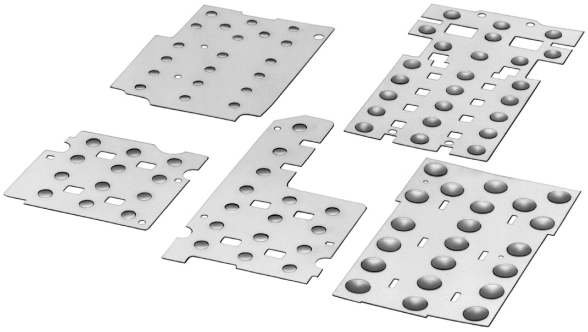
Ultra-low Profile Dome Array
B3DA

Ultra-low Profile Dome Array With Dust-Proof Construction and Crisp Clicking Action

- No soldering required. Attach directly to PCB to make an ultra-low profile tactile switch.
- Matrix adhesive used to create highly dust-proof construction with good ventilation. Omron's unique circular contact action ensures a high level of resistance to foreign matter.
- Lower profile, lighter weight, and crisp clicking action.
- Customization of Dome Array available upon request (i.e., silver plating, number of contacts, shape, etc.).
- RoHS Compliant.



Ordering Information

Item	Model (see note)
4 mm dome array	**B3DA-0010-A**
5 mm dome array	**B3DA-0000-A**

Note: Representative versions for engineering evaluation.

Specifications

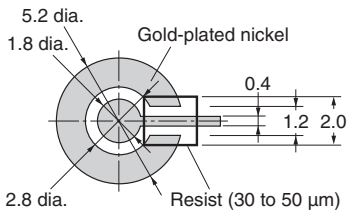
Item	Model	
	B3DA-0010-A and custom 4 mm dia. versions	**B3DA-0000-A and custom 5 mm dia. versions**
Diameter of contact dome	4-mm dia.	5-mm dia.
Operating force (OF)	approx. 160 ± 50 gf (1.57± 0.49 N)	
Releasing force (RF)	20 gf min. (0.2 N min.)	
Pretravel (PT)	0.2 ± 0.1 mm	
Height	0.25 ± 0.1 mm	
Life expectancy	500,000 operations min.	1,000,000 operations min.
Switching capacity	10 mA at 12 VDC (resistive)	
Minimum permissible load	1 mA at 3 VDC (resistive)	
Ambient operating temperature	-40 to 80°C (at 60% RH max.) with no icing or condensation.	
Ambient storage humidity	10% to 90% (at 40°C max.)	
Contact - base material	Stainless steel	
Plating	Unplated. (Silver plating available for custom models.)	

Note: Contact dome specifications not shown in this table are also available. Consult Omron for customization requirements.

