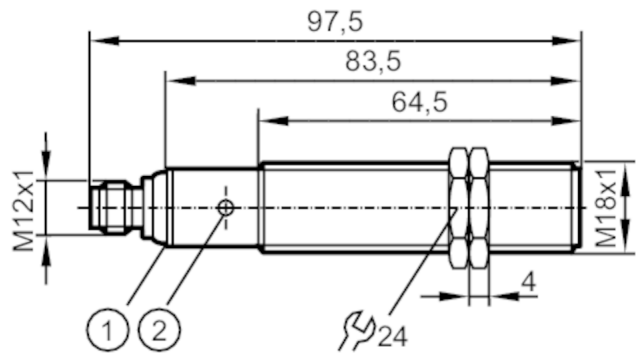


UGR500



Ultrasonic sensor

UGA01600EOKG/IO-LINK/US



- 1 LEDs
- 2 teach button



Product characteristics	
Housing	Threaded type
Electrical data	
Operating voltage [V]	10...30 DC; (cULus - Class 2 source required)
Current consumption [mA]	55
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	< 0.3
Converter frequency [kHz]	230
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 / closed; (configurable)
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
Monitoring range	
Sensing range [mm]	< 1600; (Target: 200 x 200 mm)
Angle of aperture cylindrical [°]	15; (±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 - 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 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	698	
Note		For further information please see the IODD PDF file at "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, 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]	163	
UL approval	Ta	-20...70 °C	
	voltage supply	Class 2	
	File number UL	E174191	

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Mechanical data		
Weight	[g]	101.5
Housing		Threaded type
Dimensions	[mm]	M18 x 1 / L = 97.5
Thread designation		M18 x 1
Material		stainless steel (1.4404 / 316L); PA; epoxy glass ceramics
Tightening torque	[Nm]	50

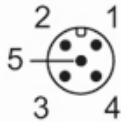
Displays / operating elements		
Display	Switching status	2 x LED, yellow
	echo	1 x LED, green
Teach function		yes

Accessories	
Items supplied	lock nuts: 2 x M18, stainless steel

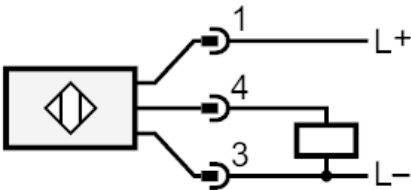
Remarks	
Remarks	cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection - connector

Connector: 1 x M12; coding: A



Connection



UGR500

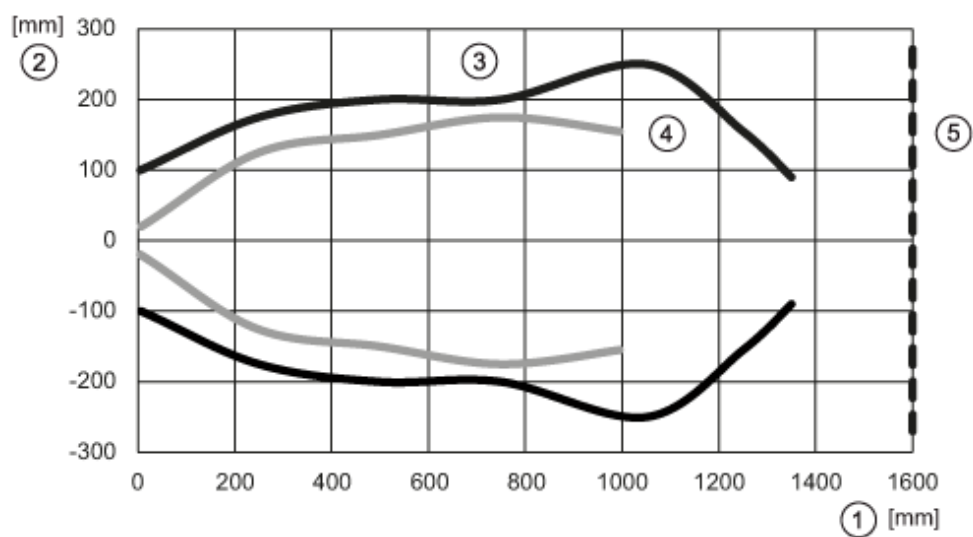
Ultrasonic sensor

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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