Distance Sensor

U2GT003

- **Digital and analog output**
- **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**

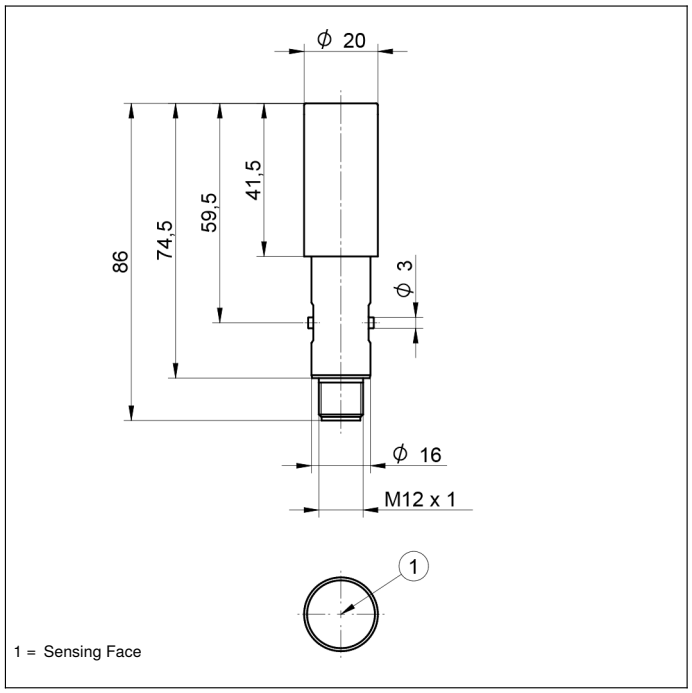
These ultrasonic sensors evaluate the sound reflected from the object. They can detect almost any object and are especially well suited for monitoring fill levels of liquids and bulk goods and for detecting transparent objects regardless of the material, state, color or transparency. The measured value 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.

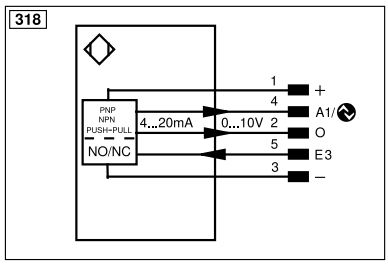
Ultrasonic Data	
Working range, reflex sensor	50...600 mm
Working range, through-beam sensor	50...1200 mm
Setting Range	50...600 mm
Reproducibility maximum	4 mm
Linearity Deviation	4 mm
Resolution	1 mm
Ultrasonic Frequency	260 kHz
Opening Angle	< 13 °
Service Life (T = +25 °C)	100000 h
Switching Hysteresis	2 % *
Electrical Data	
Supply Voltage	18...30 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
Temperature Drift	< 10 %
Temperature Range	-30...60 °C
Number of Switching Outputs	1
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
Analog Output	4...20 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Reverse Polarity and 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	Teach-In
Housing Material	Stainless steel, V4A (1.4404 / 316L)
Sensing face	Stainless steel, V4A
Degree of Protection	IP68/IP69K
Connection	M12 × 1; 4/5-pin
Ecolab	yes
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1192,59 a
Error Output	●
Analog Output	●
IO-Link	●
Connection Diagram No.	318
Suitable Connection Equipment No.	2 35
Suitable Mounting Technology No.	140

* Referring to the switching distance, at least 2 mm.

Complementary Products

IO-Link Master
Software

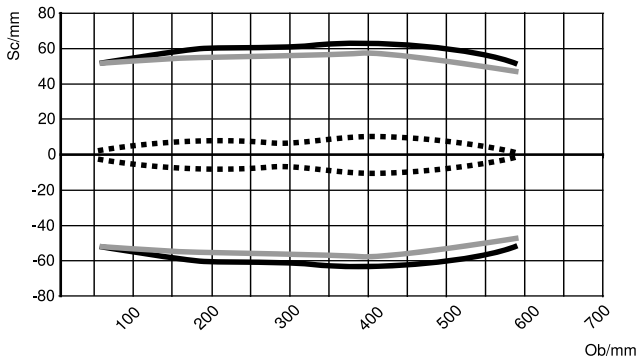




Characteristic response curve

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.

U2GT001/U2GT003



Ob = Object

Sc = Sonic cone width

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