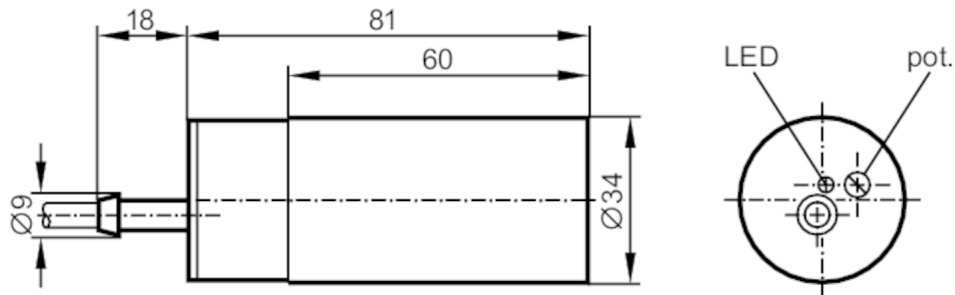




Capacitive sensor

KB-2020-BBOA/NI



Product characteristics

| | |
|--------------------|-----------------|
| Output function | normally closed |
| Sensing range [mm] | 3...20 |
| Housing | tubular |
| Dimensions [mm] | Ø 34 / L = 81 |

Electrical data

| | |
|-----------------------------|----------------|
| Operating voltage [V] | 20...250 AC/DC |
| Protection class | II |
| Reverse polarity protection | no |

Outputs

| | |
|--|---|
| Output function | normally closed |
| Max. voltage drop switching output DC [V] | 8 |
| Max. voltage drop switching output AC [V] | 10 |
| Minimum load current [mA] | 5 |
| Max. leakage current [mA] | 2.5 (250 V AC) / 1.7 (110 V AC) / 1.5 (24 V DC) |
| Permanent current rating of switching output AC [mA] | 200; (for UL application: 250 / 100 DC) |
| Permanent current rating of switching output DC [mA] | 200; (for UL application: 250 AC / 100 DC) |
| Short-time current rating of switching output [mA] | 1500; (20 ms / 0,5 Hz) |
| Switching frequency AC [Hz] | 25 |
| Switching frequency DC [Hz] | 40 |
| Short-circuit proof | no |
| Overload protection | no |

Monitoring range

| | |
|------------------------------------|----------------|
| Sensing range [mm] | 3...20 |
| Sensing range adjustable | yes |
| Factory setting sensing range [mm] | 20 |
| Real sensing range S_r [mm] | $20 \pm 10 \%$ |
| Operating distance [mm] | 0...16.2 |



Capacitive sensor

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| Accuracy / deviations | | |
|-------------------------------|---|-----------------|
| Correction factor | glass: 0.4 / water: 1 / ceramics: 0.2 / PVC: 0.2 | |
| Hysteresis | [% of Sr] | 1...15 |
| Switch-point drift | [% of Sr] | -15...15 |
| Operating conditions | | |
| Ambient temperature | [°C] | -25...70 |
| Protection | IP 65 | |
| Increased immunity | yes; (Increased immunity to conducted radio frequency interference) | |
| Tests / approvals | | |
| EMC | EN 60947-5-2 | |
| MTTF | [years] | 488 |
| Mechanical data | | |
| Weight | [g] | 258.5 |
| Housing | tubular | |
| Mounting | non-flush mountable | |
| Dimensions | [mm] | Ø 34 / L = 81 |
| Material | PBT | |
| Displays / operating elements | | |
| Display | Switching status | 1 x LED, yellow |
| Electrical connection | | |
| Required protection | miniature fuse to IEC60127-2 sheet 1; ≤ 2 A; fast acting | |
| Accessories | | |
| Items supplied | Mounting clamp: 2 | |
| | cylinder screws: 2 | |
| | spring discs: 2 | |
| Remarks | | |
| Remarks | Recommendation: check the unit for reliable function after a short circuit. | |
| Pack quantity | 1 pcs. | |

KB0029



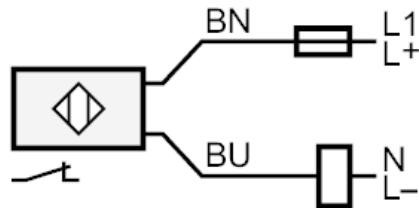
Capacitive sensor

KB-2020-BBOA/NI

Electrical connection

Cable: 2 m, PVC; 2 x 0.5 mm²

Connection



Note miniature fuse to IEC60127-2 sheet 1 \leq 2 A fast acting

Core colors :

BN =

brown

BU =

blue