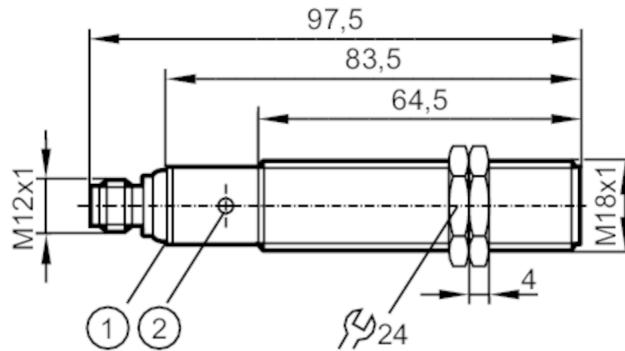


UGR503



Ultrasonic sensor

UGA02200FOKG/US



- 1 LEDs
- 2 teach button



Product characteristics

Electrical design	NPN
Output function	normally open / normally closed; (parameterisable)
Sensing range [mm]	Target: 200 x 200 mm
Housing	threaded type
Dimensions [mm]	M18 x 1 / L = 97.5

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]	200

Inputs / outputs

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

Total number of outputs	1
Electrical design	NPN
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]	2
Short-circuit protection	yes
Overload protection	yes

Detection zone

Sensing range [mm]	Target: 200 x 200 mm
Angle of aperture cylindrical [°]	14; (±2)
Monitoring range final value [mm]	2200

UGR503



Ultrasonic sensor

UGA02200FOK6/US

Accuracy / deviations		
Temperature compensation		yes
Hysteresis	[%]	< 2
Switch point drift	[%]	-2...2
Notes on the accuracy / deviation	The indicated values are reached after a warm-up time of min. 20 minutes	
Repeatability		1 %
Resolution	[mm]	1
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]	159
UL approval	Ta	-20...70 °C
	voltage supply	Class 2
	File number UL	E174191
Mechanical data		
Weight	[g]	102
Housing		threaded type
Dimensions	[mm]	M18 x 1 / L = 97.5
Thread designation		M18 x 1
Materials		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, stainless steel
Remarks		
Remarks		operating voltage "supply class 2" according to cULus
Pack quantity		1 pcs.
Electrical connection - connector		
Connector: 1 x M12; coding: A		

UGR503

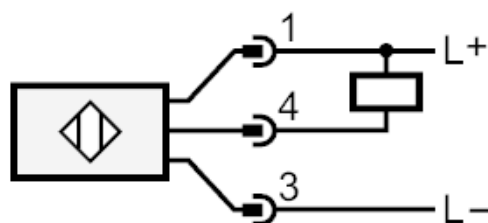


Ultrasonic sensor

UGA02200FOKG/US

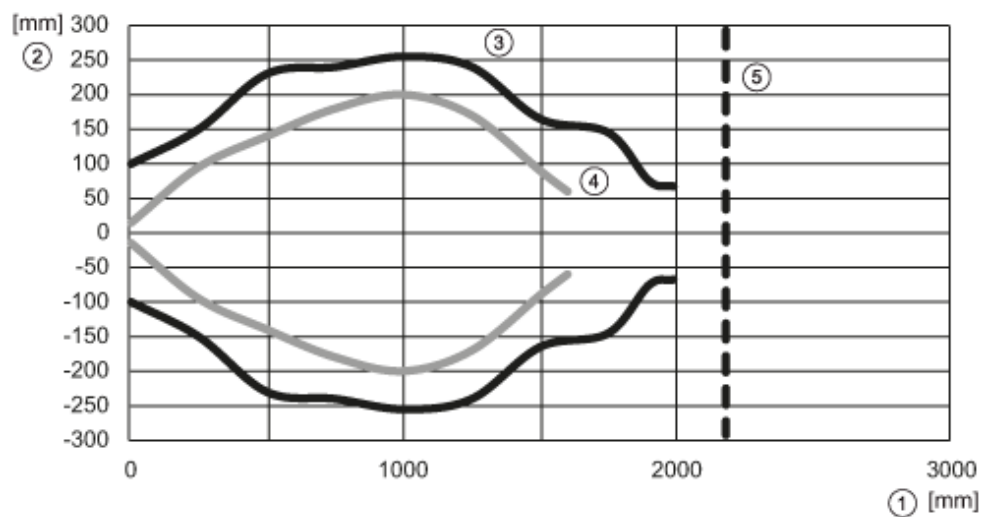


Connection



Diagrams and graphs

response curve



- 1: distance
- 2: sound beam
- 3: Target 200 x 200 mm
- 4: Target Ø 25 mm
- 5: Reflector