

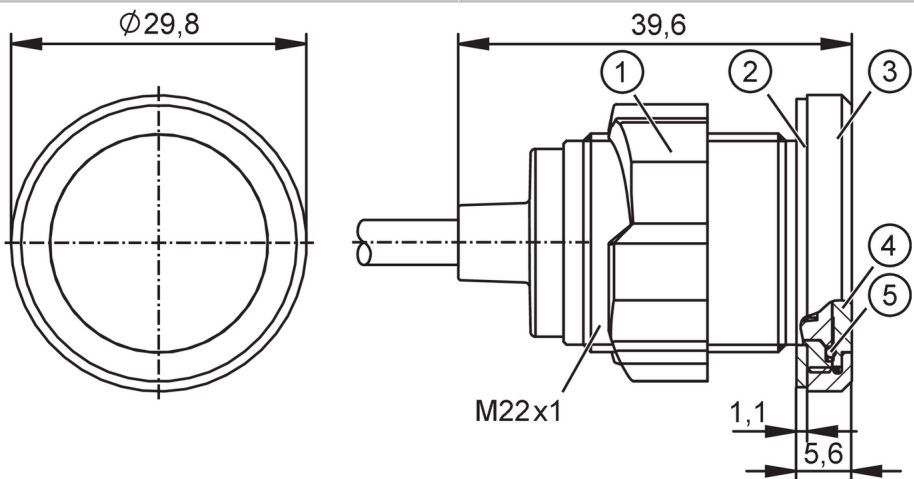
# KTE302

## Capacitive touch sensor

KTEEFOEMMFRKG/2M/IO



FDA compliance only in conjunction with the FDA-compliant E12840 seal



- 1 Nut (included in packaging)  
2 sealing (fitted)  
3,4,5 Symbol disc + sealing (optionally mounted)



### Product characteristics

|                         |                                        |
|-------------------------|----------------------------------------|
| Electrical design       | PNP/NPN; (configurable)                |
| Output function         | normally open / closed; (configurable) |
| Communication interface | IO-Link                                |
| Housing                 | Threaded type                          |
| Dimensions [mm]         | M22 x 1 / L = 39.6                     |

### Application

|                        |                                                        |
|------------------------|--------------------------------------------------------|
| Principle of operation | dynamic; static; Bistable; combination; (configurable) |
|------------------------|--------------------------------------------------------|

### Electrical data

|                             |                                                                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating voltage [V]       | 8...32 DC                                                                                                                                                                                                                                       |
| Protection class            | III                                                                                                                                                                                                                                             |
| Reverse polarity protection | yes                                                                                                                                                                                                                                             |
| Current consumption         | < 7,2 mA; (LED off: Ub = 24 V)<br>< 125 mA; (LED white, max. brightness: Ub = 8 V)<br>< 79 mA; (LED white, max. brightness: Ub = 12 V)<br>< 43 mA; (LED white, max. brightness: Ub = 24 V)<br>< 35 mA; (LED white, max. brightness : Ub = 32 V) |

### Inputs

|                          |                                                 |
|--------------------------|-------------------------------------------------|
| Total number of inputs   | 2                                               |
| Switching level high [V] | > 19.2; (at 24 V safely on : Voltage >= Ub*0,8) |
| Switching level low [V]  | < 4.8; (at 24V safely off : Voltage <= Ub*0,2)  |
| Inputs                   | according to the standard IEC 61131-2 (Typ 3)   |

### Outputs

|                   |                                        |
|-------------------|----------------------------------------|
| Electrical design | PNP/NPN; (configurable)                |
| Output function   | normally open / closed; (configurable) |



