

UGR501



Ultrasonic sensor

UGA02200EOKG/IO-LINK/US



- 1 LEDs
- 2 teach button



Product characteristics

Housing threaded type

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

Outputs

Total number of outputs	1
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
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range [mm]	< 2200; (Target: 200 x 200 mm)
Angle of aperture cylindrical [°]	14; (±2)

Accuracy / deviations

Temperature compensation	yes
Hysteresis [%]	< 2
Switch point drift [%]	-2...2
Repeatability	1 %

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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: Device Identification; Multi-channel, two setpoint switching sensor, type 0 Generic Profiled Sensor; Process Data Variable; Device Diagnosis; Teach Channel	
Required master port type		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	698
Note		For further information please see the IODD PDF file under "Downloads"	
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]	141	
UL approval		Ta	-20...70 °C
		power supply	Class 2
		File number UL	E174191
Mechanical data			
Weight	[g]	103	
Housing		threaded type	
Dimensions	[mm]	M18 x 1 / L = 97.5	
Thread designation		M18 x 1	

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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

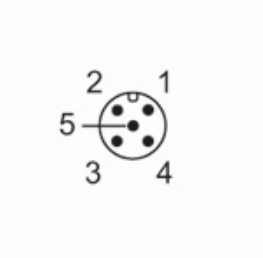
Items supplied	lock nuts: 2, stainless steel
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Remarks

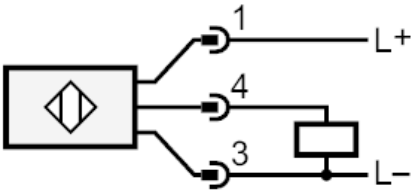
Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

Electrical connection - connector

Connector: 1 x M12; coding: A



Connection



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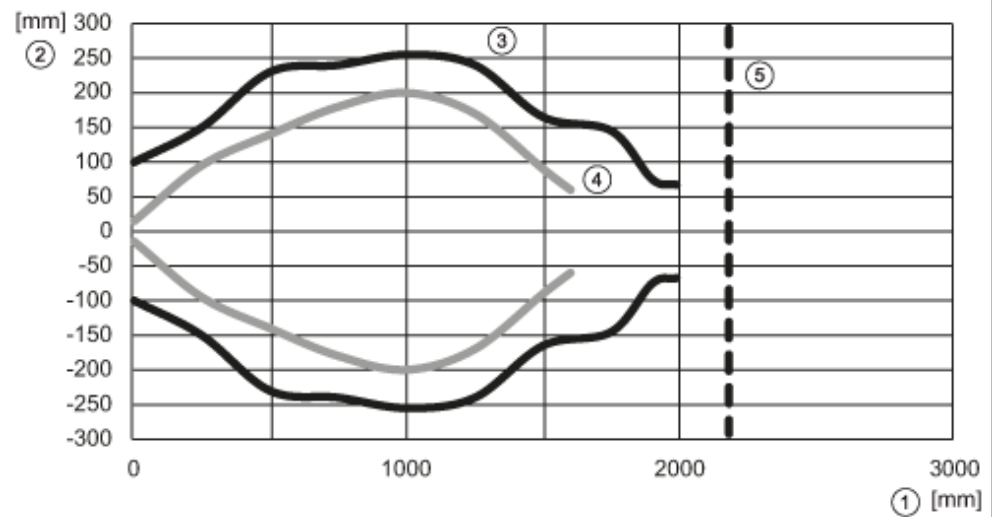


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Diagrams and graphs

response curve



- 1: distance
- 2: sound beam
- 3: Target 200 x 200 mm
- 4: Target Ø 25 mm
- 5: Reflector