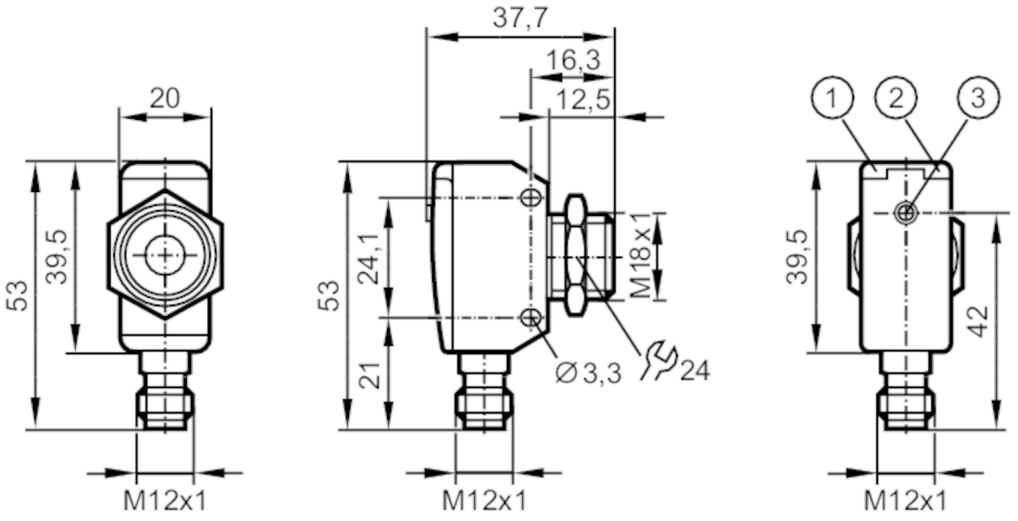
# UGT588

## Ultrasonic sensor

UGQ00800F1KG/US




1 LED echo
2 LED switching status
3 teach button

| | | |
|---|---|---|
| **Product characteristics** | | |
| Electrical design | | NPN |
| Output function | | normally open / normally closed; (parameterisable) |
| Sensing range | [mm] | 60...800; (Target: 100 x 100 mm) |
| Housing | | rectangular with M18 thread |
| Dimensions | [mm] | 53 x 20 x 37.7 |
| **Electrical data** | | |
| Operating voltage | [V] | 10...30 DC; ("supply class 2" to cULus) |
| Current consumption | [mA] | < 35 |
| Protection class | | III |
| Reverse polarity protection | | yes |
| Power-on delay time | [s] | < 0.3 |
| Converter frequency | [kHz] | 230 |
| **Inputs / outputs** | | |
| Number of inputs and outputs | | Number of digital outputs: 1; Number of analogue outputs: 1 |
| **Outputs** | | |
| Total number of outputs | | 2 |
| Output signal | | switching signal; analogue signal |
| Electrical design | | NPN |
| Number of digital outputs | | 1 |
| 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 |

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| | | | |
|---|---|---|---|
| Switching frequency DC | [Hz] | 5 | |
| Number of analogue outputs | | 1 | |
| Analogue current output | [mA] | 4...20 | |
| Max. load | [Ω] | 500 | |
| Short-circuit protection | | yes | |
| Overload protection | | yes | |
| **Detection zone** | | | |
| Sensing range | [mm] | 60...800; (Target: 100 x 100 mm) | |
| Blind zone | [mm] | 60 | |
| Angle of aperture cylindrical | [°] | 15; (±2) | |
| Max. deviation from the 90° angle sensor/object | [°] | ± 4 | |
| **Accuracy / deviations** | | | |
| Temperature compensation | | yes | |
| Hysteresis | [%] | < 1 | |
| Switch point drift | [%] | -5...5 | |
| Linearity error of analogue output | [%] | ≤ 1 | |
| Repeatability | | 1 % | |
| Resolution | [mm] | 3 | |
| Notes on the accuracy / deviation | | The indicated values are reached after a warm-up time of min. 20 minutes | |
| **Response times** | | | |
| Response time | [ms] | < 450; (analogue output) | |
| **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] | 191 | |
| UL approval | | Ta | -20...70 °C |
| | | power supply | Class 2 |
| | | File number UL | E174191 |
| **Mechanical data** | | | |
| Weight | [g] | 99 | |
| Housing | | rectangular with M18 thread | |

