

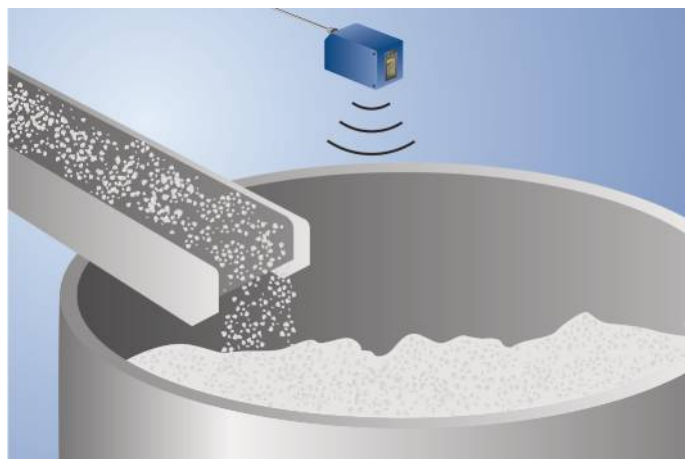
# Distance Sensor

## UMS603U035



- Digital and analog output
- Menu-driven settings
- Synchronous and multiplex mode
- Temperature drift eliminable

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. The sensor detects objects regardless of material, state of aggregation, color, or degree of transparency. The graphics display allows for easy, menu-driven sensor setup. Convenient parametrization and quick diagnosis are possible via the IO-Link interface. The sensor can only be used in reflex mode operation.



### Ultrasonic Data

Working Range	300...6000 mm
Measuring Range	5700 mm
Reproducibility maximum	5 mm
Linearity Deviation	20 mm
Resolution	1 mm
Ultrasonic Frequency	75 kHz
Opening Angle	< 14 °
Service Life (T = +25 °C)	100000 h
Switching Hysteresis	30 mm

### Electrical Data

Supply Voltage	18...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 50 mA
Switching Frequency	1,5 Hz
Response Time	< 334 ms
Temperature Range	-30...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Analog Output	4...20 mA
Synchronous Mode	up to 40 sensors
Multiplex Mode	up to 16 sensors
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	IO-Link V1.0
Protection Class	III

### Mechanical Data

Setting Method	Menu (OLED)
Housing Material	Epoxy resin/glass bubble mixture
Housing Material	Plastic, PBT
Housing Material	Plastic, PU
Housing Material	Silicone
Sensing face	Plastic, ABS
Degree of Protection	IP67
Connection	M12 × 1; 4/5-pin

### Safety-relevant Data

MTTFd (EN ISO 13849-1)	493,35 a
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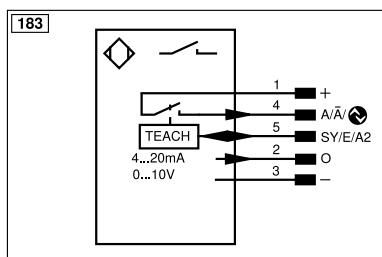
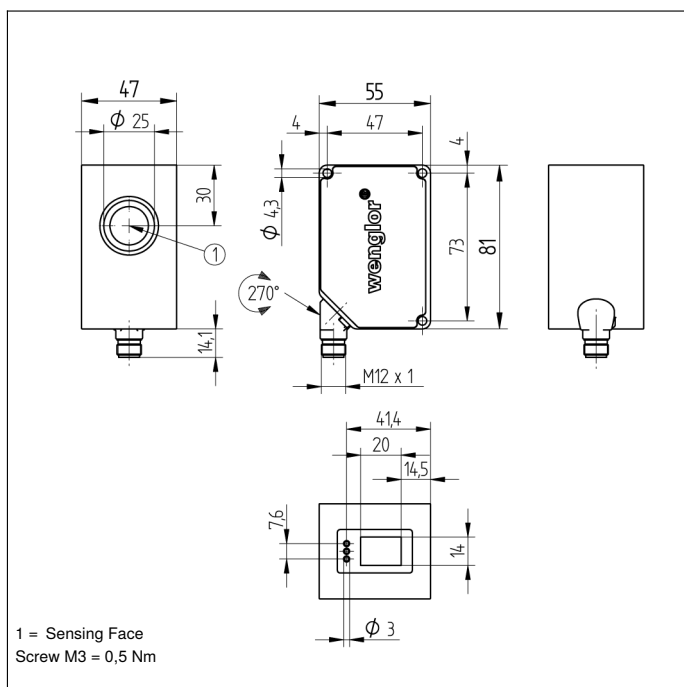
### Function

Selectable menu language	yes
Password Protection	yes
Error Output	●
PNP NO	●
Analog Output	●
IO-Link	●
Connection Diagram No.	183
Control Panel No.	X2
Suitable Connection Equipment No.	2   35
Suitable Mounting Technology No.	340

Display brightness may decrease with age. This does not result in any impairment of the sensor function.

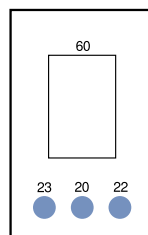
### Complementary Products

Analog Evaluation Unit AW02
IO-Link Master
PNP-NPN Converter BG2V1P-N-2M
Software



## Ctrl. Panel

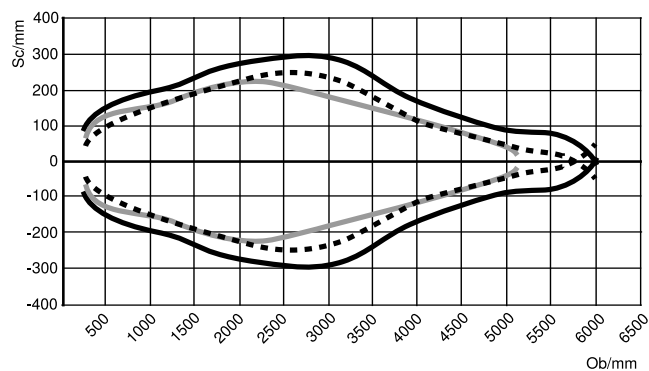
X2



20 = Enter key  
22 = Up key  
23 = Down key  
60 = display

## 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.  
UMS603U035



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)

