CANEO
Original operating instructions

IO-Link

series41 Solid

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1 Safety

1.1 General safety

All work on electrical systems or operating equipment may only be carried out by a specially qualified electrician according to the applicable electrotechnical regulations.

The safety of the system in which the SENSORswitch is integrated is the responsibility of the operator.

1.2 Personnel qualifications

A qualified electrician is a person with suitable technical training, expertise and experience as well as knowledge of relevant standards, who can evaluate the work assigned to them correspondingly and recognize potential risks.

1.3 Intended use

series41 is suitable for a variety of applications. Different operating states can be displayed with the LED outer ring. The optional four-digit seven-segment display can show numbers from 1 - 9999 and, to a limited extent, combinations of letters. series41 is intended for use in accordance with the items listed here, the values from the “Technical specifications” chapter and the values from the product description.

- Only connect the product to a limited energy source as per IEC 61010 or to an NEC class 2 power supply unit.
- Source current < 4 A at maximum operating voltage.

1.4 Reasonably foreseeable misuse

Any use other than as specified in the section Intended use or extending beyond this is deemed to be improper.

The SENSORswitch is not suitable for:

- use in potentially explosive atmospheres.
- use as a safety component as per directive 2006/42/EC

2 Notes and symbols used

Warning notes in relation to personal injury / material damage are formulated according to the "SAFE” principle. This means they contain information on the type and source of the hazard, potential consequences as well as how to avoid and avert danger. The following hazard classifications apply in the safety notes:

⚠ DANGER

Danger designates a hazardous situation, which, if ignored, will lead to death or serious injury. The symbol next to the warning indicates the type and source of the danger.

⚠ WARNING

Warning designates a hazardous situation, which, if ignored, may lead to death or serious injury. The symbol next to the warning indicates the type and source of the danger.

⚠ CAUTION

Caution designates a hazardous situation, which, if ignored, may lead to injury. The symbol next to the warning indicates the type and source of the danger.

NOTICE

Notice designates a situation, which may cause material damages and impair the product's function if attention is not paid.

TIP

Tip provides additional useful information about the handling of the product.

Symbol	Meaning
‣	Avoiding and adverting danger in the warning note
▶	Instructions for action All instructions to be followed within a procedure are always listed in chronological order.
▪	List

3 General description

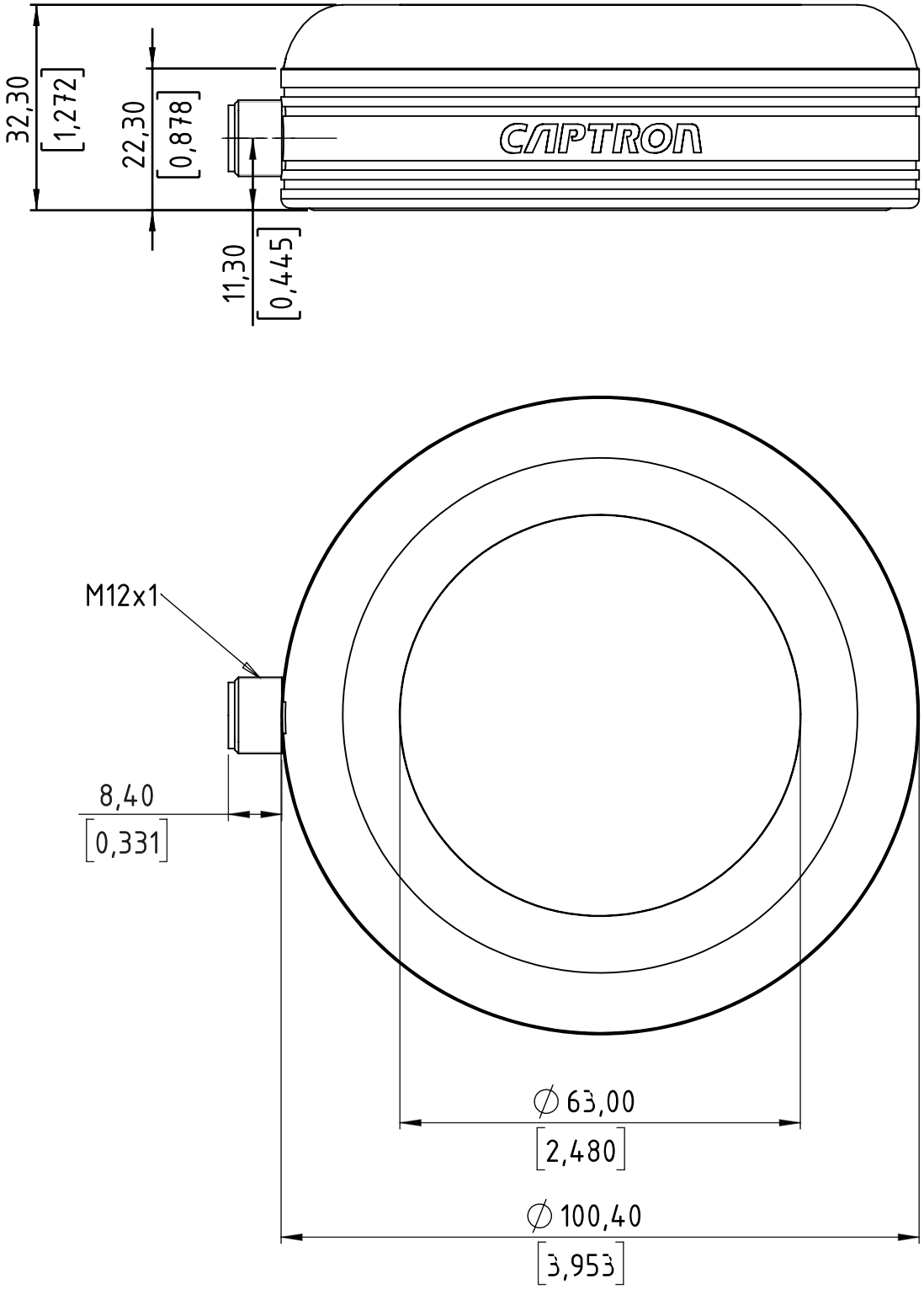
The supplied SENSORswitch can have options that differ from those shown in this manual. This does not affect the function. The SENSORswitch is equipped with multiple RGB LEDs to indicate the operating conditions. The RGB LEDs are controlled variably, depending on the configuration.

