



**Part no.: 50135746**  
**LCS-1Q54P-F10NNC-K020P**  
**Capacitive sensor**



Figure can vary

## Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Circuit diagrams
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## Technical data

<b>Basic data</b>	
Series	LCS-1
Switching distance $S_n$	1 ... 10 mm
<b>Characteristic parameters</b>	
MTTF	1,080 years
<b>Electrical data</b>	
Protective circuit	Short circuit protected Polarity reversal protection
<b>Performance data</b>	
Supply voltage	10 ... 30 V, DC
Residual ripple	0 ... 10 %, From $U_B$
Open-circuit current	15 mA
Temperature drift, max. (in % of $S_r$ )	20 %
Repeatability, max. (in % of $S_r$ )	2 %
Rated operating current	200 mA
<b>Outputs</b>	
Number of digital switching outputs	1 Piece(s)
<b>Switching outputs</b>	
Type	Digital switching output
Voltage type	DC
<b>Switching output 1</b>	
Assignment	Connection 1, conductor 2
Switching element	Transistor, NPN
Switching principle	NC (normally closed)
<b>Timing</b>	
Switching frequency	100 Hz
<b>Connection</b>	
Number of connections	1 Piece(s)
<b>Connection 1</b>	
Type of connection	Cable
Function	Signal OUT Voltage supply
Cable length	2,000 mm
Sheathing material	PUR
Number of conductors	3 -wire
Wire cross section	0.14 mm <sup>2</sup>
<b>Mechanical data</b>	
Design	Cubic
Dimension (W x H x L)	54 mm x 20.3 mm x 5.5 mm
Type of installation	Embedded
Housing material	Plastic, Polypropylene (PP)
Sensing face material	Plastic, Polypropylene (PP)
Cover material	Plastic,

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Net weight	40 g
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**Operation and display**

Type of display	LED
Number of LEDs	2 Piece(s)
Switching distance, adjustable	Yes

**Environmental data**

Ambient temperature, operation	-25 ... 70 °C
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**Certifications**

Degree of protection	IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

**Correction factors**

Acetone	0.75
Acrylic resin	0.1 ... 0.25
Alcohol	0.85
Ammonia	0.7 ... 0.85
Aniline	0.4
Gasoline	0.1
Celluloid	0.15
Liquid chlorine	0.1
Ebonite	0.15
Epoxy resin	0.15 ... 0.35
Crude oil	0.05
Ethanol	0.85
Ethylene glycol	0.93
Freon R22 and 502 (liquid)	0.35
Grain	0.15 ... 0.3
Glass	0.2 ... 0.55
Glycerin	0.98
Rubber	0.15 ... 0.9
Wood, wet	0.6 ... 0.85
Wood, dry	0.1 ... 0.4
Marble	0.5
Flour	0.05
Melamine resin	0.25 ... 0.55
Milk powder	0.2
Nylon	0.2 ... 0.3
Oil-containing paper	0.25
Paper	0.1
Polyamide	0.3
Polyester resin	0.15 ... 0.5
Pressboard	0.1 ... 0.3
PTFE	0.1
Quartz glass	0.2

