

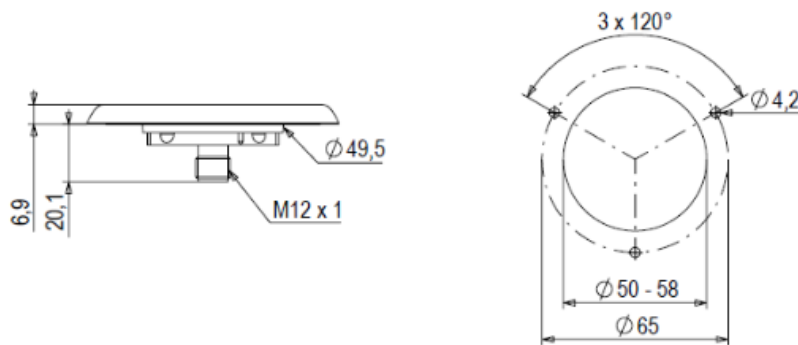
safeCAP

safeCap SC31 dual-channel, 6-pin

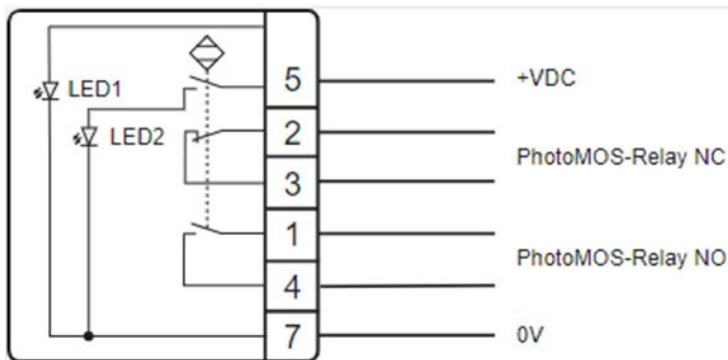
Product image



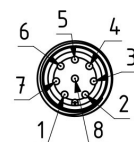
Dimensional drawing and drilling pattern



Connection plan



Plug M12, 8-pin



## safeCap SC31 dual-channel, 6-pin

## Technical data SC3x dual-channel

Operating voltage	—=—24 V (19.2...28.8V)
Contact load	100 mA (70 mA at 75 °C)
Output	PhotoMOS relay normally open contact/normally closed contact
Output pulse	Constant signal when actuated
LED 1	Green LED
LED 2	Yellow LED
Reverse polarity protection	Yes
Short circuit protection	normally open Yes; normally closed No
Power consumption	Max. 20 mA at 24 V
Operating temperature	-25 °C (-13 °F) ... +75 °C (167 °F)
Degree of protection IP	Front face IP68, plug IP67 <sup>1)</sup>
Type of actuation	Capacitive
Actuation force	No actuation force required
Rated insulation voltage	32 V
Switch-off delay $T_a$	Max. 50 ms
Switch-on delay	Max. 30 ms
MTTF <sub>d</sub>	1123 years
PFH [h <sup>-1</sup> ]	2.47E-10
Category	up to Cat 4 <sup>2)</sup>
Performance Level	up to PLe <sup>2)</sup>
DCavg	0%, up to 99% <sup>2)</sup>
Working life TM	20 years

<sup>1)</sup> IP67 for plug, when cable has been connected correctly

<sup>2)</sup> in combination with a safety logic unit as per EN ISO 13849-1, -2, DIN EN 13851, with a DC of at least 99% and a MTTF<sub>d</sub> >31 years, and/or with a PFH<sub>d</sub> <9\* 10<sup>-8</sup>

## safeCap SC31 dual-channel, 6-pin

**▲ WARNING**

Incorrect installation of safeCAP SC31!

A two-handed control device which is not installed as per standards or is not working can cause fatal or life-threatening injuries to humans.

- ⇒ Select the installation surfaces of the safeCAP SC31 as per the dimensions and distances prescribed in DIN EN ISO 1385:2019.
- ⇒ Protect the safeCAP SC31 against unintended actuation, e.g. using an SCP-3 or SCP-7.
- ⇒ Before working on the machine, check to verify that the safeCAP SC31 is functioning correctly.

**▲ WARNING**

Improper use!

safeCAP SC31 is unsuitable for machine processes where the release and interruption of a safety circuit is necessary for a period longer than 2 minutes.

**Intended use**

In combination with a safety relay authorized for two-handed operation, safeCAP SC31 is used for the safety-oriented release and interruption of a safety circuit.

safeCAP SC31 is used to protect persons working at industrial machinery which has dangerous closing movements

safeCAP SC3x has been tested in combination with the MCR 225, 3SK, and PNOZ s6 safety relays. In these instructions, the example used is the connection of the SC3x to the MCR 225, 3SK1, and PNOZ s6 safety relays. The safety-oriented release and interruption of a safety circuit is the responsibility of the operating organization.

**Reasonably foreseeable misuse**

Any use deviating from or going beyond the use specified in “Intended use” is deemed to be improper use.

The switch is not suitable for:

- use as a two-handed control without the previously specified relays or use of a substitute circuit without the independent calculation of the Performance Level as per EN ISO 13849-1:2015.
- use as a two-handed control without validation of the complete system.
- use with cables between the SC31 and safety relay longer than 30 m.
- use as a two-handed control in combination with any other switch.

## safeCap SC31 dual-channel, 6-pin

- use as an EMERGENCY STOP control device.
- use in potentially explosive areas.
- use outdoors.

## Legal notice

The information contained in this document regarding sensors, sensor switches, devices, applications, and software is for informational purposes only and may be updated at any time. It is your responsibility to ensure that your applications conform to your specifications.

CAPTRON does not make any representations or warranties, expressly or implied, with respect to the information, including but not limited to its content, condition, quality, and suitability for a particular purpose. CAPTRON rejects any liability arising from this information and its use.

The use of CAPTRON sensors, sensor switches, devices, applications, and software in life support and/or safety applications is solely at the risk of the end consumer who purchased the product. The end consumer further agrees to defend, indemnify, and hold CAPTRON harmless from any damages, claims, complaints or costs arising from such use.

Unless stated otherwise, no licenses to CAPTRON's intellectual property rights are transferred, implied or otherwise.

## Trademarks

The names and logos CAPTRON, CANEO and oneGRID are registered trademarks of CAPTRON in various countries and are the property of CAPTRON Electronic GmbH.

All other brands mentioned here are the property of the respective companies.

© 2025, CAPTRON Electronic GmbH, all rights reserved.