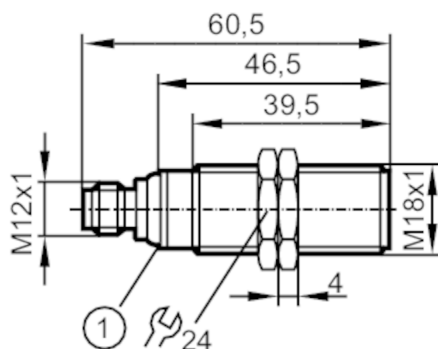


# UGT209

## Ultrasonic sensor

UGC00300FOKG/US



1 LEDs



### 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]   | 0.1                                     |
| Converter frequency         | [kHz] | 300                                     |

### Inputs

|                       |    |
|-----------------------|----|
| Synchronisation input | no |
| Multiplex input       | no |

### Outputs

|                                                 |                                                    |
|-------------------------------------------------|----------------------------------------------------|
| Electrical design                               | NPN                                                |
| Output function                                 | normally open / normally closed; (parameterisable) |
| Max. voltage drop switching output DC           | [V]<br>2.2                                         |
| Permanent current rating of switching output DC | [mA]<br>100                                        |
| Switching frequency DC                          | [Hz]<br>8                                          |
| Short-circuit protection                        | yes                                                |
| Overload protection                             | yes                                                |

### Detection zone

|                                                 |                  |
|-------------------------------------------------|------------------|
| Sensing range                                   | [mm]<br>40...300 |
| Blind zone                                      | [mm]<br>40       |
| Angle of aperture cylindrical                   | [°]<br>7; (±2)   |
| Detection range hysteresis                      | [mm]<br>< 1      |
| Max. deviation from the 90° angle sensor/object | [°]<br>± 4       |

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| Accuracy / deviations                  |                                                                      |                                                                                              |
|----------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Notes on the accuracy / deviation      | The indicated values are reached after a warm-up time of 20 minutes. |                                                                                              |
| Temperature compensation               | yes                                                                  |                                                                                              |
| Hysteresis [%]                         | < 1                                                                  |                                                                                              |
| Switch point drift [%]                 | -2.5...2.5                                                           |                                                                                              |
| Linearity error of analogue output [%] | < 1                                                                  |                                                                                              |
| Operating conditions                   |                                                                      |                                                                                              |
| Ambient temperature [°C]               | -20...70                                                             |                                                                                              |
| Protection                             | IP 67                                                                |                                                                                              |
| Tests / approvals                      |                                                                      |                                                                                              |
| EMC                                    | EN 61000-4-2 ESD                                                     | 4 kV CD / plastics                                                                           |
|                                        |                                                                      | 8 kV AD / metal                                                                              |
|                                        | 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                                                     | yes                                                                                          |
| MTTF [years]                           | 215                                                                  |                                                                                              |
| Mechanical data                        |                                                                      |                                                                                              |
| Weight [g]                             | 55.4                                                                 |                                                                                              |
| Housing                                | threaded type                                                        |                                                                                              |
| Dimensions [mm]                        | M18 x 1 / L = 60.5                                                   |                                                                                              |
| Thread designation                     | M18 x 1                                                              |                                                                                              |
| Materials                              | PBT; PA; epoxy glass ceramics                                        |                                                                                              |
| Displays / operating elements          |                                                                      |                                                                                              |
| Display                                | switching status                                                     | 1 LED, yellow                                                                                |
|                                        | echo                                                                 | 1 LED, green                                                                                 |
| Accessories                            |                                                                      |                                                                                              |
| Accessories (supplied)                 | lock nuts: 2, plastics                                               |                                                                                              |
|                                        | rubber washers: 2                                                    |                                                                                              |
| Remarks                                |                                                                      |                                                                                              |
| Remarks                                | operating voltage "supply class 2" according to cULus                |                                                                                              |
| Pack quantity                          | 1 pcs.                                                               |                                                                                              |
| Electrical connection                  |                                                                      |                                                                                              |
| Connector: 1 x M12                     |                                                                      |                                                                                              |

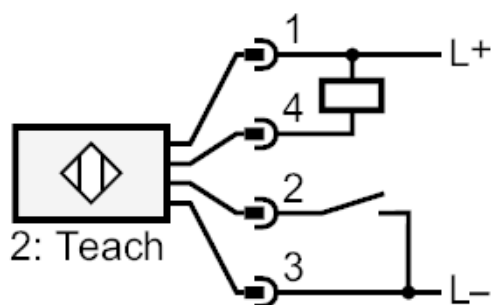
# UGT209

## Ultrasonic sensor

UGC00300FOKG/US



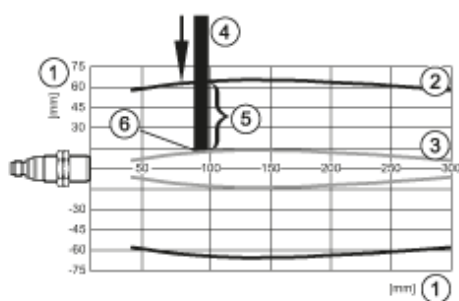
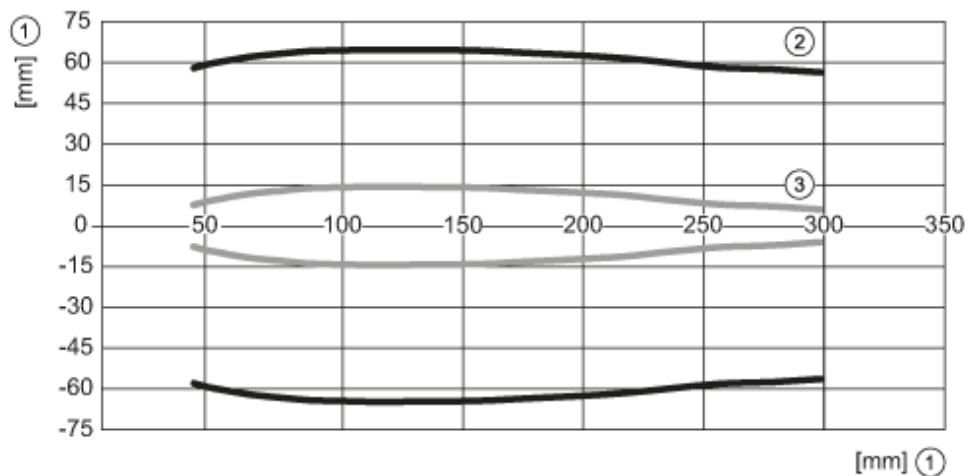
### Connection



2: Teach



### 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