

Ceiling Mount 7in1 Sensor

Datasheet



HDL-MSP07M.4CT



Please scan the QR code above to check the latest version of datasheet!

Before using this product, please read this datasheet carefully and keep it properly!

Document Version: C

◆◆ Overview

Ceiling Mount 7-in-1 Sensor includes PIR motion sensor, temperature sensor, LUX sensor, dry contact and universal switch control, etc. It can satisfy different requirements according to different logics. It supports HDL security mode and security command.

Key Functions:

- Built-in PIR sensor, temperature sensor, LUX sensor, dry contact and universal switch control
- 8 logic input conditions: PIR sensor, temperature sensor, LUX sensor, 2 dry contact inputs, 2 universal switches and logical condition
- Adjustable sensitivity from 1 to 100
- 12 logic blocks. Universal switch numbers are assigned to 201-248 in logic conditions, 2 switch numbers for each logic, universal switch has auto-off function (relay time from 1 to 3600 seconds)
- Logic can trigger the control target no matter it's valid or not. Up to 10 control targets can be triggered by each logic block
- Online update supported
- Constant LUX function

◆◆ Appearance

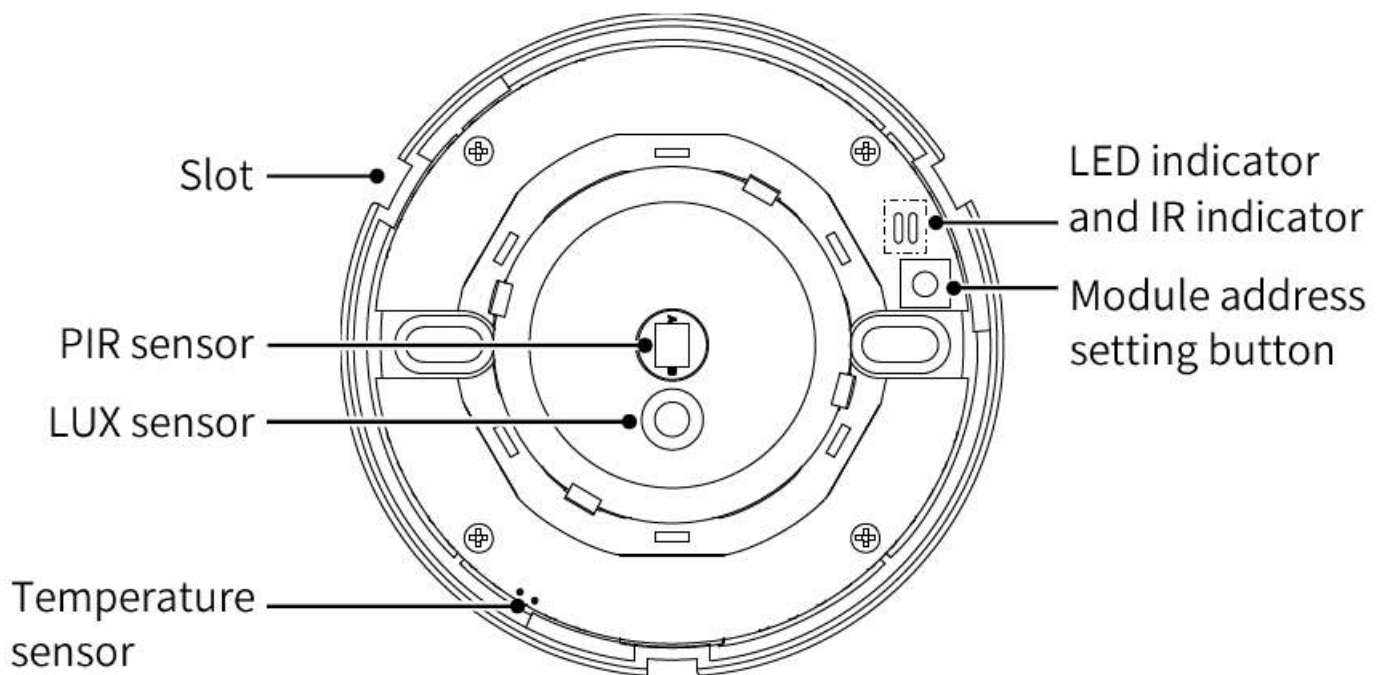


Figure 1

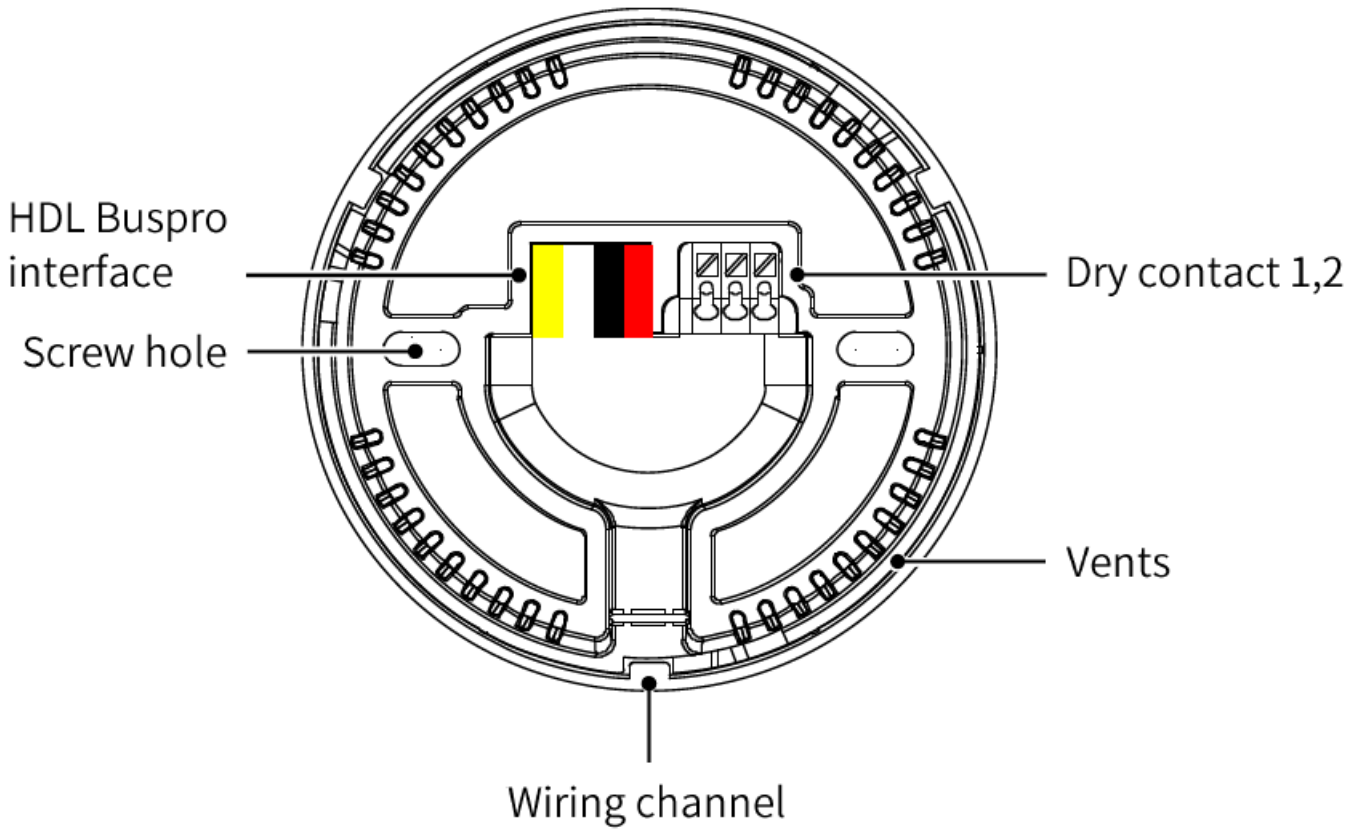


Figure 2

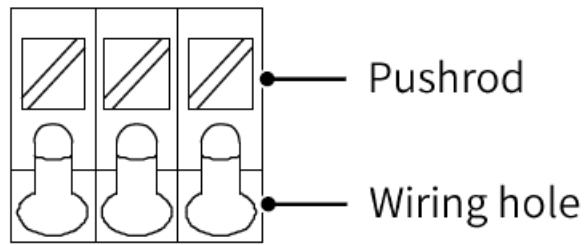


Figure 3

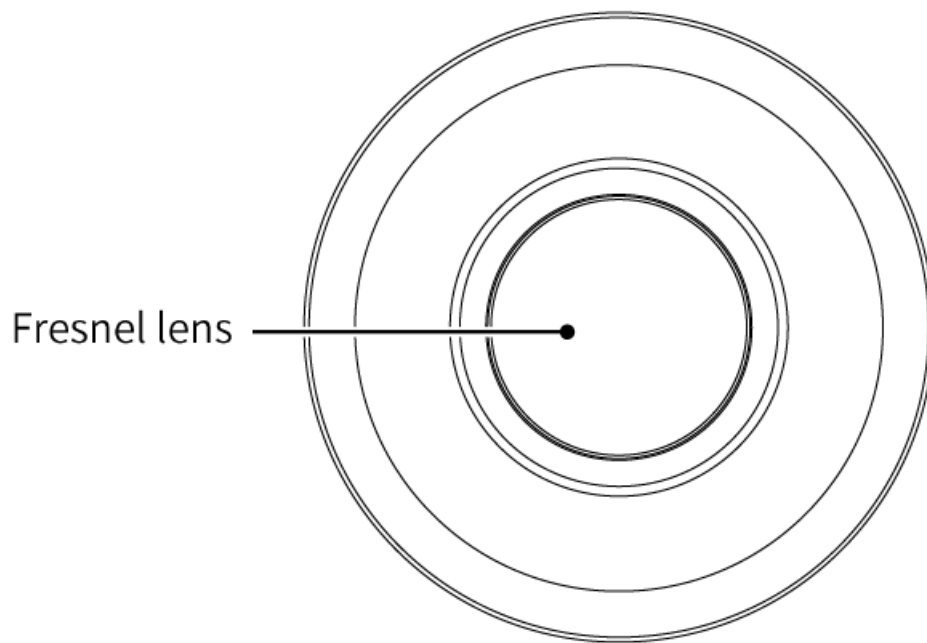


Figure 4

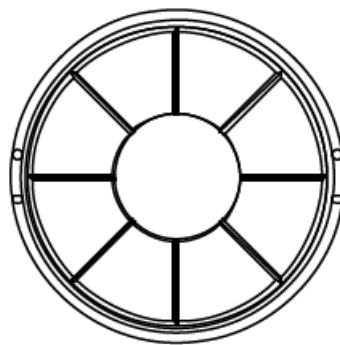


Figure 5

◆◆ Technical Data

Item	Parameter
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Rated voltage	24V DC
Rated current	25mA/24V DC
Detection range	Φ6m (Installation height: 3m)
Communication protocol	Buspro
Cable diameter of Buspro terminal	0.6 - 0.8mm
Temperature detection range	-20°C~60°C
Illumination sensing range	0-500lux
Working temperature	-5°C ~ 45°C
Working relative humidity	≤90%RH, non-condensed
Storage temperature	-20°C ~ 60°C
Storage relative humidity	≤93%RH

◆◆ Specifications

Item	Parameter
Dimensions	Φ84 ×42.5mm
Housing material	ABS
Installation	Ceiling mounted
Net weight	55.4g
IP degree (compliant with EN 60529)	IP20

