

# Actuator

31-  
281.022

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## 31-281.022 Actuator

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### PRODUCT RANGE

**Product Status:** Not Recommended for new design

### FRONT

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

**Front form:** Square

**Front bezel colour:** Black

**Front bezel material:** Plastic

### MOUNTING

**Design:** Raised

**Mounting cut-out:** Ø 16 mm

**Mounting type:** Panel mounting

### OPERATING-/INDICATION PART

**Lens illumination:** Illuminated

### 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)  
60 VDC, 0.7 A (inductive, L:R = 30 ms)  
24 VDC, 2 A (inductive, L:R = 30 ms)

**Contacts:** 1 NC / 1 NO

**Rated Operational Voltage  $U_e$ :**

250 VAC/VDC

<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 minute, as per IEC 60512-2-11 between all terminals and earth
<b>Protection class:</b>	II
<b>Standards:</b>	According to EN/IEC 61058-1
<b>Thermal current I<sub>th</sub>:</b>	5 A

### MECHANICAL CHARACTERISTICS

<b>Terminal:</b>	Plug-in terminal, 2.8 x 0.5 mm
<b>Contact material:</b>	Gold
<b>Switching action:</b>	Maintained
<b>Switching system:</b>	Snap-action switching element
<b>Switching system:</b>	Self-cleaning, double-break snap action switching system (contact opening width 2 mm x 0.5 mm), 1 normally closed and 1 normally open contact per element.
<b>Mechanical lifetime:</b>	1 Mil. cycles of operation
<b>Operating force:</b>	2 N ... 5,5 N, depending on the number of switching elements
<b>Operating Travel:</b>	ca. 3 mm
<b>Tightening torque:</b>	Fixing nut max. 0.5 Nm
<b>Wire cross section:</b>	Max. wire cross-section 1 wire with 1.5 mm Max. wire cross-section of stranded cable 2 of 0.75 mm <sup>2</sup> or 1 x 1.0 mm <sup>2</sup>
<b>Weight:</b>	0.008 kg

### AMBIENT CONDITION

<b>IP Protection:</b>	IP40 front side, IP67 with front protective cap
<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 IEC 60512-4-3, IEC 60068-2-27 (Single impacts, semi-sinusoidal)
<b>Vibration resistance:</b>	10 g at 10 Hz...2000 Hz, amplitude 1.5 mm (Sinusoidal), according to DIN EN 60512-4-4, DIN EN 60068-2-6
<b>Climate resistance:</b>	Standard condition according to IEC 60068-2-3 Changing condition according to IEC 60068-2-14

**CERTIFICATE**

**Approbations:** CB (IEC 61058-1), CSA, DNV, ENEC (EN 61058-1), UL  
**Conformities:** CE, UKCA, 2011 / 65 / EC (RoHS), 2014 / 35 / EU (LVD)  
**REACH:** REACH compliant  
**RoHS:** RoHS compliant

**OTHER**

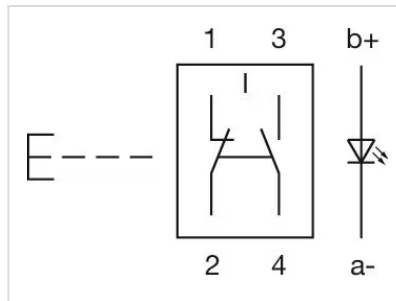
**Short Description:** Actuator, Ø 16 mm, 18 mm x 18 mm, Illuminated, Square, Black, Plastic, 1 NC / 1 NO, Maintained, Plug-in terminal, 2.8 x 0.5 mm

**Internal size:** 15,3 mm x 15,3 mm

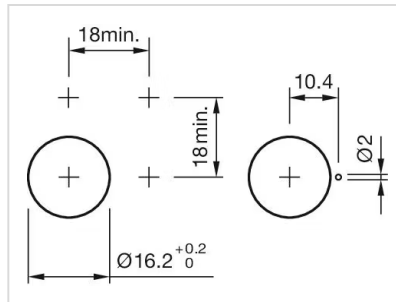
**Housing colour:** Black

**max. number of switching elements:** 1

**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
- D = Universal-Solder terminal