Distance Sensor

U2GT002



- 2 switching outputs
- External teach-in
- FDA compliant and Ecolab certified
- Hygienic design makes it easy to clean
- IO-Link 1.1
- Stainless steel housing for harsh environments

These ultrasonic sensors evaluate the sound reflected from the object. They can detect almost any object and are especially well suited for monitoring fill levels of liquids and bulk goods and for detecting transparent objects regardless of the material, state, color or transparency. The measured value can be read out via IO-Link, and the sensor can be optimally adapted to the application. The stainless steel housing in hygienic design enables use in demanding environments such as washdown and hygienic areas. The sensor can be used both in reflex mode operation, and as an ultrasonic through-beam sensor.

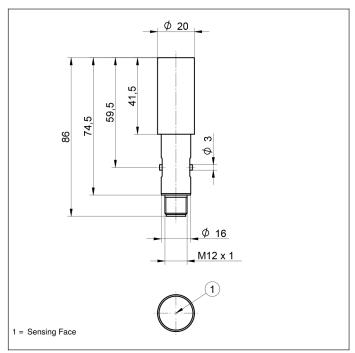
Working range, reflex sensor Working range, through-beam sensor Setting Range Reproducibility maximum Linearity Deviation Resolution Ultrasonic Frequency Opening Angle Service Life (T = +25 °C) Switching Hysteresis Electrical Data Supply Voltage Current Consumption (Ub = 24 V) Switching frequency, reflex sensor Switching frequency, reflex sensor Switching frequency, through-beam sensor Response time, through-beam sensor Temperature Drift Temperature Range Number of Switching Outputs Switching Output Voltage Drop Switching Output Voltage Drop Switching Output Voltage Drop Switching Output/Switching Current Data Storage Protection Class HII Mechanical Data Setting Method Setting Met		
Working range, through-beam sensor 1502600 mm Setting Range 1501300 mm Reproducibility maximum 8 mm 8 mm Resolution 1 mm Ultrasonic Frequency 205 kHz Opening Angle < 13° Service Life (T = +25°C) 100000 h Switching Hysteresis 2 % * Electrical Data Supply Voltage 1830 V DC Current Consumption (Ub = 24 V) < 35 mA Switching frequency, reflex sensor 10 Hz Switching frequency, through-beam sensor 10 Hz Response time, reflex sensor 50 ms Response time, through-beam sensor 50 ms Response time, through-beam sensor 50 ms Temperature Drift < 10 % 3060°C Number of Switching Outputs 2 Switching Output Voltage Drop < 2,5 V Switching Output Voltage Drop < 2	Ultrasonic Data	
Setting Range 1501300 mm Reproducibility maximum 8 mm Linearity Deviation 8 mm Ultrasonic Frequency 205 kHz Opening Angle 13 ° Service Life (T = +25 °C) 100000 h Switching Hysteresis 2 % * Electrical Data Supply Voltage 1830 V DC Current Consumption (Ub = 24 V) 35 mA Switching frequency, reflex sensor 10 Hz Switching frequency, through-beam sensor 50 ms Response time, through-beam sensor 50 ms Temperature Drift < 10 % Temperature Range 3060 °C Switching Output Voltage Drop < 2,5 V Switching Output Voltage Drop < 2,5 V Switching Output Voltage Current 100 mA Short Circuit Protection yes Reverse Polarity Protection yes Reverse Polarity Protection yes Protection Class III Mechanical Data Setting Method IO-Link Setting Method Voltage Drop Stainless steel, V4A United Setting Method Protection Peg8/IP69K Connection Diagram No. Suitable Connection Equipment No. Suitable Connection Equipment No. Suitable Mounting Technology No. 100 Link Dechanical Data Settor Connection Equipment No. Suitable Mounting Technology No.	Working range, reflex sensor	1501300 mm
Reproducibility maximum	Working range, through-beam sensor	1502600 mm
Linearity Deviation 8 mm 1 mm 1 mm 205 kHz 206 kHz 205 kHz 206 kHz 206 kHz 207 kHz 2	Setting Range	1501300 mm
Name	Reproducibility maximum	8 mm
Ultrasonic Frequency 205 kHz Opening Angle < 13 °	Linearity Deviation	8 mm
Opening Angle < 13 °	Resolution	1 mm
Service Life (T = +25 °C) 100000 h Switching Hysteresis 2 % * Electrical Data 1830 V DC Current Consumption (Ub = 24 V) < 35 mA	Ultrasonic Frequency	205 kHz
Switching Hysteresis Electrical Data Supply Voltage Current Consumption (Ub = 24 V) Switching frequency, reflex sensor Switching frequency, through-beam sensor Response time, reflex sensor Response time, through-beam sensor Temperature Drift Temperature Bange Number of Switching Outputs Switching Output/Switching Current Short Circuit Protection Neverse Polarity Protection Ves Protection Class III Mechanical Data Setting Method Setting Method Setting Method Housing Material Setting Method Setting Method Setting Method Setting Method Possible Advance Sensor Profile Sensing face Sensing face Safety-relevant Data MTTFd (EN ISO 13849-1) Error Output Suitable Connection Equipment No. Suitable Mounting Technology No.	Opening Angle	< 13 °
Electrical Data Supply Voltage 1830 V DC Current Consumption (Ub = 24 V) < 35 mA Switching frequency, reflex sensor 10 Hz Switching frequency, through-beam sensor 50 ms Response time, through-beam sensor 50 ms Response time, through-beam sensor 50 ms Temperature Drift < 10 % Temperature Range -3060 °C Number of Switching Outputs 2 Switching Output Voltage Drop < 2,5 V Switching Output/Switching Current 100 mA Short Circuit Protection yes Reverse Polarity Protection yes Overload Protection yes Ill Mechanical Data Setting Method IO-Link Setting Method ISetting Method ISetting Method ISensing face Stainless steel, V4A (1,4404 / 316L) Sensing face IP68/IP69K Connection Safety-relevant Data MTTFd (EN ISO 13849-1) 1452,07 a Error Output PNP NO IO-Link Connection Diagram No. 3117 Suitable Connection Equipment No. 2 35 Suitable Mounting Technology No. 140	Service Life (T = +25 °C)	100000 h
