HYTRONIK HN020-01V Wireless Sensor Instruction Manual

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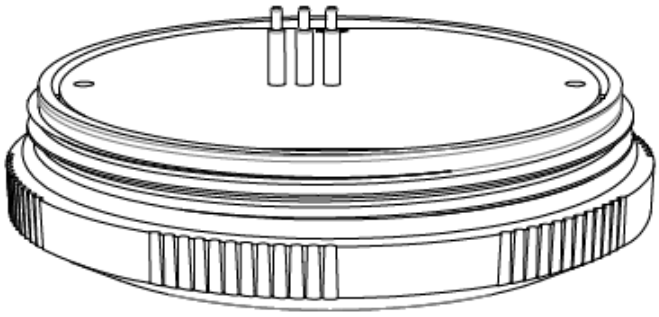
HYTRONIK HN020-01V Wireless Sensor



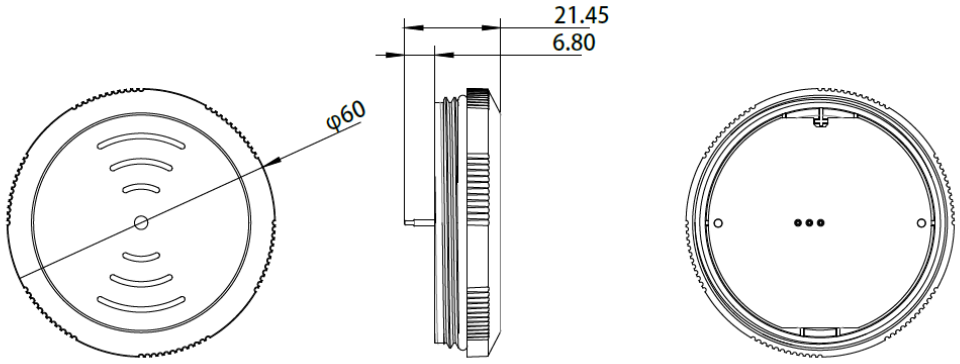
Technical Specifications

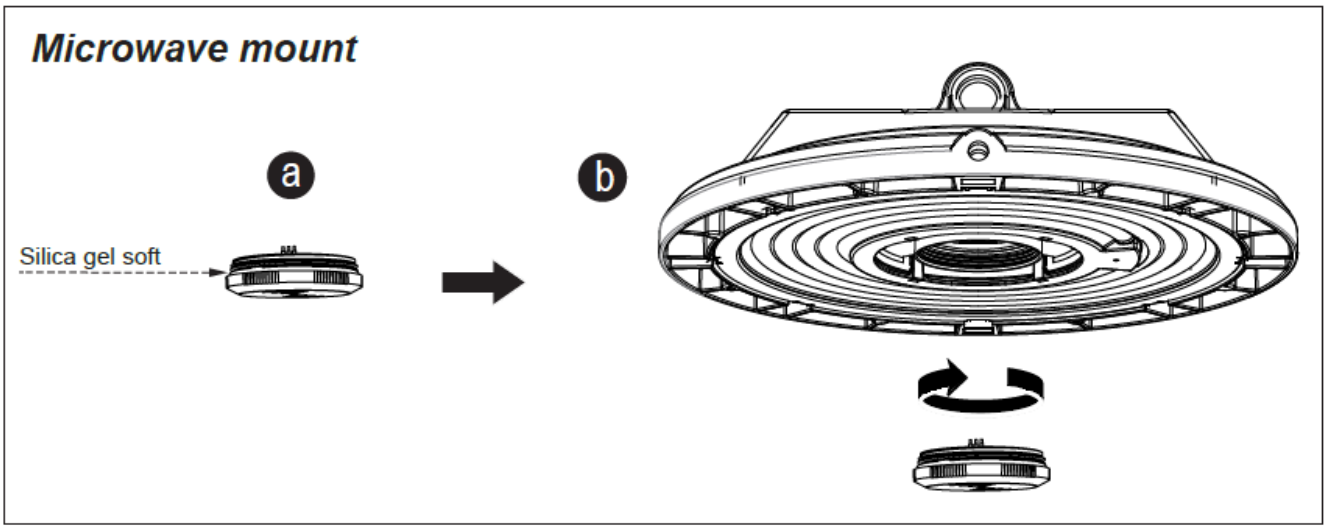
- **PRODUCT TYPE:** Microwave Motion Sensor
- **OPERATING VOLTAGE:** 12VDC/50mA
- **HF SYSTEM:** 5.8GHz CW radar

