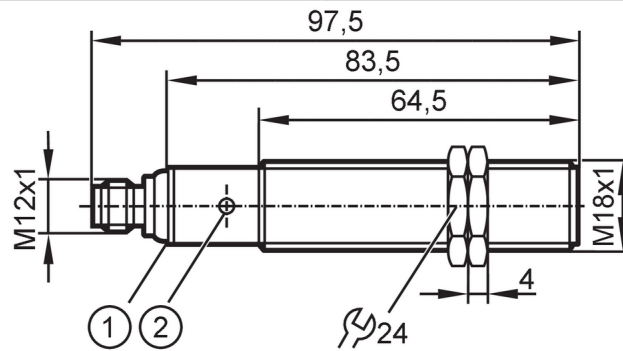


# UGT513



## Ultrasonic sensor

UGA02200E1KG/IO-LINK/US



- 1 LEDs
- 2 teach button



### Product characteristics

Electrical design	PNP
Output function	normally open / normally closed; (parameterisable)
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
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### Outputs

Total number of outputs	2
Output signal	switching signal; analogue signal; IO-Link
Electrical design	PNP
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]	2
Number of analogue outputs	1
Analogue current output [mA]	4...20
Max. load [Ω]	500
Short-circuit protection	yes

# UGT513



## Ultrasonic sensor

UGA02200E1KG/IO-LINK/US

Overload protection	yes
Resolution of analogue output	< 3 mm
<b>Detection zone</b>	
Sensing range [mm]	200...2200; (Target: 200 x 200 mm)
Blind zone [mm]	200
Angle of aperture cylindrical [°]	14; (±2)
Max. deviation from the 90° angle sensor/object [°]	± 4
<b>Accuracy / deviations</b>	
Temperature compensation	yes
Hysteresis [%]	< 2
Switch point drift [%]	-2...2
Linearity error of analogue output [%]	<3
Repeatability	1 %
Notes on the accuracy / deviation	The indicated values are reached after a warm-up time of min. 20 minutes
<b>Response times</b>	
Response time [ms]	< 400; (analogue output)
<b>Software / programming</b>	
Parameter setting options	hysteresis / window; second switch point; Switch-on and switch-off delay; switch-on operations; Teach function; light-on/dark-on mode
<b>Interfaces</b>	
Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9
Profiles	Smart Sensor - SSP 0      Generic Profiled Sensor
	Function      Device identification
	Function      Multiple switching signal
	Function      Process data variable
	Function      Device diagnosis
	Function      Teach channel
SIO mode	yes
Required master port type	A
Min. process cycle time [ms]	3.2
IO-Link process data (cyclical)	<b>function</b> <b>bit length</b>
	process value      16
	device status      4
	binary switching information      2
IO-Link functions (acyclical)	application specific tag; operating hours counter
Supported DeviceIDs	<b>Type of operation</b> <b>DeviceID</b>
	default      704
Note	For further information please see the IODD PDF file under "Downloads"

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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
	power 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 (316L/1.4404); PA; epoxy glass ceramics
Tightening torque	[Nm]	50
Displays / operating elements		
Display	switching status	2 x LED, yellow
	echo	1 x LED, green
Teach function		yes
Accessories		
Items supplied		lock nuts: 2 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		

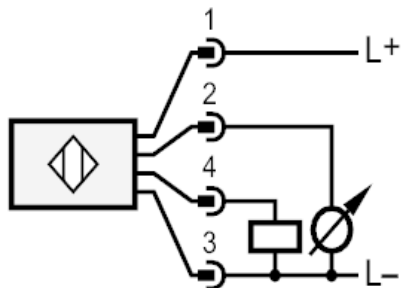
# UGT513



## Ultrasonic sensor

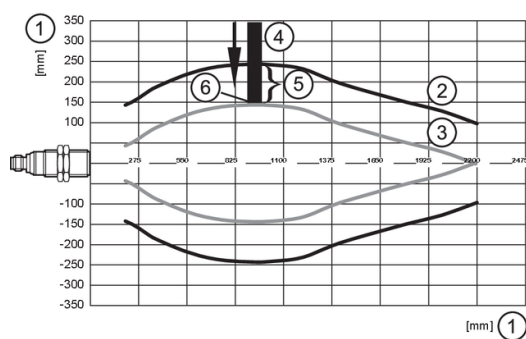
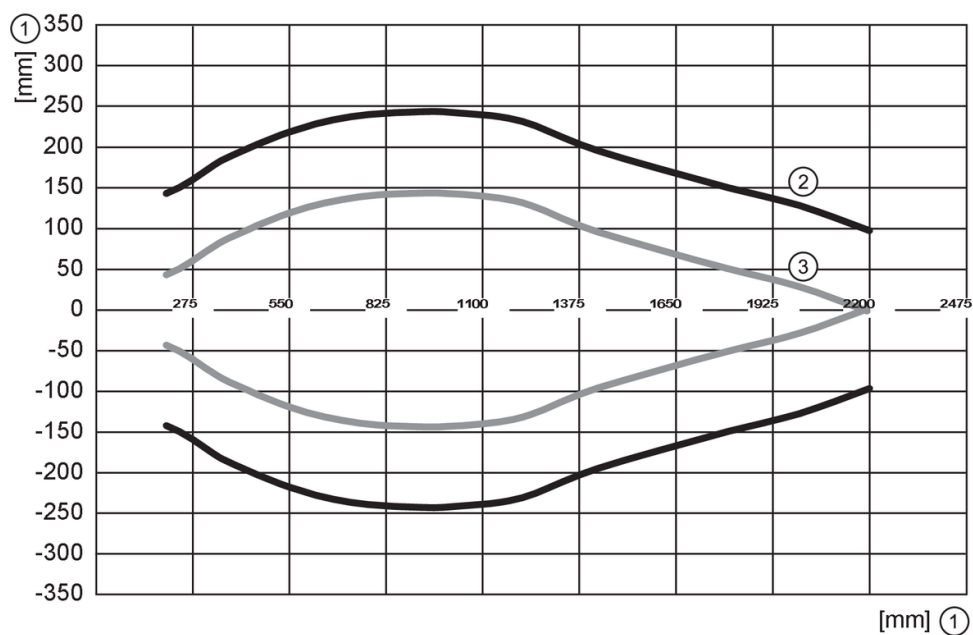
UGA02200E1KG/IO-LINK/US

### 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