



## 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

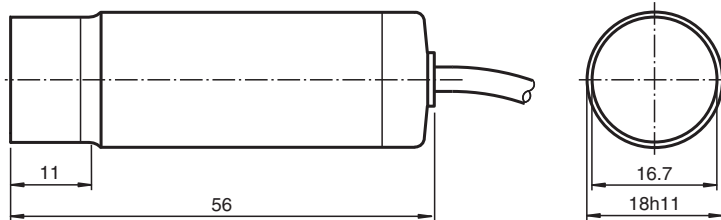
Single head system



### 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



### 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

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

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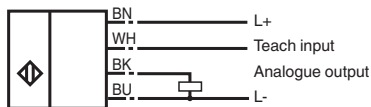
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## Technical Data

|   |  |
|---|--|
| Input type                                      | 1 program input<br>operating distance 1: $-U_B \dots +1 \text{ V}$ , operating distance 2: $+6 \text{ V} \dots +U_B$<br>input impedance: $> 4,7 \text{ k}\Omega$ program pulse: $\geq 1 \text{ s}$ |
| <b>Output</b>                                   |  |
| Output type                                     | 1 analog output $0 \dots 10 \text{ V}$ , short-circuit/overload protected  |
| Resolution                                      | 0.4 mm at max. sensing range   |
| Deviation of the characteristic curve           | $\pm 1 \%$ of full-scale value   |
| Repeat accuracy                                 | $\pm 0.5 \%$ of full-scale value   |
| Load impedance                                  | $> 1 \text{ k}\Omega$  |
| Temperature influence                           | $\pm 1.5 \%$ of full-scale value   |
| <b>Compliance with standards and directives</b> |  |
| Standard conformity                             |  |
| Standards                                       | EN IEC 60947-5-2:2020<br>IEC 60947-5-2:2019<br>EN 60947-5-7:2003<br>IEC 60947-5-7:2003   |
| <b>Approvals and certificates</b>               |  |
| CCC approval                                    | CCC approval / marking not required for products rated $\leq 36 \text{ V}$   |
| <b>Ambient conditions</b>                       |  |
| Ambient temperature                             | $-25 \dots 85 \text{ }^\circ\text{C}$ ( $-13 \dots 185 \text{ }^\circ\text{F}$ )   |
| Storage temperature                             | $-40 \dots 85 \text{ }^\circ\text{C}$ ( $-40 \dots 185 \text{ }^\circ\text{F}$ )   |
| <b>Mechanical specifications</b>                |  |
| Connection type                                 | cable PUR, 2 m, Polyether based  |
| Core cross section                              | $4 \times 0.19 \text{ mm}^2$   |
| 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   |
| <b>Factory settings</b>                         |  |
| Output  | evaluation limit A1: 90 mm<br>evaluation limit A2: 800 mm<br>Output mode: rising ramp  |

## Connection



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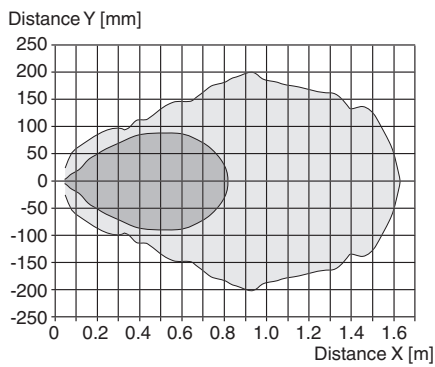
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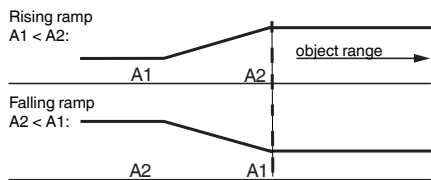
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## Characteristic Curve

### Characteristic response curve



### Programming the evaluation limits



## Accessories

|   |                  |                     |
|---|------------------|---------------------|
|  | <b>MH-18H-01</b> | 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.