

Omron introduces Tactile Switch with Gold Plating to product series

~Offers stable contact/insulation over long-term application even in severe environments~

March 8, 2004 ~ Omron Corporation will begin selling the following product from March 9, 2004:

B3F 6mm Tactile Switch with Gold Plating

The product Omron introduces this time is a Tactile Switch with Gold Plating providing stable contact and insulation properties over long-term application even in severe environments.

As an input switch, the tactile switch has been used in a wide variety of applications for over 20 years in the electronics industry. Operating parts of so-called consumer equipment – office automation and audio visual devices -- make up the main applications for general tactile switches. These tactile switches are often used for brief 1 – 2 year durations in indoor environments and the surface of the contact points or terminal ends are treated with silver plating.

However, in the case of silver plating, operation of tactile switches in adverse environments that exposes them to corrosive gases will accelerate corrosion (oxidization and sulfurization), ultimately leading to potentially defective contacts. Specifically, if the circuit current is minute or if the switch is only intended to open and close as infrequently as once every few years, cleansing of the operation parts through operation is minimal, so corrosion can progress easily.

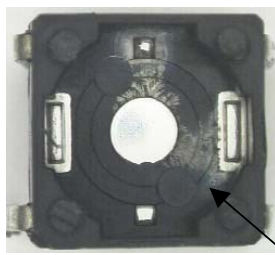
Moreover, in the case of electric pressure under conditions of high-humidity, the silver on the terminal ends or contact points experiences ion migration^{*1}, which can cause defective insulation.

Hence, Omron has introduced a tactile switch with gold plating covering the contact points to provide stable contact and insulation over extended periods despite operation in harsh environments. Plus, the contact point adopts a circular contact structure^{*2} that maintains stable contact even if foreign substances enter, thus realizing a high degree of dust protection.

This product is ideal for medical equipment and measurement instruments requiring high-reliability contacts, disaster prevention equipment and other security related equipment for which long-term installation is necessary, as well as operation parts for outdoor base receiver stations and wattmeters.

*1 Ion migration

Movement of metal in terminals and contacts to the opposite pole under the application of voltage at high humidity.

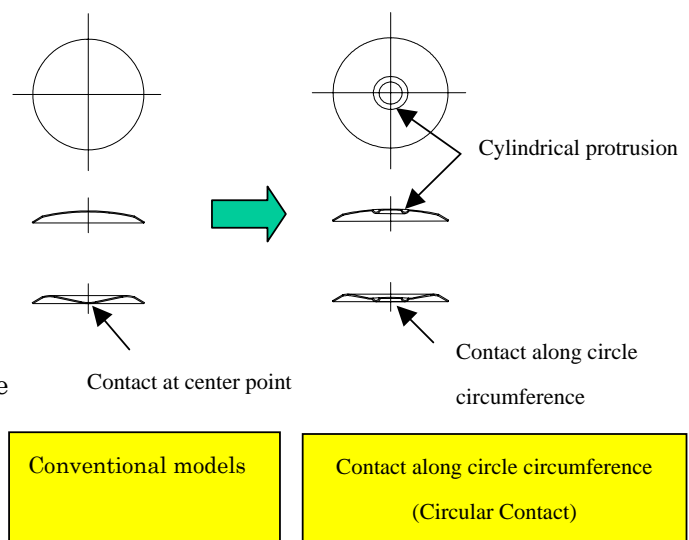


< Interior photo of tactile switch >

Silver plating ion migration (precipitation/shifting of silver between electrodes) leads to defective insulation.

*2 Circular Contact

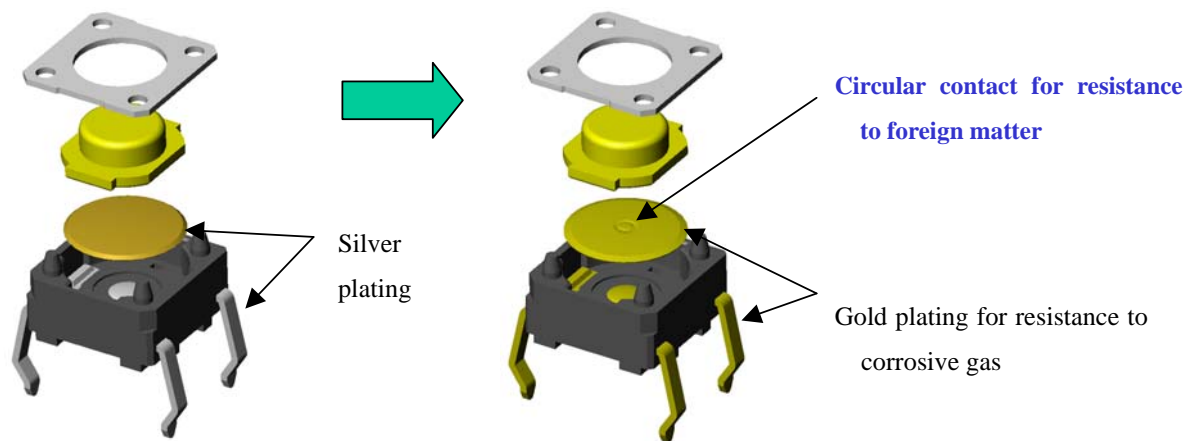
Foreign particles entering below the reversing spring will tend to collect when the switch is pressed. Therefore, poor contact occurs easily in traditional reversing springs, which provide contact only at the center point. The circular contact construction provides contact along the circumference of a circle, thus preventing poor contact by avoiding the center point.



Features

- ◎ Adopts gold plating around the contacts to protect against corrosive gas. Ensures stable contact over long periods even for microloads.
- ◎ Proprietary circular contact structure ensures a high level of resistance to foreign matter.
- ◎ Prevents ion migration.

Structure



< Silver plating type >

< Gold plating type >

Sample price: 120 yen

Sales objective: 3 million units in FY 2004

Main Characteristics

Switching capacity	DC5V ~ 24V 100 μ m ~ 50mA (resistive load)
Ambient temperature	-25 ~ 70 C (with no icing)
Ambient humidity	35 ~ 85% RH
Operating force (OF)	1.76 \pm 0.49 N
Life expectancy	300,000 operations min

About Omron

Headquartered in Kyoto, Japan, OMRON Corporation is a global leader in the field of automation. Established in 1933 and headed by President and CEO Hisao Sakuta, Omron has more than 23,000 employees in over 35 countries working to provide products and services to customers in a variety of fields including industrial automation, electronic components, social systems (ticket gate machines, ticket vending machines, cash dispensers, and traffic control), and healthcare. The company is divided into five regions and head offices are in Japan (Kyoto), Asia Pacific (Singapore), China (Shanghai), Europe (Amsterdam) and US (Chicago). For more information, visit Omron's Web site at www.omron.com

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