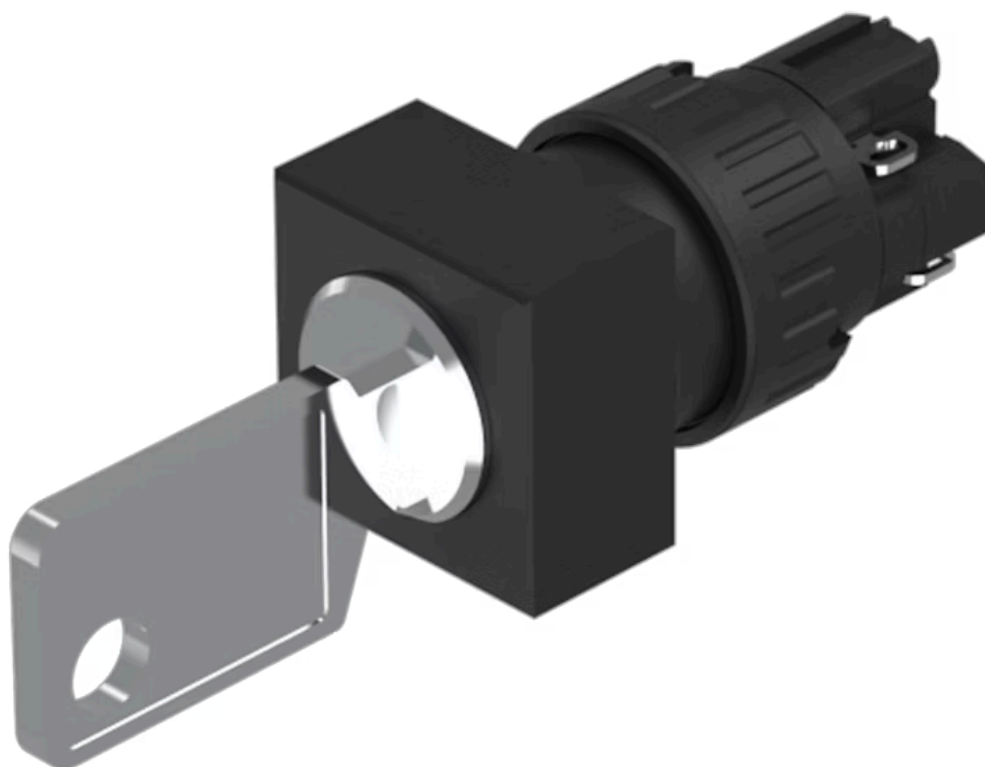


# Actuator

51-  
145.025D2F

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## 51-145.025D2F Actuator

### FRONT

**Front dimension:** 18 mm x 18 mm

**Front form:** Square

### MOUNTING

**Design:** Flush

**Mounting cut-out:** 21 mm x 21 mm

**Mounting type:** Panel mounting

### 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 @ 5 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>        | 5 A, according to EN / IEC 60947-5-1<br>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) - 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>Switching positions:</b> | 2 positions                                                                                                                                                                          |
| <b>Switching angle:</b>     | 42° 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 |
|-----------------------------|---------------------------------|

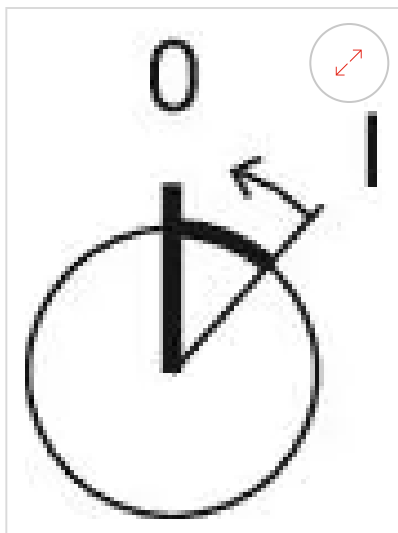
|                               |                                                                                                          |
|-------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Operating temperature:</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

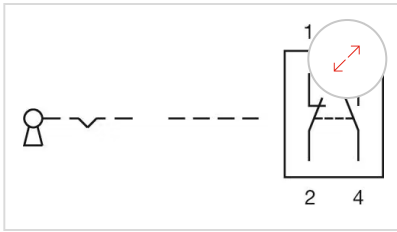
|                      |                                                                             |
|----------------------|-----------------------------------------------------------------------------|
| <b>Approbations:</b> | CB (IEC 61058-1), CQC, CSA, DNV, ENEC (EN 61058-1), UL                      |
| <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

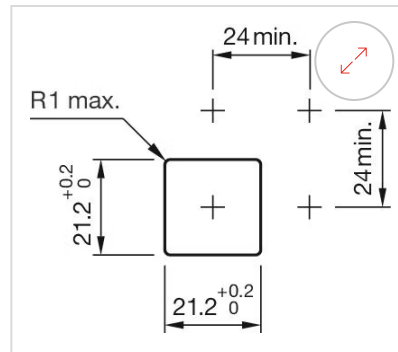
|                                           |                                                                                                                                        |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Short Description:</b>                 | Actuator, 21 mm x 21 mm, 18 mm x 18 mm, Square, 1 NC / 1 NO, Rest (a) - Momentary, Soldering terminal, IP65, according to DIN EN 60529 |
| <b>Housing colour:</b>                    | Black                                                                                                                                  |
| <b>Hints:</b>                             | Standard lock: DOM 311                                                                                                                 |
| <b>max. number of switching elements:</b> | 4                                                                                                                                      |
| <b>Switching positions:</b>               |                                                                                                                                        |



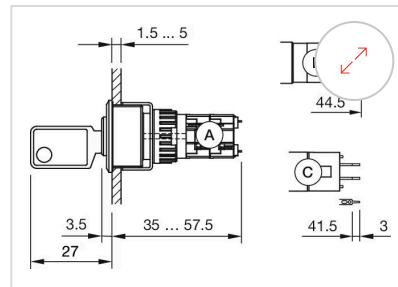
**Wiring diagrams:**



### Mounting cut-outs:



### Dimension drawings:



A = Solder terminal  
 B = Solder terminal 2.8 mm x 0.5 mm  
 C = Universal terminal 2.0 mm x 0.5 mm