A	Colored cover ring
B	Mounting bracket AH10 with O-ring
C	Screws M 4 x 6 mm
D	Plug
E	Connection M12
F	Mounting flange with sensor element

4 Technical specifications

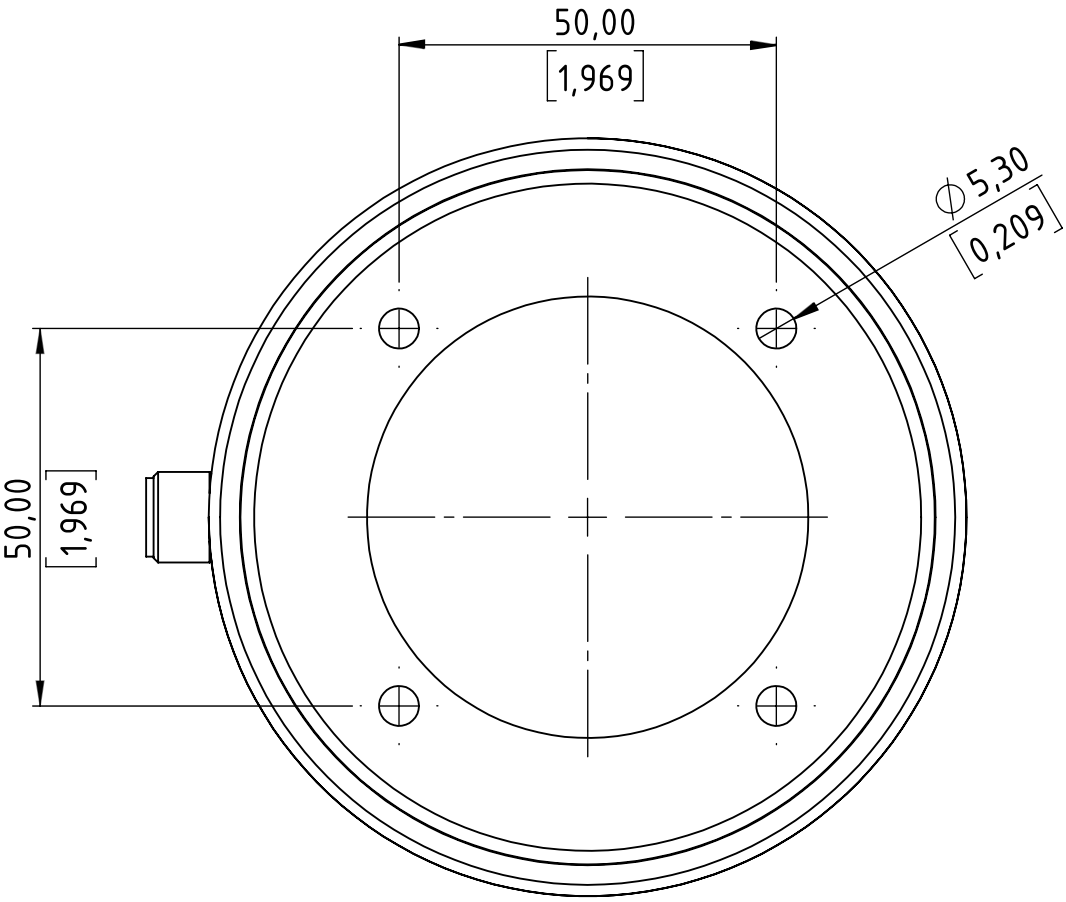
series41	
Operating voltage	DC 24 V (19.2 to 28.8 V)
Load current	max. 200 mA
Output	Adjustable PNP / NPN; NO / NC
Length of output pulse	Adjustable
Reverse polarity protection	Protection of all cables/lines
Short circuit protection	Protected against short circuit and overload
Voltage drop	Max. 2.5 V at 200 mA load current
Power consumption at 24 V	Max. 90 mA
Operating temperature	-25°C (-13°F) to 50°C (122°F)
Degree of protection IP	Front IP69K Maximum unevenness in mounting surface < 0.2 mm
Degree of protection IK	IK08
Communication interface	IO-Link specification V1.1
Measuring principle	Capacitive
Type of actuation	Touch
Actuation force	No actuation force required
Max. altitude	3000 m above sea level
Relative air humidity	Max. 95%, non-condensing

