 125V AC / 250V AC
0.1A 24VDC

## ■ Characteristics

| Operating speed | 0.1 mm to $1 \mathrm{~m} / \mathrm{s}$ (pin plunger models) |
| :---: | :---: |
| Operating frequency | Mechanical: 300 operations/min max. Electrical: 30 operations/min max. |
| Insulation resistance | $100 \mathrm{M} \Omega$ min. (at DC 500V) |
| Contact resistance (initial value) | $50 \mathrm{~m} \Omega$ max. For terminal models $70 \mathrm{~m} \Omega$ max. For molded lead wire models |
| Dielectric strength | AC 1000V (50/60HZ for 1 minute) |
| Vibration resistance | Malfunction: 10 to $55 \mathrm{~Hz}, 1.5-\mathrm{mm}$ double amplitude |
| Shock resistance | Destruction: $1,000 \mathrm{~m} / \mathrm{s}^{2}$ \{approx. 100G\} max. Malfunction: $300 \mathrm{~m} / \mathrm{s}^{2}$ \{approx. 30G\} max. |
| Durability | Mechanical: 1,000,000 operations min. (60 operations/min) Electrical: 200,000 operations min. |
| Degree of protection | IP67 |
| Degree of protection against electrical shock | Class 1 |
| Ambient operating temperature | $\begin{aligned} & -40^{\circ} \mathrm{C} \sim+120^{\circ} \text { (without wire leads) } \\ & -40^{\circ} \mathrm{C} \sim+105^{\circ} \text { (with wire leads) } \end{aligned}$ |
| Ambient operating humidity | 95\% max. (for $5^{\circ} \mathrm{C}$ to $35^{\circ} \mathrm{C}$ ) |

## Contact Form



## Product Selection <br> SR <br>  <br> 123

## 1. Contact

0: Silver contact
1: Gold-plated contact

## 2. ACTUATOR TYPES

00: Pin plunger
01: Short hinge lever
XX: other actuator types
3. TERMINAL TYPE

A: Solder Type
P: PCB Type
C: Cable Type

## Dimensions

## - Terminal

Solder terminal (A)



PCB terminal ( P )


PCB layout


Molded lead wires (C)


Short hinge Lever models


## - Mounting Holes



Operating Characteristics

|  | Pin plunger | Short hinge lever |  |  |
| :--- | :---: | :---: | :---: | :---: |
| OF max. | 200 g | 100 g |  |  |
| RF min. | 50 g | 15 g |  |  |
| PT max. | 1.2 mm | 4.5 mm |  |  |
| OT min. | 0.6 mm | 1.5 mm |  |  |
| MD max. | 0.15 mm | 0.6 mm |  |  |
| FP max. | 9.3 mm | - |  |  |
| OP | $8.4 \pm 0.3 \mathrm{~mm}$ | $10.7 \pm 1.3 \mathrm{~mm}$ |  |  |

## Precautions

## - Cautions

## Degree of Protection

Do not use the Switch underwater. The Switch was tested and found to meet the conditions necessary to meet the following standard.
The test checks for water intrusion after immersion for a specified time period. The test does not check for switching operation underwater.
IEC Publication 529, degree of protection IP67.

## Protection against Chemicals

Prevent the Switch from coming into contact with oil and chemicals.
Otherwise, damage to or deterioration of Switch materials may result.

## - Correct Use

## Mounting

Use M2.3 mounting screws with plane washers or spring washers to securely mount the Switch. Tighten the screws to a torque of 0.23 to $0.26 \mathrm{Nm}\{2.3$ to $2.7 \mathrm{kgf} \cdot \mathrm{m}\}$.

## Operating Body

With the pin plunger models, set the Switch so that the plunger can be pushed in from directly above. Since the plunger is covered with a rubber cap, applying a force from lateral directions may cause damage to the plunger or reduction in the sealing capability.


## Handling

Handle the Switch carefully so as not to break the sealing rubber of the plunger.

