



**Part no.: 50136562**  
**LCS-2M30P-F20PNC-K020V**  
**Capacitive sensor**



Figure can vary

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## Technical data

| <b>Basic data</b>          |             |
|----------------------------|-------------|
| Series                     | LCS-2       |
| Switching distance $S_n$   | 2 ... 20 mm |
| Assured switching distance | 16.2 mm     |

| <b>Electrical data</b> |   |
|------------------------|---|
| Protective circuit     | Polarity reversal protection<br>Short circuit protected |

| <b>Performance data</b> |                 |
|-------------------------|-----------------|
| Supply voltage          | 10 ... 30 V, DC |
| Residual ripple         | 0 ... 10 %      |
| Open-circuit current    | 10 mA           |
| Rated operating current | 300 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, PNP           |
| 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                |
| Cable length         | 2,000 mm             |
| Sheathing material   | PVC                  |
| Number of conductors | 3 -wire              |
| Wire cross section   | 0.35 mm <sup>2</sup> |

| <b>Mechanical data</b> |                             |
|------------------------|-----------------------------|
| Design                 | Cylindrical                 |
| Thread size            | M30 x 1.5 mm                |
| Dimension (Ø x L)      | 30 mm x 85 mm               |
| Type of installation   | Embedded                    |
| Housing material       | Plastic, Polybutylene (PBT) |
| Sensing face material  | Plastic, Polybutylene (PBT) |
| Cover material         | Plastic, Polybutylene (PBT) |

| <b>Operation and display</b>   |            |
|--------------------------------|------------|
| Type of display                | LED        |
| Number of LEDs                 | 1 Piece(s) |
| Switching distance, adjustable | Yes        |

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**Environmental data**

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | -25 ... 70 °C |
|--------------------------------|---------------|

**Certifications**

|                      |               |
|----------------------|---------------|
| Degree of protection | IP 67         |
| Protection class     | III           |
| Standards applied    | IEC 60947-5-2 |

**Correction factors**

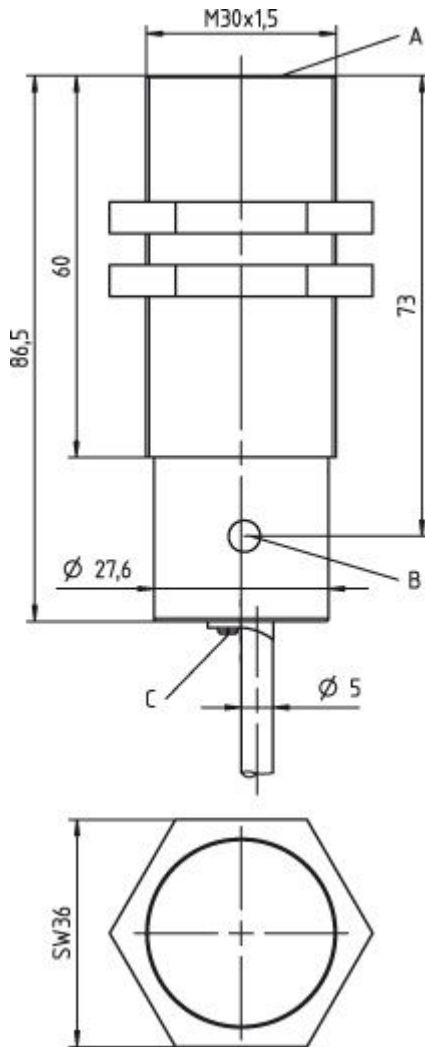
|                            |               |
|----------------------------|---------------|
| Acetone                    | 0.75          |
| Acrylic resin              | 0.1 ... 0.25  |
| Alcohol                    | 0.85          |
| Ammonia                    | 0.7 ... 0.85  |
| Aniline                    | 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           |
| 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 |

## Dimensioned drawings

All dimensions in millimeters



- A Active surface
- B Yellow LED
- C Potentiometer

## Electrical connection

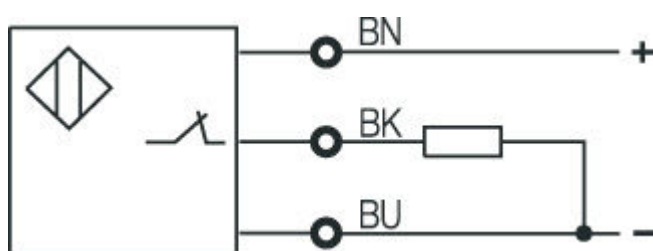
| Connection 1       |          |
|--------------------|----------|
| Type of connection | Cable    |
| Function           |          |
| Cable length       | 2,000 mm |
| Sheathing material | PVC      |
| Cable color        |          |

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| Connection 1         |                      |
|----------------------|----------------------|
| Number of conductors | 3 -wire              |
| Wire cross section   | 0.35 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   | Yellow, continuous light | Switching output/switching state |

## Accessories

### Mounting technology - Other

|   | Part no. | Designation | Article | Description  |
|---|----------|-------------|---------|--|
|  | 50132730 | AC D30M-CS  | Clamp   | Contains: 2x M36 mounting nut<br>Diameter, inner: 30 mm<br>Design of mounting device: Mounting clamp<br>Mounting bracket, at system: Screw type, Through-hole mounting<br>Mounting bracket, at device: Insertable, Clampable with limit stop<br>Type of mounting device: Clampable, With limit stop<br>Material: Metal |
|  | 50111503 | MC 030K     | Clamp   | Diameter, inner: 30 mm<br>Design of mounting device: Mounting clamp<br>Mounting bracket, at system: Through-hole mounting<br>Mounting bracket, at device: Clampable<br>Type of mounting device: Rigid<br>Material: Plastic   |

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|   | Part no. | Designation | Article | Description  |
|---|----------|-------------|---------|--|
|  | 50111504 | MC 030K-LS  | Clamp   | Diameter, inner: 30 mm<br>Design of mounting device: Mounting clamp<br>Mounting bracket, at system: Through-hole mounting<br>Mounting bracket, at device: Clampable with limit stop<br>Type of mounting device: Rigid<br>Material: Plastic |

## 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.