- **DETECTION ANGLE:** 30° 150
- **POWER CONSUMPTION:** <1W
- **DETECTION RANGE (DxH):** Max. 16 x 12m
- **HOLD TIME:** 30s 30min
- **DAYLIGHT SENSOR:** 2 500Lux; disable
- **STAND-BY PERIOD:** Os, 10s 1h, +
- **STAND-BY DIMMING LEVEL:** 10%50%
- **MOUNTING:** Indoors, ceiling & wall mounted
- **WORKING TEMP:** -20~+60C

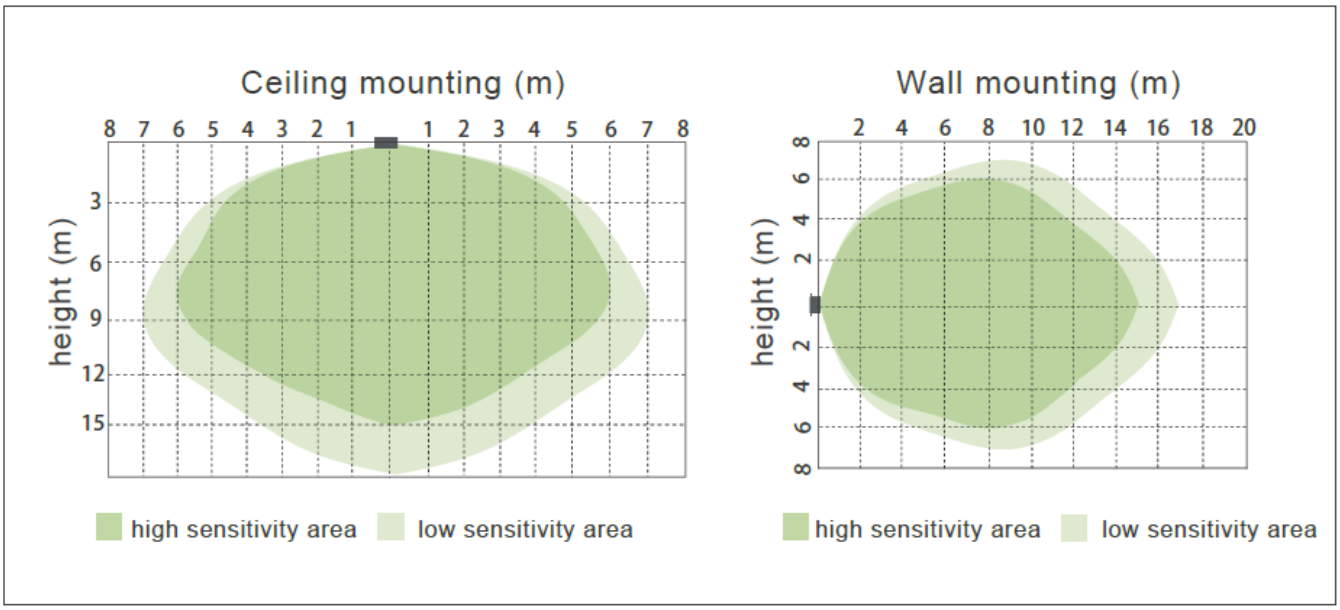
MODEL

- HNO20-01V Microwave/ constant illumination
- HN021-01V Microwave/ constant illumination+ RF(868MHz)
- HNO22-01V Microwave/ constant illumination+ RF (UL 915MH)





