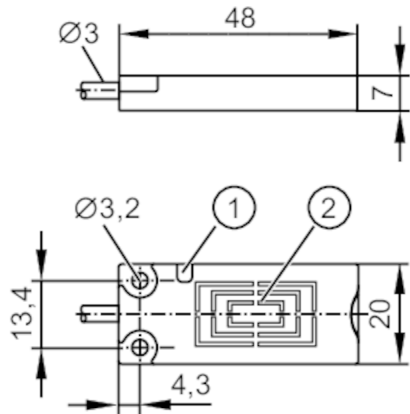


# KQ5100



## Capacitive sensor

KQ-3120NFPKG



- 1 LED
- 2 Sensing face



| Product characteristics                         |           |                                               |
|-------------------------------------------------|-----------|-----------------------------------------------|
| Electrical design                               |           | PNP                                           |
| Output function                                 |           | normally open / normally closed; (selectable) |
| Sensing range                                   | [mm]      | 12                                            |
| Communication interface                         |           | IO-Link                                       |
| Housing                                         |           | rectangular                                   |
| Dimensions                                      | [mm]      | 20 x 7 x 48                                   |
| Electrical data                                 |           |                                               |
| Operating voltage                               | [V]       | 10...30 DC                                    |
| Current consumption                             | [mA]      | < 17                                          |
| Protection class                                |           | III                                           |
| Reverse polarity protection                     |           | yes                                           |
| Measuring principle                             |           | capacitive                                    |
| Outputs                                         |           |                                               |
| Electrical design                               |           | PNP                                           |
| Output function                                 |           | normally open / normally closed; (selectable) |
| Max. voltage drop switching output DC           | [V]       | 2.5                                           |
| Permanent current rating of switching output DC | [mA]      | 100                                           |
| Switching frequency DC                          | [Hz]      | 10                                            |
| Short-circuit protection                        |           | yes                                           |
| Overload protection                             |           | yes                                           |
| Detection zone                                  |           |                                               |
| Sensing range                                   | [mm]      | 12                                            |
| Real sensing range Sr                           | [mm]      | 12 ± 10 %                                     |
| Accuracy / deviations                           |           |                                               |
| Hysteresis                                      | [% of Sr] | 1...15                                        |
| Switch point drift                              | [% of Sr] | -20...20                                      |

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## Capacitive sensor

KQ-3120NFPKG

| Software / programming        |                             |                                                                                                  |
|-------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------|
| Parameter setting options     | only via IO-Link            |                                                                                                  |
| Interfaces                    |                             |                                                                                                  |
| Communication interface       | IO-Link                     |                                                                                                  |
| Transmission type             | COM1 (4,8 kBaud)            |                                                                                                  |
| IO-Link revision              | 1.1                         |                                                                                                  |
| SDCI standard                 | IEC 61131-9 CDV             |                                                                                                  |
| Profiles                      | Smart Sensor                |                                                                                                  |
| SIO mode                      | yes                         |                                                                                                  |
| Supported DeviceIDs           | Type of operation           | DeviceID                                                                                         |
|                               | default                     | 371                                                                                              |
| Operating conditions          |                             |                                                                                                  |
| Ambient temperature           | [°C]                        | -40...80                                                                                         |
| Protection                    | IP 65; IP 67; IP 69K        |                                                                                                  |
| Tests / approvals             |                             |                                                                                                  |
| EMC                           | EN 61000-4-2                | 8 kV AD                                                                                          |
|                               | EN 61000-4-3                | 10 V/m                                                                                           |
|                               | EN 61000-4-4                | 2 kV                                                                                             |
|                               | EN 61000-4-6                | 3 V                                                                                              |
|                               | EN 55011                    | class B                                                                                          |
| Vibration resistance          | EN 60068-2-6 Fc             | (10...55 Hz) / 1 mm amplitude, oscillation period 5 min., 30 min. per axis at resonance or 55 Hz |
| Shock resistance              | EN 60068-2-27 Ea            | 30 g 6 shocks / 11 ms half-sine (x, y, z)                                                        |
| MTTF                          | [years]                     | 771                                                                                              |
| UL approval                   | Ta                          | -25...80 °C                                                                                      |
|                               | Enclosure type              | Type 1                                                                                           |
|                               | power supply                | Class 2                                                                                          |
| Mechanical data               |                             |                                                                                                  |
| Weight                        | [g]                         | 36.7                                                                                             |
| Housing                       | rectangular                 |                                                                                                  |
| Mounting                      | non-flush mountable         |                                                                                                  |
| Dimensions                    | [mm]                        | 20 x 7 x 48                                                                                      |
| Materials                     | PBT; TPE-U; stainless steel |                                                                                                  |
| Displays / operating elements |                             |                                                                                                  |
| Display                       | switching status            | 1 x LED, yellow                                                                                  |
| Remarks                       |                             |                                                                                                  |
| Pack quantity                 | 1 pcs.                      |                                                                                                  |

# KQ5100



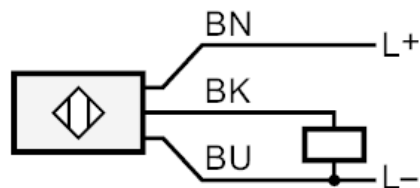
## Capacitive sensor

KQ-3120NFPKG

### Electrical connection

Cable: 2 m, PUR; 3 x 0.14 mm<sup>2</sup>

### Connection



BK: OUT / IO-Link  
Core colours :  
BK = black  
BN = brown  
BU = blue