Supply Voltage Current Consumption (Ub = 24 V) Switching frequency, reflex sensor Switching frequency, through-beam sensor Response time, reflex sensor Response time, through-beam sensor Temperature Drift Temperature Range Number of Switching Outputs Switching Output Voltage Drop Switching Output/Switching Current Short Circuit Protection Ves Reverse Polarity Protection Overload Protection Interface Setting Method Setting Method Setting Method Setting Method Setting Material Sensing face Degree of Protection Safety-relevant Data MTTFd (EN ISO 13849-1) Error Output Suitables Mounting Technology No. 10 Hz	Switching Hysteresis	2 % *
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Response time, reflex sensor Response time, through-beam sensor Temperature Drift Temperature Range Number of Switching Outputs Switching Output Voltage Drop Switching Output/Switching Current Short Circuit Protection Peverse Polarity Protection Overload Protection Interface Protection Class III Mechanical Data Setting Method Setting Method Setting Method Setting Method Foreign Foreign Stainless steel, V4A Connection Safety-relevant Data MTTFd (EN ISO 13849-1) Error Output PNP NO IO-Link Connection Equipment No. Suitable Connection Equipment No. Suitable Connection Equipment No. Suitable Mounting Technology No.	Switching frequency, reflex sensor	10 Hz
Response time, through-beam sensor Temperature Drift	Switching frequency, through-beam sensor	10 Hz
Temperature Drift < 10 % Temperature Range	Response time, reflex sensor	50 ms
Temperature Range -3060 °C Number of Switching Outputs 2 Switching Output Voltage Drop <2,5 V Switching Output/Switching Current 100 mA Short Circuit Protection yes Reverse Polarity Protection yes Overload Protection yes Interface IO-Link V1.1 Smart Sensor Profile Data Storage yes Protection Class III Mechanical Data Setting Method IO-Link Setting Method ITeach input (for switching output) Housing Material Stainless steel, V4A (1,4404 / 316L) Sensing face Stainless steel, V4A Degree of Protection IP68/IP69K Connection M12 × 1; 4/5-pin Safety-relevant Data MTTFd (EN ISO 13849-1) 1452,07 a Error Output PNP NO IO-Link Connection Equipment No. Suitable Connection Equipment No. Suitable Mounting Technology No.	Response time, through-beam sensor	50 ms
Number of Switching Outputs Switching Output Voltage Drop Switching Output/Switching Current Short Circuit Protection Reverse Polarity Protection Overload Protection July Sessor Profile Data Storage Protection Class III Mechanical Data Setting Method Setting Method Housing Material Sensing face Degree of Protection Safety-relevant Data MTTFd (EN ISO 13849-1) Error Output PNP NO IO-Link Connection Equipment No. Suitable Connection Equipment No. Suitable Mounting Technology No.	Temperature Drift	< 10 %
Number of Switching Outputs Switching Output Voltage Drop Switching Output/Switching Current Short Circuit Protection Reverse Polarity Protection Overload Protection Just Storage Protection Class III Mechanical Data Setting Method Setting Method Setting Material Housing Material Sensing face Degree of Protection Safety-relevant Data MTTFd (EN ISO 13849-1) Error Output PNP NO IO-Link 100 mA	Temperature Range	-3060 °C
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Degree of Protection IP68/IP69K Connection M12 x 1; 4/5-pin Safety-relevant Data MTTFd (EN ISO 13849-1) 1452,07 a Error Output ● PNP NO IO-Link Connection Diagram No. 317 Suitable Connection Equipment No. 2 35 Suitable Mounting Technology No. 140	<u> </u>	(1.4404 / 316L) Stainless steel V4A
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MTTFd (EN ISO 13849-1) Error Output PNP NO IO-Link Connection Diagram No. Suitable Connection Equipment No. Suitable Mounting Technology No.		W12 1, 7/0 PIII
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PNP NO IO-Link Connection Diagram No. Suitable Connection Equipment No. Suitable Mounting Technology No. 140		1402,07 4
IO-Link Connection Diagram No. Suitable Connection Equipment No. Suitable Mounting Technology No. 140		
Connection Diagram No. Suitable Connection Equipment No. Suitable Mounting Technology No. 317 2 35 Suitable Mounting Technology No.		
Suitable Connection Equipment No. 2 35 Suitable Mounting Technology No. 140	IU-LINK	
Suitable Mounting Technology No. 140	Connection Diagram No.	
	Suitable Connection Equipment No.	
* Referring to the switching distance, at least 2 mm.	Suitable Mounting Technology No.	140
	* Referring to the switching distance, at least 2 mm.	

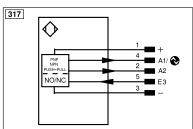
Complementary Products

IO-Link Master

Software

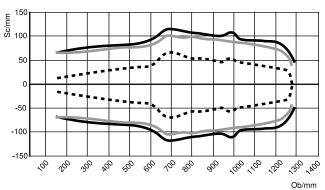






Characteristic response curve

Characteristic curves show the position of the center or the front edge of the measured object (100 × 100 mm plate) at the time of switching. U2GT002/U2GT004



Ob = Object

Sc = Sonic cone width

 Standard sonic cone (center of the measured object)

Extra-narrow sonic cone (center of the measured object)

measured object)

Standard sonic cone
(front edge of the
measured object)











