



Figure 1. Mini Ultrasonic Sensor

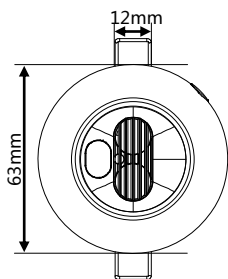


Figure 2. Dimensions - Front View

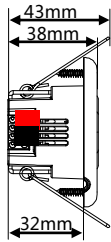


Figure 3. Dimensions - Side View

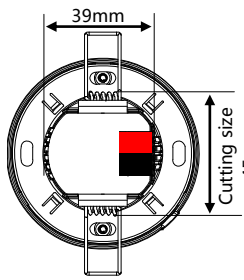


Figure 4. Dimensions - Back View

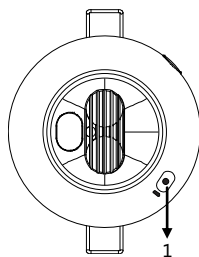


Figure 5. Components - Interior View

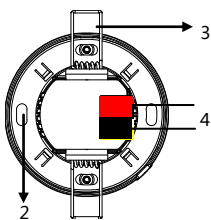
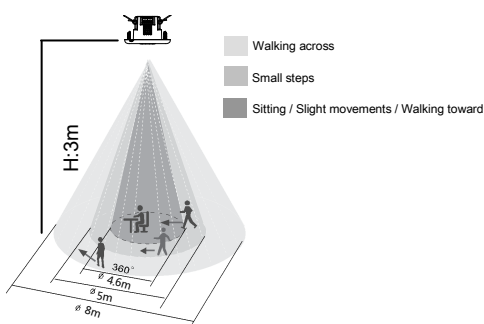


Figure 6. Components - Back View



Detection Range (At 25°C)

Mounting height	Sitting / Slight movements / Walking towards	Small steps	Walking across
3m	4.6m	5m	8m

Figure 7. Detection Range

## Overview

KNX Mini Ultrasonic Sensor (See Figure 1) contains four independent logic blocks and one combined logic block. The logic inputs include ultrasonic sensor status, brightness value, temperature and external telegrams. Depending on the user's needs, the sensor can be set to either master-slave mode or single mode, etc.

## Functions

- With 2CH lighting control, 4 sections of brightness and delay time can be set in dimming output. With gradually dimming effect, the sensor supports automatic or semi-automatic mode. Telegram locking/unlocking and delay time can be set.
- With 2CH constant brightness control, dimming values and forced operation can be set.
- The sensor has 5 logic blocks and each block contains 10 object outputs. Telegram locking/unlocking and delay time can be set.
- Control types: Switch control, Absolute dimming control, Shutter control, Alarm control, Percentage control, Sequence control, Scene control, String(14 bytes) control, Threshold control, Logic combination control.
- Logic inputs: Ultrasonic sensing status, brightness value, temperature and external telegrams.
- 2 logical relations: AND, OR
- 2 working modes: Single mode and master / slave mode.
- The logic validity can be set by external telegram so as to ensure that end users can reset the logics.

## Important Notes

- Installation - This device should be mounted at the ceiling at a recommended height of 2-3m from the floor.
- Programming - The device is compliant with the KNX standard and the parameters are set by the Engineering Tool Software (ETS).
- The KNX bus voltage is 21-30V DC.

## Product Information

**Dimensions - See Figure 2 - 4**

**Components - See Figure 5 - 6**

1. Programming button & programming LED
2. Screw hole
3. Spring clips
4. KNX/EIB bus connector

**Detection Range - See Figure 7**

### Installation

**Ceiling-mounted - See Figure 8 - 10**

- Step 1. When installing the sensor in the thin ceiling, produce an opening of diameter 45mm in the ceiling.
- Step 2. Fix the sensor into position with the assistance of the spring clips after wiring.

**Flush-mounted - See Figure 11 - 14**

- Step 1. When installing the sensor in the thick wall, produce an opening of diameter 45mm and depth of 35mm in the wall.
- Step 2. Remove the spring clips and pry apart the cover and the sensor.
- Step 3. Fix the sensor in the wall with screws.
- Step 4. Attach the cover to the sensor.

## Safety Precautions

- The installation and commissioning of the device must be carried out by HDL or the organization designated by HDL. For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
- HDL takes no responsibility for all consequences caused by installation and wire connection which are not in accordance with this document.
- Please do not privately disassemble the device or change components, otherwise it may cause mechanical failure, electric shock, fire or body injury.
- Please resort to our customer service department or designated agencies for maintenance service. The warranty is not applicable for the product fault caused by private disassembly.

## Package Contents

M/US05.1\*1 / Datasheet\*1

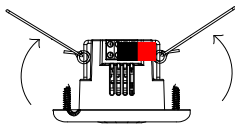


Figure 8

⇓ 1

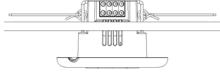


Figure 9

⇓ 2

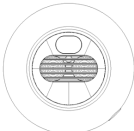


Figure 10

Figure 8 - 10. Installation – Ceiling-mounted

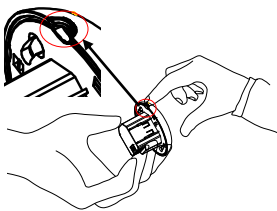


Figure 11

⇓ 1



Figure 12

⇓ 2

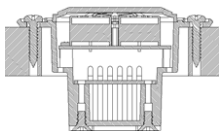


Figure 13

⇓ 3

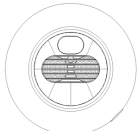


Figure 14

Figure 11 - 14. Installation – Flush-mounted

## Technical Data

### Basic Parameters

Working voltage	21~30V DC
Working current	10mA/30V DC
Communication	KNX
Cable diameter of KNX terminal	0.6 - 0.8mm
PIR detection range	Φ8m (Installation height:3m)
Temperature detection range	-30°C~70°C
Brightness detection range	0~1200LUX

### External Environment

Working temperature	-5°C~45°C
Working relative humidity	≤90%
Storage temperature	-20°C~60°C
Storage relative humidity	≤93%

### Specifications

Dimensions	Φ63×38 (mm)
Net weight	42.4g
Housing material	ABS
Installation	Ceiling-mounted/Flush-mounted (See Figure 8 -10/Figure 11 -14 )
Protection rating (Compliant with EN 60529)	IP20

### Name and Content of Hazardous Substances in Products

Components	Hazardous substances					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Chromium VI (Cr (VI))	Poly-brominated biphenyls (PBB)	Poly-brominated diphenyl ethers (PBDE)
Plastic	o	o	o	o	o	o
Hardware	o	o	o	o	-	-
Screw	o	o	o	x	-	-
Solder	x	o	o	o	-	-
PCB	x	o	o	o	o	o
IC	o	o	o	o	x	x

The symbol "-" indicates that the hazardous substance is not contained.

The symbol "o" indicates that the content of the hazardous substances in all the homogeneous materials of the component is below the limit requirement specified in the Standard IEC62321-2015.

The symbol "x" indicates that the content of the hazardous substance in at least one of the homogeneous materials of the part exceeds the limit requirement specified in the Standard IEC62321-2015.

## KNX Cable Guide

KNX	KNX Cable
-	Black
+	Red

#### Technical support

E-mail: [support@hdlautomation.com](mailto:support@hdlautomation.com)

Website: <https://www.hdlautomation.com>

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