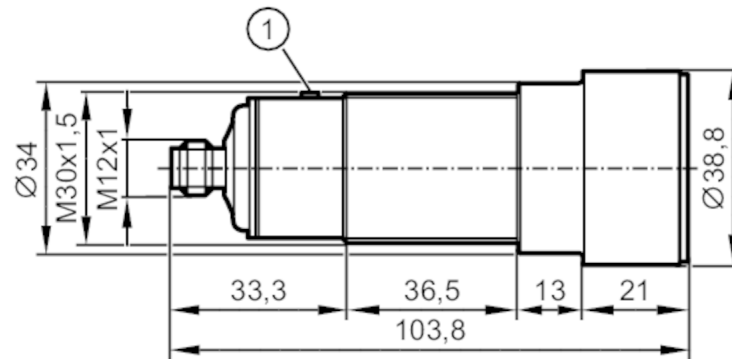


# UIT505



## Ultrasonic diffuse reflection sensor

UIA06000E2KG/IO-Link/US



1 teach button



### Product characteristics

|                         |  |
|-------------------------|--|
| Electrical design       | PNP  |
| Output function         | normally open / normally closed; (parameterisable + 1x voltage output) |
| Sensing range [mm]      | 350...6000; (Target: 400 x 400 mm)                                     |
| Communication interface | IO-Link  |
| Housing                 | threaded type  |
| Dimensions [mm]         | M30 x 1.5 / L = 103.8  |

### 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]   | 75         |

### Inputs / outputs

|                              |   |
|------------------------------|---|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analogue outputs: 1 |
|------------------------------|---|



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| Outputs  |   |
|--|---|
| Total number of outputs  | 2   |
| Electrical design  | PNP   |
| Number of digital outputs  | 1   |
| Output function  | normally open / normally closed; (parameterisable + 1x voltage output)  |
| Max. voltage drop switching output DC [V]                                | 2.2   |
| Permanent current rating of switching output DC [mA]                     | 100   |
| Switching frequency DC [Hz]  | 1   |
| Number of analogue outputs   | 1   |
| Analogue voltage output [V]  | 0...10  |
| Min. load resistance [ $\Omega$ ]  | 3000  |
| Short-circuit protection   | yes   |
| Overload protection  | yes   |
| Detection zone   |   |
| Sensing range [mm]   | 350...6000; (Target: 400 x 400 mm)  |
| Blind zone [mm]  | 350   |
| Angle of aperture cylindrical [ $^{\circ}$ ]                             | 15; ( $\pm 2$ )   |
| Max. deviation from the 90 $^{\circ}$ angle sensor/object [ $^{\circ}$ ] | $\pm 4$   |
| Accuracy / deviations  |   |
| Temperature compensation   | yes   |
| Hysteresis [%]   | < 3   |
| Switch point drift [%]   | -5...5  |
| Linearity error of analogue output [%]                                   | <3  |
| Notes on the accuracy / deviation  | The indicated values are reached after a warm-up time of min. 20 minutes  |
| Repeatability  | 1 %   |
| Resolution [mm]  | 3   |
| Response times   |   |
| Response time [ms]   | < 600; (analogue output)  |
| 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 |



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| Interfaces                    |   |  |
|-------------------------------|---|--|
| Communication interface       | IO-Link   |  |
| Transmission type             | COM2 (38,4 kBaud)   |  |
| IO-Link revision              | 1.1   |  |
| SDCI standard                 | IEC 61131-9   |  |
| Profiles                      | Smart Sensor: Device Identification; Multi-channel, two setpoint switching sensor, type 0 Generic Profiled Sensor; Process Data Variable; Device Diagnosis; Teach Channel |  |
| SIO mode                      | yes   |  |
| Required master port type     | A   |  |
| Min. process cycle time [ms]  | 3.2   |  |
| IO-Link functions (cyclical)  | 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           | Type of operation   | IO-Link device ID  |
|                               | Default   | 1098 d / 00 04 4A h  |
| Note                          | For further information please see the IODD PDF file at "Downloads"   |  |
| Operating conditions          |   |  |
| Ambient temperature [°C]      | -20...70  |  |
| Storage temperature [°C]      | -30...80  |  |
| Protection                    | IP 67   |  |
| 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]                  | 107   |  |
| UL approval                   | Ta  | -20...70 °C  |
|                               | voltage supply  | Class 2  |
|                               | File number UL  | E174191  |
| Mechanical data               |   |  |
| Weight [g]                    | 241.5   |  |
| Housing                       | threaded type   |  |
| Dimensions [mm]               | M30 x 1.5 / L = 103.8   |  |
| Thread designation            | M30 x 1.5   |  |
| Materials                     | stainless steel (1.4404 / 316L); PA; epoxy glass ceramics   |  |
| Tightening torque [Nm]        | 100   |  |

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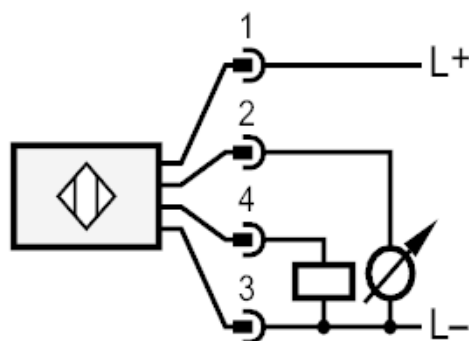
| Displays / operating elements |   |                 |
|-------------------------------|---|-----------------|
| Display                       | switching status                                      | 2 x LED, yellow |
|                               | echo  | 1 x LED, green  |
| Teach function                | yes   |                 |
| Accessories                   |   |                 |
| Accessories (supplied)        | lock nuts: 2, stainless steel                         |                 |
| Remarks                       |   |                 |
| Remarks                       | operating voltage "supply class 2" according to cULus |                 |
| Pack quantity                 | 1 pcs.  |                 |

### Electrical connection

Connector: 1 x M12



### Connection

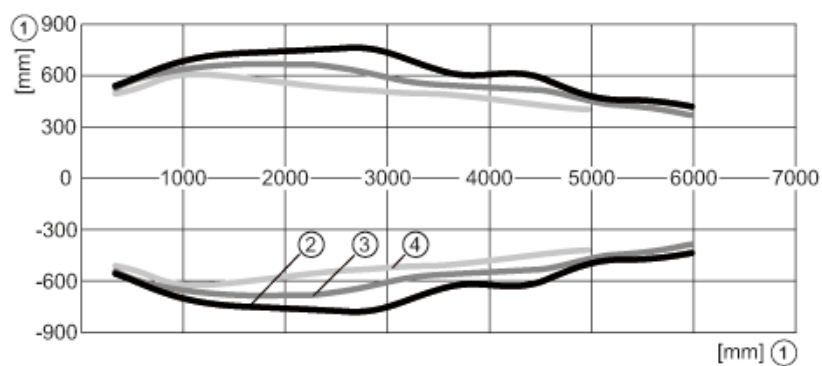




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### Diagrams and graphs



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