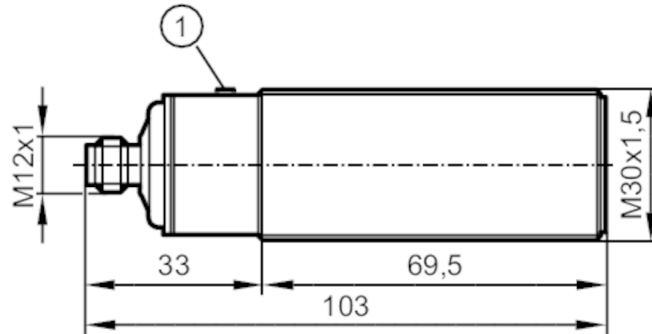


# UIT510



## Ultrasonic diffuse reflection sensor

UIA03500F1KG/US



1 teach button



### Product characteristics

Electrical design	NPN
Output function	normally open / normally closed; (parameterisable + 1x current output)
Sensing range [mm]	250...3500; (Target: 200 x 200 mm)
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 analogue outputs: 1
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### Outputs

Total number of outputs	2
Electrical design	NPN
Number of digital outputs	1
Output function	normally open / normally closed; (parameterisable + 1x current output)
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 analogue outputs	1
Analogue current output [mA]	4...20
Max. load [ $\Omega$ ]	500
Short-circuit protection	yes
Overload protection	yes

# UIT510



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Detection zone		
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
Accuracy / deviations		
Temperature compensation		yes
Hysteresis	[%]	< 3
Switch point drift	[%]	-5...5
Linearity error of analogue output	[%]	<3
Notes on the accuracy / deviation		The indicated values are reached after a warm-up time of min. 20 minutes
Repeatability		1 %
Resolution	[mm]	3
Response times		
Response time	[ms]	< 600; (analogue output)
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, oscillation period 5 min., 30 min. per axis at 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]	111
UL approval	Ta	-20...70 °C
	voltage supply	Class 2
	File number UL	E174191
Mechanical data		
Weight	[g]	225
Housing		threaded type
Dimensions	[mm]	M30 x 1.5 / L = 103
Thread designation		M30 x 1.5
Materials		stainless steel (1.4404 / 316L); PA; epoxy glass ceramics
Tightening torque	[Nm]	100

# UIT510



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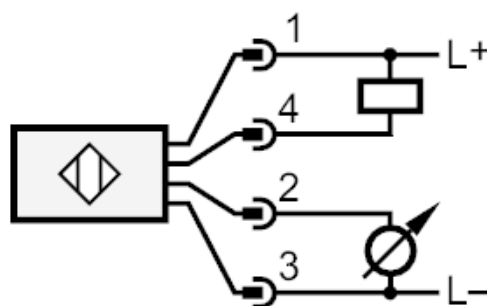
Displays / operating elements		
Display	switching status	2 x LED, yellow
	echo	1 x LED, green
Teach function	yes	
Accessories		
Accessories (supplied)	lock nuts: 2, stainless steel	
Remarks		
Remarks	operating voltage "supply class 2" according to cULus	
Pack quantity	1 pcs.	

### Electrical connection

Connector: 1 x M12



### Connection

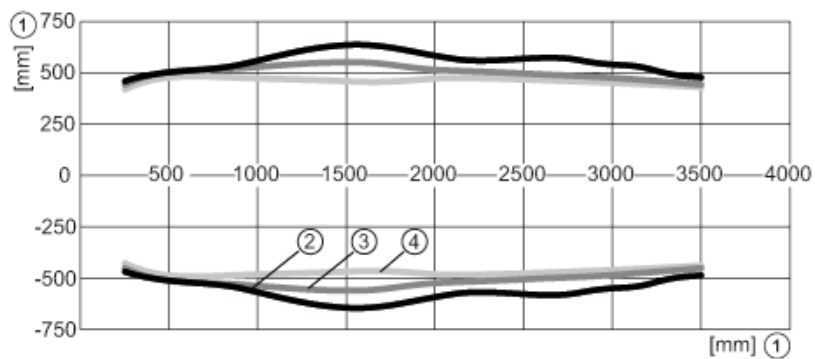




## Ultrasonic diffuse reflection sensor

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### Diagrams and graphs



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