

Distance Sensor

UMD402U035



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

These ultrasonic sensors evaluate the sound reflected from the object. They are capable of detecting almost any object, regardless of material and condition. Thanks to the innovative transducer, this sensor has a particularly wide sonic cone at close range. This means that many different kinds of pieces can be reliably detected on conveyor belts. The sensor can only be used in reflex mode operation.



Ultrasonic Data

Working Range	50...400 mm
Measuring Range	350 mm
Reproducibility maximum	1 mm
Linearity Deviation	5 mm
Resolution	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	-30...60 °C
Number of Switching Outputs	1
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Analog Output	0...10 V
Synchronous Mode	up to 40 sensors
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Interface	IO-Link V1.0
Protection Class	III

Mechanical Data

Setting Method	Teach-In
Housing Material	Stainless steel, V2A (1.4305 / 303)
Sensing face	Epoxy resin/glass bubble mixture
Sensing face	Plastic, PBT
Sensing face	Silicone
Full Encapsulation	yes
Degree of Protection	IP67
Connection	M12 × 1; 4/5-pin

Safety-relevant Data

MTTFd (EN ISO 13849-1)	828,67 a
PNP NO/NC switchable	●
Analog Output	●
IO-Link	●
Connection Diagram No.	182
Control Panel No.	D12
Suitable Connection Equipment No.	2 35
Suitable Mounting Technology No.	150

Complementary Products

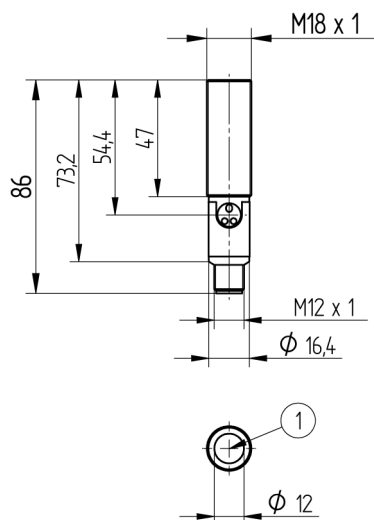
Analog Evaluation Unit AW02
Baffle Plate Z0021, Z0022
IO-Link Master
PNP-NPN Converter BG2V1P-N-2M
Software

Ctrl. Panel

D12

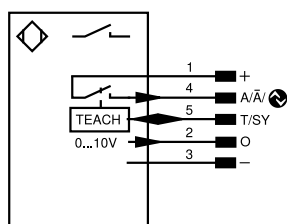


01 = Switching Status Indicator
06 = Teach Button
79 = Run/Error Indicator



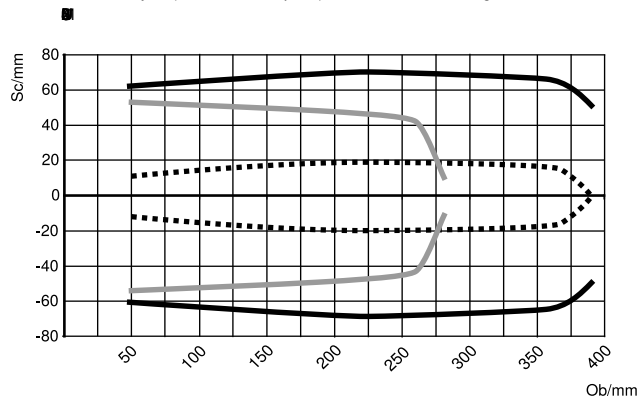
1 = Sensing Face

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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.



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)