

EAO – Your Expert Partner for Human Machine Interfaces

82-4151.2114 - Illuminated pushbutton 16 mm stainless-steel, maintained

82-4151.2114 - Illuminated pushbutton 16 mm stainless-steel, maintained 24V red LED



Configuration Number : 82-10-000164

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	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
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Connection Method

Terminal	Solder / Plug-in 2.8 x 0.5 mm
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Actuator

Switching action	Maintained
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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
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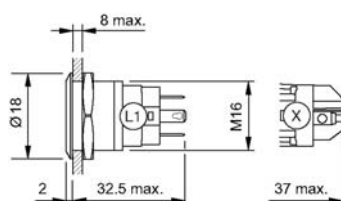
Function

Illuminated pushbutton

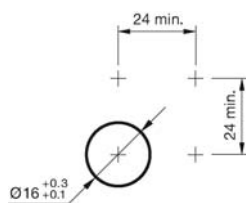
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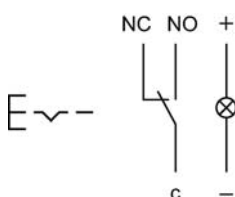
Dimensions



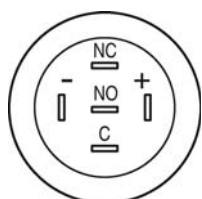
Mounting cut-outs



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/s² 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.