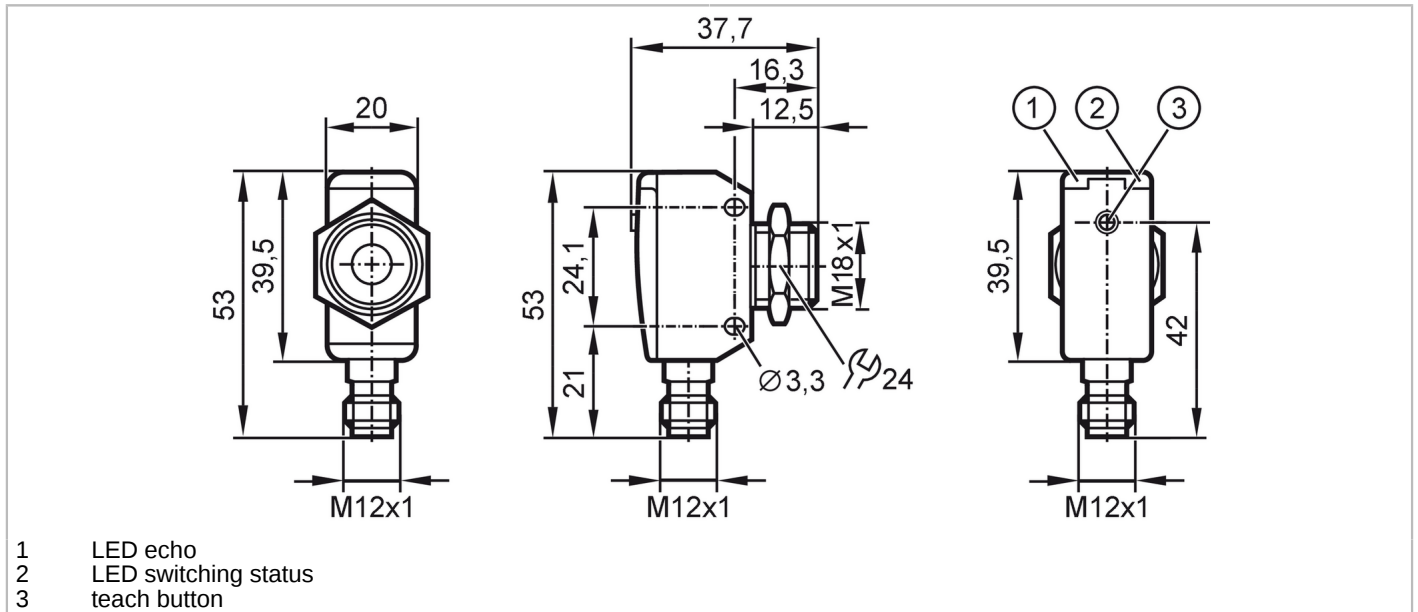


UGT591



Ultrasonic sensor

UGQ01200F2KG/US



Product characteristics

| | |
|--------------------|--|
| Electrical design | NPN |
| Output function | normally open / normally closed; (parameterisable) |
| 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 |
| 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 |
| Switching frequency DC [Hz] | 5 |
| Number of analogue outputs | 1 |

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UGQ01200F2KG/US

| | | |
|---|---------------------------|--|
| 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 |
| | voltage 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 |
| Thread designation | | M18 x 1 |

UGT591



Ultrasonic sensor

UGQ01200F2KG/US

| | | |
|------------------------|---|--|
| 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 x M18, stainless steel |
|----------------|-------------------------------------|

Remarks

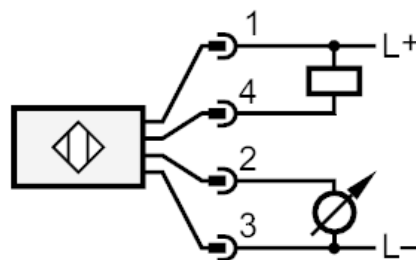
| | |
|---------------|---|
| Remarks | operating voltage "supply class 2" according to cULus |
| Pack quantity | 1 pcs. |

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4

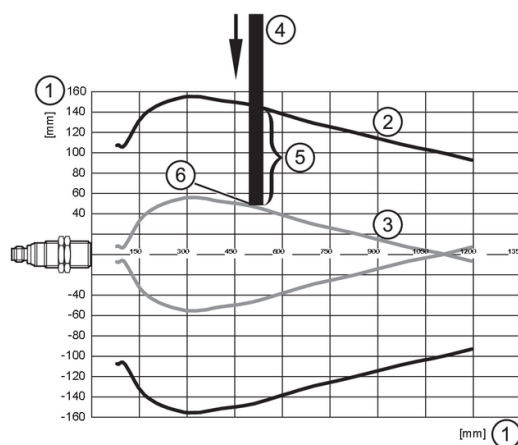
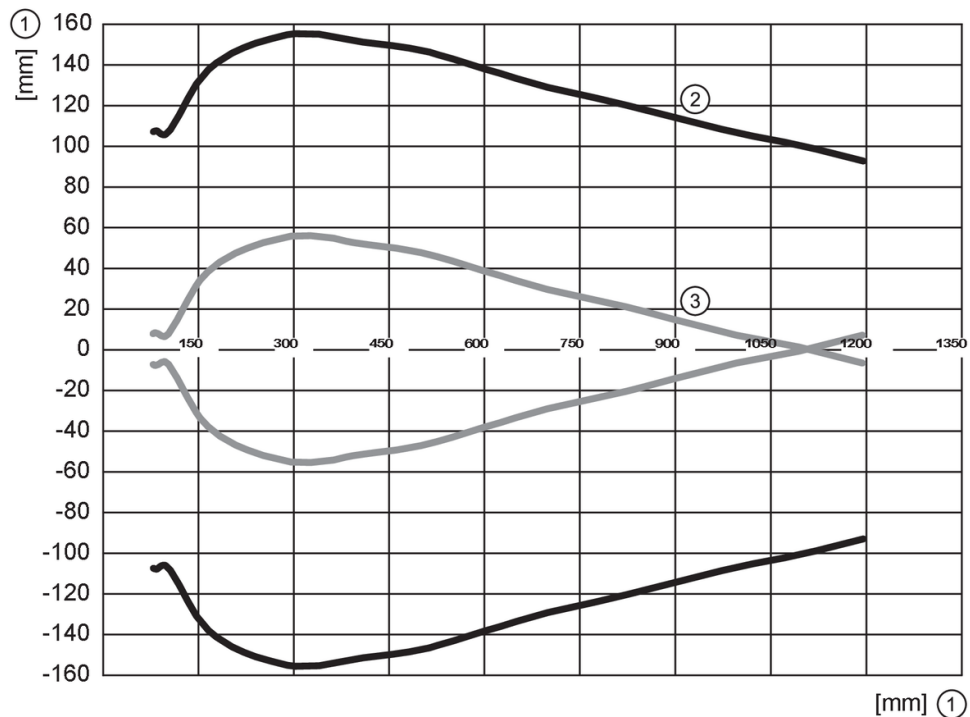


Connection





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