

Model Number

UBC400-18GH40-I-V1

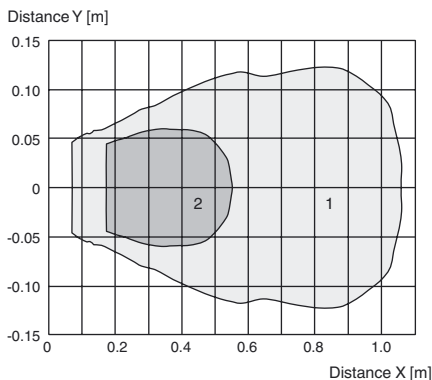
Single head system

Features

- Short design, 40 mm
- Analog output 4 mA ... 20 mA
- Measuring window adjustable
- Program input
- Temperature compensation

Diagrams

Characteristic response curves



Curve 1: flat plate 100 mm x 100 mm
Curve 2: round bar, Ø 8 mm

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Technical data

General specifications

Sensing range	40 ... 400 mm
Adjustment range	50 ... 400 mm
Unusable area	0 ... 40 mm
Standard target plate	100 mm x 100 mm
Transducer frequency	approx. 255 kHz
Response delay	approx. 100 ms

Electrical specifications

Operating voltage U_B	10 ... 30 V DC , ripple 10 % _{SS}
No-load supply current I_0	≤ 20 mA

Input

Input type	1 program input lower evaluation limit A1: $-U_B ... +1$ V, upper evaluation limit A2: $+4$ V ... $+U_B$ input impedance: > 4.7 kΩ, pulse duration: ≥ 1 s
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Output

Output type	1 analog output 4 ... 20 mA, 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	0 ... 300 Ohm
Temperature influence	± 1.5 % of full-scale value

Ambient conditions

Ambient temperature	0 ... 70 °C (32 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Connection type	Connector M12 x 1 , 4-pin
Protection degree	IP67
Material	
Housing	Stainless steel 1.4435 / AISI 316L O-ring for cover sealing: EPDM
Transducer	PTFE
Mass	25 g

Factory settings

Output	evaluation limit A1: 50 mm evaluation limit A2: 400 mm output behavior: rising slope
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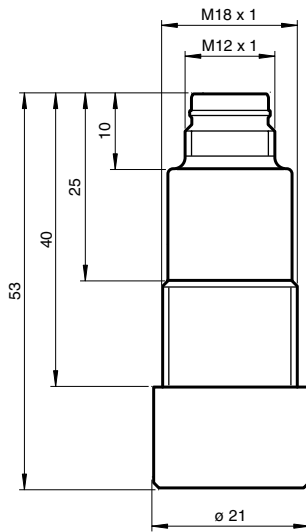
Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007 EN 60947-5-7:2003 IEC 60947-5-7:2003

Approvals and certificates

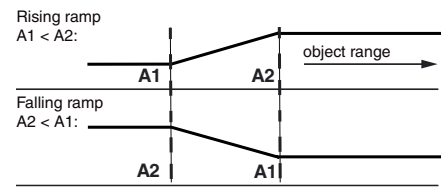
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤36 V

Dimensions



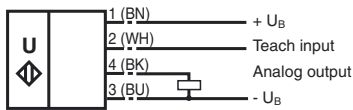
Additional Information

Programmed analogue output function



Electrical Connection

Standard symbol/Connections:
(version I)



Core colors in accordance with EN 60947-5-2.

Pinout

Connector V1



Accessories

UB-PROG2
Programming unit

OMH-04
Mounting aid for round steel ø 12 mm or sheet 1.5 mm ... 3 mm

BF 18
Mounting flange, 18 mm

BF 18-F
Mounting flange with dead stop, 18 mm

BF 5-30
Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm

V1-G-2M-PVC
Female cordset, M12, 4-pin, PVC cable

V1-W-2M-PUR
Female cordset, M12, 4-pin, PUR cable

Adjusting the evaluation limits

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The ultrasonic sensor features an analogue output with two teachable evaluation limits. These are set by applying the supply voltage $-U_B$ or $+U_B$ to the Teach-In input. The supply voltage must be applied to the Teach-In input for at least 1 s. The lower evaluation limit A1 is taught with $-U_B$, A2 with $+U_B$.

Two different output functions can be set:

1. Analogue value increases with rising distance to object (rising ramp)
2. Analogue value falls with rising distance to object (falling ramp)

Teach-In rising ramp (A2 > A1)

- Position object at lower evaluation limit
- Teach-In lower limit A1 with $-U_B$
- Position object at upper evaluation limit
- Teach-In upper limit A2 with $+U_B$

Teach-In falling ramp (A1 > A2):

- Position object at lower evaluation limit
- Teach-In lower limit A2 with $+U_B$
- Position object at upper evaluation limit
- Teach-In upper limit A1 with $-U_B$

Default setting

A1: unusable area
A2: nominal sensing range
Mode of operation: rising ramp