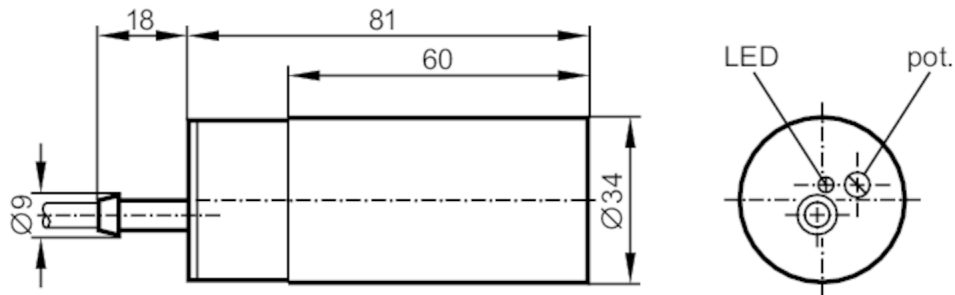


Capacitive sensor

KB-2020-BBOA/NI



Product characteristics

| | | |
|-----------------|------|-----------------|
| Output function | | normally closed |
| Sensing range | [mm] | 3...20 |
| Housing | | cylindrical |
| 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 |

Detection zone

| | | |
|-------------------------------|------|----------------|
| 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 |



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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 | | cylindrical | |
| Mounting | | non-flush mountable | |
| Dimensions | | [mm] | Ø 34 / L = 81 |
| Materials | | 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 clamps: 2 | |
| | | cylinder screws: 2 | |
| | | spring discs: 2 | |
| Remarks | | | |
| Remarks | | Recommendation: Check the safe functioning of the unit after a short circuit. | |
| Pack quantity | | 1 pcs. | |



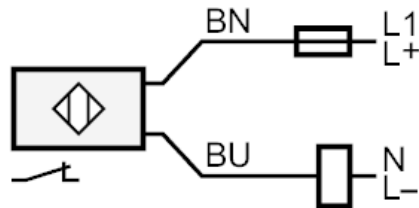
Capacitive sensor

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 colours :

BN =

brown

BU =

blue