Detection Pattern



SECTION 1 TYPICAL APPLICATIONS

Typical Applications

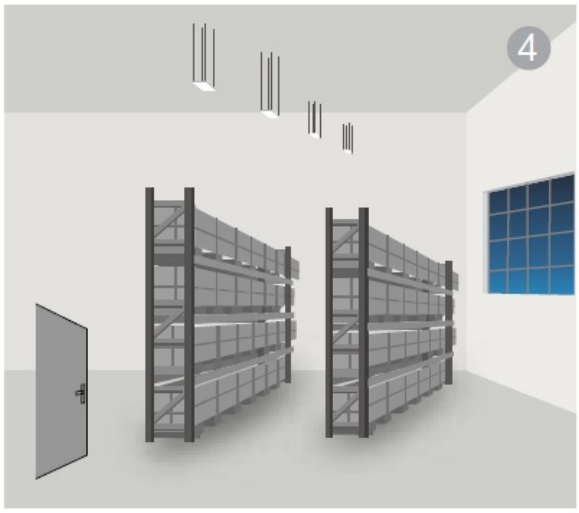
ULTRANIK HF motion detector

Daylight Harvest

The motion detector can turn on the light based on movement. With this detector built-in, light is automatically on when needed and dimmed to a preset level before it is totally off.

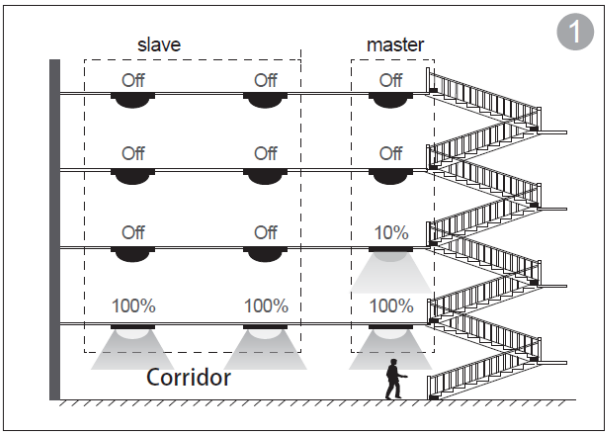
1. The light keeps off during the daytime even when movement is detected. (Ambient lux level is above preset daylight threshold)
2. With movement and insufficient ambient lux level, the light is triggered on 100% by the detector.

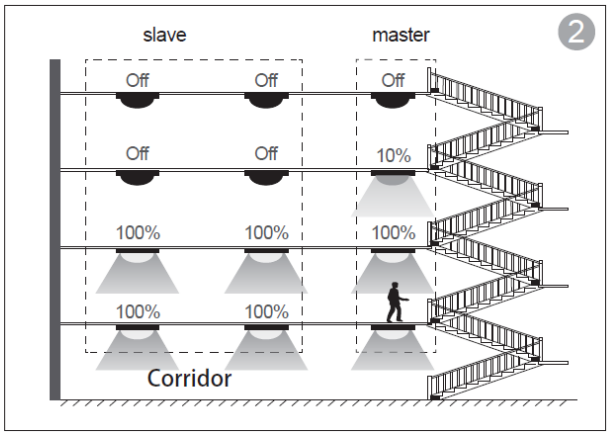
- The sensor high bay turns on at full or dims to maintain the lux level. The light output regulates according to the level of natural light available.



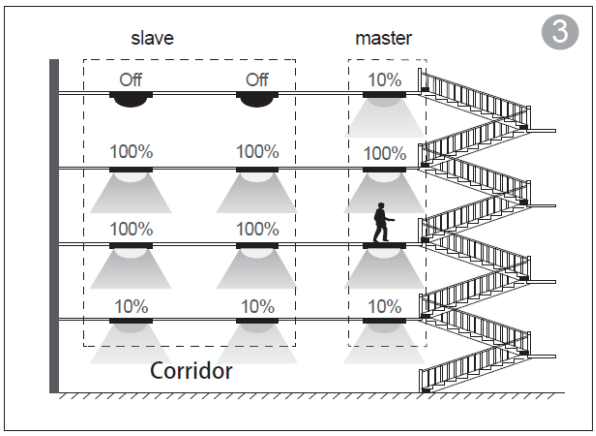
1. If there is no more movement, the light dims to stand-by dimming level after hold-time.
2. The light turns off automatically after standby time.

