

KN180120

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 | PTFE |
| Ambient temperature | -25 °C ... 70 °C |
| Degree of protection (IP) | IP67 |
| Housing coating | Nickel-plated |
| Housing design | Cylinder, screw-thread |
| Housing material | Brass |
| Mechanical mounting condition for sensor | Non-flush |
| Pressure-proof | No |
| Sensor length | 60 mm |
| Thread length | 45 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 | 400 mA |
| No-load current | 15 mA |
| Number of pins | 3 |
| Rated control supply voltage U_s at DC | 10 V ... 35 V |
| Reverse polarity protection | Yes |
| Setting procedure | Manual adjustment |
| Short-circuit-proof | Yes |
| Suitable for safety functions | No |
| Supply voltage | 10 V ... 35 V |
| Switching distance | 8 mm |
| Switching distance | 0.5 mm ... 15 mm |

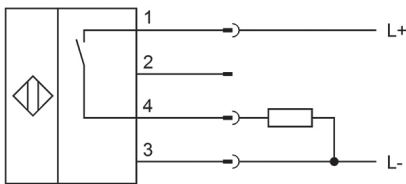
ELECTRICAL DATA

| | |
|--|-----------------------|
| Switching frequency | 50 Hz |
| Type of electrical connection | Connector M12 |
| Type of switching function | Normally open contact |
| Type of switching output | PNP |
| Voltage drop | 2 V |
| Voltage type | DC |
| With LED display | Yes |
| With monitoring function of downstream devices | No |

OTHER DATA

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

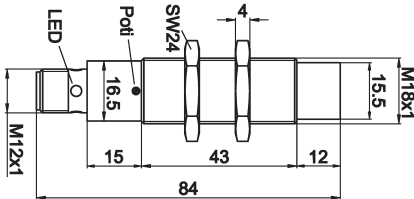
CONNECTION



Colors: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)

Functions: 1 = L+, 2 = n. c., 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!

