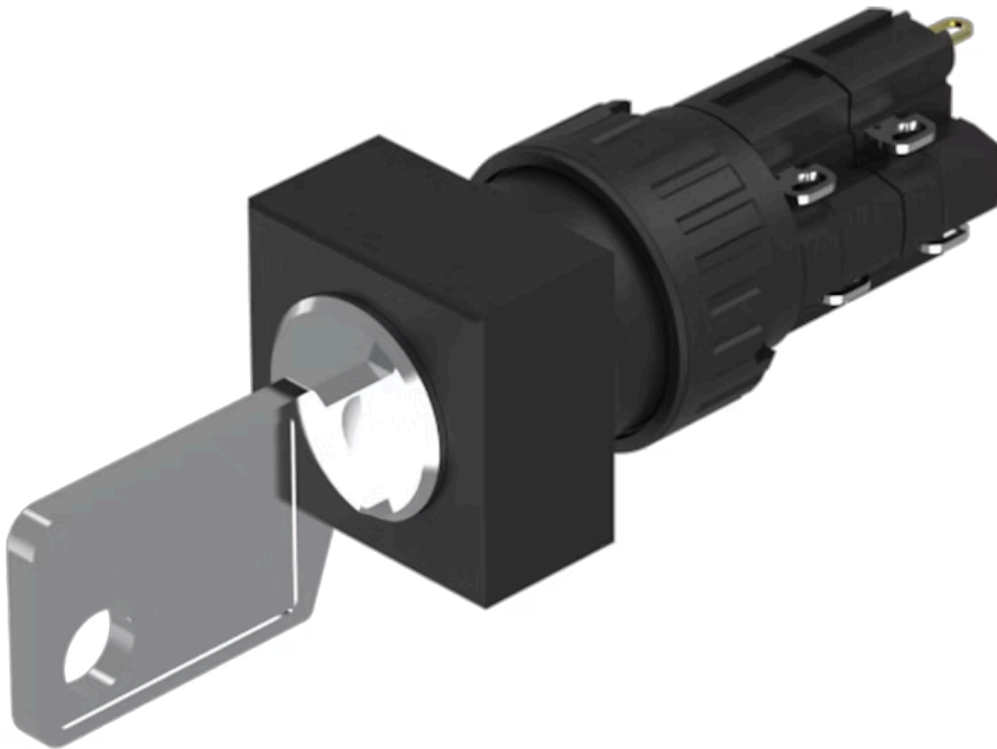


# Actuator

51-  
146.025D2F

Distribution by  
DigiKey

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## 51-146.025D2F 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>Contacts:</b>                                   | 2 NC / 2 NO   |
| <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>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 |
|-----------------------------|---------------------------------|

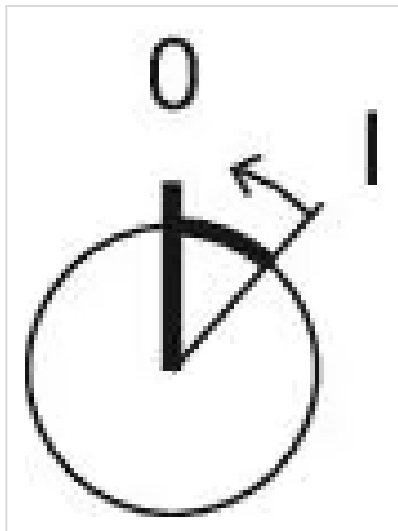
|                               |  |
|-------------------------------|--|
| <b>Operating temperature:</b> | - 25 °C ... + 55 °C  |
| <b>Storage temperature:</b>   | - 40 °C ... + 85 °C  |
| <b>Shock resistance:</b>      | 15 g for 11 ms, as per DIN / EN 60512-4-3, DIN / EN 60068-2-27 (Single impacts, 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

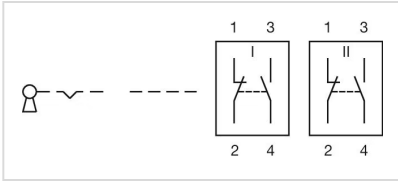
|                      |   |
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| <b>Approbations:</b> | CB (IEC 61058-1), CQC, CSA, DNV, ENEC (EN 61058-1), UL                      |
| <b>Conformities:</b> | CE, UKCA, 2011 / 65 / EC (RoHS), 2014 / 30 / EU (EMC), 2014 / 35 / EU (LVD) |
| <b>REACH:</b>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

### OTHER

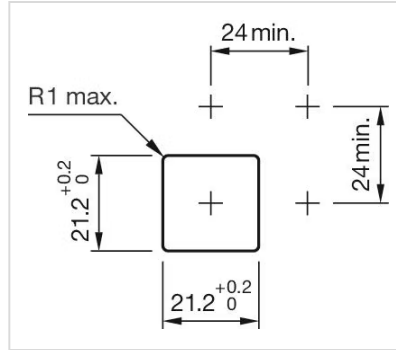
|   |  |
|---|--|
| <b>Short Description:</b>                 | Actuator, 21 mm x 21 mm, 18 mm x 18 mm, square, 2 NC / 2 NO, Rest (a) - Momentary, Soldering terminal, IP65, according to DIN EN 60529 |
| <b>Housing colour:</b>                    | Black  |
| <b>Hints:</b>                             | Standard lock: DOM 311   |
| <b>max. number of switching elements:</b> | 4  |
| <b>Switching positions:</b>               |  |



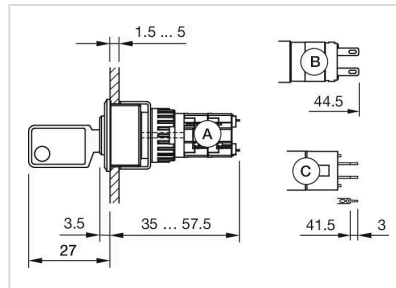
**Wiring diagrams:**



**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