

Teach instructions

HTU412B / DMU412B

Ultrasonic sensor / Ultrasonic distance sensor



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Leuze electronic GmbH + Co. KG

In der Braike 1

73277 Owen / Germany

Phone: +49 7021 573-0

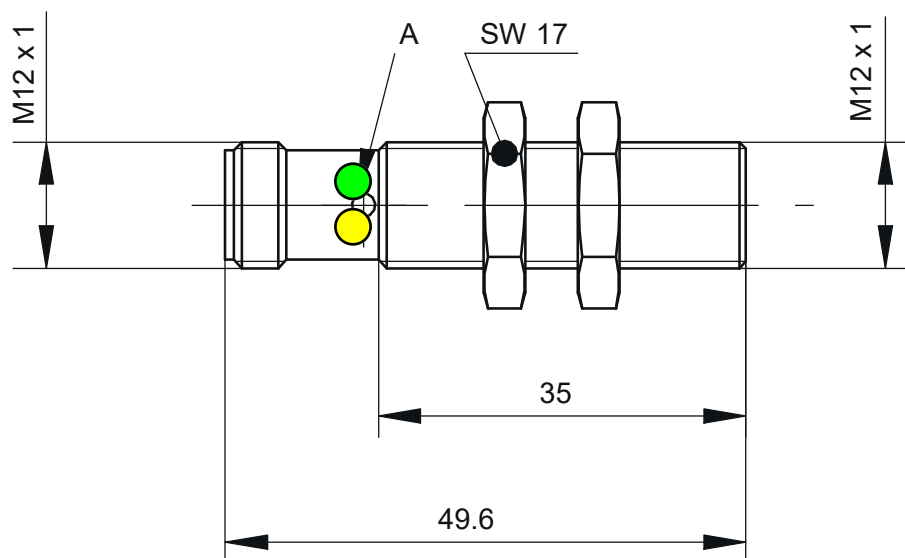
Fax: +49 7021 573-199

www.leuze.com

info@leuze.com

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1 LED indicator



All dimensions in mm

A Indicator diode
WAF 17 Width across flats 17

Fig. 1.1: LED indicators

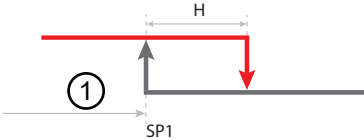
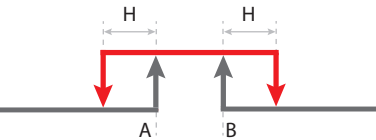
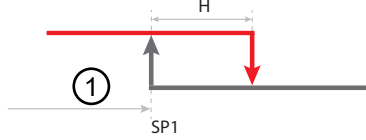
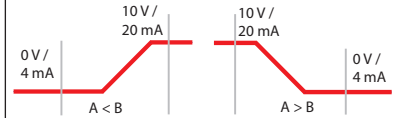
Tab. 1.1: LED signal

Color	Status	Meaning
Green	Continuous light	Ready
Yellow	Continuous light	Switching output 1 active (PNP light switching / NPN dark switching)

2 Sensor adjustment (teach) via teach input (pin 5)

The sensor is factory-adjusted for maximum operating range. After commissioning the sensor, a teach event must be performed.

In teach mode, the output switches to 0 V. In normal operation, the teach line must be connected to 0 V. For external teach-in, connect the teach line to Vs+ according to the information given below.

Sensors with one switching output (HTU)	Sensors with two switching outputs (HTU)	Measuring sensors (DMU)
1-point teach (output 1)		
Connect teach line to Vs+ for approx. 2 s until the green LED flashes (2 Hz). Place object at desired switching point and briefly connect teach line to Vs+ again. – Finished!		
The sensor detects the object at the switching point of Out 1 and the yellow LED is on (PNP light switching, NPN dark switching).		
 <p>1 Detection direction H Hysteresis SP1 switching point 1</p>		
(2) Window teach	(2) 1-point teach (output 2)	(2) Measurement range / window teach
Connect teach line to Vs+ (approx. 4 s) until the yellow LED flashes (2 Hz).	Connect teach line to Vs+ (approx. 4 s) until the yellow LED flashes (2 Hz).	Connect teach line to Vs+ (approx. 4 s) until the yellow LED flashes (2 Hz).
Place object at switching window position A and briefly connect teach line to Vs+ again. Position object at switching window position B and briefly connect teach line again. – Finished!	Place object at desired switching point. Briefly connect teach line to Vs+ again. – Finished!	Place object at switching window position A and briefly connect teach line to Vs+ again. Position object at switching window position B and briefly connect teach line again. – Finished!
The sensor detects objects in the defined switching window and the yellow LED is on if an object is detected.	The sensor detects an object at the switching point of Out 2.	Defines the measurement range of the analog output. Output 1 is active if an object is located within the measurement range.
 <p>H Hysteresis</p>	 <p>1 Detection direction H Hysteresis SP1 switching point 1</p>	

Set factory defaults

- ↳ Connect teach line to Vs+ (approx. 8 s) until the green and yellow LEDs flash (1 Hz).
- ⇒ The sensor setting now corresponds to the factory settings (switching point at the maximum operating range).

Teach error

If the object is located outside of the operating range during the teach event, a teach error occurs. All LEDs flash rapidly at 8 Hz. For the teach event, it must always be ensured that the object is located within the operating range.