

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

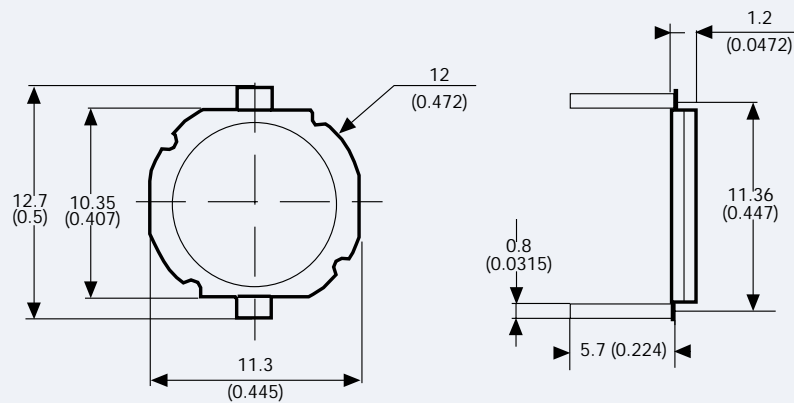
Construction	ED	EDM
Function	Momentary	Momentary
Contact arrangement	1 make contact = SPST	1 make contact=SPST,NO
Distance between button	12.7 (0.500)	12.7 (0.500) centers, min.
Terminals	PC pins or tabs	PC pins or tabs
Electrical data		
	Silver	Gold
Switching power max. AC/DC	6 W	3 W
Switching voltage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

Ordering code: see next page.

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Dimensional Drawings

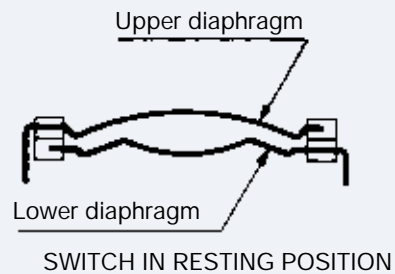
ED Domes



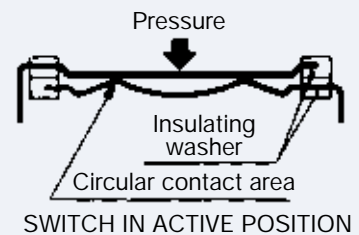
Switch action principal

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

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



SWITCH IN RESTING POSITION



SWITCH IN ACTIVE POSITION

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