

# Switching element

45-311.1Z40

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## 45-311.1Z40 Switching element

### MOUNTING

**Component mounting type:** Front mounting

### ELECTRICAL CHARACTERISTICS

**Switching voltage and switching current:**

at AC-12						
Voltage	24 V	48 V	110 V	230 V	400 V	500 V
Current	10 A	10 A	10 A	8 A	6 A	10 A
at AC-15						
Voltage	24 V	48 V	110 V	230 V	400 V	500 V
Current	6 A	6 A	6 A	4 A	3 A	1,4 A
at DC-12						
Voltage	24 V	48 V	110 V	230 V	400 V	500 V
Current	10 A	5 A	2,5 A	1 A	0,3 A	0,2 A
at DC-13						
Voltage	24 V	48 V	110 V	230 V	400 V	500 V
Current	3 A	1,5 A	0,7 A	0,3 A	0,1 A	0,07 A

**Contacts:** 1 NO

**Contact reliability:** One contact failure per 10 million switching operations (5 V, 1 mA)  
One contact failure per 100 million switching operations (17 V, 5 mA)

**Insulation voltage:** Rated value 500 V

**Surge voltage resistance:** Rated value 6 kV

**Switching rating:** 500 V AC @ 10 A

**Pollution degree:** 3

**Standards:** The switches comply with the "Standards for low-voltage switching devices" EN IEC 60947-5-1

**Thermal current I<sub>th</sub>:** 10 A Max. permissible current for continuous operation and ambient temperatures not exceeding the specified max. values.

### MECHANICAL CHARACTERISTICS

**Terminal:** Spring-type terminal

**Contact material:** Silver

<b>Switching system:</b>	Slow-make switching element
<b>Switching system:</b>	The double-break, slow-make switching element is equipped with normally open or normally closed contact. The normally closed contact has forced opening. Up to six switching elements can be snapped to each holder. The NC contact opens automatically upon disconnection of the actuator. On delivery, the contact is open (= safe state). Activation (= NC contacts on the non-actuated commanding device are closed) takes place upon first-time actuation after the contact block is snapped onto the actuator.
<b>Mechanical lifetime:</b>	10 Mil. cycles of operation
<b>Tightening torque:</b>	0.8 ... 0.9 Nm
<b>Operating frequency:</b>	Max. 3 600/h
<b>Terminal details 1:</b>	Solid 2 x (0.25 ... 1.5mm <sup>2</sup> ) Finely stranded – Without end sleeves 2 x (0.5 ... 1.5 mm <sup>2</sup> ) – With end sleeves 2 x (0.5 ... 0.75 mm <sup>2</sup> ) – For AWG cables for auxiliary contacts 2 x (24 ... 16)
<b>Wire cross section:</b>	Solid 2 x (0.25 ... 1.5mm <sup>2</sup> ) Finely stranded – Without end sleeves 2 x (0.5 ... 1.5 mm <sup>2</sup> ) – With end sleeves 2 x (0.5 ... 0.75 mm <sup>2</sup> ) – For AWG cables for auxiliary contacts 2 x (24 ... 16)
<b>Weight:</b>	0.01 kg

## AMBIENT CONDITION

<b>IP Protection:</b>	IP20 Terminal, IP40 Housing
<b>Operating temperature:</b>	– 25 °C ... + 70 °C
<b>Storage temperature:</b>	– 40 °C ... + 80 °C
<b>Shock resistance:</b>	According to IEC 60068-2-27: Sinusoidal half-wave 50 g / 11 ms
<b>Vibration resistance:</b>	According to IEC 60068-2-6: 2 ... 500 Hz: 5 g
<b>Climate resistance:</b>	During operation according to IEC 60721: 3K6, 3C3, 3S2, 3M6

## CERTIFICATE

<b>Approbations:</b>	CCC, CSA, UL
<b>Conformities:</b>	CE, UKCA
<b>REACH:</b>	REACH compliant
<b>RoHS:</b>	RoHS compliant

## OTHER

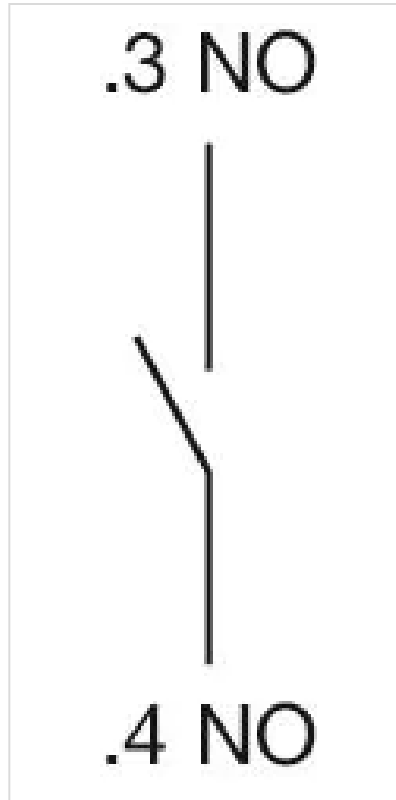
<b>Short Description:</b>	Switching element, Slow-make switching element, 500 V AC @ 10 A, Silver, 1 NO,
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Spring-type terminal, Front mounting

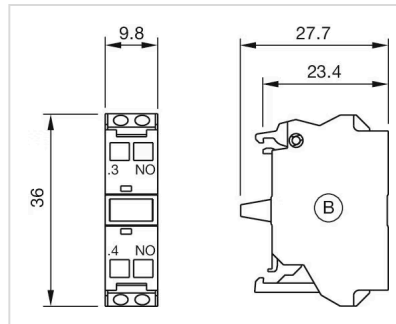
**Product attributes:** Front plate mounting

**Switching element type:** Single

**Wiring diagrams:**



**Dimension drawings:**



B = Spring-type terminal  
for Part No. 45-311.1Z40, 45-311.1X40