4.1 Dimensional drawing



Metric and imperial measurements are used in drawings. Imperial measurements are marked with [ ].

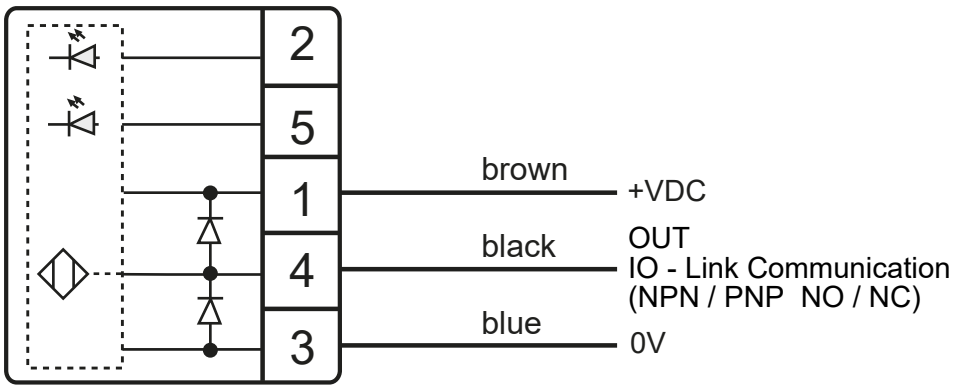
4.2 Drilling pattern



Metric and imperial measurements are used in drawings. Imperial measurements are marked with [ ].

