

Distance Sensor

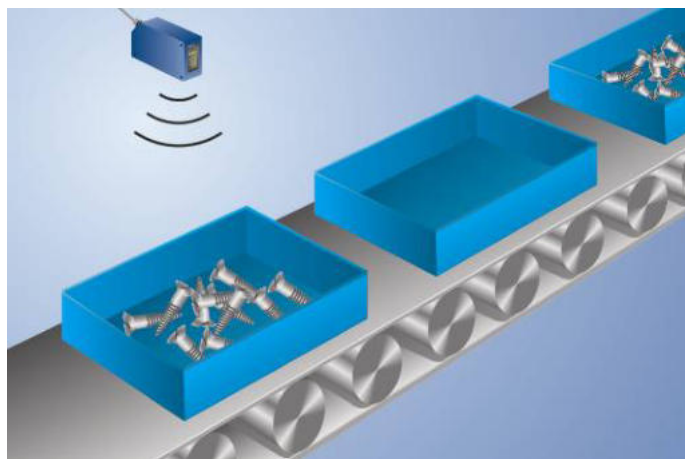
UMS123U035

Part Number



- 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.



Technical Data

Ultrasonic Data	
Working Range	100...1200 mm
Measuring Range	1100 mm
Reproducibility maximum	1 mm
Linearity Deviation	4 mm
Resolution	0,2 mm
Ultrasonic Frequency	225 kHz
Opening Angle	< 12 °
Service Life (T = +25 °C)	100000 h
Switching Hysteresis	5 mm

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 30 mA
Switching Frequency	7 Hz
Response Time	< 72 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
Degree of Protection	IP67
Connection	M12 × 1; 4/5-pin

Function	
Selectable menu language	yes
Password Protection	yes

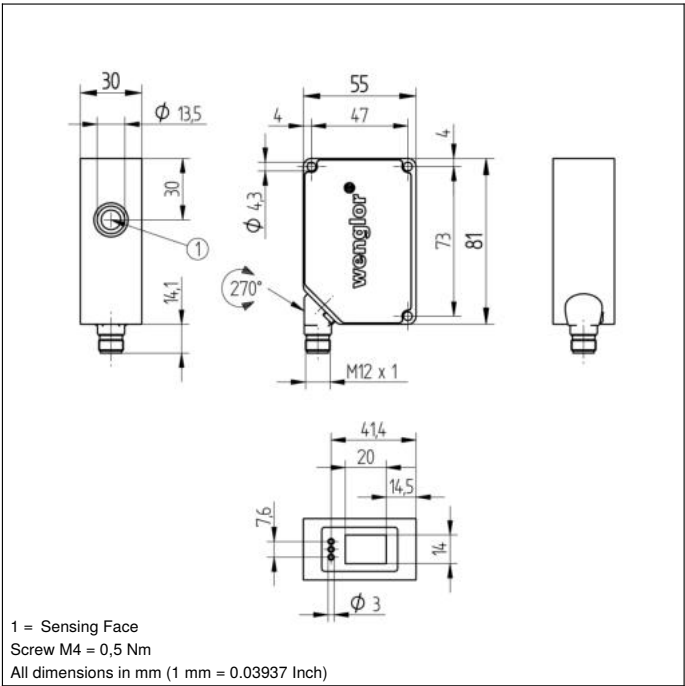
Error Output	●
PNP NO	●
Analog Output	●
IO-Link	●

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.

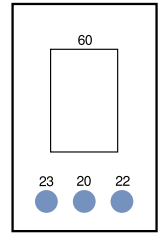
Complementary Products

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

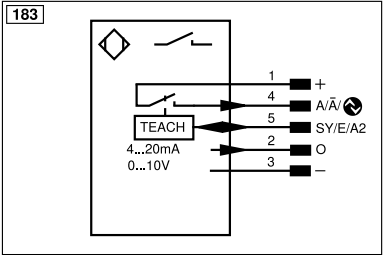


Ctrl. Panel

X2



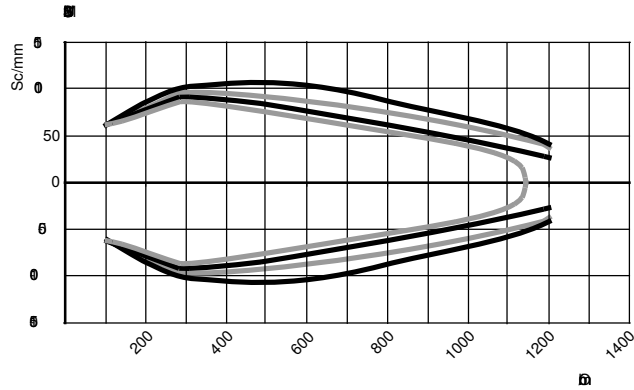
20 = Enter key
22 = Up key
23 = Down key
60 = display



Legend			
+	Supply Voltage +	nc	Not connected
-	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	W-	Ground for the Trigger Input
V	Contamination/Error Output (NO)	O	Analog Output
ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output
E	Input (analog or digital)	BZ	Block Discharge
T	Teach Input	Amv	Valve Output
Z	Time Delay (activation)	a	Valve Control Output +
S	Shielding	b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY-	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	S+	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
IO-Link		Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
OSSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contact Monitoring
PT	Platinum measuring resistor	ENARs422	Encoder A/Ā (TTL)
		ENBrs422	Encoder B/B̄ (TTL)
		ENA	Encoder A
		ENb	Encoder B
		AMIN	Digital output MIN
		AMAX	Digital output MAX
		AOK	Digital output OK
		SY In	Synchronization In
		SY OUT	Synchronization OUT
		OLT	Brightness output
		M	Maintenance
		rsv	Reserved
		Wire Colors according to DIN IEC 60757	
		BK	Black
		BN	Brown
		RD	Red
		OG	Orange
		YE	Yellow
		GN	Green
		BU	Blue
		VT	Violet
		GY	Grey
		WH	White
		PK	Pink
		GNYE	Green/Yellow

Characteristic response curve

Measurement of the sonic cone on a 100 × 100 mm plate



Ob = Object

Sc = Sonic cone width

Standard
Medium-width
Narrow
Extra-narrow

