

Omron to sell solderless ultra-low profile tactile switch that reduces production lead-time for operating parts of portable devices

August 27, 2003 – Omron will begin selling the following product from September 1st, 2003:

B3D Ultra-low profile dome key

This single-key type ultra-low profile dome key (^{*1}) can be attached to a printed circuit board (PCB) to make an ultra-low profile tactile switch.

Recent years have seen a demand for ultra-low profile switches possessing a crisp clicking action (clicking feel), not only for mobile phones, digital cameras and other mobile equipment, but also for operating parts used in industrial applications (controllers, industrial use PDA's, etc.) and business applications (measuring instruments, communications equipment, etc) where the miniaturization/lower profile of portable devices continues to progress.

Omron responded to these needs in December 2000 by producing/marketing a solderless sheet switch B3DA ultra-low profile dome array (^{*2}) that received high praise in the industry.

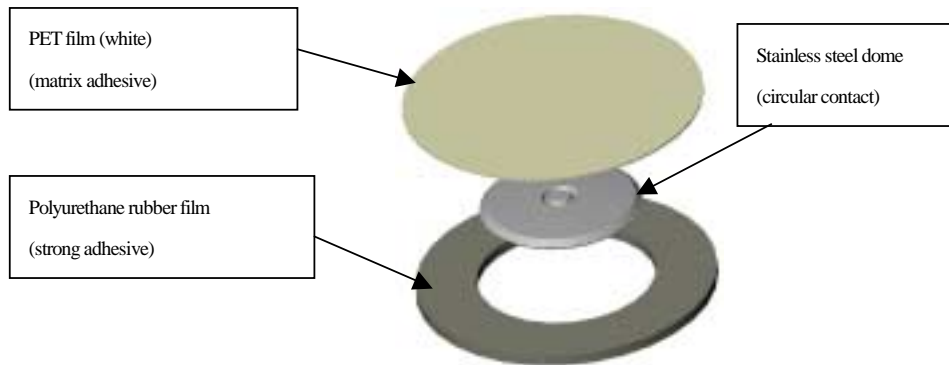
However, a design that corresponds every time to the key layout was vital to customers' needs. Lead-time took at least several weeks from request until delivery and because an initial investment was necessary for the metal mold, jigs, etc., this product could be used for comparatively large orders but not for small-to-medium sized orders.

To handle small-to-medium sized orders, Omron developed a single-key type ultra-low profile dome key that attaches to each key as needed by the customer in making a low-profile operating switch with ease. Not limited to small/medium sized orders of equipment, it is also well suited for mobile devices scattered with numerous operating switches, mobile devices in which it is required for just one operating part (ex. reset switch), and for purposes of equipment testing.

Characteristics

- No soldering required. The structure provides strong resistance against electricity due to no soldered terminals.
- A highly dust-proof ventilated construction is realized through matrix adhesives.
- A stainless steel contact dome achieves a crisp clicking action.
- Omron's proprietary circular contact creates a structure well protected against foreign substances.

Structure



(*1) What is a dome key?

A single adhesive type key that attaches to each key on a printed circuit board to make a tactile switch.



(*2) What is a dome array?

An adhesive type sheet switch with a dome layout in agreement with the sheet dimensions and key layout needed by the customer.



Specifications

Model types	4-mm dia. contact dome, 5-mm dia. contact dome
Operating force (OF)	$1.67 \pm 0.49\text{N}$
Releasing force (RF)	0.2 N min.
Pretravel (PT)	$0.2 \pm 0.1 \text{ mm}$
Thickness	$0.3 \pm 0.1 \text{ mm}$
Life expectancy	1,000,000 operations min. (for 5-mm dia. contact dome)
Switching capacity	DC12V 10mA (resistance load)
Ambient operating temp.	- 40 ~ 80°C

About Omron

Headquartered in Kyoto, Japan, OMRON Corporation is a global leader in the field of automation. Established in 1933 and headed by 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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