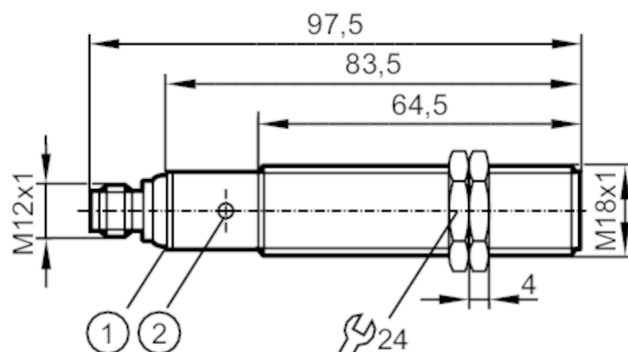


UGR502

Ultrasonic sensor

UGA01600FOKG/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	NPN
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 %

UGR502



Ultrasonic sensor

UGA01600FOKG/US

Resolution	[mm]	1	
Notes on the accuracy / deviation		The indicated values are reached after a warm-up time of min. 20 minutes	
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]	145	
UL approval	Ta	-20...70 °C	
	voltage supply	Class 2	
	File number UL	E174191	
Mechanical data			
Weight	[g]	101	
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, stainless steel	
Remarks			
Remarks		cULus - Class 2 source required	
Pack quantity		1 pcs.	

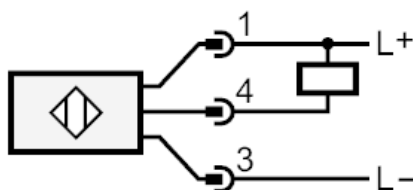


Electrical connection - connector

Connector: 1 x M12; coding: A

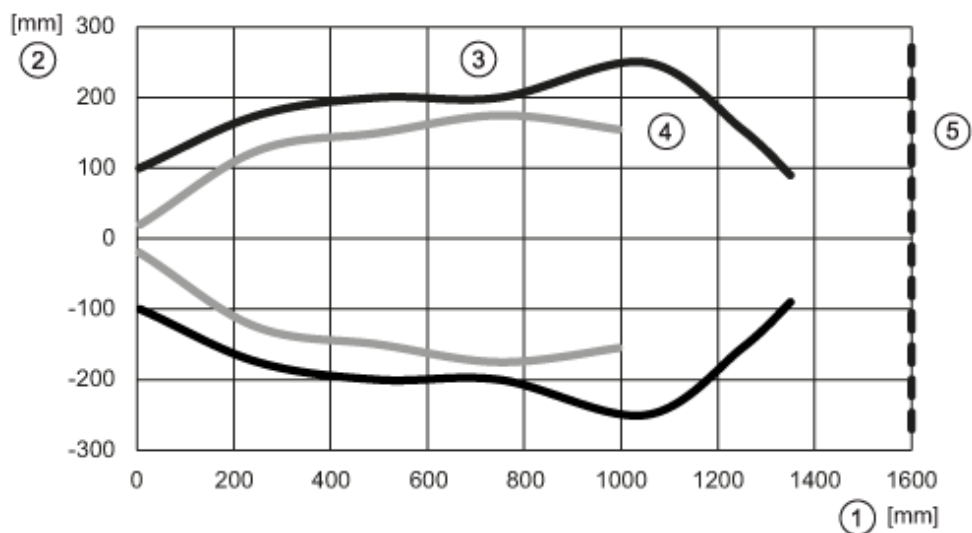


Connection



Diagrams and graphs

Response curve



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