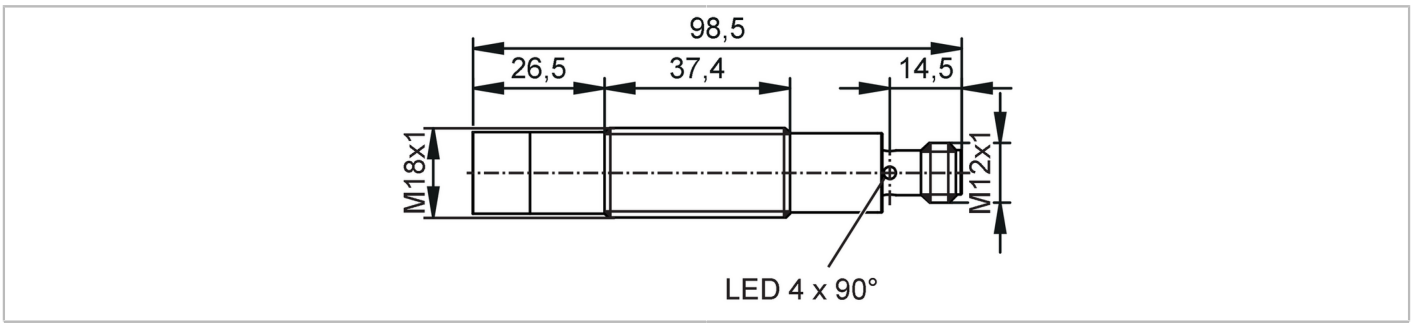
UGT300

Full-metal ultrasonic sensor

UGA400400RRKG/AM/IO/US



Product characteristics		
Electrical design		PNP/NPN; (configurable)
Output function		normally open / closed; (configurable)
Sensing range	[mm]	50...400; (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]	300
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]	10
Short-circuit protection		yes
Overload protection		yes
Monitoring range		
Sensing range	[mm]	50...400; (Target: 100 x 100 mm)
Blind zone	[mm]	50
Angle of aperture cylindrical	[°]	16; (±1)
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	
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	1774
Note		For further information please see the IODD PDF file at "Downloads"	
Operating conditions			
Ambient temperature	[°C]	-10...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
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

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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	-10...70 °C
		Enclosure type	Type 1
		voltage supply	Class 2
		File number UL	E174191

Mechanical data

Weight	[g]	96
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

Accessories

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

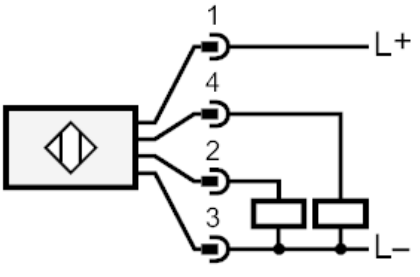
Remarks

Pack quantity	1 pcs.

Electrical connection - plug

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

Connection



4	IO-Link

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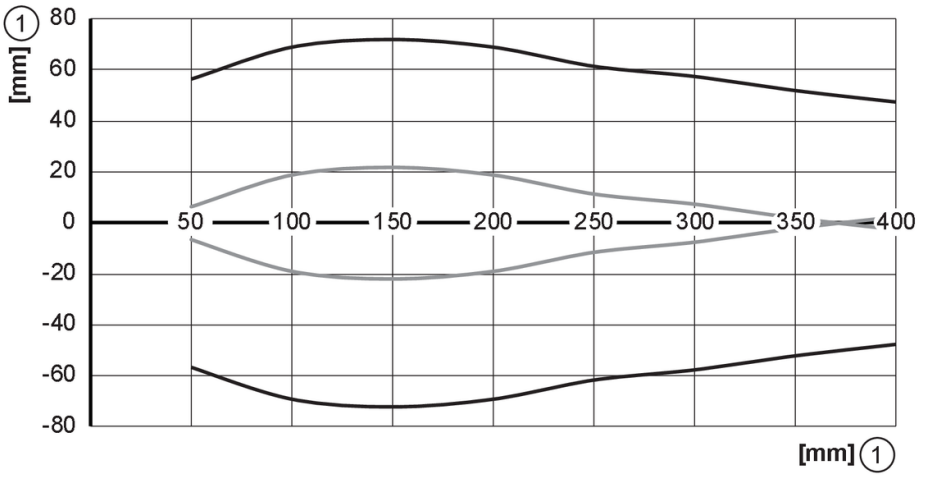
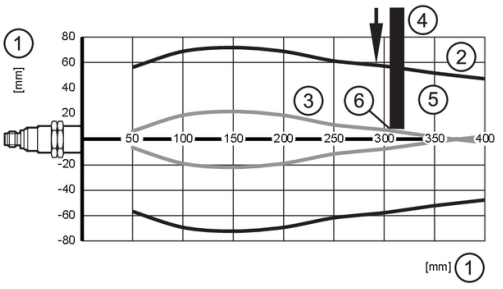
Diagrams and graphs





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