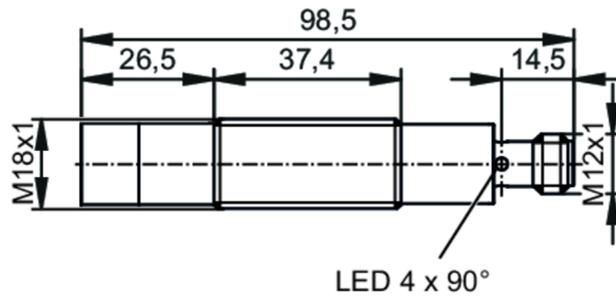


UGT303



Full-metal ultrasonic sensor

UGA401000RRKG/AM/IO/US



Product characteristics	
Electrical design	PNP/NPN; (configurable)
Output function	normally open / closed; (configurable)
Sensing range [mm]	100...1000; (Target: 100 x 100 mm)
Communication interface	IO-Link
Housing	Threaded type
Dimensions [mm]	M18 x 1 / L = 98.5
Electrical data	
Operating voltage [V]	10...30 DC; (cULus - Class 2 source required)
Current consumption [mA]	< 50
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	< 0.5
Converter frequency [kHz]	200
Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 2
Outputs	
Total number of outputs	2
Electrical design	PNP/NPN; (configurable)
Number of digital outputs	2
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2.2
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	6
Short-circuit protection	yes
Overload protection	yes
Monitoring range	
Sensing range [mm]	100...1000; (Target: 100 x 100 mm)
Blind zone [mm]	100
Angle of aperture cylindrical [°]	16; (±1)

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Max. deviation from the 90° angle sensor/object	[°]	± 4
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Accuracy / deviations

Temperature compensation		yes
Hysteresis	[%]	< 1
Temperature drift		± 2 %; (of the final value of the measuring range)
Repeatability		0,5 %
Resolution	[mm]	1
Notes on the accuracy / deviation		The indicated values are reached after a warm-up time of min. 20 minutes

Software / programming

Parameter setting options		hysteresis / window; second switch point; Switch-on and switch-off delay; switch-on operations; Teach function; light-on/dark-on mode
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Interfaces

Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9
Profiles	Smart Sensor - SSP 4.1.1	Measuring and Switching Sensor, 1 channel
	Common - I&D	Identification and Diagnosis
	Extension	Sensor control
	Extension	Object detection, switches when value falls below the setpoint
	Function	Locator
	Function	ProductURI
SIO mode		yes
Required master port class		A
Min. process cycle time	[ms]	3.2
IO-Link process data (cyclical)	Function	bit length
	process value	16
	device status	4
	binary switching information	2
IO-Link functions (acyclical)		application specific tag; operating hours counter
Supported DeviceIDs	Type of operation	DeviceID
	default	1812
Note		For further information please see the IODD PDF file at "Downloads"

Operating conditions

Ambient temperature	[°C]	-20...70
Storage temperature	[°C]	-25...75
Protection		IP 65; IP 67; IP 68; IP 69K

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

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Vibration resistance	EN 60068-2-6 Fc	(10-55) Hz 1 mm amplitude, vibration duration 5 min., 30 min. per axis with 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]		838
UL approval	Ta	-20...70 °C
	Enclosure type	Type 1
	voltage supply	Class 2
	File number UL	E174191

Mechanical data

Weight [g]	96.2
Housing	Threaded type
Dimensions [mm]	M18 x 1 / L = 98.5
Thread designation	M18 x 1
Material	housing: stainless steel (1.4404 / 316L); LED window: PA
Tightening torque [Nm]	50

Displays / operating elements

Display	Switching status	1 LED, yellow
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Accessories

Items supplied	lock nuts: 2 x M18, stainless steel damping plates: 2, EPDM
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Remarks

Pack quantity	1 pcs.
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Electrical connection - plug

Connector: 1 x M12; coding: A



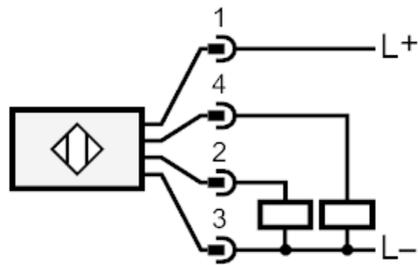
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Connection



4

IO-Link

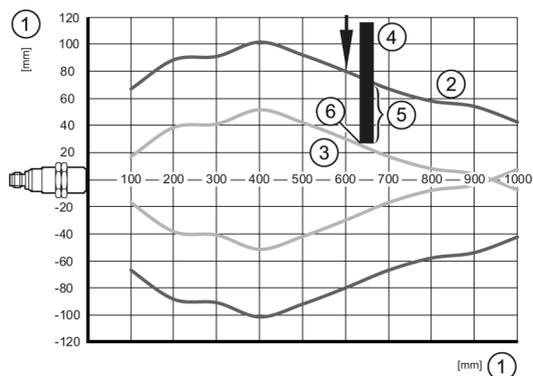
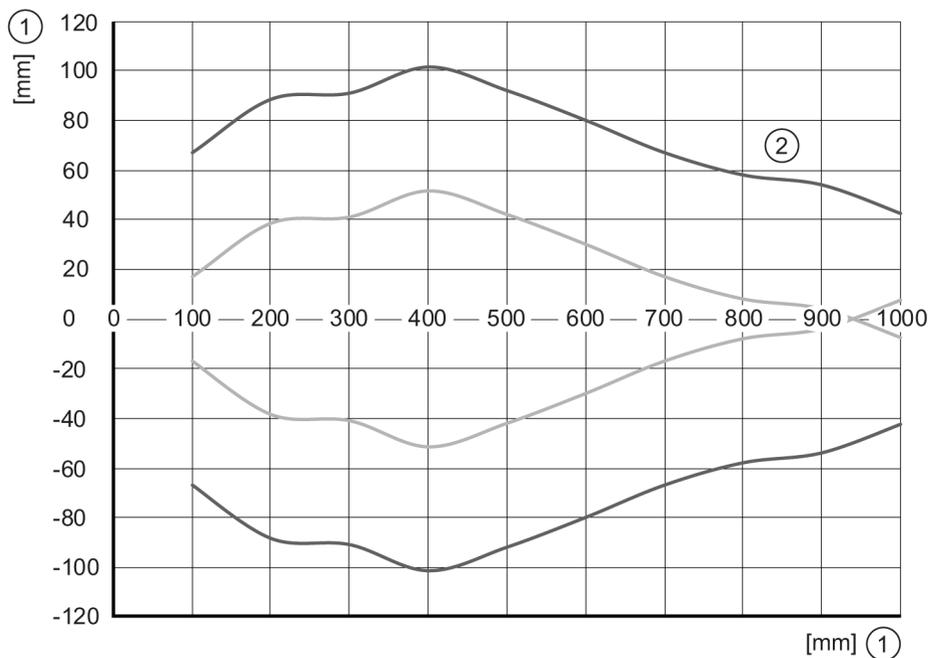
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Diagrams and graphs



- 1 Distance
- 2 Monitoring range
- 3 switch-on/switch-off graph
- 4 Target 100 x 100 mm
- 5 50 % of the target in the detection zone
- 6 Set point