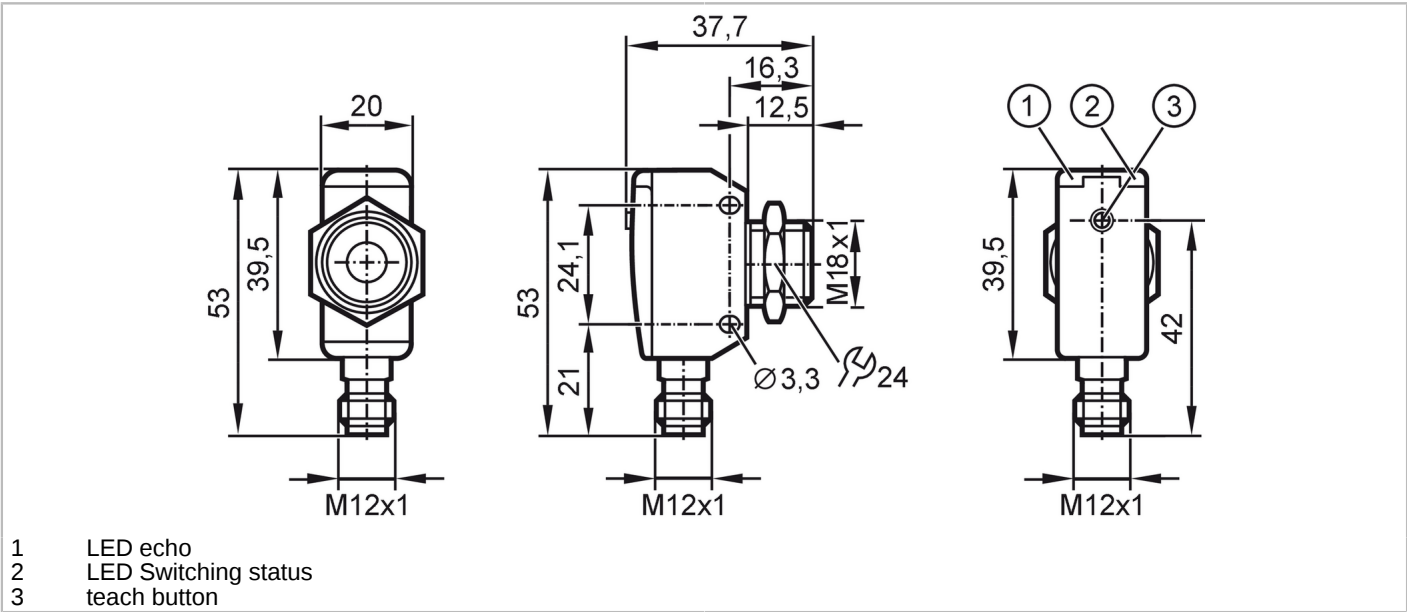


UGT594



Ultrasonic sensor

UGQ01200EOKG/IO-Link/US



Product characteristics	
Electrical design	PNP
Output function	normally open / closed; (configurable)
Sensing range [mm]	80...1200; (Target: 200 x 200 mm)
Communication interface	IO-Link
Housing	rectangular with M18 thread
Dimensions [mm]	53 x 20 x 37.7
Electrical data	
Operating voltage [V]	10...30 DC; (cULus - Class 2 source required)
Current consumption [mA]	< 35
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 / closed; (configurable)
Max. voltage drop switching output DC [V]	2.2
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	5
Short-circuit protection	yes

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Ultrasonic sensor

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Overload protection	yes	
Monitoring range		
Sensing range	[mm]	80...1200; (Target: 200 x 200 mm)
Blind zone	[mm]	80
Angle of aperture cylindrical	[°]	14; (±2)
Max. deviation from the 90° angle sensor/object	[°]	± 4
Accuracy / deviations		
Temperature compensation	yes	
Hysteresis	[%]	< 1
Switch-point drift	[%]	-2...2
Linearity error of analog output	[%]	≤ 1
Repeatability IO-Link	[%]	< 0,7
Repeatability	1 %	
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]	16
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	888
Note	For further information please see the IODD PDF file at "Downloads"	
Operating conditions		
Ambient temperature	[°C]	-20...70
Storage temperature	[°C]	-30...80

