

Reflex Sensor with Analog Output

UMD402U035

Part Number



- Digital and analog output
- Stainless steel housing
- Synchronous mode
- Temperature drift eliminable

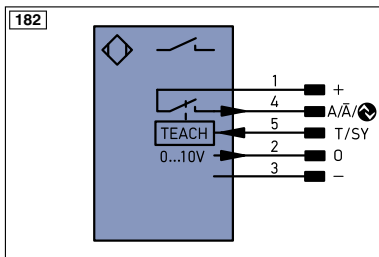
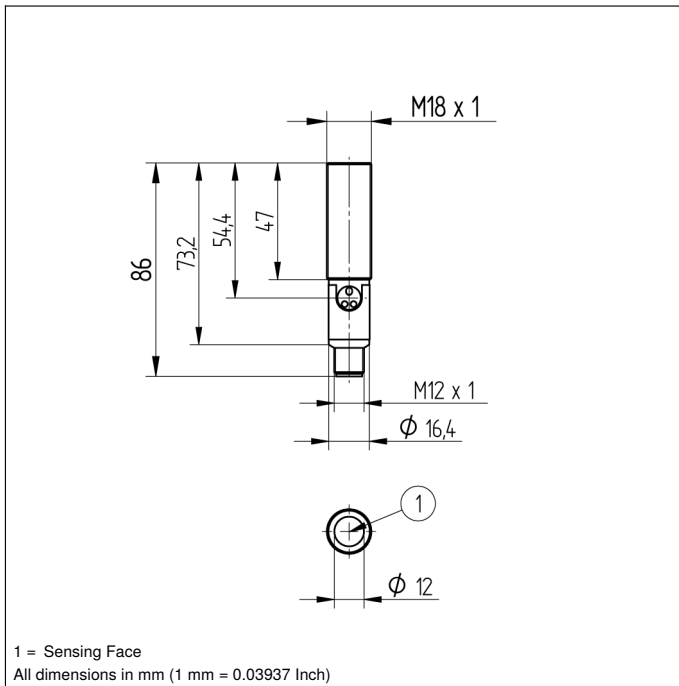
These ultrasonic sensors evaluate the sound reflected by the object. They detect almost every object and are suited especially for the filling level monitoring of fluids or bulk material or the detection of transparent objects. The sensor detects objects independent from their material, aggregate state, color or transparency. Convenient programming and quick diagnosis is possible via the IO-Link interface.



Technical Data

Ultrasonic Data	
Working Range	50...400 mm
Measuring Range	350 mm
Reproducibility maximum	1 mm
Linearity Deviation	5 mm
Resolution	0,1 mm
Ultrasonic Frequency	300 kHz
Opening Angle	< 12 °
Service Life (T = +25 °C)	100000 h
Switching Hysteresis	2 mm
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 30 mA
Switching Frequency	20 Hz
Response Time	25 ms
Temperature Range	-25...60 °C
Switching Outputs	1
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Analog Output	0...10 V
Synchronization	yes
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Interface	IO-Link
IO-Link Version	1.0
Protection Class	III
Mechanical Data	
Adjustment	Teach-In
Housing Material	Stainless Steel
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4/5-pin
PNP NO/NC switchable	●
IO-Link	●
Analog Output	●
Connection Diagram No.	182
Control Panel No.	D12
Suitable Connection Technology No.	2 35
Suitable Mounting Technology No.	150 160





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)	O	Analog Output
V	Contamination/Error Output (NO)	O-	Ground for the Analog Output
Ṽ	Contamination/Error Output (NC)	BZ	Block Discharge
E	Input (analog or digital)	AWV	Valve Output
T	Teach Input	a	Valve Control Output +
Z	Time Delay (activation)	b	Valve Control Output 0 V
S	Shielding	SY	Synchronization
RxD	Interface Receive Path	E+	Receiver-Line
TxD	Interface Send Path	S+	Emitter-Line
RDY	Ready	±	Grounding
GND	Ground	SnR	Switching Distance Reduction
CL	Clock	Rx+/-	Ethernet Receive Path
E/A	Output/Input programmable	Tx+/-	Ethernet Send Path
IO-Link	IO-Link	Bus	Interfaces-Bus A(+)/B(-)
PoE	Power over Ethernet	La	Emitted Light disengageable
IN	Safety Input	Mag	Magnet activation
OSSD	Safety Output	RES	Input confirmation
Signal	Signal Output	EDM	Contacting Monitoring

Wire Colors according to DIN IEC 757

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

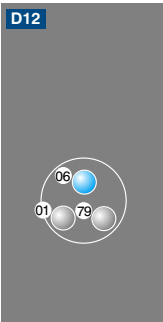
Complementary Products

Deflection plate Z0021, Z0022

IO-Link Master

PNP-NPN Converter BG2V1P-N-2M

Ctrl. Panel

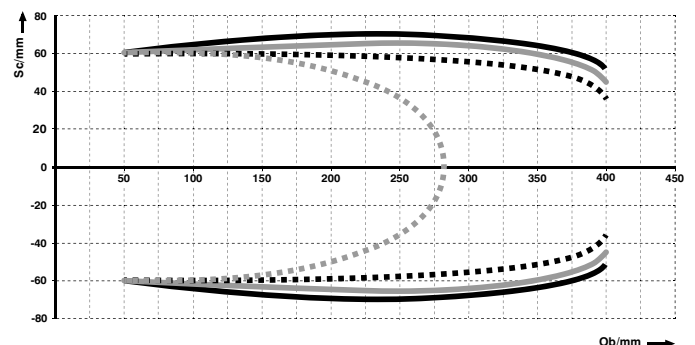


01 = Switching Status Indicator
06 = Teach Button
79 = Run/Error Indicator

Characteristic response curve

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

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Ob = Object

Sc = Sonic cone width

— Standard
- - - Medium-width
... Narrow
- · - Extra-narrow