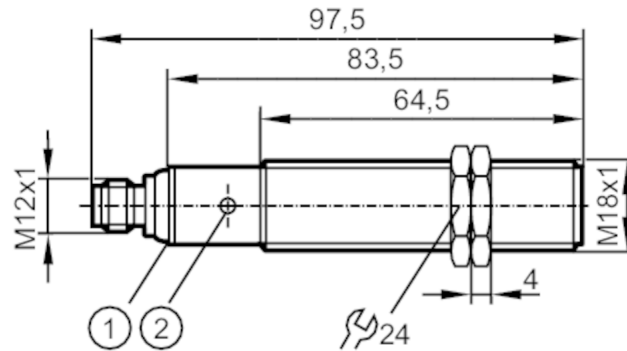


UGT513



Ultrasonic sensor

UGA02200E1KG/IO-LINK/US



- 1 LEDs
- 2 teach button



Product characteristics

| | |
|-------------------------|--|
| Electrical design | PNP |
| Output function | normally open / normally closed; (parameterisable + 1x current output) |
| Sensing range [mm] | 200...2200; (Target: 200 x 200 mm) |
| Communication interface | IO-Link |
| Housing | threaded type |
| Dimensions [mm] | M18 x 1 / L = 97.5 |

Electrical data

| | |
|-----------------------------|---|
| Operating voltage [V] | 10...30 DC; ("supply class 2" to cULus) |
| Current consumption [mA] | 55 |
| Protection class | III |
| Reverse polarity protection | yes |
| Power-on delay time [s] | < 0.3 |
| Converter frequency [kHz] | 200 |

Inputs / outputs

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



Ultrasonic sensor

UGA02200E1KG/IO-LINK/US

| Outputs | |
|--|---|
| Total number of outputs | 2 |
| Electrical design | PNP |
| Number of digital outputs | 1 |
| Output function | normally open / normally closed; (parameterisable + 1x current output) |
| Max. voltage drop switching output DC [V] | 2.2 |
| Permanent current rating of switching output DC [mA] | 100 |
| Switching frequency DC [Hz] | 2 |
| Number of analogue outputs | 1 |
| Analogue current output [mA] | 4...20 |
| Max. load [Ω] | 500 |
| Short-circuit protection | yes |
| Overload protection | yes |
| Resolution of analogue output | < 3 mm |
| Detection zone | |
| Sensing range [mm] | 200...2200; (Target: 200 x 200 mm) |
| Blind zone [mm] | 200 |
| Angle of aperture cylindrical [$^{\circ}$] | 14; (± 2) |
| Max. deviation from the 90° angle sensor/object [$^{\circ}$] | ± 4 |
| Accuracy / deviations | |
| Temperature compensation | yes |
| Hysteresis [%] | < 2 |
| Switch point drift [%] | -2...2 |
| 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 % |
| Response times | |
| Response time [ms] | < 400; (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 | 704 d / 00 02 C0 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] | 142 | |
| UL approval | Ta | -20...70 °C |
| | voltage supply | Class 2 |
| | File number UL | E174191 |
| Mechanical data | | |
| Weight [g] | 102 | |
| Housing | threaded type | |
| Dimensions [mm] | M18 x 1 / L = 97.5 | |
| Thread designation | M18 x 1 | |
| Materials | stainless steel (1.4404 / 316L); PA; epoxy glass ceramics | |
| Tightening torque [Nm] | 50 | |

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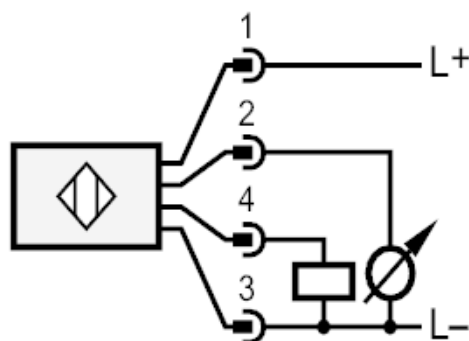
| Displays / operating elements | | |
|-------------------------------|---|-----------------|
| Display | switching status | 2 x LED, yellow |
| | echo | 1 x LED, green |
| Teach function | yes | |
| Accessories | | |
| Accessories (supplied) | lock nuts: 2, stainless steel | |
| Remarks | | |
| Remarks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

Electrical connection

Connector: 1 x M12

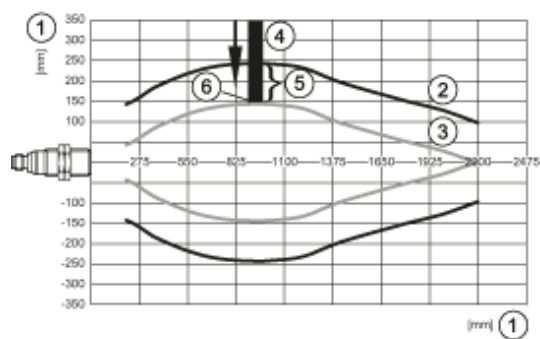
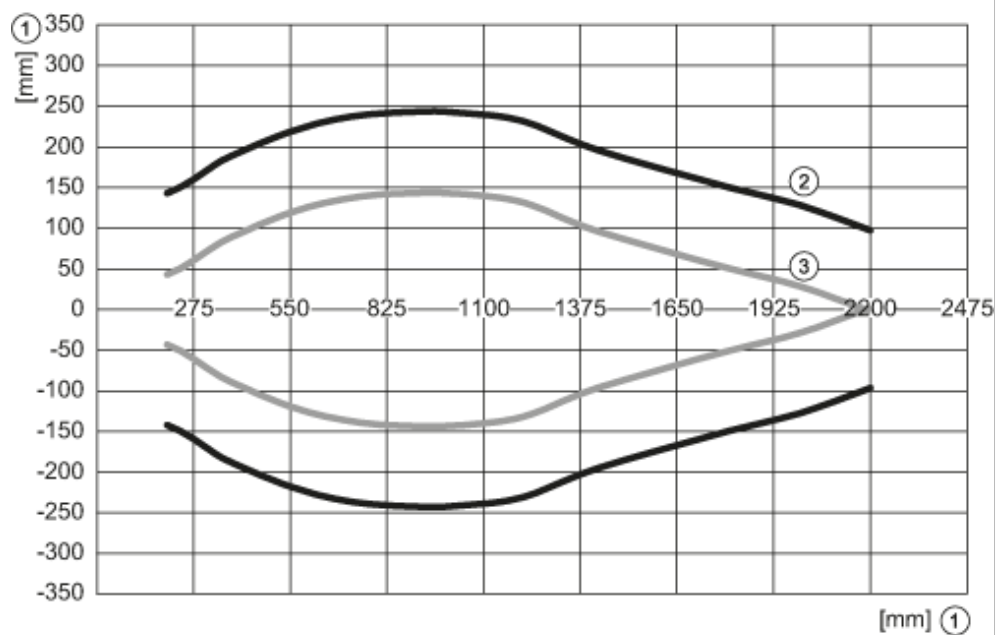


Connection



Pin 4 = IO-Link

Diagrams and graphs



- 1: distance
- 2: Detection zone
- 3: switch-on/switch-off graph
- 4: Target 200 x 200 mm
- 5: 50% of the target in the detection zone
- 6: switch point