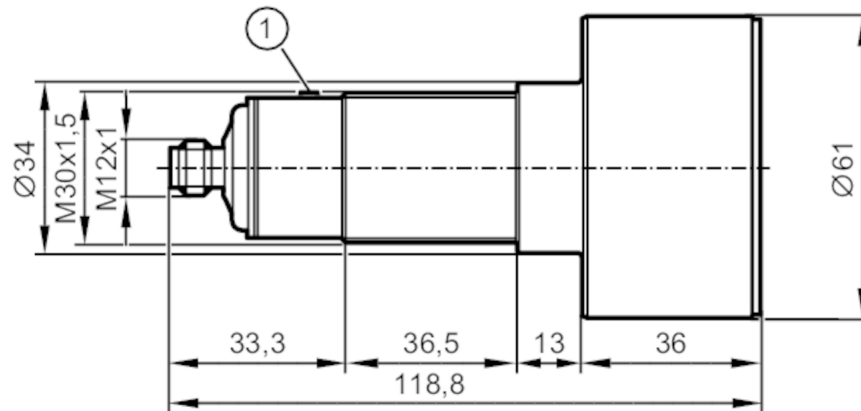




## Ultrasonic sensor

UIA08000GOKG/IO-Link/US



1 teach button



### Product characteristics

|                         |  |
|-------------------------|--|
| Electrical design       | PNP  |
| Output function         | normally open / normally closed; (parameterisable) |
| Sensing range [mm]      | 600...8000; (Target: 1000 x 1000 mm)               |
| Communication interface | IO-Link  |
| Housing                 | threaded type                                      |
| Dimensions [mm]         | M30 x 1.5 / L = 118.8                              |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 30       |
| Protection class            | III        |
| Reverse polarity protection | yes        |
| Power-on delay time [s]     | < 0.3      |
| Converter frequency [kHz]   | 40         |

### Inputs / outputs

|                              |                              |
|------------------------------|------------------------------|
| Number of inputs and outputs | Number of digital outputs: 2 |
|------------------------------|------------------------------|

### Outputs

|  |  |
|--|--|
| Total number of outputs                              | 2  |
| Electrical design                                    | PNP  |
| Number of digital outputs                            | 2  |
| Output function                                      | normally open / normally closed; (parameterisable) |
| Max. voltage drop switching output DC [V]            | 2.2  |
| Permanent current rating of switching output DC [mA] | 100  |
| Switching frequency DC [Hz]                          | 1  |
| Short-circuit protection                             | yes  |
| Overload protection                                  | yes  |



## Ultrasonic sensor

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| Detection zone                                      |   |                   |            |               |      |               |   |                              |   |
|---|---|-------------------|------------|---------------|------|---------------|---|------------------------------|---|
| Sensing range [mm]                                  | 600...8000; (Target: 1000 x 1000 mm)  |                   |            |               |      |               |   |                              |   |
| Blind zone [mm]                                     | 600   |                   |            |               |      |               |   |                              |   |
| Angle of aperture cylindrical [°]                   | 10; (±2)  |                   |            |               |      |               |   |                              |   |
| Max. deviation from the 90° angle sensor/object [°] | ± 4   |                   |            |               |      |               |   |                              |   |
| Accuracy / deviations                               |   |                   |            |               |      |               |   |                              |   |
| Temperature compensation                            | yes   |                   |            |               |      |               |   |                              |   |
| Hysteresis [%]                                      | < 3   |                   |            |               |      |               |   |                              |   |
| Switch point drift [%]                              | -5...5  |                   |            |               |      |               |   |                              |   |
| Repeatability                                       | 1 %   |                   |            |               |      |               |   |                              |   |
| Resolution [mm]                                     | 3   |                   |            |               |      |               |   |                              |   |
| Notes on the accuracy / deviation                   | The indicated values are reached after a warm-up time of min. 20 minutes  |                   |            |               |      |               |   |                              |   |
| Software / programming                              |   |                   |            |               |      |               |   |                              |   |
| Parameter setting options                           | hysteresis / window; second switch point; Switch-on and switch-off delay; switch-on operations; Teach function; light-on/dark-on mode   |                   |            |               |      |               |   |                              |   |
| Interfaces  |   |                   |            |               |      |               |   |                              |   |
| Communication interface                             | IO-Link   |                   |            |               |      |               |   |                              |   |
| Transmission type                                   | COM2 (38,4 kBaud)   |                   |            |               |      |               |   |                              |   |
| IO-Link revision                                    | 1.1   |                   |            |               |      |               |   |                              |   |
| SDCI standard                                       | IEC 61131-9   |                   |            |               |      |               |   |                              |   |
| Profiles  | Smart Sensor - SSP 0      Generic Profiled Sensor   |                   |            |               |      |               |   |                              |   |
|   | Function      Device identification   |                   |            |               |      |               |   |                              |   |
|   | Function      Multiple switching signal   |                   |            |               |      |               |   |                              |   |
|   | Function      Process data variable   |                   |            |               |      |               |   |                              |   |
|   | Function      Device diagnosis  |                   |            |               |      |               |   |                              |   |
|   | Function      Teach channel   |                   |            |               |      |               |   |                              |   |
| SIO mode  | yes   |                   |            |               |      |               |   |                              |   |
| Required master port type                           | A   |                   |            |               |      |               |   |                              |   |
| Min. process cycle time [ms]                        | 3.2   |                   |            |               |      |               |   |                              |   |
| IO-Link process data (cyclical)                     | <table border="1"> <thead> <tr> <th>function</th> <th>bit length</th> </tr> </thead> <tbody> <tr> <td>process value</td> <td>16</td> </tr> <tr> <td>device status</td> <td>4</td> </tr> <tr> <td>binary switching information</td> <td>2</td> </tr> </tbody> </table> | function          | bit length | process value | 16   | device status | 4 | binary switching information | 2 |
| function  | bit length  |                   |            |               |      |               |   |                              |   |
| process value                                       | 16  |                   |            |               |      |               |   |                              |   |
| device status                                       | 4   |                   |            |               |      |               |   |                              |   |
| binary switching information                        | 2   |                   |            |               |      |               |   |                              |   |
| IO-Link functions (acyclical)                       | application specific tag; operating hours counter   |                   |            |               |      |               |   |                              |   |
| Supported DeviceIDs                                 | <table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>1099</td> </tr> </tbody> </table>   | Type of operation | DeviceID   | default       | 1099 |               |   |                              |   |
| Type of operation                                   | DeviceID  |                   |            |               |      |               |   |                              |   |
| default   | 1099  |                   |            |               |      |               |   |                              |   |
| Note  | For further information please see the IODD PDF file under "Downloads"  |                   |            |               |      |               |   |                              |   |
| Operating conditions                                |   |                   |            |               |      |               |   |                              |   |
| Ambient temperature [°C]                            | -20...70  |                   |            |               |      |               |   |                              |   |
| Storage temperature [°C]                            | -30...80  |                   |            |               |      |               |   |                              |   |
| Protection  | IP 67   |                   |            |               |      |               |   |                              |   |