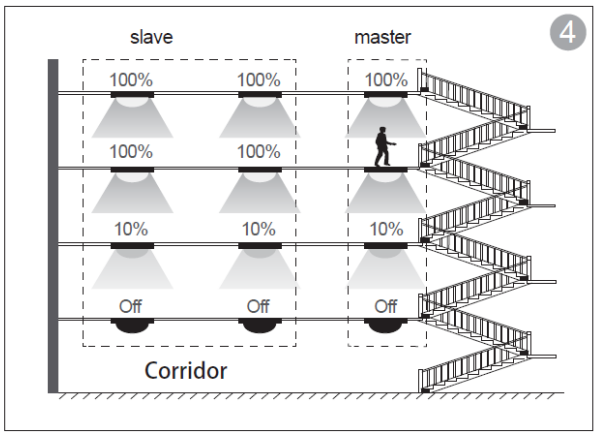
For staircase and corridor (master and slave)





1. While the 1st sensor detects motion on the 1st floor, it switches the light on at 100% and sends a signal to all slave units. All slaves on the 1st floor turn on and the sensor high bay on the 2nd-floor switches on at stand-by level.
2. The person walks to the 2nd floor, the 2nd Sensor high bay switches the light on at 100%. All slaves on the 2nd floor turn the light on and the Sensor high bay on the 3rd-floor switches on at stand-by level.

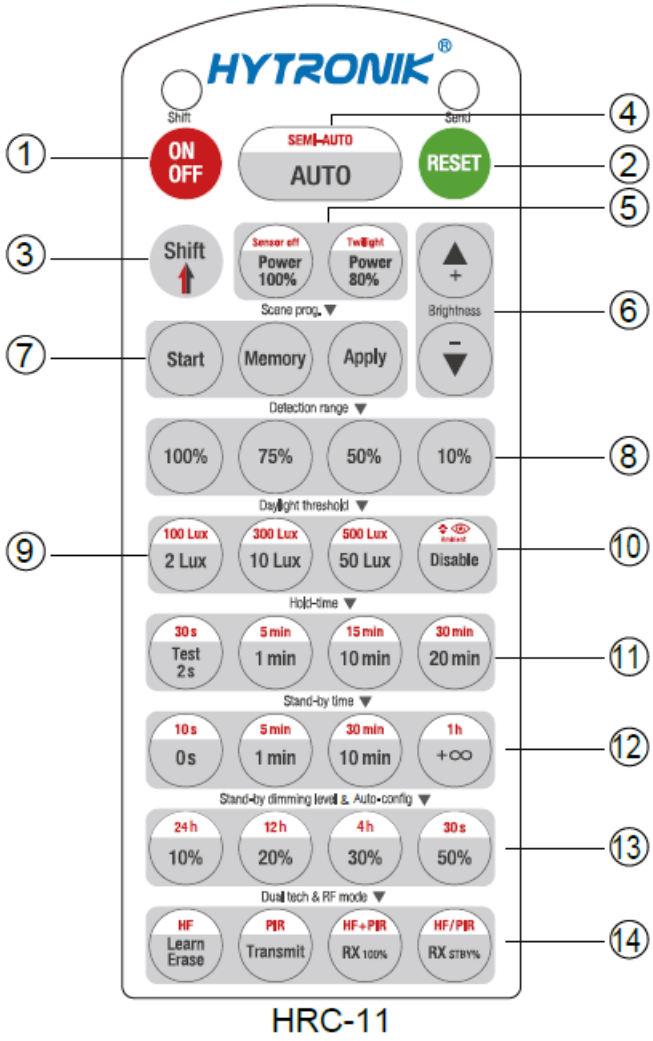




3. The person walks to the 3rd floor, the 3rd sensor high bay switches the light on 100%. All slaves on the 3rd floor turn the light on and the Sensor high bay on the 4th floor switches on the standby level. Meanwhile, the lights on the 1st floor are dimmed to stand-by level after hold-time.
4. The person walks to the 4th floor, the 4th sensor high bay switches the light on at 100%. All slaves on the 4th

floor turn the light on Meanwhile, all sensors on the 1st floor turn the light off after the stand-by period, and all lights on the 2nd floor dim to stand-by level after hold-time.

SECTION 2 REMOTE CONTROL



HRC-11

Permanent ON/OFF [1 button]

- Press the button, to select permanent ON or permanent OFF mode.
- Press the button / to resume automatic operation.
- The mode will change to AUTO Mode after power failure.

RESET[2 buttons]

- Press the button, and all settings go back to the default settings:
- Detection range: 100% Hold time: 1min Stand-by period: 5min
- Stand-by dimming level: 20% Daylight sensor: LUX disable

Shift [3 button]

- Press the button, and the LED on the top left corner will flash to indicate mode selection.
- All values/settings in RED are valid for 20 seconds.

