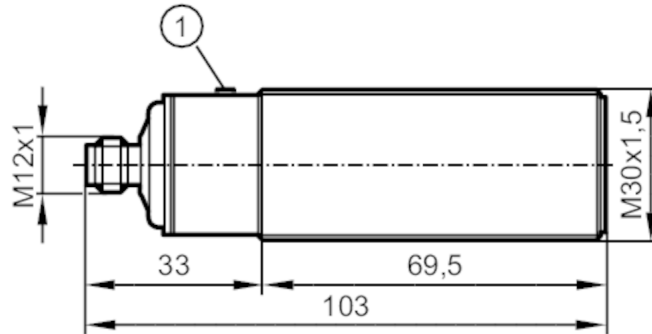


# UIT502



## Ultrasonic sensor

UIA03500E2KG/IO-Link/US



1 teach button



### Product characteristics

Electrical design	PNP
Output function	normally open / closed; (configurable)
Sensing range [mm]	250...3500; (Target: 200 x 200 mm)
Communication interface	IO-Link
Housing	Threaded type
Dimensions [mm]	M30 x 1.5 / L = 103

### Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 30
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	< 0.3
Converter frequency [kHz]	112

### Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
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### Outputs

Total number of outputs	2
Output signal	switching signal; analog signal; IO-Link
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]	1
Number of analog outputs	1
Analog voltage output [V]	0...10
Min. load resistance [Ω]	3000

# UIT502



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Short-circuit protection	yes								
Overload protection	yes								
<b>Monitoring range</b>									
Sensing range [mm]	250...3500; (Target: 200 x 200 mm)								
Blind zone [mm]	250								
Angle of aperture cylindrical [°]	12; (±2)								
Max. deviation from the 90° angle sensor/object [°]	± 4								
<b>Accuracy / deviations</b>									
Temperature compensation	yes								
Hysteresis [%]	< 3								
Switch-point drift [%]	-5...5								
Linearity error of analog output [%]	<3								
Repeatability	1 %								
Resolution [mm]	3								
Notes on the accuracy / deviation	The indicated values are reached after a warm-up time of min. 20 minutes								
<b>Reaction times</b>									
Response time [ms]	< 600; (analog 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 class	A								
Min. process cycle time [ms]	3.2								
IO-Link process data (cyclical)	<table border="1"> <thead> <tr> <th>Function</th> <th>bit length</th> </tr> </thead> <tbody> <tr> <td>process value</td> <td>16</td> </tr> <tr> <td>device status</td> <td>4</td> </tr> <tr> <td>binary switching information</td> <td>2</td> </tr> </tbody> </table>	Function	bit length	process value	16	device status	4	binary switching information	2
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	<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>1095</td> </tr> </tbody> </table>	Type of operation	DeviceID	default	1095				
Type of operation	DeviceID								
default	1095								
Note	For further information please see the IODD PDF file at "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, 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]	113
UL approval	Ta	-20...70 °C
	voltage supply	Class 2
	File number UL	E174191
Mechanical data		
Weight	[g]	241
Housing		Threaded type
Dimensions	[mm]	M30 x 1.5 / L = 103
Thread designation		M30 x 1.5
Material		stainless steel (1.4404 / 316L); PA; epoxy glass ceramics
Tightening torque	[Nm]	100
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 M30, stainless steel
Remarks		
Remarks		cULus - Class 2 source required
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12; coding: A		

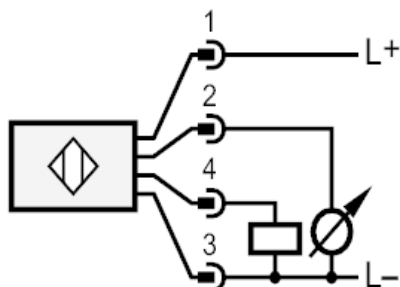




## Ultrasonic sensor

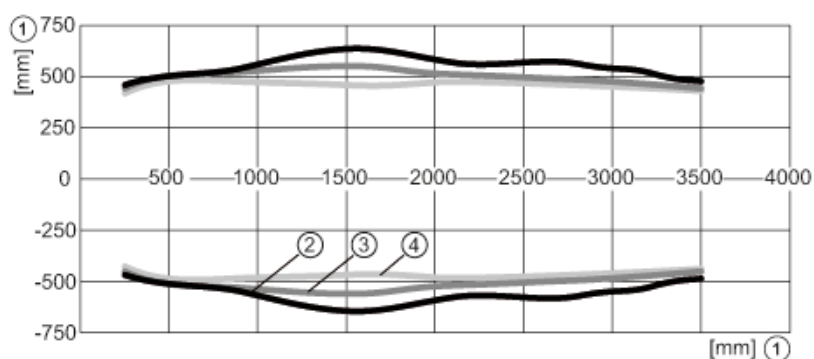
UIA03500E2KG/IO-Link/US

### Connection



4 IO-Link

### Diagrams and graphs



- 1 Distance
- 2 Standard sound cone
- 3 Medium sound cone
- 4 Narrow sound cone