



Figure 1. Ceiling Mount Ultrasonic Sensor  
图 1. 吸顶式超声波传感器

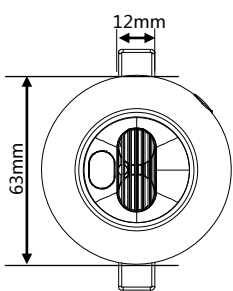


Figure 2. Dimensions - Front View  
图 2. 尺寸图 - 正面

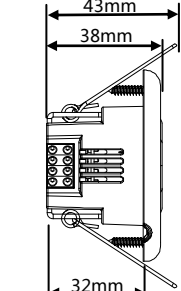


Figure 3. Dimensions - Side View  
图 3. 尺寸图 - 侧面

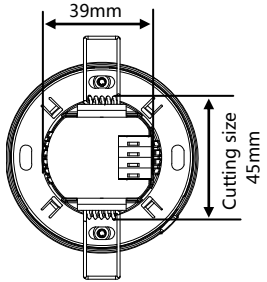


Figure 4. Dimensions - Back View  
图 4. 尺寸图 - 背面

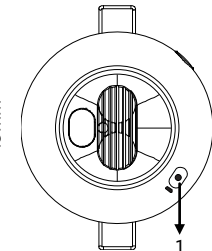


Figure 5. Components - Interior View  
图 5. 部件 - 内部图

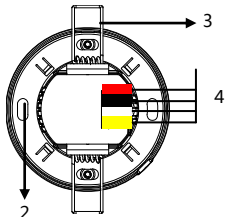
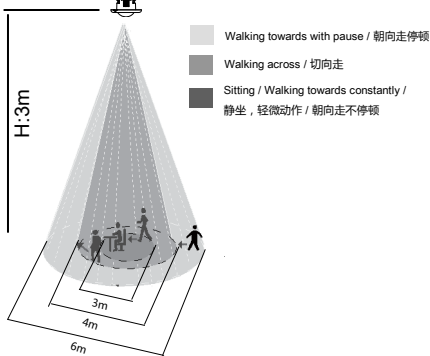


Figure 6. Components - Back View  
图 6. 部件 - 后视图



Detection Range / 感应范围 (At 25°C)

Mounting height / 安装高度	Sitting / Walking towards constantly / 静坐, 轻微动作 / 朝向走不停顿	Walking across / 切向走动	Walking towards with pause / 朝向走停顿
3m	3m	4m	6m

Figure 7. Detection Range  
图7. 感应范围

## Overview

Ceiling Mount Ultrasonic Sensor (See Figure 1) includes ultrasonic sensor and LUX sensor. The logic block can combine all conditions (ultrasonic sensor, LUX sensor, universal switch and logic block) for different application.

## Functions

- Equipped with LUX sensor, ultrasonic sensor and universal switch, which can be used as logic conditions
- With two logic relationship: OR, AND
- Adjustable ultrasonic sensitivity, Sensitivity range:1-10
- 24 logic blocks in total, each logic block has 20 output targets
- Universal Switch 201 - 248 can be used as logic inputs, two Universal Switches for each logic and they has auto-off option too (from 1 - 3600 seconds)
- A Logic can trigger some targets when it is true, and trigger other targets when it is false
- Security function, to be used with the security module
- Supports upgrades via HDL Buspro Setup Tool

## Important Notes

- Buspro - dedicated HDL Buspro cable
- Buspro connection - Series connection (hand-in-hand)
- Installation position - Ceiling mount
- Check the connection, avoid any mistake
- Installation position: Indoor, keep it away from AC outlet and heat source.

## Product Information

Dimensions - See Figure 2 - 4

Components - See Figure 5 - 6

1. **Module indicator:** Keep pressing the button for 3 seconds, then the address of the module can be read and modified in the HDL Buspro Setup Tool.

**Indication:** The indicator can be set to indicate the LED or not. If yes, when detecting some movement, the LED will turn on during this process; if not, whether there is movement or not, it always keeps off.

- Screw hole
- Spring bracket
- HDL Buspro connector: From top to bottom: +DC24V, COM, DATA-, DATA+

Detection range - See Figure 7

Product 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 does not take responsibility for all the consequences caused by installation and wire connection that 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

HDL-MSPU03.4C\*1 / Buspro connector\*1 / Datasheet\*1

## 产品概述

吸顶式超声波传感器(见图1)包含超声波传感器、照度传感器。内部逻辑将照度传感器、超声波传感器、通用开关等条件,根据需要组成不同的逻辑功能,满足客户控制需求。

## 功能说明

- 内设照度传感器、超声波、通用开关等逻辑条件
- 具有2个可选逻辑关系: OR、AND
- 具有24个逻辑块功能,每个逻辑块可设置20个目标输出
- 超声波传感器灵敏度可调节,灵敏度范围为 1~10
- 逻辑条件中通用开关号分配为201~248,每个逻辑2个开关号,通用开关有自动关闭功能,时间范围为 1~3600s
- 逻辑成立与否均可触发控制目标
- 安防预警功能,需要与安防模块配合使用
- 支持HDL Buspro在线升级

## 注意事项

- 总线 - HDL Buspro专用电缆
- 总线连接 - 推荐使用手拉手的连接方式
- 安装方式 - 吸顶
- 按照总线定义连接相应的端口,不能接错
- 安装位置: 室内,远离空调出风口,远离热源

