

# KG5305



## Capacitive sensor

KG-3080QBPKG/SL/1P/IO



1 LED yellow switching status



### Product characteristics

|                         |                    |
|-------------------------|--------------------|
| Electrical design       | PNP                |
| Output function         | normally open      |
| Sensing range [mm]      | 0.5...9            |
| Communication interface | IO-Link            |
| Housing                 | threaded type      |
| Dimensions [mm]         | M18 x 1 / L = 92.5 |

### Application

|                         |           |
|-------------------------|-----------|
| Medium temperature [°C] | -25...110 |
|-------------------------|-----------|

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 22       |
| Protection class            | III        |
| 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] | 200           |
| Switching frequency DC [Hz]                          | 30            |
| Short-circuit protection                             | yes           |
| Overload protection                                  | yes           |

### Detection zone

|                                    |          |
|------------------------------------|----------|
| Sensing range [mm]                 | 0.5...9  |
| Sensing range adjustable           | yes      |
| Factory setting sensing range [mm] | 8        |
| Real sensing range Sr [mm]         | 8 ± 10 % |

### Accuracy / deviations

|                  |        |
|------------------|--------|
| Hysteresis [X01] | 1...15 |
|------------------|--------|

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|                                      |                  |                                                                                                                                                                 |
|--------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switch point drift                   | [X01]            | -10...10                                                                                                                                                        |
| <b>Interfaces</b>                    |                  |                                                                                                                                                                 |
| Communication interface              |                  | IO-Link                                                                                                                                                         |
| Transmission type                    |                  | COM2 (38,4 kBaud)                                                                                                                                               |
| IO-Link revision                     |                  | 1.1                                                                                                                                                             |
| SDCI standard                        |                  | IEC 61131-9                                                                                                                                                     |
| Profiles                             |                  | Smart Sensor: Process Data Variable; Device Identification                                                                                                      |
| SIO mode                             |                  | yes                                                                                                                                                             |
| Required master port type            |                  | A                                                                                                                                                               |
| Min. process cycle time              | [ms]             | 20                                                                                                                                                              |
| IO-Link functions (acyclical)        |                  | application specific tag; operating hours counter; normally open / normally closed (configurable); PNP / NPN (parametrierbar); switch point setting; Hysteresis |
| <b>Operating conditions</b>          |                  |                                                                                                                                                                 |
| Ambient temperature                  | [°C]             | -25...80                                                                                                                                                        |
| Protection                           |                  | IP 65; IP 67; IP 69K                                                                                                                                            |
| <b>Tests / approvals</b>             |                  |                                                                                                                                                                 |
| EMC                                  | EN 61000-4-2     | 30 kV AD / 4 kV CD                                                                                                                                              |
|                                      | EN 61000-4-3     | 10 V/m                                                                                                                                                          |
|                                      | EN 61000-4-4     | 2 kV                                                                                                                                                            |
|                                      | EN 61000-4-6     | 10 V                                                                                                                                                            |
|                                      | EN 55011         | class B                                                                                                                                                         |
| Vibration resistance                 | DIN EN 60947-5-2 | 1 mm amplitude, oscillation period 5 min., 30 min. per axis at resonance or 55 Hz                                                                               |
| Shock resistance                     | DIN EN 60947-5-2 | 30 g 6 shocks / 11 ms half-sine (x, y, z)                                                                                                                       |
| MTTF                                 | [ANN]            | 1269                                                                                                                                                            |
| UL approval                          | Ta               | -25...60 °C                                                                                                                                                     |
|                                      | Enclosure type   | Type 1                                                                                                                                                          |
|                                      | подача напруги   | Limited Voltage/Current                                                                                                                                         |
|                                      | UL Approval no.  | D004                                                                                                                                                            |
|                                      | File number UL   | E174191                                                                                                                                                         |
| <b>Mechanical data</b>               |                  |                                                                                                                                                                 |
| Weight                               | [g]              | 72.2                                                                                                                                                            |
| Housing                              |                  | threaded type                                                                                                                                                   |
| Mounting                             |                  | quasi flush                                                                                                                                                     |
| Dimensions                           | [mm]             | M18 x 1 / L = 92.5                                                                                                                                              |
| Thread designation                   |                  | M18 x 1                                                                                                                                                         |
| Materials                            |                  | PBT; PC; POM                                                                                                                                                    |
| Tightening torque                    | [Nm]             | 8                                                                                                                                                               |
| <b>Displays / operating elements</b> |                  |                                                                                                                                                                 |
| Display                              | switching status | 1 x LED, yellow                                                                                                                                                 |
| <b>Аксессуары</b>                    |                  |                                                                                                                                                                 |
| Items supplied                       |                  | lock nuts: 2                                                                                                                                                    |
| <b>Remarks</b>                       |                  |                                                                                                                                                                 |
| Pack quantity                        |                  | 1 pcs.                                                                                                                                                          |

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### Electrical connection

Cable: 2 m, PUR, Ø 4 mm; 3 x 0.34 mm<sup>2</sup>

### Connection



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