

EAO – Your Expert Partner for Human Machine Interfaces

82-4153.1133 - Illuminated pushbutton 16 mm stainless-steel, momentary

82-4153.1133 - Illuminated pushbutton 16 mm stainless-steel, momentary, 12V Green LED



Configuration number: 82-10-000967

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 |
|------------------|------------------|

Connection Method

| | |
|----------|------------------------------|
| Terminal | Solder, plug-in 2.8 x 0.5 mm |
|----------|------------------------------|

Actuator

| | |
|------------------|-----------|
| Switching action | Momentary |
|------------------|-----------|

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 green LED |
|--------------|---------------------|

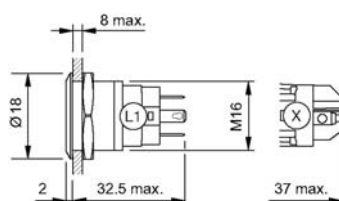
Function

| |
|------------------------|
| Illuminated pushbutton |
|------------------------|

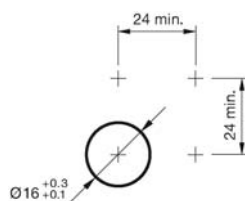
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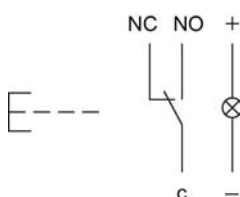
Dimensions



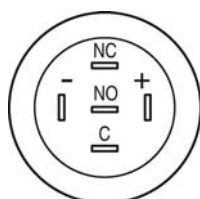
Mounting cut-outs



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_o

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.