Auto Mode [4 buttons]

- Press the button to initiate automatic mode. The sensor starts working and all settings remain as before the light was switched ON/OFF.

Semi-auto Mode [button3 &4]

- Press button Shift (the red LED is on for indication),
- and press the button to initiate semi-auto mode. The fixture is manually on by push-switch and automatically off in semi-auto mode.

Power output [5 buttons]

- Press the button, and the light output shifts between 80% and 100%.

Note: the function of “Sensor off” and “Twilight” are disabled.

Brightness +/- [6 button]

- Press the button to adjust the light brightness between 10%~100%.

Scene prog. [7 zone] (One-key-commissioning

- Press the button “start” to program.
- Select the buttons in **8** “Detection range”, **9**/**10** “Daylight threshold”, “Hold time”,**13** “Stand-by time”, and **13** “Stand-by dimming level” to set all parameters.
- 3. Press the button “Memory” to save all the settings programmed in the remote control.
- Press the button “Apply” to set the settings for each sensor unit(s). For example, to pre-set detection range 100%, daylight threshold Disable, hold time5min, stand-by time +∞ , stand-by dimming level 30%, the steps should be as follows: Press button Start, button 100%, Disable, Shift, 5min, Shift, +∞, 30%, Memory.
- By pointing to the sensor unit(s) and pressing 7 Apply, all settings are passed on to the sensor(s).

Detection range [8 zones]

- Press buttons in z one to set detection range at 100% / 75%/ 50% / 10%.

Daylight threshold [9 zones]

- Press buttons in zone to set the daylight sensor at 2Lux / 10Lux / 50Lux / 100Lux / 300Lux / 500Lux or Disable.

Note: To set the daylight sensor at 100Lux / 300 Lux / 500Lux, press the button Shift at first.

Ambient daylight threshold [10 buttons]

1. Press the button Shift, the red LED is on for indication.

2. Press the button, and the ambient lux level is sampled and set as the new daylight threshold.

Stand-by time [11 zones]

- Press buttons in zone to set the hold time at 2s / 30s / 1min / 5min / 10min / 15min / 20min / 30min.

Note

- To set hold-time at 30s / 5min / 15min / 30min, press button Shift at first.
- 2s is for testing purposes only, stand-by period and daylight sensor settings are disabled in this mode.
- To exit from Test mode, press the button or any button in the zone.

Hold time [12 zones]

- Press buttons in zone to set the stand-by period at 0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞.

Note: “0s” means on/off control; “+∞” means bi-level control, 100% on when motion is detected, and remains at the stand-by dimming level when no presence is detected after hold-time.

Stand-by dimming level [13 zones]

- Press buttons in zone to set the stand-by dimming level at 10% /20% / 30% / 50%.

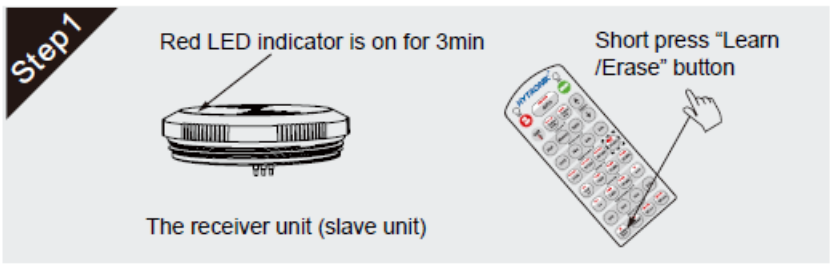
Note: 24h / 12h / 4h / 30s are disabled.

Dual tech & RF mode [14 zones]

- HF, PIR, HF+PIR, and HF/PIR are disabled. 2. For RF grouping, please see below.

