Ultrasonic sensor
UMB800-18H40-U-2M

- Front of transducer and housing manufactured entirely from stainless steel
- Degree of protection IP68 / IP69K
- Short version: 55 mm
- Program input
- Temperature compensation
- Mounting bracket MH-18H-01 included in delivery

Single head system

CE   UKCA

Function

The enclosure and transducer of this ultrasonic sensor form a hermetically sealed unit. Therefore the sensor is suitable for all applications where a very high tightness is required. Since the sensor housing is made exclusively of V4A stainless steel and all seals are made of highly chemical-resistant materials, this sensor is also predestined for use in chemically aggressive environments.
For reliable operation, due to the special design of this sensor, solely the enclosed mounting accessories must be used.

Dimensions
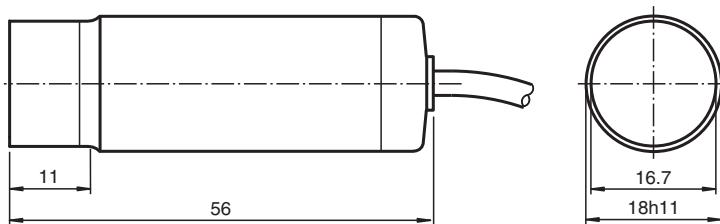
11
56
16.7
18h11

Technical Data

General specifications

Sensing range		70 ... 800 mm
Adjustment range		90 ... 800 mm
Dead band		0 ... 70 mm
Standard target plate		100 mm x 100 mm
Transducer frequency		approx. 170 kHz
Response delay		approx. 100 ms
Electrical specifications		
Operating voltage	U_B	15 ... 30 V DC
No-load supply current	I_0	≤ 15 mA
Input		

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

Input type	1 program input operating distance 1: $-U_B$ ... +1 V, operating distance 2: +6 V ... $+U_B$ input impedance: > 4,7 kΩ program pulse: ≥ 1 s
Output	
Output type	1 analog output 0 ... 10 V , short-circuit/overload protected
Resolution	0.4 mm at max. sensing range
Deviation of the characteristic curve	± 1 % of full-scale value
Repeat accuracy	± 0.5 % of full-scale value
Load impedance	> 1 kOhm
Temperature influence	± 1.5 % of full-scale value
Compliance with standards and directives	
Standard conformity	
Standards	EN IEC 60947-5-2:2020 IEC 60947-5-2:2019 EN 60947-5-7:2003 IEC 60947-5-7:2003
Approvals and certificates	
CCC approval	CCC approval / marking not required for products rated ≤36 V
Ambient conditions	
Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications	
Connection type	cable PUR , 2 m , Polyether based
Core cross section	4 x 0.19 mm²
Housing diameter	18 mm
Degree of protection	IP68 / IP69K
Material	
Housing	Stainless steel 1.4404 / AISI 316L
Transducer	Stainless steel 1.4435 / AISI 316L
Seal	Cable seal : TPU , Elastollan 1185 A10
Mass	90 g
Factory settings	
Output	evaluation limit A1: 90 mm evaluation limit A2: 800 mm Output mode: rising ramp

Connection


```
BN ──── L+
WH ──── Teach input
BK ──── Analogue output
BU ──── L-
```

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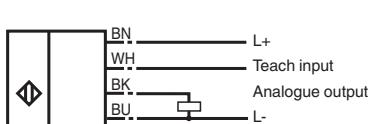
Characteristic Curve

Characteristic response curve

Distance Y [mm]

Distance X [m]

| | flat surface 100 mm x 100 mm |
| | round bar, Ø 25 mm |
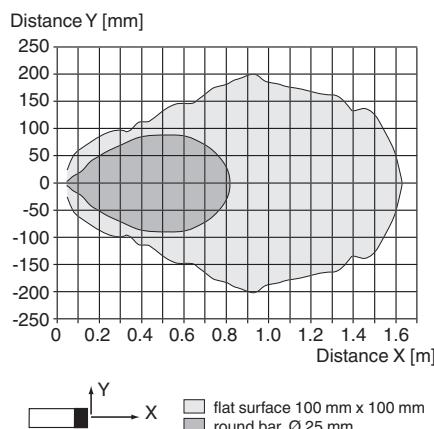
Programming the evaluation limits

Rising ramp
A1 < A2:

object range

A1   A2

Falling ramp
A2 < A1:

A2   A1
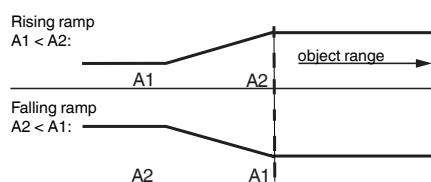
Accessories

	MH-18H-01	Mounting aid, 18 mm

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Mounting

Mounting instructions

⚠️ Comply with the minimum permissible bending radius of 70 mm, if you install the connecting cable!

⚠️ The mounting accessories included with the sensor must be used in order to ensure reliable operation!

Additional Information

Adjustment Possibilities

The sensor is equipped with 1 analog output with 2 programmable limits. The programming of the limits and of the output mode is done using the teach-in input.

Further Documentation

For information on programming and synchronisation you may refer to the commissioning instruction.

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