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Protection	IP 67
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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]		201
UL approval	Ta	-20...70 °C
	voltage supply	Class 2
	File number UL	E174191

Mechanical data

Weight [g]	99
Housing	rectangular with M18 thread
Dimensions [mm]	53 x 20 x 37.7
Thread designation	M18 x 1
Material	stainless steel (630/1.4542/17-4 PH); PBT; PA; epoxy glass ceramics
Tightening torque [Nm]	50

Displays / operating elements

Display	Switching status	1 x LED, yellow
	echo	1 x LED, green
Teach function		yes

Accessories

Items supplied	lock nuts: 1 x M18, stainless steel
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Remarks

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

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4



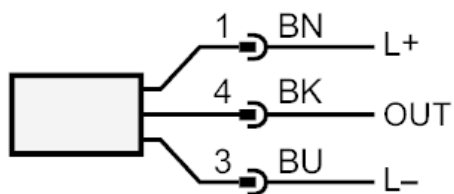
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Ultrasonic sensor

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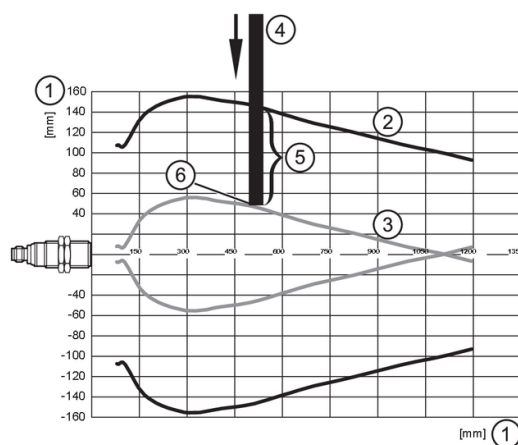
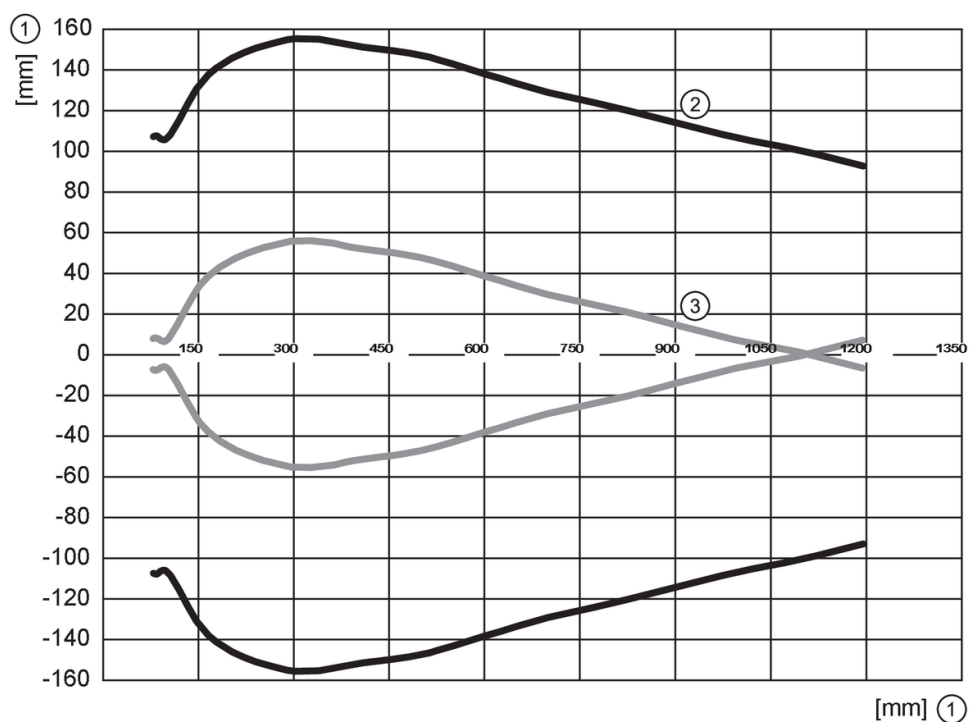
Connection



OUT: Switching output / IO-Link



Diagrams and graphs



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