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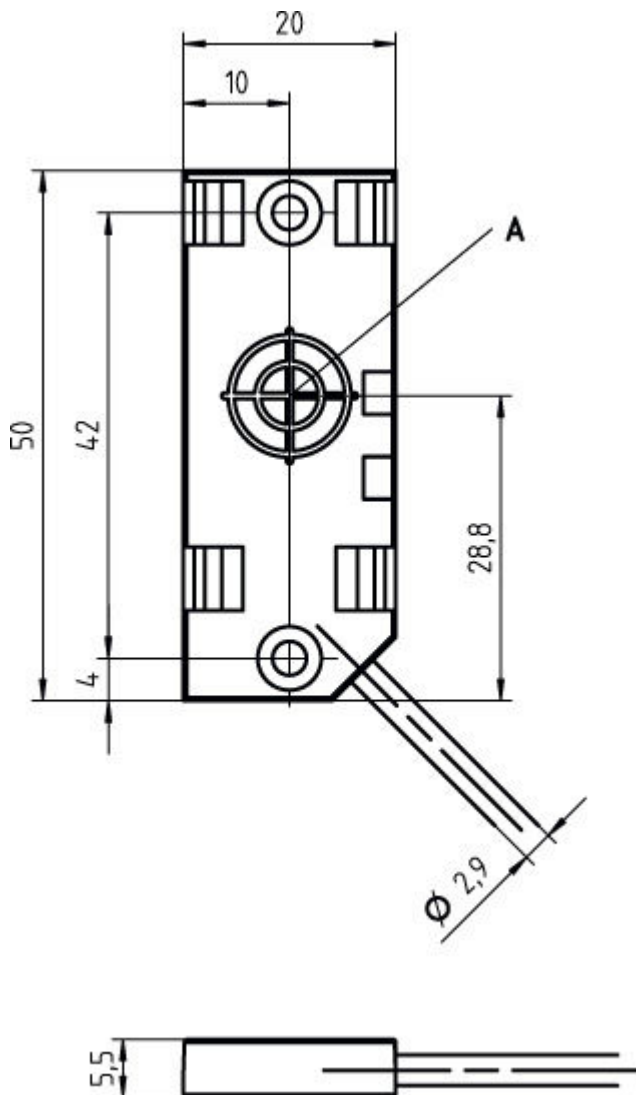
Salt	0.35
Sand	0.15 ... 0.3
Water	1
Cement dust	0.25
Sugar	0.15

