



Part no.: 50135744
LCS-1Q54P-F10PNC-K020P
Capacitive sensor



Figure can vary

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Circuit diagrams
- Operation and display
- Notes



Part no.: 50135744 – LCS-1Q54P-F10PNC-K020P – Capacitive sensor

Technical data

Basic data	
Series	LCS-1
Switching distance S_n	1 ... 10 mm
Characteristic parameters	
MTTF	1,080 years
Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected
Performance data	
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
Outputs	
Number of digital switching outputs	1 Piece(s)
Switching outputs	
Type	Digital switching output
Voltage type	DC
Switching output 1	
Assignment	Connection 1, conductor 2
Switching element	Transistor, PNP
Switching principle	NC (normally closed)
Timing	
Switching frequency	100 Hz
Connection	
Number of connections	1 Piece(s)
Connection 1	
Type of connection	Cable
Function	Voltage supply Signal OUT
Cable length	2,000 mm
Sheathing material	PUR
Number of conductors	3 -wire
Wire cross section	0.14 mm ²
Mechanical data	
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,

Part no.: 50135744 – LCS-1Q54P-F10PNC-K020P – Capacitive sensor

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

Part no.: 50135744 – LCS-1Q54P-F10PNC-K020P – Capacitive sensor

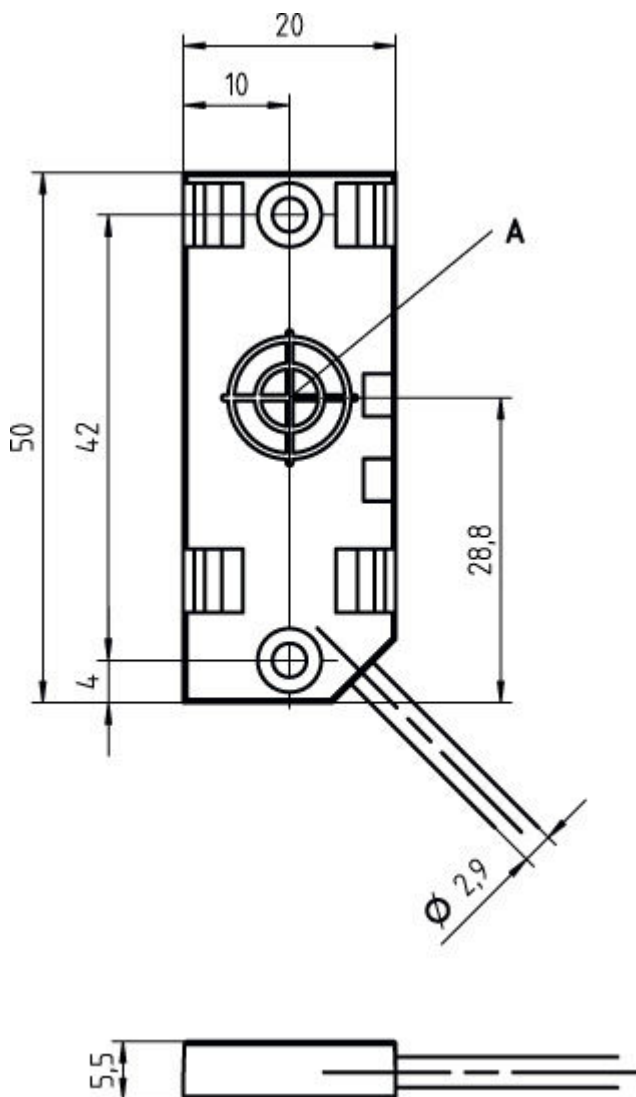
Salt	0.35
Sand	0.15 ... 0.3
Water	1
Cement dust	0.25
Sugar	0.15

