

# EAO – Your Expert Partner for Human Machine Interfaces

## 82-5151.2114 - Illuminated pushbutton 19 mm stainless-steel, maintained

### 82-5151.2114 - Illuminated pushbutton 19 mm stainless-steel, maintained 24V Red LED



Configuration Number : 82-10-000033

#### Mounting

Mounting cut-out Design Ø 19 mm  
flush

#### Front

Front dimension Ø 22 mm  
Front shape round  
Front ring shape flush  
Front bezel material Stainless steel

#### Other Attributes

Operating voltage -LED 24 V AC/DC  
Weight 0.018 kg  
Operation current 10 mA

#### Operating-/Indication part

Lens optics ring illuminated  
Lens material Stainless steel  
Lens profile flat  
Lens illumination illuminative  
Lens colour Stainless steel

#### IP-Rating

Front protection IP 65, IP 67

#### Connection Method

Terminal Solder / plug-in 2.8 x 0.5 mm

#### Actuator

Switching action Maintained

#### Switching element

Switching current 3 A  
Contact material Silver  
Contacts 1 C  
Switching system Snap-action switching element  
Switching voltage 240 V AC/DC

#### Illumination

Illumination Ring with red LED

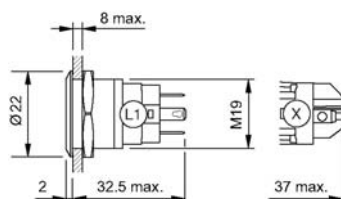
#### Function

Illuminated pushbutton

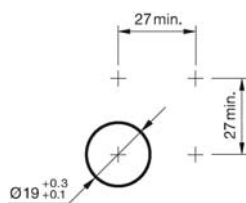
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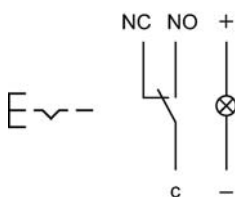
## Dimensions



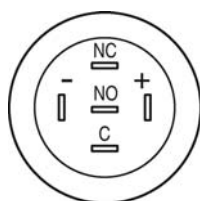
## Mounting cut-outs



## Wiring diagram



## Component layout



## Legend

Switching action: C = Maintained

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.*