

# EAO – Your Expert Partner for Human Machine Interfaces

## 82-4153.1113 - Illuminated pushbutton 16 mm stainless-steel, momentary

### 82-4153.1113 - Illuminated pushbutton 16 mm stainless-steel, momentary, 12V Red LED



Configuration number: 82-10-000968

#### Mounting

Design	flush
Mounting cut-out	Ø 16 mm

#### Front

Front shape	round
Front ring shape	flush
Front dimension	Ø 18 mm
Front bezel material	Stainless steel

#### Other Attributes

LED Operating voltage	12 V AC/DC
Weight	0.018 kg
Operation current	10 mA

#### Operating-/Indication part

Lens optics	opaque
Lens material	Stainless steel
Lens profile	flat
Lens illumination	ring illumination
Lens colour	Stainless steel

#### IP-Rating

Front protection	IP65, IP67, IK10
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#### Connection Method

Terminal	Solder, plug-in 2.8 x 0.5 mm
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#### Actuator

Switching action	Momentary
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#### Switching element

Switching current	5 A
Contact material	Gold-plated silver
Contacts	1 C
Switching system	Snap-action switching element
Switching voltage	250 V AC
Typical switch ratings	1A@24VDC, 0.5A@ 220VA

#### Illumination

Illumination	Ring with red LED
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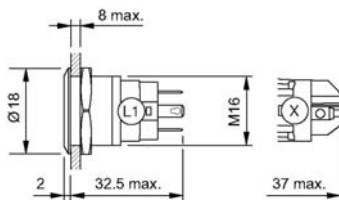
#### Function

Illuminated pushbutton
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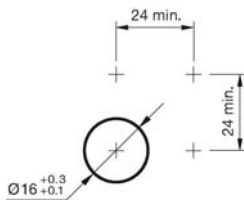
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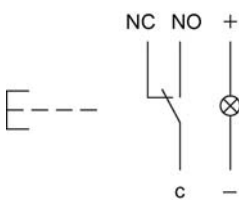
## Dimensions



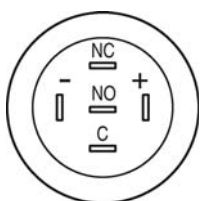
## Mounting cut-outs



## Wiring diagram



## Component layout



## Legend

Switching action: B = Momentary  
Contacts: C = Changeover

**Indicator, Pushbutton, Illuminated pushbutton**
**Switching system**

Snap-action changeover contact normally closed / normally open.  
Switching function momentary or maintain.

**Material**
**Housing**

Stainless-steel  
Stainless-steel chrome-coloured  
Brass gold-coloured  
Aluminium natural anodized

**Terminal housing**

Polyamide 66 (PA66)

**Contact material**

Silver alloy  
Silver contacts gold-plated

**Mechanical characteristics**
**Mounting cut-out**

Ø 16 mm +0.3/+0.1 mm  
Ø 19 mm +0.3/+0.1 mm  
Ø 22 mm +0.3/+0.1 mm

**Terminals**

Soldering/plug-in terminals 2.8 x 0.5 mm  
Screw terminal

**Tightening torque**

5 Nm min. – 12 Nm max. for fixing nut

**Actuating force**

4 ... 7 N

**Actuating travel**

3 mm

**Mechanical lifetime**

Pushbutton momentary 1 Mio. cycles of operation  
Pushbutton maintain 500 000 cycles of operation

**Resistance to heat of soldering**

Hand-soldering max. 260 °C, 3 sek.

**Electrical characteristics**
**Rated Operational Voltage  $U_e$** 

250 VAC

**Rated Insulation Voltage  $U_i$** 

250 V

**Illumination**

LED red, green, blue, yellow and white

LED and series resistor with polarity protection are built in.

LED-Voltage	Tolerance	Current	Consumption
6 VAC/DC	±10 %	15 mA	0.1 W
12 VAC/DC	±10 %	14 mA	0.17 W
24 VAC/DC	±10 %	10 mA	0.24 W
110 VAC	±10 %	2 mA	0.22 W
230 VAC	±10 %	1.3 mA	0.29 W

**Contact resistance**

<50 mΩ

**Electrical life**

50 000 cycles of operation (full load)

**Switch rating IEC 60947-5-1 (Silver contacts)**

Switch rating AC cosφ 0.3 service categorie AC-15

Voltage	Current
24 VAC	1 A
110 VAC	1 A
220 VAC	0.5 A

Switch rating DC service categorie DC-13 (Silver contacts)

Voltage	Current
24 VDC	0.7 A
110 VDC	0.2 A
220 VDC	0.1 A

**Switch rating UL 508 (Silver contacts)**

Switch rating AC cosφ 0.75 ... 0.8)

Voltage	Current
120 VAC	5 A
240 VAC	3 A

Switch rating DC

Voltage	Current
24 VDC	1 A

**Recommended minimum operational data**

according to DIN EN 60947-5-4

	Silver contacts	Silver contacts gold-plated
Voltage	17 VAC/DC	1 VAC/DC
Current	50 mA	5 mA

**Conventional free air thermal current  $I_{th}$** 

5 A

The maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

**Electrical strength**

1500 VAC, 50 Hz 1 min. between life terminals and ground

**Isolation resistance**

500 VDC at min. 10 MΩ according to IEC 60512-2

## Environmental conditions

### Storage temperature

-40 °C ... +80 °C

### Operating temperature

-30 °C ... +70 °C

### Front protection

IP 65 and IP 67, as per IEC 60529

### Impact resistance

IK 10, as per IEC 62262

### Shock resistance

max. 500 m/s<sup>2</sup> according to IEC 60068-2-27

### Degree of pollution

2, as per EN IEC 60947-1

### Vibration resistance

10 ... 500 Hz, amplitude 1.5 mm p-p according to IEC 60068-2-6

## Climate resistance

Damp heat, 21 days according to IEC 60512-11

Stainless steel and aluminium versions:

Saline mist, 96 hours according to IEC 60512-11

Brass versions:

Saline mist, 24 hours according to IEC 60512-11

## Approvals

### Approbations

CB

UL

C UL

CCC

### Declaration of conformity

CE

*EAO reserves the right to alter specifications without further notice.*