



Ultrasonic sensor UMB800-18H40-E5-2M

- 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

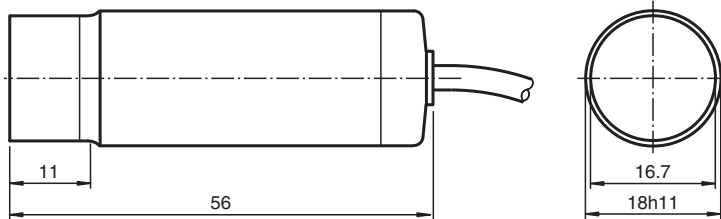
Single head system



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

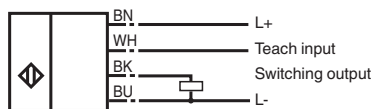
General specifications			
Sensing range			70 ... 800 mm
Adjustment range			90 ... 800 mm
Dead band			0 ... 70 mm
Standard target plate			100 mm x 100 mm
Transducer frequency			approx. 170 kHz
Response delay			approx. 100 ms
Electrical specifications			
Operating voltage	U_B		10 ... 30 V DC
No-load supply current	I_0		≤ 15 mA
Input			
Input type			1 program input operating distance 1: $-U_B \dots +1$ V, operating distance 2: $+6$ V ... $+U_B$ input impedance: $> 4,7$ k Ω program pulse: ≥ 1 s
Output			
Output type			1 switching output E5, PNP NO/NC, programmable
Rated operating current	I_e		200 mA, short-circuit/overload protected
Voltage drop	U_d		≤ 3 V
Repeat accuracy			± 0.5 % of full-scale value
Switching frequency	f		≤ 4 Hz

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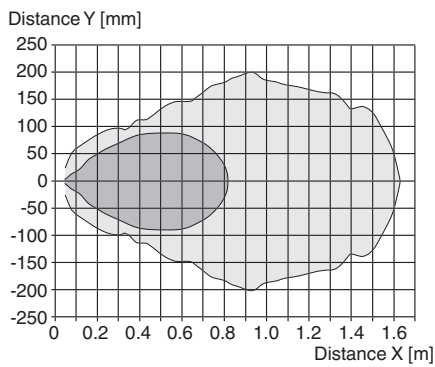
Range hysteresis	H	1 % of the set operating distance
Temperature influence		± 1.5 % of full-scale value
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2:2020 IEC 60947-5-2:2019
Approvals and certificates		
CCC approval		CCC approval / marking not required for 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 mm ²
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
Dimensions		
Length		55 mm
Diameter		18 mm
Factory settings		
Output		Switch point A1: 90 mm Switch point A2: 800 mm Output mode: Window mode Output logic: normally open

Connection Assignment

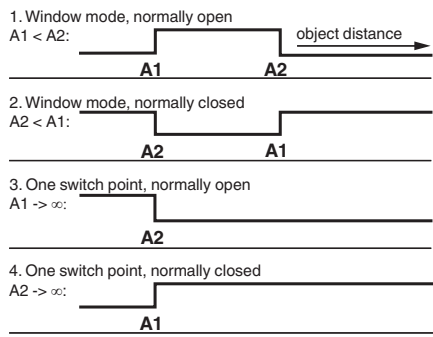


Characteristic Curve

Characteristic response curve



Switching output modes



5. $A1 \rightarrow \infty, A2 \rightarrow \infty$: Object presence detection mode

Object detected: Switch output closed
 No object detected: Switch output open

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!

Commissioning

Adjustment possibilities

The sensor is equipped with 1 switching output with 2 programmable switch points. The programming of the switch points and the of output behavior is done via the teach input of the sensor.

Further Documentation

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