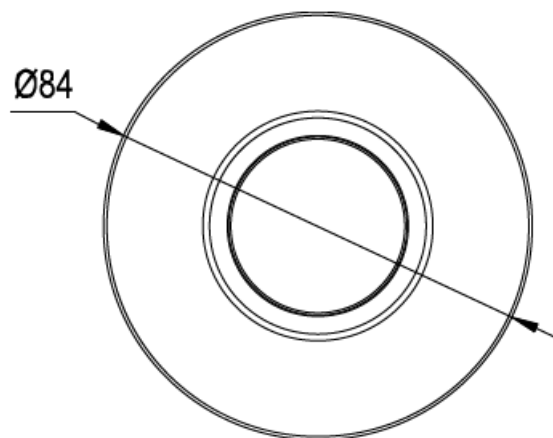


Figure 6

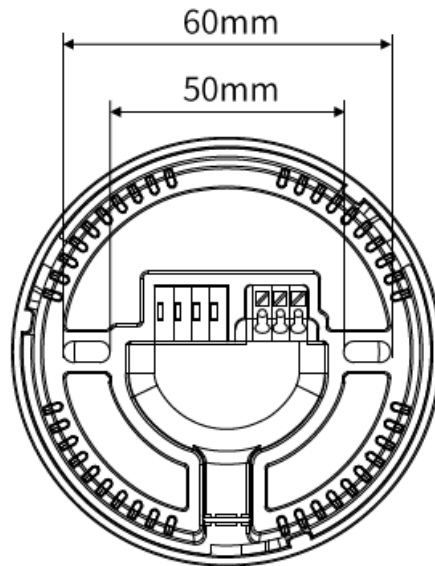


Figure 7

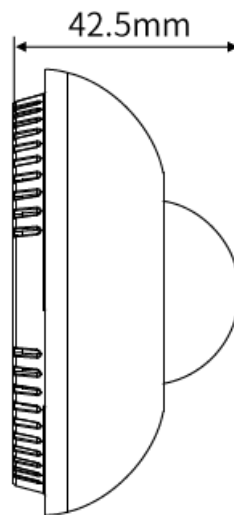


Figure 8

◆◆ Safety Precaution

Danger:

Please do not privately disassemble or replace any parts of the product. Otherwise, it may cause mechanical fault, electric shock, fire or personal injuries.

Warning:

- The installation and testing for the product must be carried out by HDL Automation Co., Ltd. (hereinafter referred to as HDL) or its appointed service agencies. The electric construction shall comply with local laws and safety regulations.
- HDL will not be responsible for any consequence caused by the inexpert or faulty installation and wiring methods, which are not in accordance with the instructions contained in this datasheet.
- Please contact HDL after-sales departments or our designated service agencies for your maintenance service. Product failures caused by private disassembly are not subject to the warranty.

Caution:

- Before performing any installation or disassembly procedures, any maintenance or cleaning procedures on the device, it is crucial to disconnect the device from all voltage sources. This step is necessary to ensure the safety of the technician and prevent any potential damage to the device.
- Do not use corrosive liquid to wipe the device body, especially the interface, so to avoid damage to the device.
- Buspro cable: CAT5E or HDL Buspro cable.
- For Buspro connection, a hand-in-hand connection is recommended.
- After all of the cables are terminated, check for correct and good terminations.
- Do not wipe the device with a damp cloth.
- Prior to performing maintenance or cleaning on the device, disconnect the device from all voltage sources, to avoid electric leakage and electric shock.
- Kindly take note that the installation of the aforementioned device is recommended to be conducted in an indoor environment, with due consideration given to the avoidance of exposure to external factors such as humidity and high temperatures.
- Dry contact cable requirement: Applicable wire: 0.5~0.75mm², stripping wire length: 8.5~10mm, shield cable with length less than 20m recommended

◆◆ Wiring

Tips: For Buspro connection, a hand-in-hand connection is recommended.