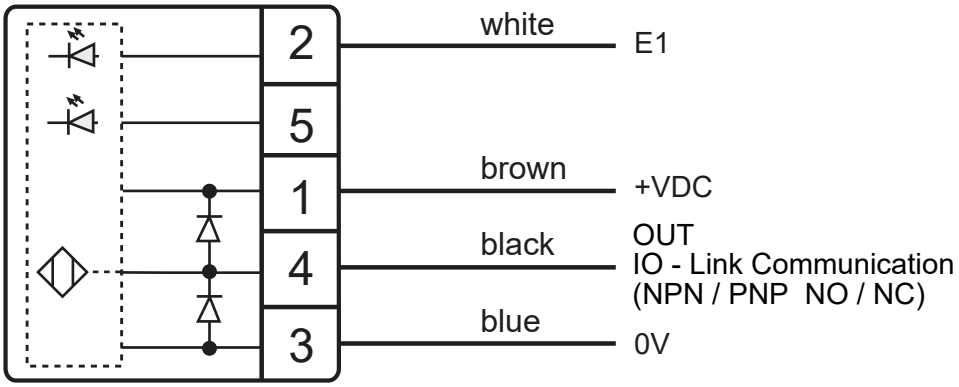
4.3 Connection plan

3-pin



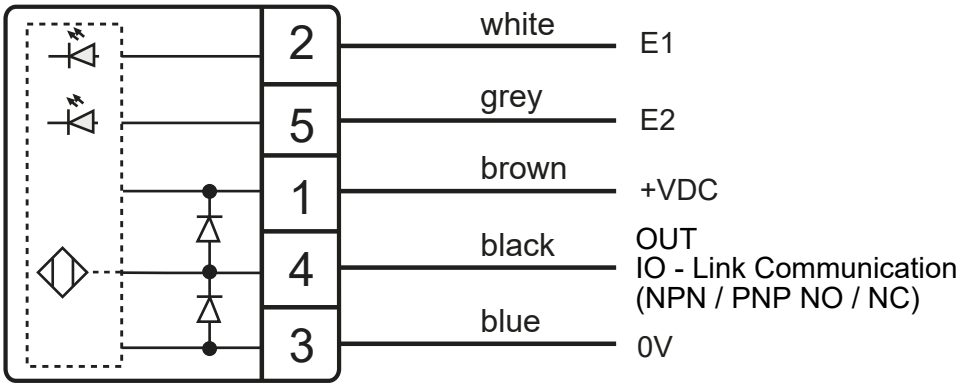
The product description will indicate the configuration.

4-pin



The product description will indicate the configuration.

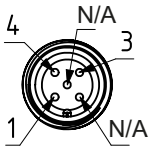
5-pin



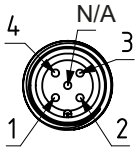
The product description will indicate the configuration.

4.4 Connection options

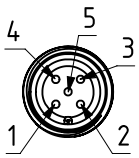
Plug M12, 3-pin



Plug M12, 4-pin



Plug M12, 5-pin



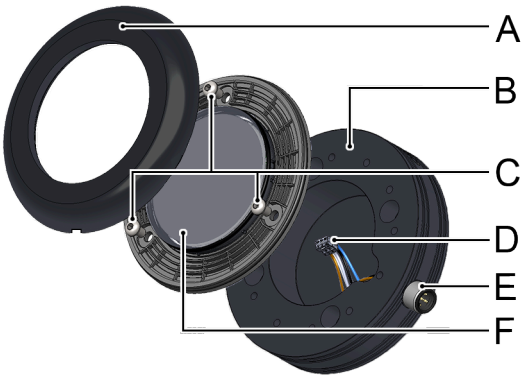
5 Assembly

⚠ WARNING

Improper work on electrical systems!
Electric shock can result in death or life-threatening injuries.

- Before working on electrical systems, disconnect them from their voltage supply and secure them against being switched on again.
- Work on electrical installations should be carried out only by qualified personnel in compliance with local and national electrical regulations and specifications.

Requirements: Mounting surface is level and clean (maximum unevenness of the mounting flange 0.2 mm).



- ► Disconnect the system from its voltage supply and secure it against being switched on again.
- ► Set the desired position of the SENSORswitch and mark the holes for the mounting screws according to the drilling pattern.

  The screw head may have a maximum diameter of 9.5 mm.
- ► Select the diameter to match the mounting surface and screw type.
- ► Secure the mounting bracket (B) with four screws.
- ► Connect the mounting flange with sensor element (F) and the connector (D).
- ► Align the mounting flange with the sensor element (F) and tighten it with the supplied screws to a maximum of 1.5 Nm.
- ► Place colored cover ring (A) with groove downward and press close to the button surface.
- ► Connect SENSORswitch with M12 connection (E).

6 Operation

series41 is operated by touching the button surface.

7 Maintenance operations

Carry out the following maintenance operations at the specified intervals.

Maintenance operation	as needed	annually
Clean the button surface	X	
Check cables for intactness and firm fit		X
Check screw connections for tightness		X

NOTICE

Solvents contained in cleaning agents can attack the plastic of the button!

- Clean the surface of the button with a neutral cleaning agent or a damp microfiber cloth.

8 Disassembly

⚠ WARNING

Improper work on electrical systems!

Electric shock can result in death or life-threatening injuries.

- Before working on electrical systems, disconnect them from their voltage supply and secure them against being switched on again.
- Work on electrical installations should be carried out only by qualified personnel in compliance with local and national electrical regulations and specifications.

► Disconnect the system from its voltage supply and secure it against being switched on again.

► Remove the M12 connector.

► Insert the flat head screwdriver into the groove on the cover ring (A) and remove the cover ring with the screwdriver via lever action.

► Loosen the screw connections (C) and disconnect the electrical connection (D).

► Remove the mounting bracket (B).

9 Disposal

Different types of electrical and electronic components must be recycled according to their type. All applicable statutory, state and local laws and regulations must be complied with.

10 Imprint

The operating instructions have been authored and published by
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CANEO series41 Solid 1.5

Product description