

# Actuator

51-  
138.025D2

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## 51-138.025D2 Actuator

### FRONT

**Front dimension:** Ø 18 mm

**Front form:** Round

### MOUNTING

**Design:** Raised

**Mounting type:** Panel mounting

### ELECTRICAL CHARACTERISTICS

**Switching voltage and switching current:**

- 250 VAC, 5 A (ohmic)
- 250 VAC, 3 A (Soldering terminal)
- 250 VAC, 2 A (inductive,  $\cos(\phi) = 0.7$ )
- 125 VAC, 3 A (inductive,  $\cos(\phi) = 0.7$ )
- 220 VDC, 0.1 A (inductive, L:R = 30 ms)
- 110 VDC, 0.2 A (inductive, L:R = 30 ms)
- 60 VDC, 0.7 A (inductive, L:R = 30 ms)
- 24 VDC, 2 A (inductive, L:R = 30 ms)

**Contacts:** 4 NC / 4 NO

**Rated Operational Voltage  $U_e$ :** 250 VAC/DC according to EN IEC 60947-1

**Switching rating:** 250 V @ 5 A

**Electrical lifetime:** 50 000 cycles of operation

**Electric strength:** 2500 VAC, 50 Hz, 1 min. between all terminals and earth, according to IEC 61058-1, part 15

**Protection class:** II

**Standards:** According to EN/IEC 61058-1

**Thermal current  $I_{th}$ :** 5 A, according to EN / IEC 60947-5-1  
The maximum current in continuous operation and at ambient temperature not exceeding the quoted maximum values.

## MECHANICAL CHARACTERISTIC

|                             |                                                                                                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Terminal:</b>            | Soldering terminal                                                                                                                                                                   |
| <b>Contact material:</b>    | Gold                                                                                                                                                                                 |
| <b>Switching action:</b>    | Rest (a) - Maintained (a)                                                                                                                                                            |
| <b>Switching system:</b>    | Snap-action switching element                                                                                                                                                        |
| <b>Switching system:</b>    | Self-cleaning, double-break snap action switching system, 1 normally closed and 1 normally open contact per element.                                                                 |
| <b>Switching positions:</b> | 2 positions                                                                                                                                                                          |
| <b>Switching angle:</b>     | 90° right                                                                                                                                                                            |
| <b>Mechanical lifetime:</b> | 50 000 cycles of operation                                                                                                                                                           |
| <b>Operating force:</b>     | 1,8 ... 6 N, depending on the number of switching elements                                                                                                                           |
| <b>Tightening torque:</b>   | Fixing nut max. 0.5 Nm                                                                                                                                                               |
| <b>Wire cross section:</b>  | Snap-action switching element with tinned soldering terminals at the sides<br>Max. wire diameter 2 wires à 1.2 mm<br>Max. wire cross-section of stranded cable 1 x 1 mm <sup>2</sup> |
| <b>Weight:</b>              | 0.026 kg                                                                                                                                                                             |

## AMBIENT CONDITION

|                               |                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>IP front protection:</b>   | IP65, according to DIN EN 60529                                                                          |
| <b>Operating temperature:</b> | – 25 °C ... + 55 °C                                                                                      |
| <b>Storage temperature:</b>   | – 40 °C ... + 85 °C                                                                                      |
| <b>Shock resistance:</b>      | 15 g for 11 ms, as per DIN / EN 60512-4-3, DIN / EN 60068-2-27 (Single impacts, semi-sinusoidal)         |
| <b>Vibration resistance:</b>  | 10 g at 10 Hz...1500 Hz, amplitude 0.75 mm (Sinusoidal), according to DIN EN 60512-4-4, DIN EN 60068-2-6 |
| <b>Climate resistance:</b>    | Standard condition, as per DIN EN 60068-2-30<br>Changing condition, as per DIN EN 60068-2-14             |

## CERTIFICATE

|                      |                                                                             |
|----------------------|-----------------------------------------------------------------------------|
| <b>Approbations:</b> | CB (IEC 61058-1), CQC, CSA, DNV, ENEC (EN 61058-1), UL                      |
| <b>Conformities:</b> | CE, UKCA, 2011 / 65 / EC (RoHS), 2014 / 30 / EU (EMC), 2014 / 35 / EU (LVD) |
| <b>REACH:</b>        | REACH compliant                                                             |
| <b>RoHS:</b>         | RoHS compliant                                                              |

## OTHER

**Short Description:**

Actuator, Ø 18 mm, Round, 4 NC / 4 NO, Rest (a) - Maintained (a),  
Soldering terminal, IP65, according to DIN EN 60529

**Housing colour:**

Black

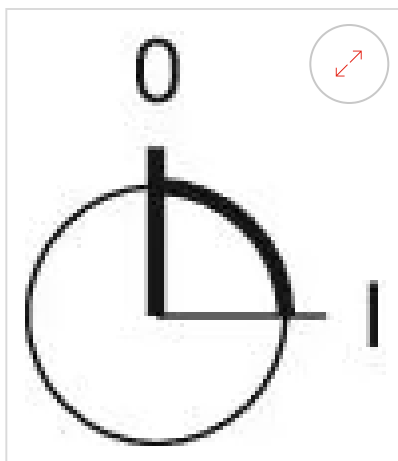
**Hints:**

Standard lock: DOM 311

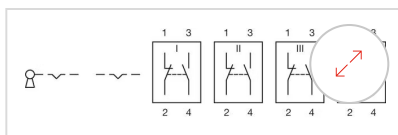
**max. number of switching elements:**

4

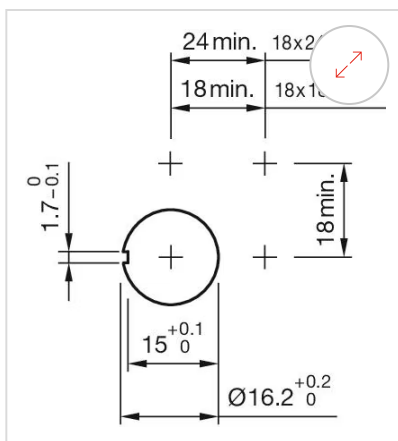
**Switching positions:**



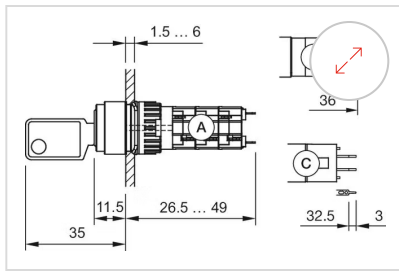
**Wiring diagrams:**



**Mounting cut-outs:**



**Dimension drawings:**



A = Solder terminal

B = Plug-in terminal 2.8 mm x 0.5 mm

C = Universal terminal 2.0 mm x 0.5 mm