HDL Buspro interface Dry contact 1, 2

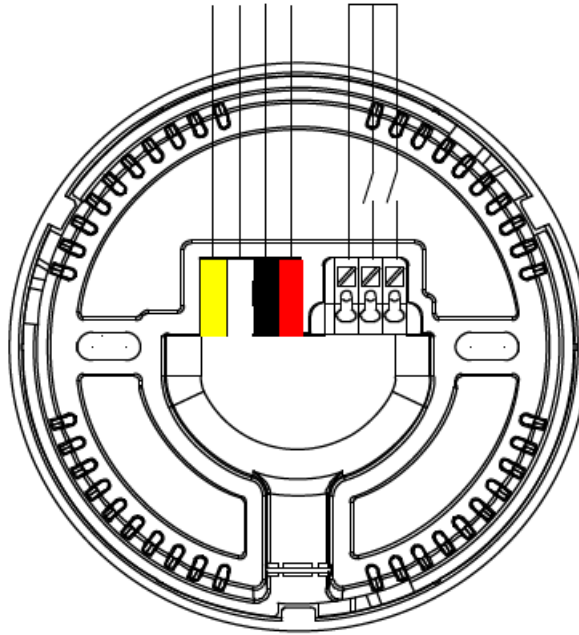


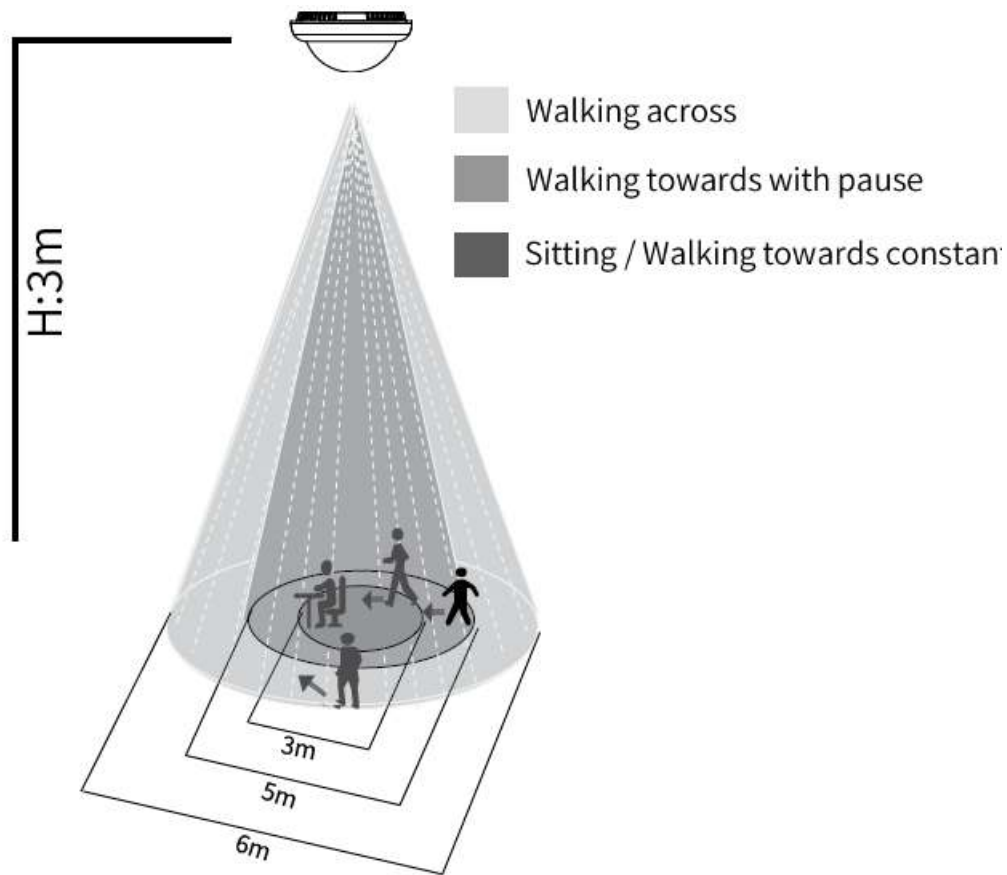
Figure 9

HDL Buspro Cable Guide:

HDL Buspro	HDL Buspro Cable	CAT5 / CAT5E
DATA+	Yellow	Blue/Green
DATA-	White	Blue white/Green white
COM	Black	Brown white/Orange white
24V DC	Red	Brown/Orange

◆◆ Installation

1. Detection range



Detection Range (At 25°C)

Mounting height	Sitting / Walking towards constantly	Walking towards with pause	Walking across
3m	3m	5m	6m

Figure 10. Detection range

2. Installation

Note:

- The device can only be installed indoors. The installation site must be far away from air outlet and heat source such as air conditioner and fan, and avoid installation near large area metal objects.
- Before performing any installation procedures, any maintenance or cleaning procedures on the device, it is crucial to disconnect the device from all voltage sources. This step is necessary to ensure the safety of the technician and prevent any potential damage to the device.

Step 1. Rotate and open the sensor.

Step 2. Fix the sensor base on the wall box with screws.

Step 3. Put the cover on the sensor.

