



Ultrasonic sensor

UG-01600E1KG/IO-LINK/US



- 1 LEDs
- 2 teach button



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]	230

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1
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Outputs

Total number of outputs	2
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] 3
Number of analogue outputs	1
Analogue current output	[mA] 4...20
Max. load	[Ω] 500
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range	[mm] 150...1600
Blind zone	[mm] 150
Angle of aperture cylindrical	[°] 7; (±2)
Detection range hysteresis	[mm] < 1
Max. deviation from the 90° angle sensor/object	[°] ± 4



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Accuracy / deviations		
Notes on the accuracy / deviation	The indicated values are reached after a warm-up time of 20 minutes.	
Temperature compensation	yes	
Hysteresis [%]	1	
Switch point drift [%]	-2...2	
Linearity error of analogue output [%]	1	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor: Process Data Variable; Device Identification	
SIO mode	yes	
Required master port type	A	
Min. process cycle time [ms]	3.2	
Operating conditions		
Ambient temperature [°C]	-20...70	
Protection	IP 67	
Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / plastics
		8 kV AD / metal
	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	yes
MTTF [years]	144	
Mechanical data		
Weight [g]	66.4	
Housing	threaded type	
Dimensions [mm]	M18 x 1 / L = 97.5	
Thread designation	M18 x 1	
Materials	PBT; PA; epoxy glass ceramics	
Displays / operating elements		
Display	switching status	2 LED, yellow
	echo	1 LED, green
Accessories		
Accessories (supplied)	lock nuts: 2, plastics	
	rubber washers: 2	



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Remarks

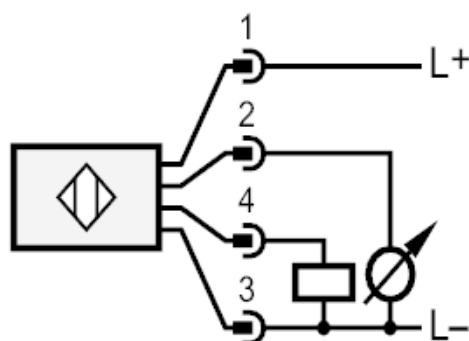
Remarks	operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12



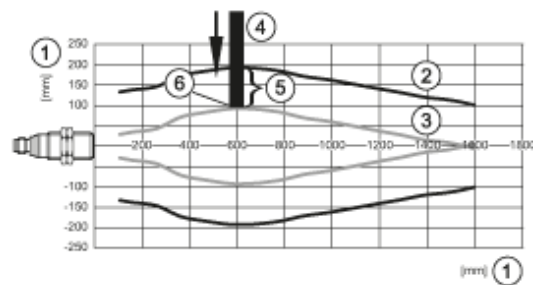
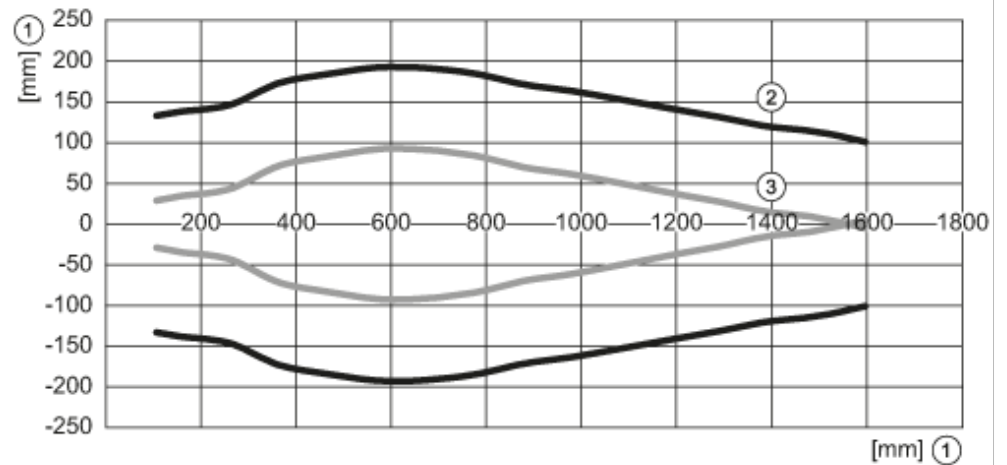
Connection



Pin 4 = IO-Link



Diagrams and graphs



- 1: distance
- 2: Detection zone
- 3: switch-on/switch-off graph
- 4: Target 200 x 200 mm
- 5: 50 % of the target in the detection zone
- 6: switch point