

Installation and Instruction Manual

HYTRONIK®

**Microwave Motion Sensor
DALI Output**

HCD450/D2

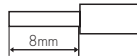
1. Technical Specifications

Sensor principle	High Frequency (microwave)
Operation frequency	10.525GHz
Frequency range	>10.5 Ghz and <10.6 Ghz
Operating voltage	120 ~ 277VAC 50/60Hz
Warming-up	20s
Current Consumption	Max. 2mA from DALI Bus
Output	DALI-2 Command
Transmission power	<0.5mW
Detection range(Max.)	Max installation height: 27m (forklift) Max installation height: 20m (human) Max detection range: 17 * 14m (L * W)
Detection angle	30° ~ 150°
Operation temperature	Ta: -20°C ~ +60°C
Case temperature (Max.)	Tc: +75°C
Storage temperature	-40°C ~ 70°C
Relative humidity	20 ~ 90%
IP rating	IP65
Insulation	Class II

Wire Preparation



0.75~1.5mm²

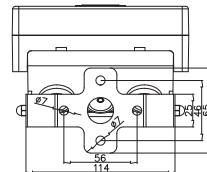
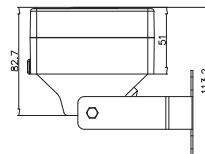
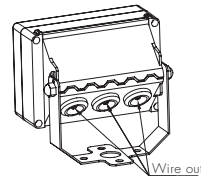
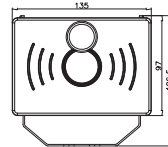
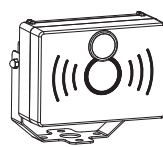
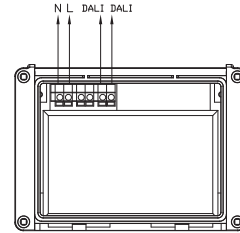


To make or release the wire from the terminal,
use a screwdriver to push down the button.

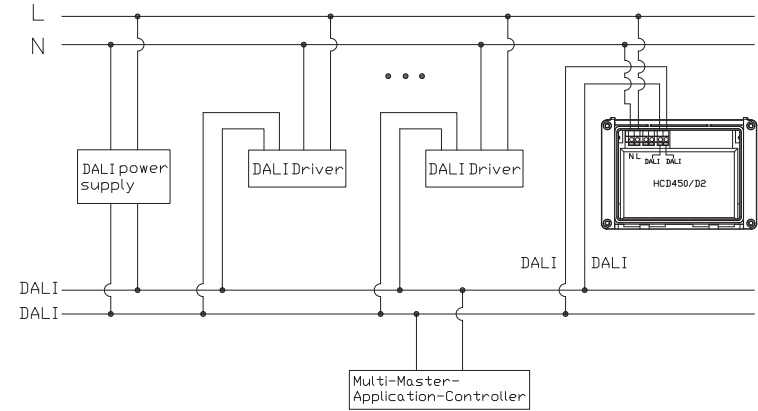
1. 200 metres (total) max. for 1mm² CSA (Ta = 50°C)
2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50°C)

2. Installation

Mechanical Structure & Dimensions

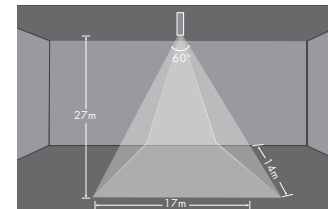


Wiring Diagram

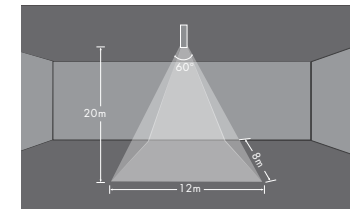


—This product should be installed by a qualified electrician.

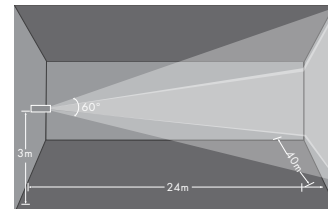
3. Detection Pattern



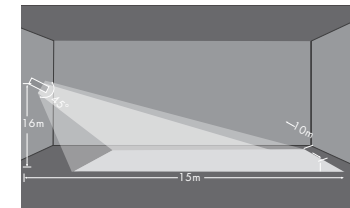
Forklift driving



Single person continuous walking



Single person continuous walking



Single person continuous walking

4. Sensitivity Adjustment

The motion sensor only sends motion events. No further signals or commands will be sent. Sensor sensitivity ranges from 0 to 100%.

- *Values of "detectionRange" and "detectionSensitivity" shall have the following meaning:
- [0,100]: 0-100%. 0 is the lowest detection range or detection sensitivity, 100 is the highest.
 - 255: Adjustment not supported.

*Set sensitivity: 0x26
*Query sensitivity: 0x2B

Command name	Address byte	Instance byte	Opcode byte	DTR0	DTR1	DTR2	Answer	Send twice	See subclause	Command subclause
CATCH MOVEMENT	Device	Instance	0x20						9.4.6	11.7.2
SET HOLD TIMER (DTR0)	Device	Instance	0x21	✓				✓	9.5.1	11.8.3
SET REPORT TIMER (DTR0)	Device	Instance	0x22	✓				✓	9.5.2	11.8.4
SET DEADTIME TIMER (DTR0)	Device	Instance	0x23	✓				✓	9.5.3	11.8.5
CANCEL HOLD TIMER	Device	Instance	0x24						9.5.1	11.7.3
SET DETECTION RANGE (DTR0)	Device	Instance	0x25	✓				✓	9.5.7	11.8.6
SET SENSITIVITY (DTR0)	Device	Instance	0x26	✓				✓	9.5.7	11.8.7
QUERY INSTANCE CAPABILITIES	Device	Instance	0x29				✓		9.5.6	11.9.7
QUERY DETECTION RANGE	Device	Instance	0x2A				✓		9.5.7	11.9.8
QUERY SENSITIVITY	Device	Instance	0x2B				✓		9.5.7	11.9.9
QUERY DEATIME TIMER	Device	Instance	0x2C				✓		9.5.3	11.9.3
QUERY HOLD TIMER	Device	Instance	0x2D				✓		9.5.1	11.9.4
QUERY REPORT TIMER	Device	Instance	0x2E				✓		9.5.2	11.9.5
QUERY CATCHING	Device	Instance	0x2F				✓		9.5.6	11.9.6

*The valid value range is 0-100, 0-24 is the lowest sensitivity of the first gear, 25-49 is the second gear, 50-74 is the third gear, and 75-100 is the highest sensitivity of the fourth gear.

5. Additional Information / Documents

1. To learn more about detailed product features/functions, please kindly refer to <https://hytronik.com/product/hcd450-d2>
2. Regarding precautions for Microwave sensor installation and operation, please kindly refer to: <https://hytronik.com/service/downloads> (Microwave Sensors Precautions for Product Installation and Operation)
3. Data sheet is subject to change without notice. Please always refer to the most recent release on <https://hytronik.com/products/motion-daylight-sensors>
4. Regarding Hytronik standard guarantee policy, please kindly refer to <https://hytronik.com/service/downloads> (Guarantee Conditions document)