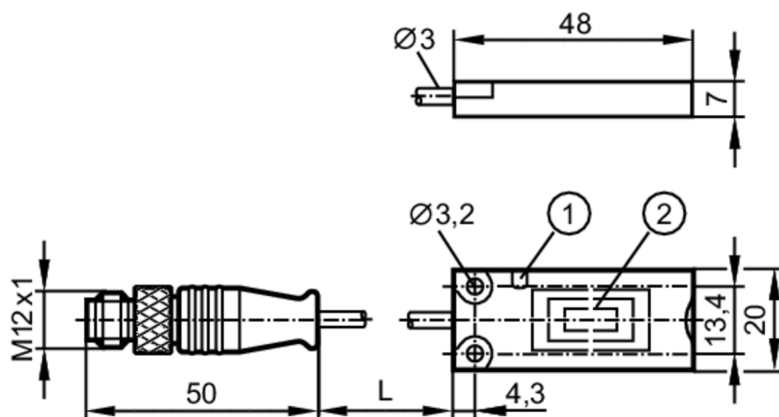


# KQ5101



## Capacitive sensor

KQ-3120NFPKG/0,1M/US



- 1 LED
- 2 sensing face



### Product characteristics

|                         |                                      |
|-------------------------|--------------------------------------|
| Electrical design       | PNP                                  |
| Output function         | normally open / 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; (UL - Class 2 source required) |
| Current consumption [mA]    | < 17                                       |
| Protection class            | III                                        |
| Reverse polarity protection | yes                                        |
| Measuring principle         | capacitive                                 |

### Outputs

|                                                      |                                      |
|------------------------------------------------------|--------------------------------------|
| Electrical design                                    | PNP                                  |
| Output function                                      | normally open / 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                                  |

### Monitoring range

|                            |           |
|----------------------------|-----------|
| 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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| 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]                         | -25...80                                                                                           |
| Note on ambient temperature   | for UL application: ...50 °C |                                                                                                    |
| Protection                    | IP 65; IP 67                 |                                                                                                    |
| 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, vibration duration 5 min., 30 min. per axis with 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                                                                                                |
| Mechanical data               |                              |                                                                                                    |
| Weight                        | [g]                          | 27.4                                                                                               |
| Housing                       | rectangular                  |                                                                                                    |
| Mounting                      | non-flush mountable          |                                                                                                    |
| Dimensions                    | [mm]                         | 20 x 7 x 48                                                                                        |
| Material                      | PBT; TPE-U; stainless steel  |                                                                                                    |
| Displays / operating elements |                              |                                                                                                    |
| Display                       | Switching status             | 1 x LED, yellow                                                                                    |
| Remarks                       |                              |                                                                                                    |
| Pack quantity                 | 1 pcs.                       |                                                                                                    |

# KQ5101



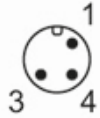
## Capacitive sensor

KQ-3120NFPKG/0,1M/US

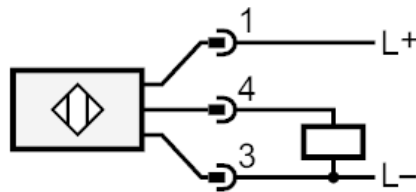
### Electrical connection - plug

Cable: 0.1 m, PUR, Ø 2.9 mm

Connector: 1 x M12; coding: A



### Connection



4: OUT / IO-Link