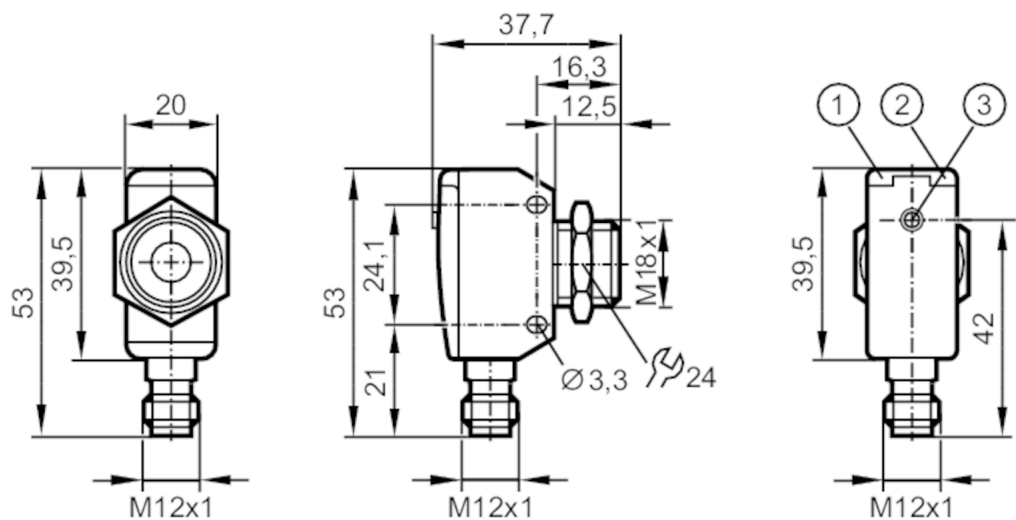


# UGT591

## Ultrasonic sensor

UGQ01200F2KG/US



- 1 LED echo
- 2 LED switching status
- 3 teach button



| Product characteristics                              |  |
|--|--|
| Electrical design                                    | NPN  |
| Output function                                      | normally open / normally closed; (parameterisable + 1x voltage output) |
| Sensing range [mm]                                   | 80...1200; (Target: 200 x 200 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]                            | 200  |
| Inputs / outputs                                     |  |
| Number of inputs and outputs                         | Number of digital outputs: 1; Number of analogue outputs: 1            |
| Outputs  |  |
| Total number of outputs                              | 2  |
| Electrical design                                    | NPN  |
| 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]                          | 5  |

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|                            |     |        |
|----------------------------|-----|--------|
| Number of analogue outputs |     | 1      |
| Analogue voltage output    | [V] | 0...10 |
| Min. load resistance       | [Ω] | 3000   |
| Short-circuit protection   |     | yes    |
| Overload protection        |     | yes    |

### Detection zone

|   |      |                                   |
|---|------|-----------------------------------|
| Sensing range                                   | [mm] | 80...1200; (Target: 200 x 200 mm) |
| Blind zone                                      | [mm] | 80                                |
| Angle of aperture cylindrical                   | [°]  | 14; (±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]                   | 190  |
| UL approval          | Ta                        | -20...70 °C  |
|                      | power supply              | Class 2  |
|                      | File number UL            | E174191  |

### Mechanical data

|            |      |                             |
|------------|------|-----------------------------|
| Weight     | [g]  | 97.5                        |
| Housing    |      | rectangular with M18 thread |
| Dimensions | [mm] | 53 x 20 x 37.7              |

# UGT591



## Ultrasonic sensor

UGQ01200F2KG/US

|                        |   |
|------------------------|---|
| Thread designation     | M18 x 1   |
| Materials              | 1.4542 (17-4 PH / 630); 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

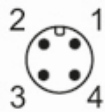
|                |                               |
|----------------|-------------------------------|
| Items supplied | lock nuts: 1, stainless steel |
|----------------|-------------------------------|

### Remarks

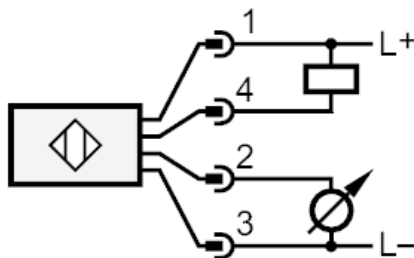
|               |   |
|---------------|---|
| Remarks       | operating voltage "supply class 2" according to cULus |
| Pack quantity | 1 pcs.  |

### Electrical connection

Connector: 1 x M12; coding: A

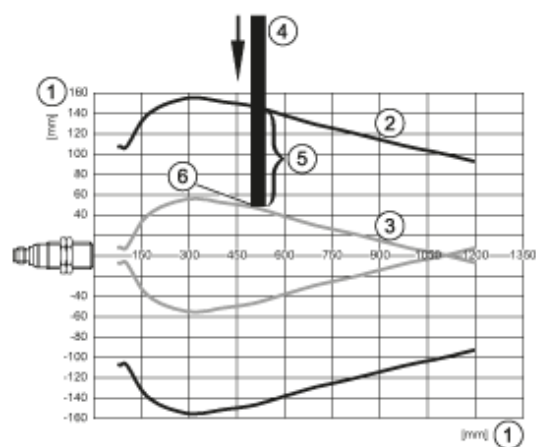
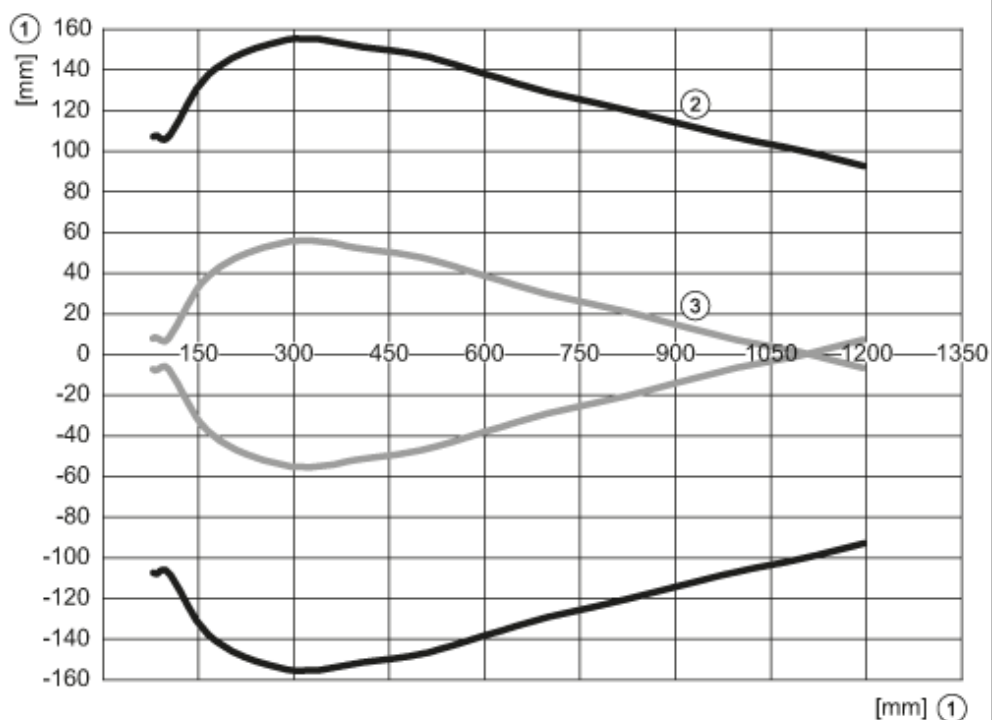


### Connection





### 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