



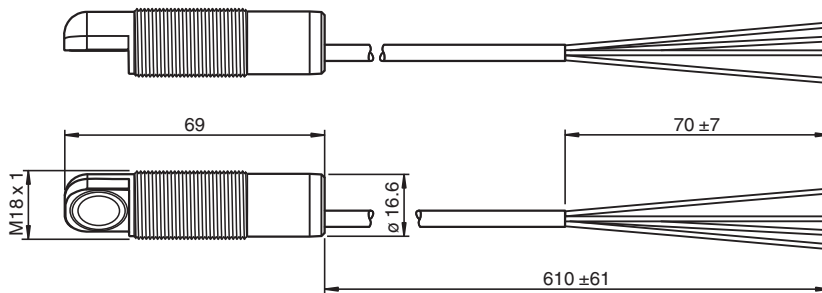
Ultrasonic sensor UB800-18GM40A-E5-610MM-Y

- Short design, 40 mm
- Function indicators visible from all directions
- Switching output
- 5 different output functions can be set
- Program input
- Temperature compensation
- Customer-specific cable length
- Deutsch 4-pin, DT04 connector

Single head system



Dimensions



Technical Data

General specifications	
Sensing range	50 ... 800 mm
Adjustment range	70 ... 800 mm
Dead band	0 ... 50 mm
Standard target plate	100 mm x 100 mm
Transducer frequency	approx. 255 kHz
Response delay	approx. 100 ms
Indicators/operating means	
LED green	Power on
LED yellow	indication of the switching state flashing: program function object detected
LED red	solid red: Error red, flashing: program function, object not detected
Electrical specifications	
Operating voltage	U_B 10 ... 30 V DC
No-load supply current	I_0 ≤ 20 mA
Input	

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

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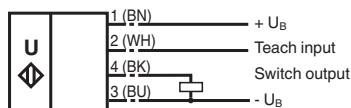
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Technical Data

Input type	1 program input operating distance 1: $-U_B \dots +1 \text{ V}$, operating distance 2: $+6 \text{ V} \dots +U_B$ input impedance: $> 4,7 \text{ k}\Omega$ program pulse: $\geq 1 \text{ s}$	
Output		
Output type	1 switching output E5, PNP NO/NC, programmable	
Rated operating current	I_e	200 mA , short-circuit/overload protected
Default setting	Switch point A1: 70 mm Switch point A2: 800 mm	
Voltage drop	U_d	$\leq 3 \text{ V}$
Repeat accuracy	$\leq 1 \%$	
Switching frequency	f	$\leq 4 \text{ Hz}$
Range hysteresis	H	1 % of the set operating distance
Temperature influence	$\pm 1.5 \%$ 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		
UL approval	cULus Listed, Class 2 Power Source	
CCC approval	CCC approval / marking not required for products rated $\leq 36 \text{ V}$	
Ambient conditions		
Ambient temperature	$-25 \dots 70 \text{ }^\circ\text{C}$ ($-13 \dots 158 \text{ }^\circ\text{F}$)	
Storage temperature	$-40 \dots 85 \text{ }^\circ\text{C}$ ($-40 \dots 185 \text{ }^\circ\text{F}$)	
Mechanical specifications		
Connection type	cable	
Housing diameter	18 mm	
Degree of protection	IP67	
Material		
Housing	brass, nickel-plated	
Transducer	epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT	
Cable		
Sheath diameter	4.8 mm	
Bending radius	$> 38.4 \text{ mm}$, fixed $> 72 \text{ mm}$, moving	
Material	PVC	
Number of cores	4	
Core cross section	$4 \times 0.5 \text{ mm}^2$	
Length	L	610 mm
Mass	65 g	
General information		
Scope of delivery	Deutsch connector DT04-4P-CE01 Deutsch wedge W4P German contact 0460-202-1631	

Connection

Standard symbol/Connections:
(version E5, pnp)



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

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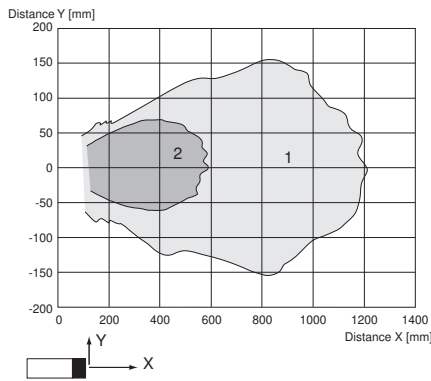
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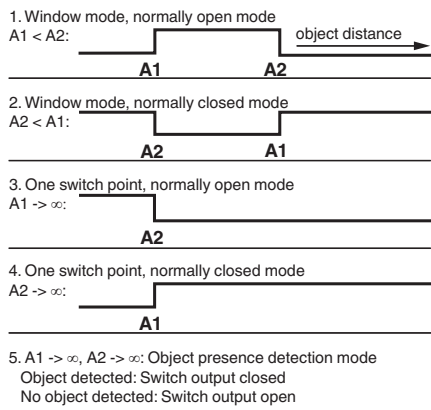
Characteristic Curve

Characteristic response curve



Curve 1: flat surface 100 mm x 100 mm
 Curve 2: round bar, Ø 25 mm

Programmable output modes



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	Plastic mounting adapter, 18 mm
	BF 5-30	Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm
	M18K-VE	Plastic nuts with centering ring for the vibration-free mounting of cylindrical sensors

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Teach-In

Adjusting the switching points

The ultrasonic sensor features a switch output with two teachable switching points. 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. LEDs indicate whether the sensor has recognised the target during the TEACH-IN procedure. Switching point A1 is taught with $-U_B$, A2 with $+U_B$.

Five different output functions can be set

1. Window mode, normally-open function
2. Window mode, normally-closed function
3. one switching point, normally-open function
4. one switching point, normally-closed function
5. Detection of object presence

TEACH-IN window mode, normally-open function

- Set target to near switching point
- TEACH-IN switching point A1 with $-U_B$
- Set target to far switching point
- TEACH-IN switching point A2 with $+U_B$

TEACH-IN window mode, normally-closed function

- Set target to near switching point
- TEACH-IN switching point A2 with $+U_B$
- Set target to far switching point
- TEACH-IN switching point A1 with $-U_B$

TEACH-IN switching point, normally-open function

- Set target to near switching point
- TEACH-IN switching point A2 with $+U_B$
- Cover sensor with hand or remove all objects from sensing range
- TEACH-IN switching point A1 with $-U_B$

TEACH-IN switching point, normally-closed function

- Set target to near switching point
- TEACH-IN switching point A1 with $-U_B$
- Cover sensor with hand or remove all objects from sensing range
- TEACH-IN switching point A2 with $+U_B$

TEACH-IN detection of objects presence

- Cover sensor with hand or remove all objects from sensing range
- TEACH-IN switching point A1 with $-U_B$
- TEACH-IN switching point A2 with $+U_B$

LED Displays

Displays in dependence on operating mode	Red LED	Yellow LED
TEACH-IN switching point:		
Object detected	off	flashes
No object detected	flashes	off
Object uncertain (TEACH-IN invalid)	On	off
Normal operation	off	Switching state
Fault	on	Previous state

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