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|                                                 |         |                                                                                                                                                        |                                                                                    |
|-------------------------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Max. voltage drop switching output DC           | [V]     | 1.5                                                                                                                                                    |                                                                                    |
| Permanent current rating of switching output DC | [mA]    | 200                                                                                                                                                    |                                                                                    |
| Short-circuit protection                        |         | yes                                                                                                                                                    |                                                                                    |
| Overload protection                             |         | yes                                                                                                                                                    |                                                                                    |
| Reaction times                                  |         |                                                                                                                                                        |                                                                                    |
| Response time                                   | [ms]    | 64                                                                                                                                                     |                                                                                    |
| Software / programming                          |         |                                                                                                                                                        |                                                                                    |
| Parameter setting options                       |         | normally open / closed; PNP/NPN; static; dynamic; Bistable; combination; Switch-on and switch-off delay; brightness; sensitivity; Operating conditions |                                                                                    |
| Interfaces                                      |         |                                                                                                                                                        |                                                                                    |
| Communication interface                         |         | IO-Link                                                                                                                                                |                                                                                    |
| Transmission type                               |         | COM2 (38,4 kBaud)                                                                                                                                      |                                                                                    |
| IO-Link revision                                |         | 1.1.3                                                                                                                                                  |                                                                                    |
| Profiles                                        |         | Smart Sensor - SSP 1.1                                                                                                                                 | Fixed Switching Sensor                                                             |
|                                                 |         | Common - I&D                                                                                                                                           | Identification and Diagnosis                                                       |
|                                                 |         | Extension                                                                                                                                              | Sensor Control Wide                                                                |
|                                                 |         | Function                                                                                                                                               | Locator                                                                            |
|                                                 |         | Function                                                                                                                                               | ProductURI                                                                         |
| Min. process cycle time                         | [ms]    | 13.2                                                                                                                                                   |                                                                                    |
| Supported DeviceIDs                             |         | Type of operation                                                                                                                                      | DeviceID                                                                           |
|                                                 |         | default                                                                                                                                                | 1559                                                                               |
| Operating conditions                            |         |                                                                                                                                                        |                                                                                    |
| Ambient temperature                             | [°C]    | -30...65                                                                                                                                               |                                                                                    |
| Protection                                      |         | IP 65; IP 67; (IP 69K on the front)                                                                                                                    |                                                                                    |
| Tests / approvals                               |         |                                                                                                                                                        |                                                                                    |
| EMC                                             |         | EN 61000-4-2 ESD                                                                                                                                       | 4 kV CD / 8 kV AD                                                                  |
|                                                 |         | EN 61000-4-3 HF radiated                                                                                                                               | 10 V/m / 3 V/m                                                                     |
|                                                 |         | EN 61000-4-4 Burst                                                                                                                                     | 2 kV                                                                               |
|                                                 |         | EN 61000-4-6 HF conducted                                                                                                                              | 10 V                                                                               |
|                                                 |         | IEC 61000-6-3, EN 55011                                                                                                                                | (Class B)                                                                          |
|                                                 |         | IEC 61000-4-5 Surge                                                                                                                                    | 1 kV (L+ to L- , 42 Ω, 0,5 μF) / 0,5 kV (all cables to L- , 42 Ω, 0,5 μF)          |
| Vibration resistance                            |         | EN 60068-2-6 Fc                                                                                                                                        | 20 g (10...3000 Hz) / 50 sweep cycles per frequency; 1 octave per minute in 3 axes |
| Shock resistance                                |         | EN 60068-2-27 Ea                                                                                                                                       | 50 g 11 ms half-sine; 20 shocks each in every direction of the 3 coordinate axes   |
| Continuous shock resistance                     |         | EN 60068-2-29 Eb                                                                                                                                       | 40 g 6 ms half-sine; 8000 shocks each in every direction of the 3 coordinate axes  |
| MTTF                                            | [years] | 218                                                                                                                                                    |                                                                                    |
| Mechanical data                                 |         |                                                                                                                                                        |                                                                                    |
| Weight                                          | [g]     | 122.2                                                                                                                                                  |                                                                                    |
| Housing                                         |         | Threaded type                                                                                                                                          |                                                                                    |
| Dimensions                                      | [mm]    | M22 x 1 / L = 39.6                                                                                                                                     |                                                                                    |
| Thread designation                              |         | M22 x 1                                                                                                                                                |                                                                                    |
| Material                                        |         | housing: stainless steel; lock nut: PBT; Symbol disc: PA; Gasket: NR                                                                                   |                                                                                    |

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Displays / operating elements

|         |       |                       |
|---------|-------|-----------------------|
| Display | Power | LED, RGB configurable |
|---------|-------|-----------------------|

Accessories

|                        |                            |
|------------------------|----------------------------|
| Items supplied         | lock nuts: 1 x M22         |
|                        | transparent symbol disc: 1 |
|                        | symbol sticker: 1          |
|                        | Gasket: 1                  |
|                        | O-ring: 1                  |
| Accessories (optional) | Symbol disc                |

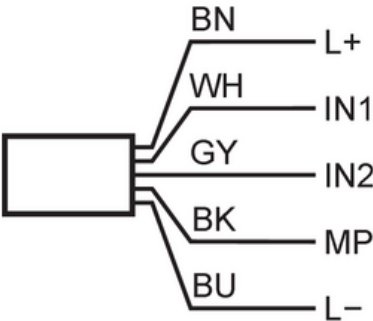
Remarks

|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

Electrical connection

Cable: 2 m, PUR, Ø 4.9 mm; 5 x 0.34 mm²

Connection



|      |       |
|------|-------|
| BN : | brown |
| WH : | white |
| GY : | grey  |
| BK:  | black |
| BU:  | blue  |

|    |     |
|----|-----|
| BN | L+  |
| WH | IN1 |
| GY | IN2 |
| BK | MP  |
| BU | L-  |

DO (NO/NC), IO-Link

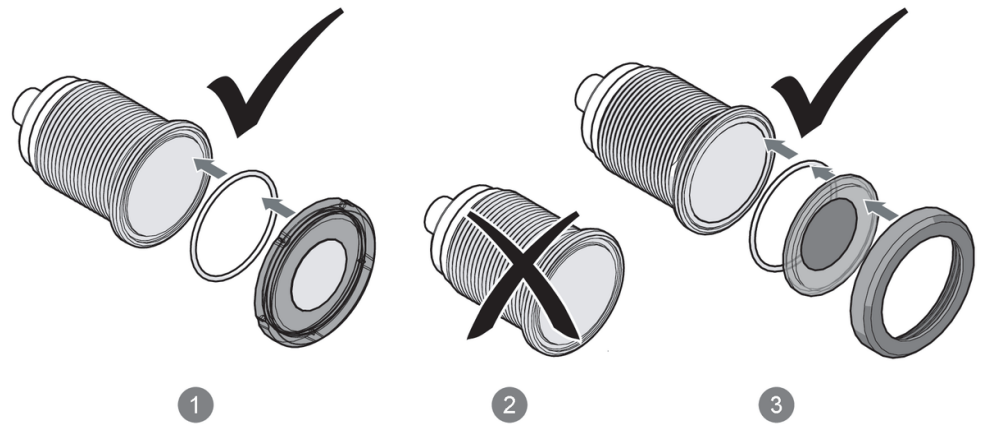
MP: multifunctional input; DO: digital output; NO: normally open; NC: normally closed

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### Diagrams and graphs

application note relevant for the function



function  
only  
ensured  
with  
symbol  
disc  
(can  
be  
ordered  
separately)

1. function ensured with plastic disc
2. function not ensured without disc
3. function ensured with stainless steel disc