# UIT506



## Ultrasonic sensor

UIA08000GOKG/IO-Link/US

| Tests / approvals    |                           |  |
|----------------------|---------------------------|--|
| EMC                  | EN 61000-4-2 ESD          | 4 kV CD / 8 kV AD  |
|                      | EN 61000-4-3 HF radiated  | 3 V/m  |
|                      | EN 61000-4-4 Burst        | 2 kV   |
|                      | EN 61000-4-6 HF conducted | 3 V  |
|                      | EN 55011                  | Class A  |
| 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 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes              |
| MTTF [years]         |                           | 105  |
| UL approval          | Ta                        | -20...70 °C  |
|                      | power supply              | Class 2  |
|                      | File number UL            | E174191  |

| Mechanical data        |  |   |
|------------------------|--|---|
| Weight [g]             |  | 441.5   |
| Housing                |  | threaded type   |
| Dimensions [mm]        |  | M30 x 1.5 / L = 118.8                                   |
| Thread designation     |  | M30 x 1.5   |
| Materials              |  | stainless steel (316L/1.4404); PA; epoxy glass ceramics |
| Tightening torque [Nm] |  | 100   |

| Displays / operating elements |                  |                 |
|-------------------------------|------------------|-----------------|
| Display                       | switching status | 2 x LED, yellow |
|                               | echo             | 1 x LED, green  |
| Teach function                |                  | yes             |

| Accessories    |  |                                     |
|----------------|--|-------------------------------------|
| Items supplied |  | lock nuts: 2 x M30, stainless steel |

| Remarks       |  |   |
|---------------|--|---|
| Remarks       |  | operating voltage "supply class 2" according to cULus |
| Pack quantity |  | 1 pcs.  |

### Electrical connection

Connector: 1 x M12; coding: A

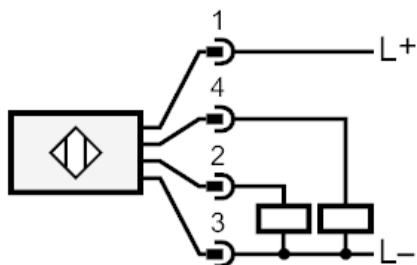




## Ultrasonic sensor

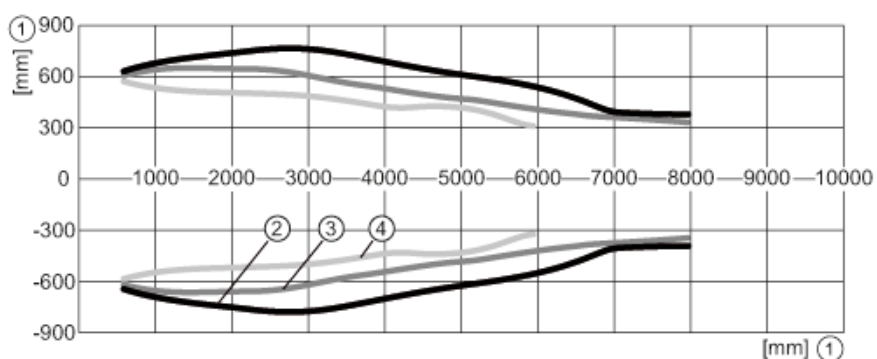
UIA08000GOKG/IO-Link/US

### Connection



4 IO-Link

### Diagrams and graphs



- 1 distance
- 2 Standard sound beam
- 3 Medium sound beam
- 4 Narrow sound beam