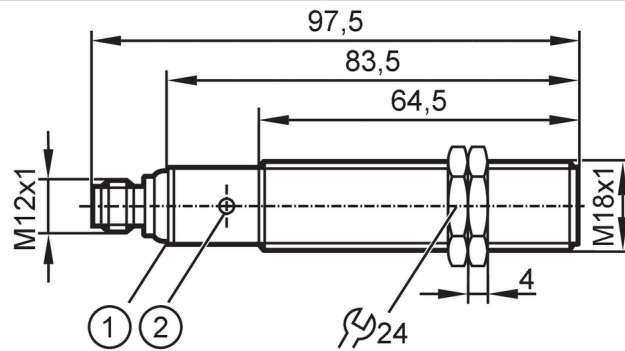


# UGR500



## Ultrasonic sensor

UGA01600EOKG/IO-LINK/US



- 1 LEDs
- 2 teach button



### Product characteristics

Housing	Threaded type
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### 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
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### 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	
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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 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)	<b>Function</b>	<b>bit length</b>
	process value	16
	device status	4
	binary switching information	2
IO-Link functions (acyclical)	application specific tag; operating hours counter	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	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

# UGR500



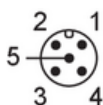
## Ultrasonic sensor

UGA01600EOKG/IO-LINK/US

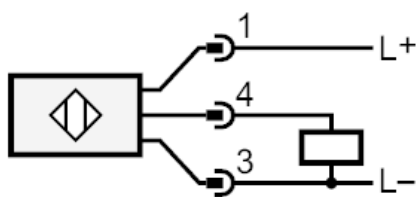
Mechanical data		
Weight	[g]	101.5
Housing		Threaded type
Dimensions	[mm]	M18 x 1 / L = 97.5
Thread designation		M18 x 1
Material		stainless steel (1.4404 / 316L); PA; epoxy glass ceramics
Tightening torque	[Nm]	50
Displays / operating elements		
Display	Switching status	2 x LED, yellow
	echo	1 x LED, 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

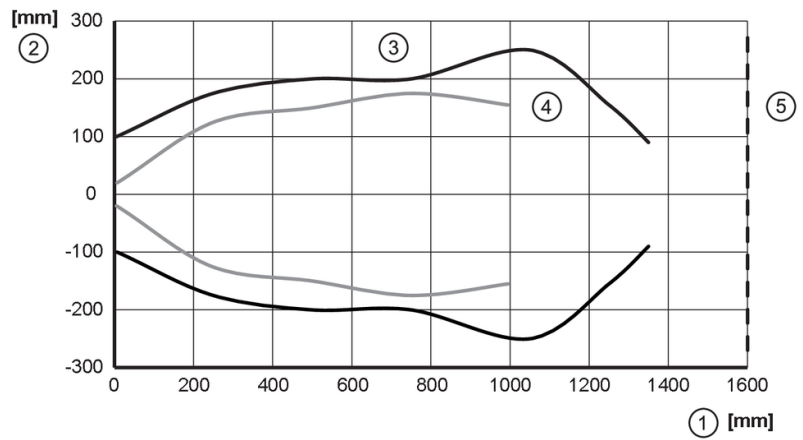
## Ultrasonic sensor

UGA01600EOKG/IO-LINK/US



### Diagrams and graphs

#### Response curve



- 1: Distance
- 2: sound beam
- 3: Target 200 x 200 mm
- 4: Target  $\varnothing$  25 mm
- 5: Reflector