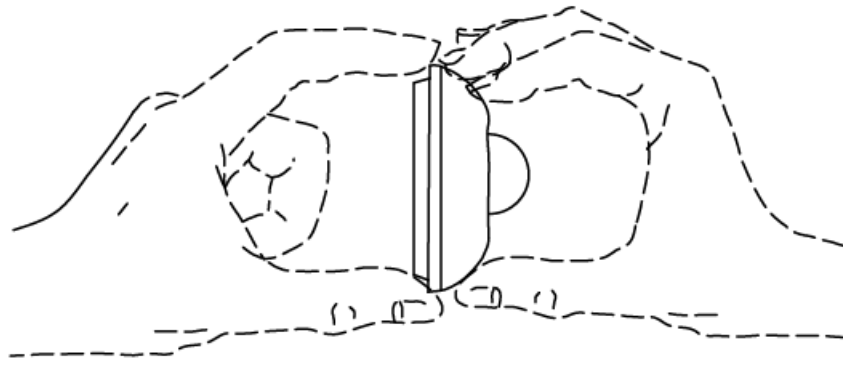


Figure 11

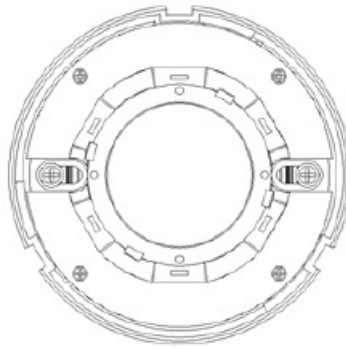
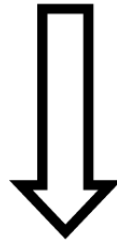


Figure 12

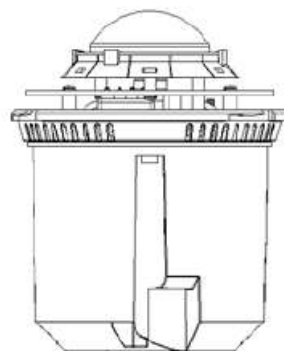
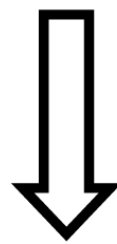


Figure 13

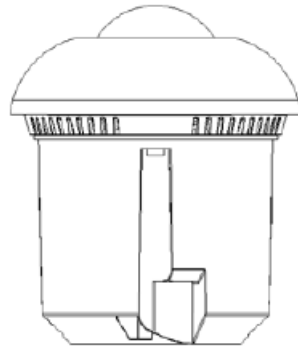


Figure 14

◆◆ Operation

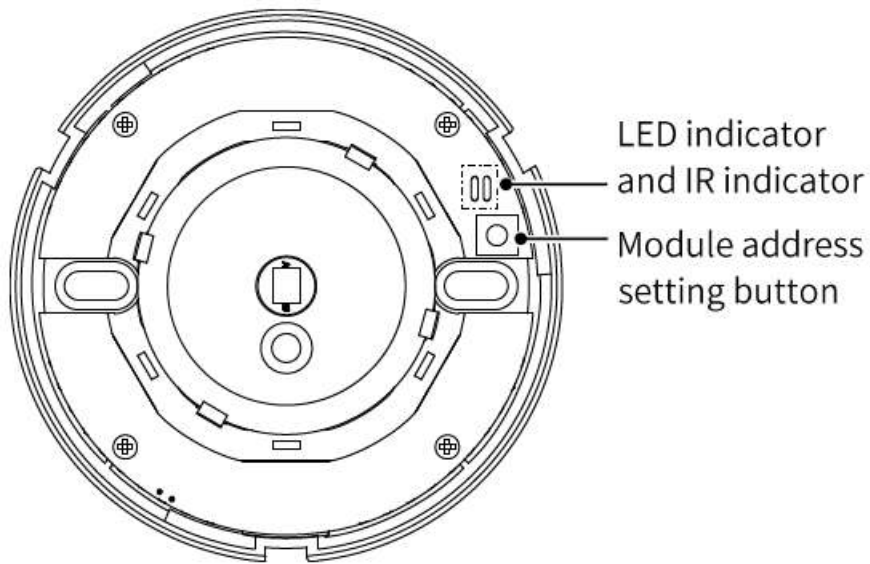


Figure 15

- **LED indicator and IR indicator**

Tips: Indicators can be set via commissioning software.

Indicator status	Device status description
Indicator flashes in green.	The device is in normal working mode.
Red indicator is on.	The device detects motion.

- **Module address setting button**

Function	Operation	Indicator Status	Remark
Address setting	Long press for 3s	Green indicator turns on	Go to “Address management”→“Address modification” of commissioning software to read and modify the address setting

◆◆ Packing List

- Ceiling Mount 7-in-1 Sensor*1
- Buspro connector*1
- Screw*2
- Angle cover*1

Note: After unpacking, please check if the product and the parts are complete.

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Update History

The form below contains the information of every update. The latest version contains all the updates of all former versions.

Version	Update Information	Date
V1.0	Initial release	June 25, 2025

◆◆ Technical Support

E-mail: hdltickets@hdlautomation.com

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