**Classification**

eCl@ss 8.0	27270102
eCl@ss 9.0	27270102
ETIM 5.0	EC002715

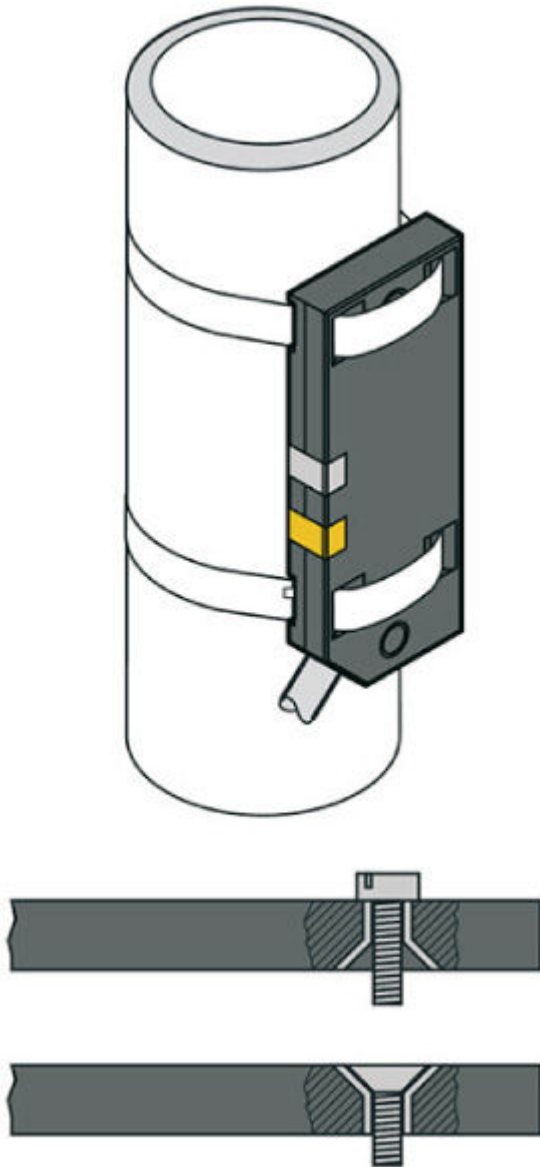
**Dimensioned drawings**

All dimensions in millimeters

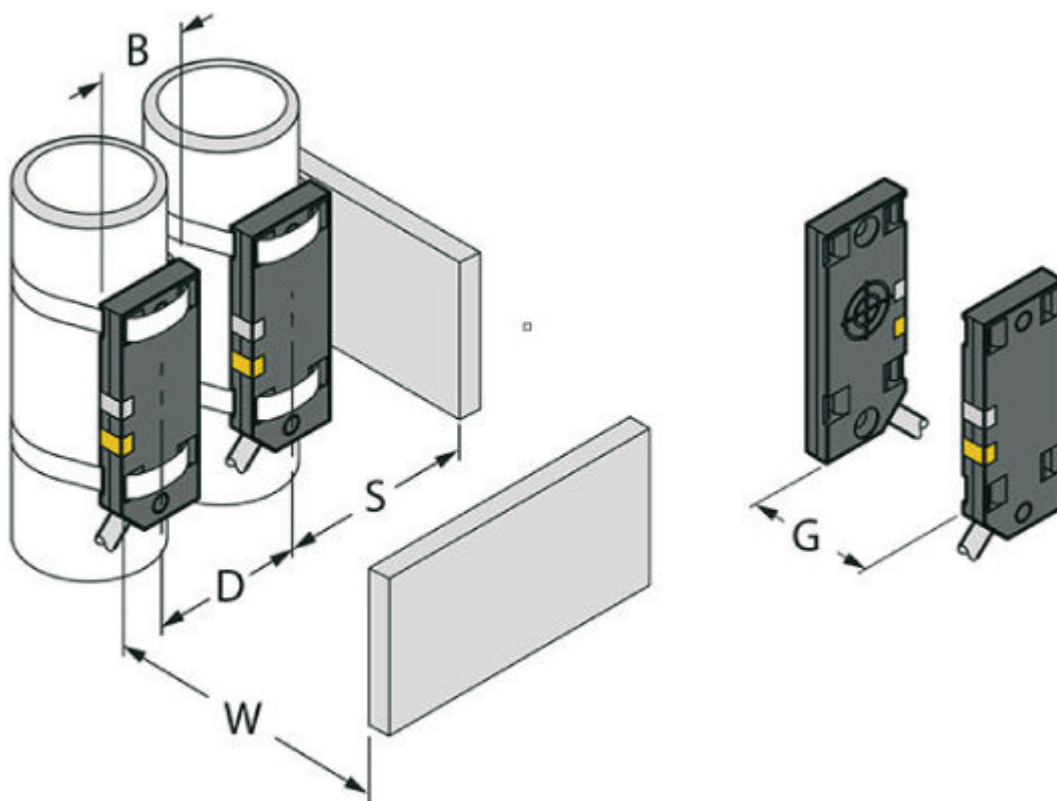


A Active surface

Mounting variants



Mounting distances



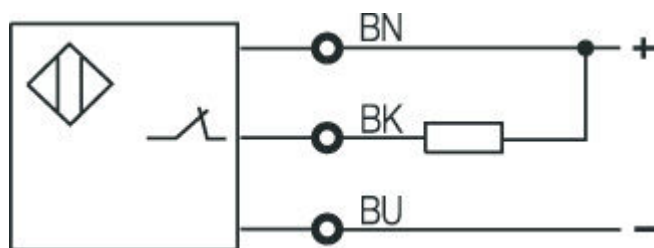
- B Ø 20 mm, diameter of the active surface
- D 40 mm
- G 60 mm
- S 30 mm
- W 30 mm

**Electrical connection**

Connection 1	
Type of connection	Cable
Function	Signal OUT Voltage supply
Cable length	2,000 mm
Sheathing material	PUR
Cable color	
Number of conductors	3 -wire
Wire cross section	0.14 mm <sup>2</sup>

Conductor color	Conductor assignment
Brown	10 - 30 V DC
Black	OUT
Blue	GND

## Circuit diagrams



## Operation and display

### LEDs

LED	Display	Meaning
1	Green, continuous light	Ready
2	Yellow, continuous light	Switching output/switching state

## Notes

### Observe intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

### NOTE

- The specified minimum distances have been checked with a standard switching distance. If the sensitivity of the sensor is changed using a potentiometer, this data sheet information is no longer valid.