## HIGHLY ELECTRIC CO LTD

10TH FL-3, 738 CHUNG CHENG RD, CHUNG HO DISTRICT, NEW TAIPEI 235 TW

## SR f/b 0 or 1, f/b-00, -01 or -two digits; f/b $\mathbf{A}$ or $\mathbf{P}$

Micro

|  |  |  | Temp | Pol/ | Circuit | 30C cycle | 55C cycle |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Load | Amps | Volts | Hz | (C) | Thr | Code | Endurance | | Endurance |
| :---: |

## Conditions of Acceptability

Unless specified otherwise in the individual Reports, consideration is to be given to the following Conditions of Acceptability when these components are employed in the end-use equipment.

The switch terminals have been investigated for use only with copper wire or copper alloy quick-connect terminals. The connector shall be properly matched to the tab.

The spacing between any connections when installed on the switch terminals and the adjacent
mounting surface shall be judged using the spacing requirements in the end-product standard.
3. For switches employing integral leads, the minimum temperature rating of the leads is $60^{\circ} \mathrm{C}$.
4. These switches have been subjected to a minimum of 6000 cycles endurance test.

Special Conditions of Acceptability (that may apply to the above product)
The following are the Special Conditions of Acceptability for switches identified by number in the individual Recognitions indicated in the "SPCOA" field above. Switches with a Condition of Acceptability other than noted below are identified by a letter and described in the Follow-up Procedure Report.

1. These switches incorporate prepared connectors, such as crimp-on connectors or solder-tinted wire.
2. These are lighted switches employing a lamp. The usable lamp life has not been investigated.

These switches have openings in the housing adjacent to arcing parts. Caution is needed if the end-use
3. application involves combustible dust or adjacent combustible materials that could be ignited by switch arcing.
These are diaphragm-actuated water-level switches suitable for use at a maximum temperature (shown within parentheses in degrees Celsius) and for exposure to typical laundry detergent. If the switch is
4. mounted below the water level and has an integral metal case, the metal case shall be considered a live part.
5. Speed-control circuits have been investigated for risk of fire and shock. The suitability of the speed control for a particular appliance shall be investigated in the end-use application.
These switches employ screw-type pressure-wire connectors or push-in terminals. The terminals have
6. been investigated for use with solid and/or solder-dipped stranded conductors of a specified size (shown within parentheses in sq.mm or AWG).
7. These switches employ auxiliary contacts that have not been investigated.

These switches were investigated for the IP rating when mounted in a representative end-product
8. enclosure as defined by the manufacturer. The suitability of the protection from solid objects or water for
parts enclosed in the end product shall be considered in the end-use investigation.

## Special Conditions of Acceptability for File E88392

(that may apply to the above product)
The following are the Special Conditions of Acceptability for switches specific to this file number. The
"SPCOA" field above indicates which of these special conditions apply to the product shown.
Note 1A- When mounted in accordance with the manufactures instruction, this switch gets a protection degree of IP 40.

Note 1B The switch is to be employed in an end use product providing an enclosure or insulating barrier - that provides Reinforced or Double Insulation over the front and rear switch enclosure Surfaces.

Note 1C Whole switch is installed inside of end product; considered for no accessible parts.

Note 2A - The terminals have been evaluated for use with 1.5 mm 2 flexible stranded conductors.
Note 2B The Switch body is installed inside of end product and considered no accessible parts.

Note 2C Heating test was conducted at ambient temperature of 85 deg C with measured maximum - temperature of 116.4 deg $C$ on terminals, the suitability of wire conductors using on the switches terminals shall be determined in end-product applications.
Note 3A - The terminals have been evaluated for use with 24 AWG flexible stranded conductors.
Note 3B The Switch body is installed inside of end product and considered no accessible parts.
Note 3C Heating test was conducted at ambient temperature of 105 deg C with measured maximum - temperature of 118.9 deg $C$ on terminals, the suitability of wire conductors using on the switches terminals shall be determined in end-product applications.
Note A1 - These switches employ terminals which have been investigated for use only as solder-type terminals.

