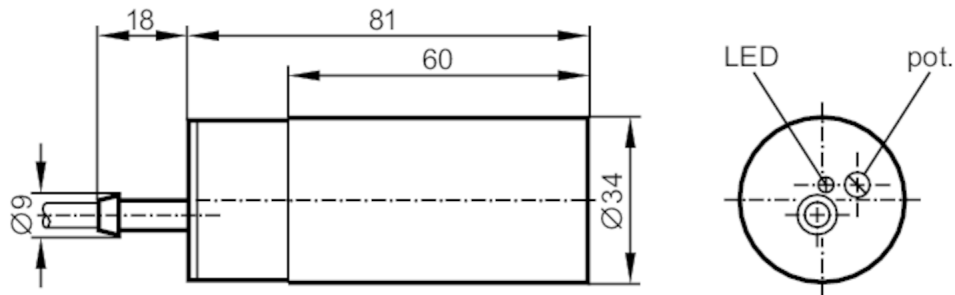


## Capacitive sensor

KB-3020-BPKG/NI



## Product characteristics

|                    |               |
|--------------------|---------------|
| Electrical design  | PNP           |
| Output function    | normally open |
| Sensing range [mm] | 3...20        |
| Housing            | cylindrical   |
| Dimensions [mm]    | Ø 34 / L = 81 |

## Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...36 DC |
| Current consumption [mA]    | 13; (24 V) |
| Protection class            | II         |
| Reverse polarity protection | yes        |

## Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | PNP           |
| Output function                                      | normally open |
| Max. voltage drop switching output DC [V]            | 2.5           |
| Permanent current rating of switching output DC [mA] | 250           |
| Switching frequency DC [Hz]                          | 40            |
| Short-circuit proof                                  | yes           |
| Overload protection                                  | yes           |

## 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       |

## Accuracy / deviations

|                                  |                                                  |
|----------------------------------|--------------------------------------------------|
| Correction factor                | glass: 0.4 / water: 1 / ceramics: 0.2 / PVC: 0.2 |
| Hysteresis [% of $S_r$ ]         | 1...15                                           |
| Switch point drift [% of $S_r$ ] | -15...15                                         |

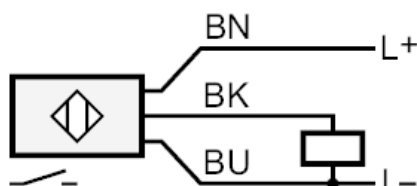
# KB5004



## Capacitive sensor

KB-3020-BPKG/NI

| 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]          | 778                                                                 |
| Mechanical data               |                  |                                                                     |
| Weight                        | [g]              | 255.5                                                               |
| Housing                       |                  | cylindrical                                                         |
| Mounting                      |                  | non-flush mountable                                                 |
| Dimensions                    | [mm]             | Ø 34 / L = 81                                                       |
| Materials                     |                  | PBT                                                                 |
| Displays / operating elements |                  |                                                                     |
| Display                       | switching status | 1 x LED, yellow                                                     |
| Accessories                   |                  |                                                                     |
| Items supplied                |                  | Mounting clamps: 1<br>screwdriver: 1                                |
| Remarks                       |                  |                                                                     |
| Pack quantity                 |                  | 1 pcs.                                                              |
| Electrical connection         |                  |                                                                     |
| Cable: 2 m, PVC; 3 x 0.5 mm²  |                  |                                                                     |
| Connection                    |                  |                                                                     |



BN = Core colours :  
brown  
BU = blue  
BK = black