Distance Sensor

UMS303U035

- ● **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, menudriven sensor setup. Convenient parametrization and quick diagnosis are possible via the IO-Link interface. The sensor can only be used in reflex mode operation.
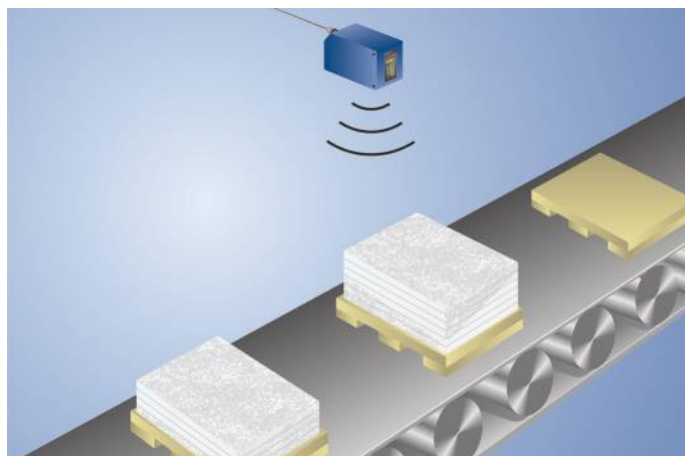
Ultrasonic Data	
Working Range	200...3000 mm
Measuring Range	2800 mm
Reproducibility maximum	2 mm
Linearity Deviation	4 mm
Resolution	0,3 mm
Ultrasonic Frequency	120 kHz
Opening Angle	< 14 °
Service Life (T = +25 °C)	100000 h
Switching Hysteresis	15 mm
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 50 mA
Switching Frequency	3 Hz
Response Time	< 167 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	Plastic, ABS
Sensing face	Epoxy resin/glass bubble mixture
Sensing face	Plastic, PBT
Sensing face	Silicone
Degree of Protection	IP67
Connection	M12 × 1; 4/5-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	513,14 a
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.
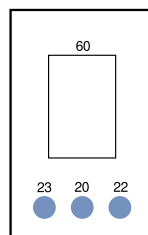
Complementary Products

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

![wenglor - the innovative family logo]
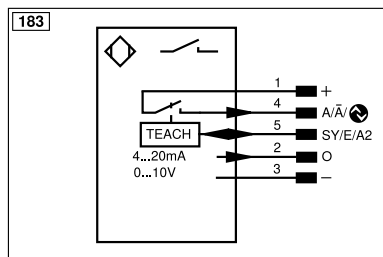
Ctrl. Panel

X2
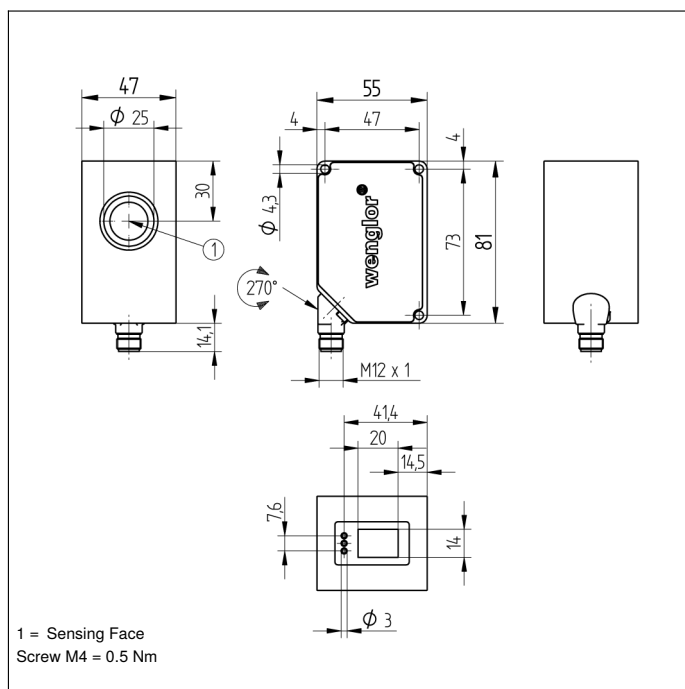

```
        60
  23    20    22
  ●     ●     ●
```

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

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1 = Sensing Face
Screw M4 = 0.5 Nm

183

TEACH
4...20mA
0...10V

1 +
4 A/Ā/
5 SY/E/A2
2 O
3 −

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.

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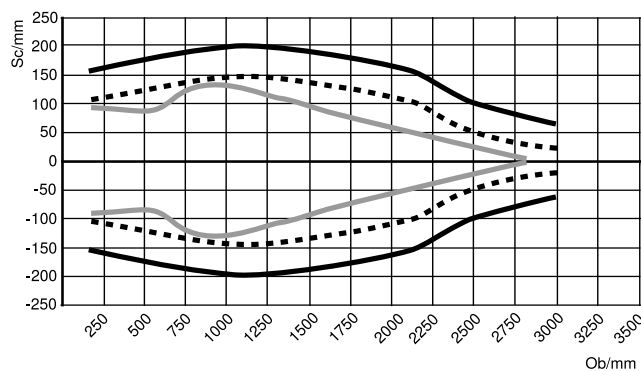
Ob = Object

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)