

## KN180107

### CAPACITIVE SENSORS • NORM SWITCHING DISTANCE

Capacitive proximity switches are contact-free sensors. They detect metallic and non-metallic objects, regardless of whether they move or not. The achievable sensing range of the devices depends on the object material, its dimensions and the response sensitivity, which is set via a potentiometer. The vibration-resistant sensors can be approached laterally or frontally. Capacitive proximity switches are used for presence detection (e.g. sealing detection), positioning (e.g. PET bottles), counting (e.g. plastic caps), level detection (e.g. lubricant) or distance measurements (e.g. thickness measurement) of solid and liquid materials.



#### MECHANICAL DATA

|  |                        |
|--|------------------------|
| Active area material of sensor           | PA 6.6 (synthetic)     |
| Ambient temperature (MAX)                | 70 °C                  |
| Ambient temperature (MIN)                | -25 °C                 |
| Cable length                             | 2 m                    |
| Degree of protection (IP)                | IP67                   |
| Housing design                           | Cylinder, screw-thread |
| Housing material                         | PBT                    |
| Material of cable sheath                 | PVC                    |
| Mechanical mounting condition for sensor | Non-flush              |
| Number of wires                          | 3                      |
| Pressure-proof                           | No                     |
| Sensor length                            | 81 mm                  |
| Thread length                            | 40 mm                  |
| Thread pitch                             | 1 mm                   |
| Thread size, metric                      | 18                     |

#### ELECTRICAL DATA

|  |                   |
|--|-------------------|
| Cascadable                                     | No                |
| Correction factor (glass)                      | 0.6               |
| Correction factor (oil)                        | 0.5               |
| Correction factor (PVC)                        | 0.5               |
| Correction factor (wood)                       | 0.6               |
| Hysteresis                                     | 15 %              |
| Max. output current                            | 200 mA            |
| No-load current                                | 20 mA             |
| Rated control supply voltage $U_s$ at DC (MAX) | 60 V              |
| Rated control supply voltage $U_s$ at DC (MIN) | 10 V              |
| Reverse polarity protection                    | Yes               |
| Setting procedure                              | Manual adjustment |
| Short-circuit-proof                            | Yes               |
| Suitable for safety functions                  | No                |

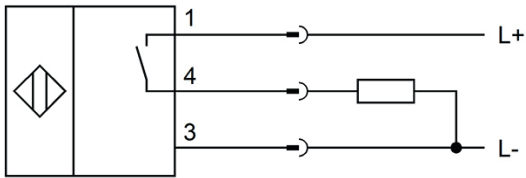
## ELECTRICAL DATA

|  |                       |
|--|-----------------------|
| Supply voltage (MAX)                           | 60 V                  |
| Supply voltage (MIN)                           | 10 V                  |
| Switching distance                             | 8 mm                  |
| Switching distance (MAX)                       | 8 mm                  |
| Switching distance (MIN)                       | 1 mm                  |
| Switching frequency                            | 25 Hz                 |
| Type of electrical connection                  | Cable                 |
| Type of switching function                     | Normally open contact |
| Type of switching output                       | PNP                   |
| Voltage drop                                   | 3 V                   |
| Voltage type                                   | DC                    |
| With LED display                               | Yes                   |
| With monitoring function of downstream devices | No                    |

## OTHER DATA

|                 |     |
|-----------------|-----|
| Level detection | Yes |
|-----------------|-----|

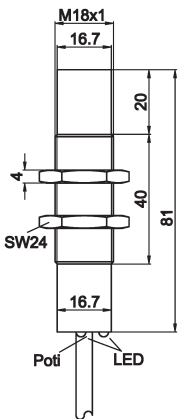
## CONNECTION



**Colors:** 1 = BN (brown), 3 = BU (blue), 4 = BK (black)

**Functions:** 1 = L+, 3 = L-, 4 = PNP NO

## DIMENSIONAL DRAWING



## INSTALLATION



Mounting / Installation may only be carried out by a qualified electrician!

## DISPOSAL



## SAFETY WARNINGS

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

Never use these devices in applications where the safety of a person depends on their functionality.