



**Datasheet**

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Figure 1. KNX Ceiling Mount Indoor Microwave Sensor

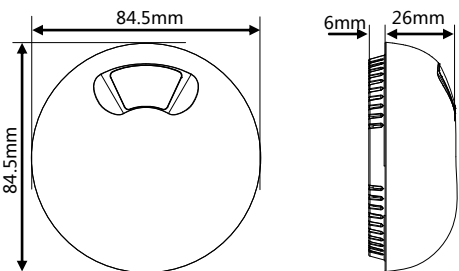


Figure 2. Dimensions - Front View      Figure 3. Dimensions - Side View

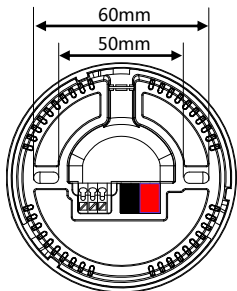


Figure 4. Dimensions - Back View

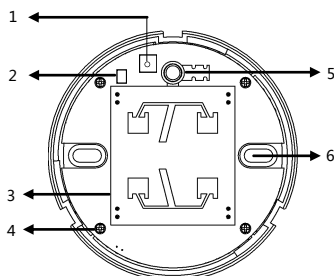


Figure 5. Components - Interior View

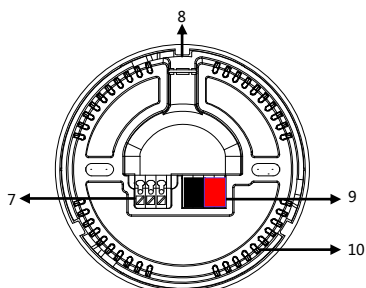


Figure 6. Components - Back View

## Overview

KNX Ceiling Mount Indoor Microwave Sensor (See Figure 1) contains four independent logic blocks and one combined logic block. The logic inputs include microwave sensor status, brightness value, temperature, dry contact input and external telegrams, which enables the control of lighting, curtains, thresholds, etc.

## Functions

- With 2CH constant brightness control, 4 dimming values and forced operation can be set.
- The sensor has 5 logic blocks and each block contains 10 object outputs. Dry contact and 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: Microwave sensor status, brightness value, temperature, dry contact input and external telegrams.
- 2 logical relations: AND, OR
- 2 working modes: Single mode and master / slave mode.
- 2CH dry contact can be set as dry contact and LED status display and the operation function can be set as switch control, dimming control, scene control and percentage control.
- The logic validity can be set by external telegram.

## Important Notes

- Installation - This device should be mounted at the ceiling at a recommended height of 2-3m from the floor. Avoid installing the sensor close to large area of mental object (s), air conditioners or heat sources is not practical.
- 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
2. LED indicator
3. Microwave sensor
4. PCB fixing screw
5. Lux sensor
6. Screw hole
7. Dry contact 1, dry contact 2
8. Wiring channel, open it for wiring
9. KNX/EIB bus connector
10. Ventilation hole

**Detection Range - See Figure 7**

**Installation - See Figure 8 - 11**

Step 1. Rotate and take the cover off. Screw the plate on the wall box with screws.

Step 2. Install the sensor onto the plate with screws.

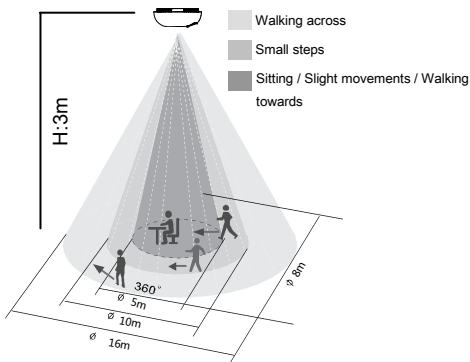
Step 3. Rotate and attach the cover to the sensor.

## 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/WS05.1\*1 / Screw\*2 / Datasheet\*1



Detection Range (At 30°C)

Mounting height	Sitting / Slight movements / Walking towards	Small steps	Walking across
3m	5m	10m	16m

Figure 7. Detection Range

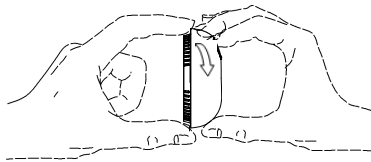


Figure 8

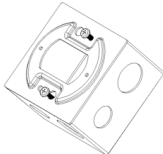


Figure 9

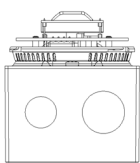


Figure 10

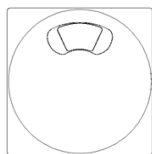


Figure 11

Figure 8-11. Installation

## Technical Data

### Basic Parameters

Working voltage	21~30V DC
Working current	17mA/30V DC
Communication	KNX
Cable diameter of KNX terminal	0.6 - 0.8mm
Microwave sensing range	Φ16m (Installation height: 3m)
Temperature detection range	-30°C~70°C
Brightness detection range	0~15000LUX

### External Environment

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

### Specifications

Dimensions	Φ84.5×32 (mm)
Net weight	67.5g
Housing material	ABS
Installation	Ceiling mount (See Figure 8 - 11)
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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