

# Actuator

51-  
151.0252F

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## 51-151.0252F Actuator

### MOUNTING

|                       |                |
|-----------------------|----------------|
| <b>Design:</b>        | Flush          |
| <b>Mounting type:</b> | Panel mounting |

### OPERATING-/INDICATION PART

|                           |             |
|---------------------------|-------------|
| <b>Lens illumination:</b> | Illuminated |
|---------------------------|-------------|

### ELECTRICAL CHARACTERISTICS

|                                                    |                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Switching voltage and switching current:</b>    | 250 VAC, 5 A (ohmic)<br>250 VAC, 3 A (Soldering terminal)<br>250 VAC, 2 A (inductive, $\cos(\phi) = 0.7$ )<br>125 VAC, 3 A (inductive, $\cos(\phi) = 0.7$ )<br>220 VDC, 0.1 A (inductive, L:R = 30 ms)<br>110 VDC, 0.2 A (inductive, L:R = 30 ms)<br>60 VDC, 0.7 A (inductive, L:R = 30 ms)<br>24 VDC, 2 A (inductive, L:R = 30 ms) |
| <b>Contacts:</b>                                   | 1 NC / 1 NO                                                                                                                                                                                                                                                                                                                         |
| <b>Rated Operational Voltage <math>U_e</math>:</b> | 250 VAC/DC according to EN IEC 60947-1                                                                                                                                                                                                                                                                                              |
| <b>Switching rating:</b>                           | 250 V @ 3 A                                                                                                                                                                                                                                                                                                                         |
| <b>Electrical lifetime:</b>                        | 50 000 cycles of operation                                                                                                                                                                                                                                                                                                          |
| <b>Electric strength:</b>                          | 2500 VAC, 50 Hz, 1 min. between all terminals and earth, according to IEC 61058-1, part 15                                                                                                                                                                                                                                          |
| <b>Protection class:</b>                           | II                                                                                                                                                                                                                                                                                                                                  |
| <b>Standards:</b>                                  | According to EN/IEC 61058-1                                                                                                                                                                                                                                                                                                         |
| <b>Thermal current <math>I_{th}</math>:</b>        | The maximum current in continuous operation and at ambient temperature not exceeding the quoted maximum values.<br>3 A                                                                                                                                                                                                              |

### MECHANICAL CHARATERISTIC

|                             |                                                                                                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Terminal:</b>            | Soldering terminal                                                                                                                                                                   |
| <b>Contact material:</b>    | Gold                                                                                                                                                                                 |
| <b>Switching action:</b>    | Momentary                                                                                                                                                                            |
| <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>Mechanical lifetime:</b> | 2 Mil. cycles of operation                                                                                                                                                           |
| <b>Operating force:</b>     | 1,8 ... 6 N, depending on the number of switching elements                                                                                                                           |
| <b>Operating Travel:</b>    | 3 mm                                                                                                                                                                                 |
| <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>              | 0.005 kg                                                                                                                                                                             |

## AMBIENT CONDITION

|                               |                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>IP front protection:</b>   | IP65, according to DIN EN 60529                                                                          |
| <b>Operating temperature:</b> | – 25 °C ... + 55 °C, mounted as a block, make sure the heat can escape freely                            |
| <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, EAC, ENEC (EN 61058-1), UL, VDE            |
| <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

|                           |                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------|
| <b>Short Description:</b> | Actuator, Illuminated, 1 NC / 1 NO, Momentary, Soldering terminal, IP65, according to DIN EN 60529 |
| <b>Housing colour:</b>    | Black                                                                                              |

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Figure 1 consists of two parts, (A) and (B), illustrating the dimensions of the test specimens.

Part (A) shows three circular specimens with the following dimensions:

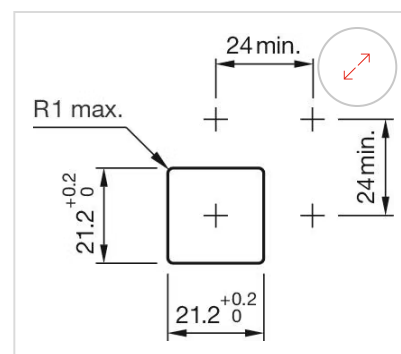
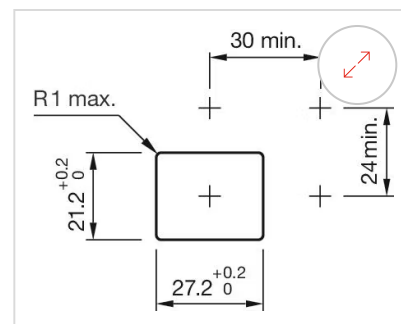
- Specimen A: Diameter 27.0 mm.
- Specimen B: Diameter 18.0 mm x 18.0 mm.
- Specimen C: Diameter 18.0 mm x 24.0 mm.

Part (B) shows the cross-sectional dimensions of the specimens, including diameters and thicknesses:

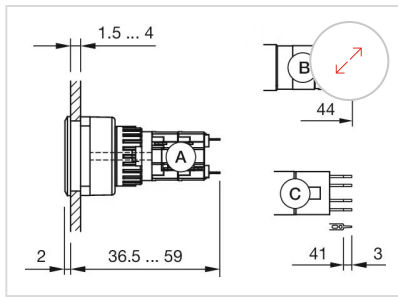
- Specimen A: Diameter 27.0 mm, thickness 12 mm.
- Specimen B: Diameter 18.0 mm, thickness 12 mm.
- Specimen C: Diameter 18.0 mm, thickness 12 mm.

Technical drawing showing a hole and shaft with dimensions and tolerances:

- Hole:** Diameter  $\varnothing 22.3$  with a tolerance of  $^{+0.3}_0$ . The hole is represented by a circle with a center cross.
- Shaft:** Diameter  $\varnothing 25$  with a tolerance of  $^{+0.1}_{-0.05}$ . The shaft is represented by a circle with a center cross.
- Fit:** The drawing indicates a clearance fit, as the hole is larger than the shaft.
- Dimensions:**
  - The hole diameter is  $\varnothing 22.3$  with a tolerance of  $^{+0.3}_0$ .
  - The shaft diameter is  $\varnothing 25$  with a tolerance of  $^{+0.1}_{-0.05}$ .
- Fit:** The drawing indicates a clearance fit, as the hole is larger than the shaft.
- Dimensions:**
  - The hole diameter is  $\varnothing 22.3$  with a tolerance of  $^{+0.3}_0$ .
  - The shaft diameter is  $\varnothing 25$  with a tolerance of  $^{+0.1}_{-0.05}$ .



**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