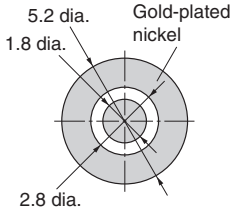
■ Recommended Contact Form on PCB

4-mm Diameter Contact Dome

Single-side PCB

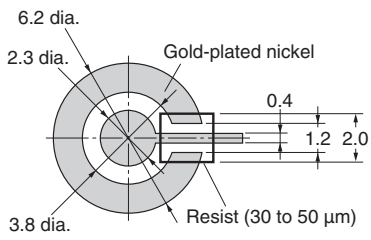


Multilayer PCB

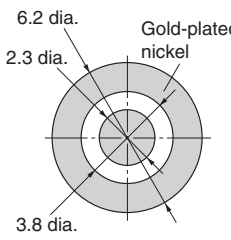


5-mm Diameter Contact Dome

Single-side PCB



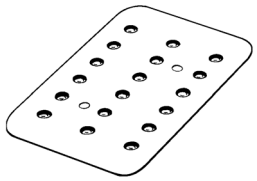
Multilayer PCB

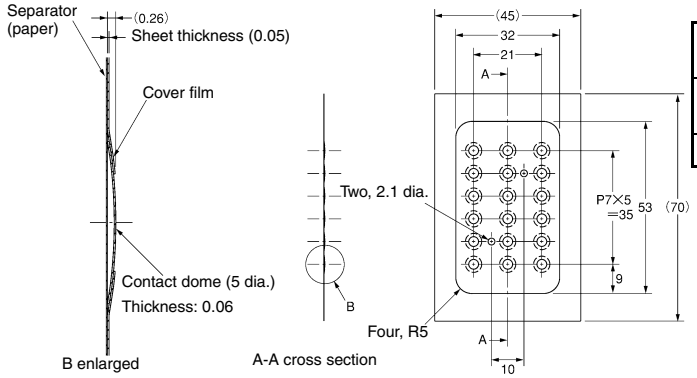


Dimensions

Unit: mm

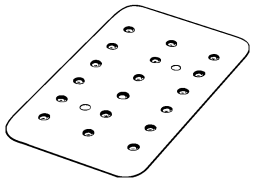
B3DA-0000-A

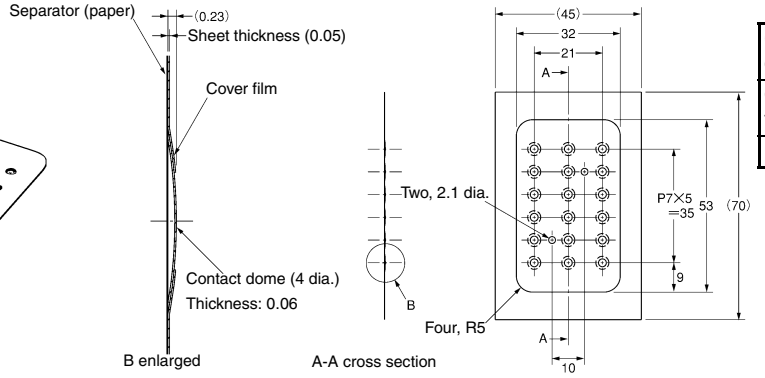




Contact dome diameter	5 dia. (18 keys)
Operating force (OF)	1.57 ± 0.49 N
Plating	Unplated

B3DA-0010-A





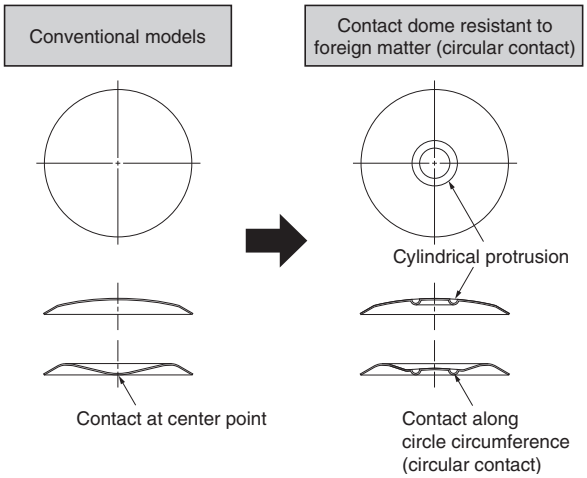
Contact dome diameter	4 dia. (18 keys)
Operating force (OF)	1.57 ± 0.49 N
Plating	Unplated

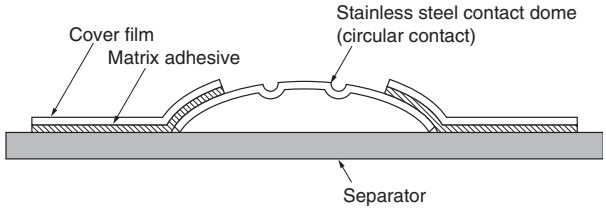
Construction

Circular Contact

When Dome Arrays are attached to the PCB, any PCB dust or foreign particles will tend to collect in the center of the key when it is pressed. Therefore, poor contact occurs easily in Dome Arrays that provide contact at the center point only.

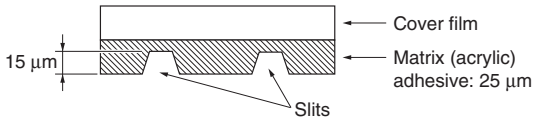
The circular contact construction provides contact along the circumference of a circle, thus preventing poor contact by avoiding the center point.





Matrix Adhesive

The surface structure of this adhesive has grid-shaped slits, as shown in the following cross-sectional diagram. These slits provide both ventilation and dust-proofing, which is required for contact dome operation.



Precautions

■ Attaching to the PCB

Remove the Dome Array from the sheet using tweezers or a vacuum pick-up tool, and attach it above the contact on the PCB surface, which has been wiped clean in advance.

Do not reuse a Dome Array that has been detached from the PCB. Attach a new Dome Array to the PCB.

Do not touch the Dome Array with bare hands, or with unclean gloves. Doing so may damage the Dome Array, which is the part that comes in contact with the PCB.

■ Reflow Soldering

The Dome Array cannot withstand heat from reflow soldering. Always perform reflow soldering before attaching the Dome Array to the PCB.

■ Washing

Do not wash the Dome Array. The Dome Array is not water-resistant and must not be exposed to water or other liquids.

■ Common Precautions

Be sure to read the precautions common to all Tactile Switches, contained in the Technical User's Guide, "Tactile Switches, Technical Information" for correct use.

MEMO

Omron Electronic Components, LLC

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   (d) Products: Products and/or services of Seller
   (e) Including: Including without limitation
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