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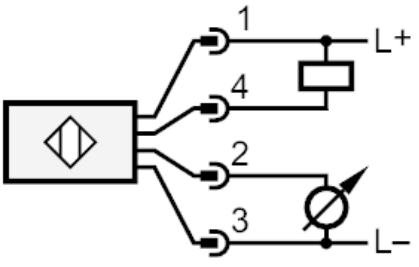
| | | | |
|---|---|---|---|
| Dimensions | [mm] | 53 x 20 x 37.7 | |
| Thread designation | | M18 x 1 | |
| Materials | | stainless steel (630/1.4542/17-4 PH); PBT; PA; epoxy glass ceramics | |
| Tightening torque | [Nm] | 50 | |
| **Displays / operating elements** | | | |
| Display | | switching status | 1 x LED, yellow |
| | | echo | 1 x LED, green |
| Teach function | | yes | |
| **Accessories** | | | |
| Items supplied | | lock nuts: 1, stainless steel | |
| **Remarks** | | | |
| Remarks | | operating voltage "supply class 2" according to cULus | |
| Pack quantity | | 1 pcs. | |
| **Electrical connection** | | | |

Connector: 1 x M12; coding: A

Connection



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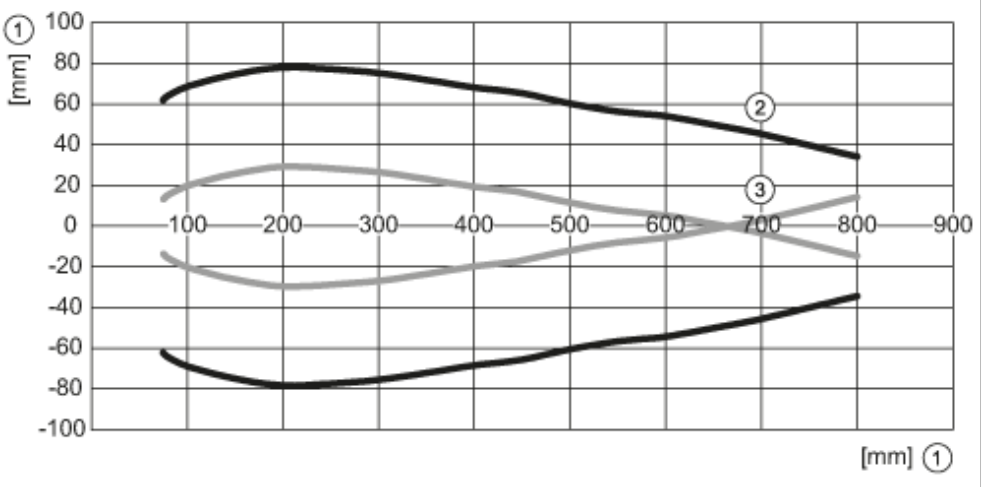
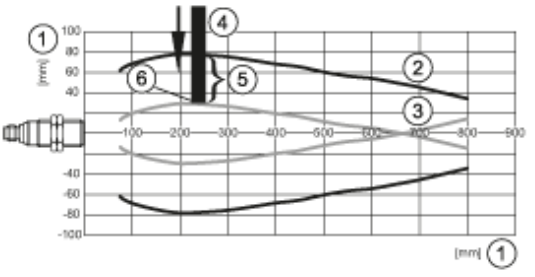
## Diagrams and graphs




1: distance

2: Detection zone

3: switch-on/switch-off graph

4: Target 100 x 100 mm

5: 50% of the target in the detection zone

6: switch point