Classification

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

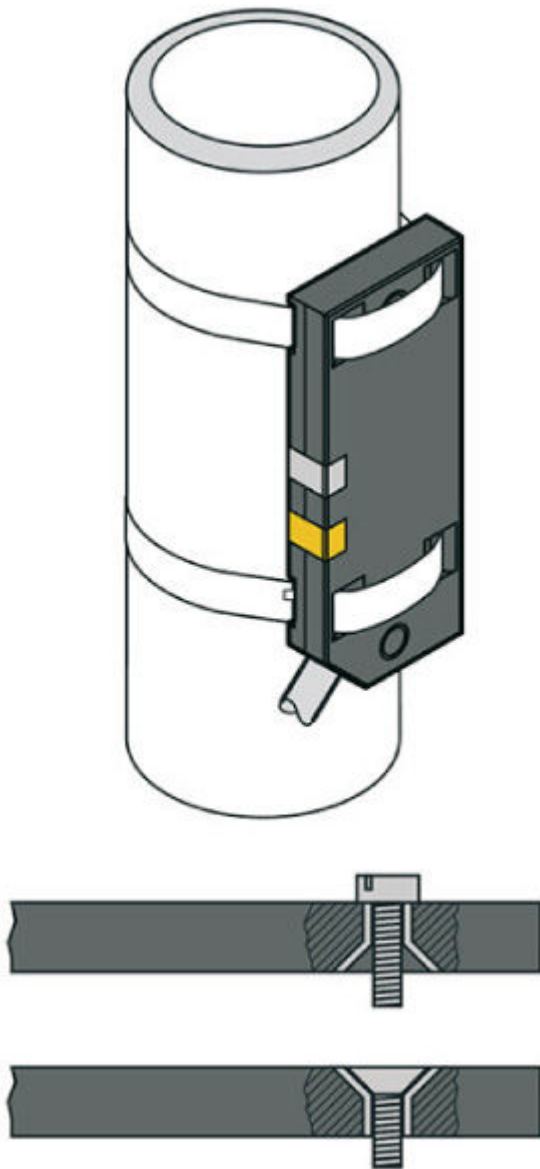
Dimensioned drawings

All dimensions in millimeters

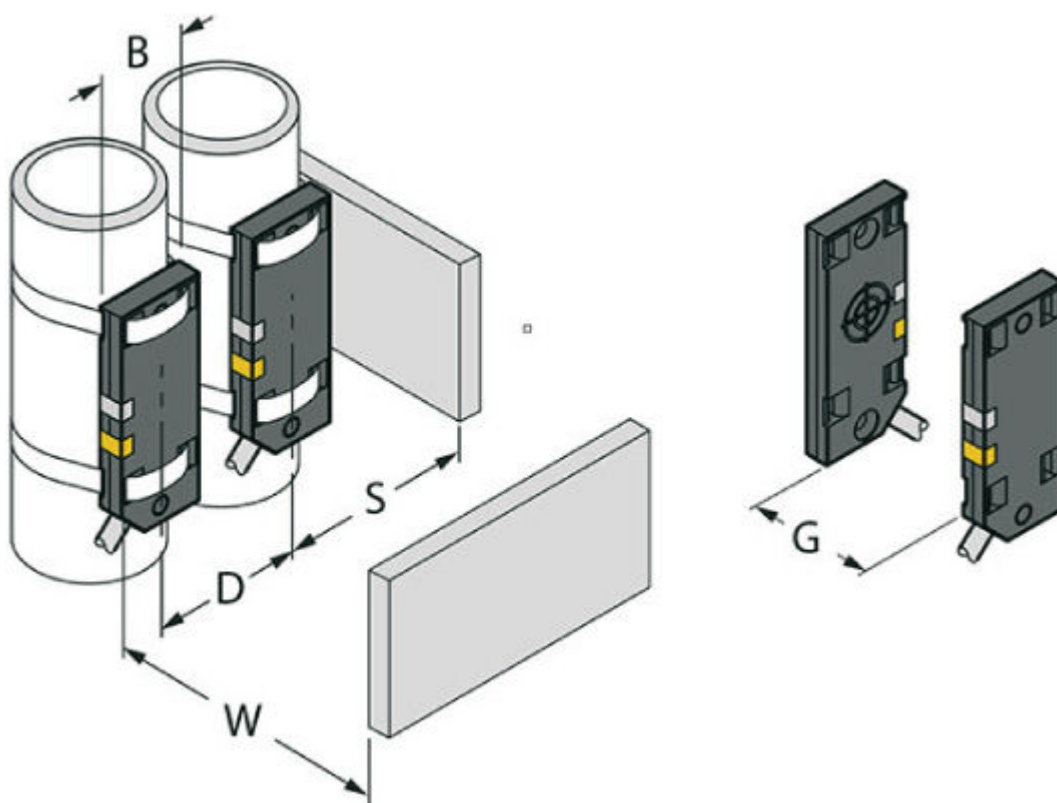


A Active surface

Mounting variants



Mounting distances



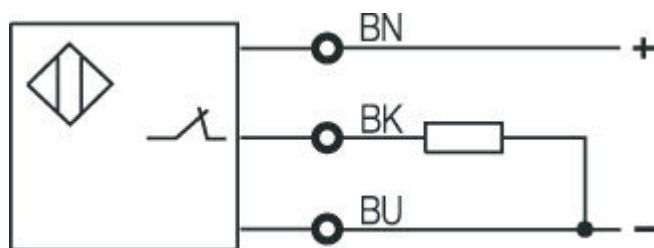
- B Ø 20 mm, diameter of the active surface
- D 40 mm
- G 60 mm
- S 30 mm
- W 30 mm

Electrical connection

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

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.