

# ED Domes and EDM Domes



## ED

ED, the disc contact is a momentary tact switch with short travel and good tactile feedback. Direct mounting on a printed circuit board is possible.

In that case, the dome must be actuated by a soft actuator of 3.0 mm (0.118) minimum diameter. The ED dome is available in various types of modules and is the main component of several switches presented in this catalog.

Self-cleaning system:

The contact is made on at least 3 points of the lower diaphragm, these 3 points of contacts are always different at each new switch action. During the switching movement, the upper disc slides on the lower diaphragm, ensuring the contact's self-cleaning.

## EDM

The EDM is available in 4 versions:

EDM 450 AU  
EDM 650 AU  
EDM 450 AG  
EDM 650 AG

The EDM Multi Dome Series was developed for low profile applications needing increased tactile response and high performance specifications.

Applications range from aircraft instrument panels to radio keypads. This high performance dome switch combines our reliable ED contact system with added tactile domes for forces of 4.5N (450 grams) and 6.5N (650 grams).

## Main features

- Gold (Au) or silver (Ag) contacts
- Two different operating forces
- Low profile
- Compact PWB spacing
- Proven application in avionics

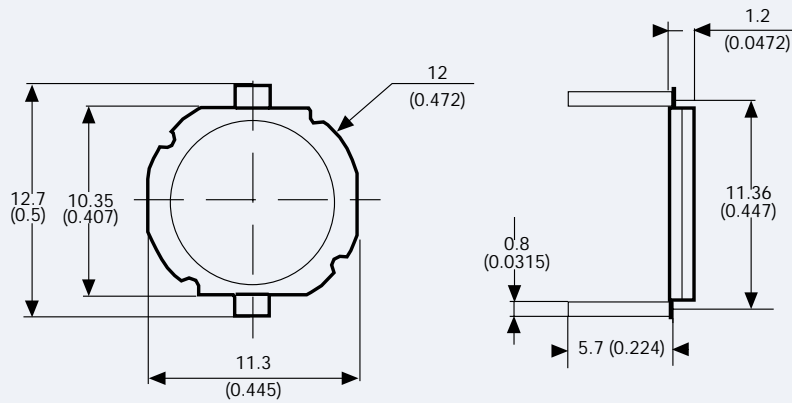
| Construction                             | ED   | EDM  |                      |
|--|--|--|----------------------|
| Function                                 | Momentary  | Momentary  |                      |
| Contact arrangement                      | 1 make contact = SPST                              | 1 make contact=SPST,NO                                   |                      |
| Distance between button                  | 12.7 (0.500 )                                      | 12.7 (0.500 ) centers, min.                              |                      |
| Terminals                                | PC pins or tabs                                    | PC pins or tabs  |                      |
| Electrical data                          | Silver   | Gold   |                      |
| Switching power max. AC/DC               | 6 W  | 3 W  | 3 W                  |
| Switching voltage max. AC/DC             | 100 V  | 100 V  | 100 V DC             |
| Switching current max. AC/DC             | 100 mA   | 50 mA  | 50 mA                |
| Carrying current max. AC/DC              | 250 mA   | 250 mA   |                      |
| Dielectric strength (50 Hz/1 Min.)       | ≧ 300 V  | ≧ 300 V  | ≧ 300 V              |
| Operating life with max. switching power | ≧ 10 <sup>6</sup> operations                       | ≧ 5 × 10 <sup>6</sup> operations                         |                      |
| Contact resistance                       | ≧ 10 mΩ  | ≧ 15 mΩ  | ≧ 15 mΩ              |
| Insulation resistance (100 V)            | ≧ 10 <sup>11</sup> Ω                               | ≧ 10 <sup>11</sup> Ω                                     | ≧ 10 <sup>11</sup> Ω |
| Contact bounce                           | ≧ 100 μs   | ≧ 100 μs   | ≧ 1ms                |
| Mechanical data                          | ED   | EDM  |                      |
| Switching travel                         | 0.3 (0.012 )<br>Max. admissible 0.5 (0.02)         | 0.4 (0.0157 )<br>Max. admissible 0.5 (0.0197)            |                      |
| Operating force                          | 2.4N ± 25%<br>(240 grams ± 25%)                    | 4.5N (450 grams) ±25%<br>6.5N (650 grams) ±25%           |                      |
| Further data                             |  |  |                      |
| Contact material                         | Silver plated, Gold plated                         | Ag (silver plated)<br>Au (gold plated)                   |                      |
| Operating temperature                    | - 25°C to + 70°C                                   | -55°C to +85°C   |                      |
| Storage temperature                      | - 40°C to + 85°C                                   | -55°C to + 85°C  |                      |
| Material                                 | housing<br>contact base<br>plating of contact area | Thermoplastic<br>Phosphor bronze<br>1.5 microns gold (G) |                      |
| Climatic data                            |  |  |                      |
| Climatic category (days)                 | 10 for silver version<br>56 for gold version       |  |                      |
| Soldering by static bath                 | 255°C for 5 seconds                                |  |                      |

Ordering code: see next page.

# ED Domes and EDM Domes

## Dimensional Drawings

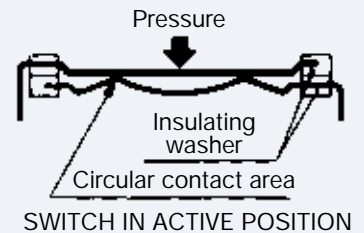
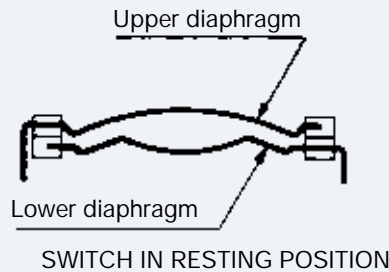
### ED Domes



### Switch action principal

The disc contact is essentially made of two separate conductive domes separated by an insulated material.

The upper diaphragm is shaped so that under pressure it collapses suddenly and establishes contact with the lower diaphragm.



| Ordering code |  | 1  | 2 | 3  | 4 |
|---------------|--|----|---|----|---|
|               |  | ED | S | SC | 0 |
| 1             | <b>Designation:</b> ED / EDM450 / EDM650               | →  | ↑ | ↑  | ↑ |
| 2             | <b>Contact material:</b> S = silver,<br>G = gold       | →  | ↑ | ↑  | ↑ |
| 3             | <b>Contacts:</b> AC = with PC pins,<br>SC = with tabs  | →  | ↑ | ↑  | ↑ |
| 4             | <b>Sealing:</b> 0 = flux sealed,<br>1 = totally sealed | →  | ↑ | ↑  | ↑ |