## 产品信息

产品尺寸 - 见图 2-4

产品部件 - 见图 5-6

1. 地址设置键&指示灯(打开外壳之后才能看到)  
长按该键约3秒指示灯闪烁,此时在HDL Buspro Setup Tool软件中可修改地址。地址管理→修改地址,可读取和修改设备地址。指示灯:可以设置是否指示。若设置为指示,则感应到动静时灯长亮,没动静时灯灭。若设置为不指示,则有动静均不指示。

- 螺丝孔
  - 弹簧支架
  - HDL Buspro
- 从上往下分别是: +DC24V、COM、DATA-、DATA+

感应范围 - 见图 7

设备的安装

弹簧支架安装 - 见图8-10

步骤1. 在薄的天花板、木板上安装时,在天花板、木板上开一个直径45mm的圆孔。

步骤2. 用弹簧支架卡住,即可固定。

螺丝安装 - 见图11-14

步骤1. 在较厚的墙壁、天花木板上安装时,在墙壁开一个直径40mm,深35mm的圆孔。

步骤2. 取掉弹簧支架,用手指在传感器的拆分缺口轻撬面盖,传感器面盖即可打开。

步骤3. 用螺丝固定传感器的底座。

步骤4. 盖上传感器面盖。

## 安全警告

- 本设备的安装及调试工作必须由我司或我司指派的机构进行。其电气安装的计划 and 施工,必须遵守当地相关的安全标准和法规。
- 未按照本说明书进行安装及接线方式的,所造成的一切后果皆与我司无关。
- 请不要私自拆装或更换零部件,否则可能会导致机械故障、电击、火灾或身体伤害。
- 请将一切维修工作交由我司售后部门或指定机构进行,本产品的保修范围不适用于因用户拆卸产品而导致的故障。

## 装箱清单

HDL-MSPU03.4C\*1 / 总线端子\*1 / 说明书\*1

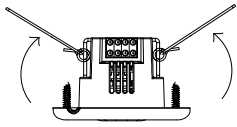


Figure 8 / 图 8

↓ 1

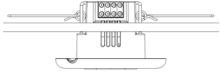


Figure 9 / 图 9

↓ 2

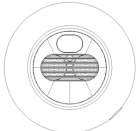


Figure 10 / 图 10

Figure 8 - 10. Installation – Ceiling-mounted  
图 8 - 10. 弹簧支架安装图

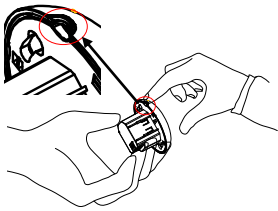


Figure 11 / 图 11

↓ 1



Figure 12 / 图 12

↓ 2

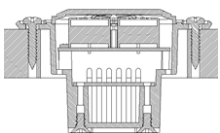


Figure 13 / 图 13

↓ 3

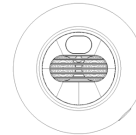


Figure 14 / 图 14

Figure 11 - 14. Installation – Flush-mounted  
图 11 - 14. 螺丝安装图

#### 技术支持

服务热线：020-85820195

(工作时间：9:00-12:00, 13:00-18:00, 星期一至星期五)

邮箱：kfb@hdlchina.com.cn

网址：http://www.hdlchina.com

#### Technical support

E-mail: support@hdlautomation.com

Website: https://www.hdlautomation.com

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### Technical Data

#### Basic Parameters

Working voltage	18~30V DC
Working current	30mA/24V DC
Detection range	Φ6m (Installation height: 3m)
Range for LUX sensor	0-500lux

#### External Environment

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

#### Specifications

Dimensions	63(Diameter)×38(mm)
Net weight	91g
Housing material	ABS, Infrared lens
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.

### HDL Buspro Cable Guide

	HDL Buspro	HDL Buspro/KNX	CAT5/CAT5E
DATA+		Yellow	Blue/Green
DATA-		White	Blue White/Green White
GND		Black	Brown White/Orange White
24V DC		Red	Brown/Orange

ZH

### 技术参数

#### 基本参数

工作电压	18~30V DC
工作电流	30mA/24V DC
感应范围	Φ6m(安装高度:3m)
亮度测量范围	0-500lux

#### 外部环境

工作温度	-5°C~45°C
工作相对湿度	≤90%
储存温度	-20°C~60°C
储存相对湿度	≤93%

#### 产品规格

尺寸	63mm(直径)×38mm
净重	91g
外壳材料	ABS, 红外镜头
安装方式	弹簧支架安装/螺丝安装 (见图8-10/图11-14)
防护级别 (符合 EN 60529)	IP20

#### 产品中有害物质的名称及含量

部件名称	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
塑胶组件	o	o	o	o	o	o
五金铜件	o	o	o	o	-	-
螺丝组件	o	o	o	x	-	-
焊锡	x	o	o	o	-	-
PCB组件	x	o	o	o	o	o
IC	o	o	o	o	x	x

- : 表示不含有该有害物质。

o : 表示该有害物质在该部件所有均质材料中的含量均在IEC62321-2015规定的限量要求以下。

x : 表示该有害物质至少在该部件的某一均质材料中的含量超出IEC62321-2015规定的限量要求。

### 总线定义

	HDL Buspro	HDL Buspro/KNX	CAT5/CAT5E
DATA+		黄	蓝/绿
DATA-		白	蓝白/绿白
GND		黑	棕白/橙白
24V DC		红	棕/橙