Sensor setting go back to default setting as followed after press reset:

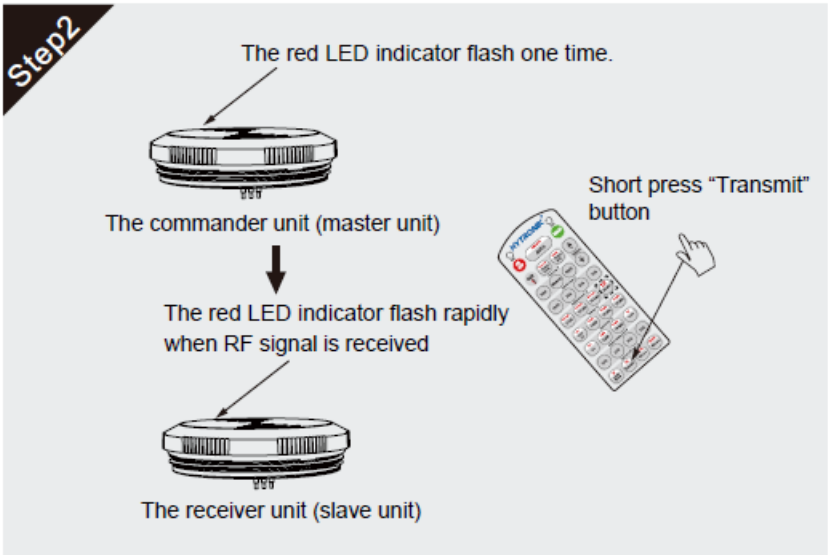
- Detection range: 100%
- Hold time: 5min
- Stand-by time: 10min
- Stand-by dimming level: 10%
- Daylight threshold: 300LUX



- Short press the “Learn/Erase” button on RC to activate pairing mode, and the receiver unit will flash once every

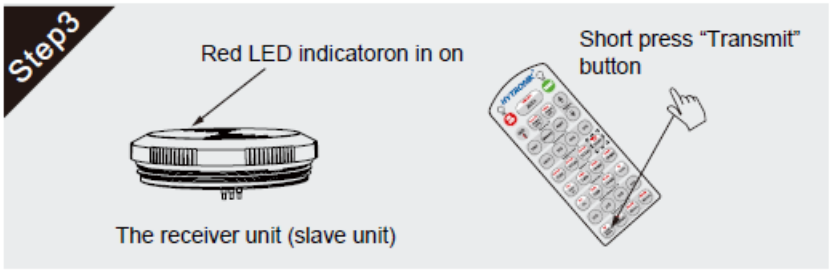
second for 3min.

Note: the unit can only pair up to 30 units.



- Short press the “Transmit” button on RC, and the commander unit (master unit) will flash one time to send the transmission signal.
- Upon receiving the transmission signal, the receiver unit (slave unit) will rapidly flash 3 times in 1s to indicate the success of pairing. Repeat this step to pair more units. One more short press on the “Learn/Erase” button to the receiver unit to complete the pairing process, the receiver unit will quit the pairing mode.

Note: Press button RX100%, the light on the receiver unit is 100% on upon receiving RF on signal; Press the “RX STBY%” button, and the light(s) goes to preset stand-by dimming level directly.



Erase

- Long press the “Learn/Erase” button for 3s to the sensor unit. The red LED indicator rapidly flash for about 5s. all commands it has received before will be erased.

SECTION 3 TROUBLESHOOTING

MALFUNCTION CAUSE REMEDY	CAUSE	REMEDY
The fixture does not light up	Incorrect daylight threshold setting	Adjust daylight threshold settin g
	Faulty fixture	Replace fixture
	No power supply	Check power to the sensor
The fixture is always on	Continous movement in the detection zo ne	Check detection area setting
The fixture is on when it should not	Sudden change in temperature due to w eather (wind, rain, snow) or air expelled f rom fans, or open windows	Adjust zone, change installatio n site

FCC STATEMENT

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

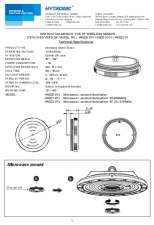
1. this device may not cause harmful interference.
2. this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment. The device has been evaluated to meet general RF exposure requirements, the device can be used in portable exposure conditions without restriction.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Documents / Resources

	HYTRONIK HN020-01V Wireless Sensor [pdf] Instruction Manual HN020-01V, HN02001V, 2AXAA-HN020-01V, 2AXAAHN02001V, HN022-01V, HN02201V, 2AX AA-HN022-01V, 2AXAAHN02201V, HN020-01V, HN021-01V, HN022-01, HN020-01V Wireless Sensor, HN020-01V, Wireless Sensor

References

- Microwave sensor_Microwave motion sensor_Hytronik Electronics Co., Ltd.