RF WIRELESS DUAL SENSE SENSOR FOR HIGH BAY HIM39/RF AND HC034RF

1. Technical Specifications

Product type	RF wireless dual sense independent DALI sensor (tri-level control)
Operating voltage	220-240VAC 50/60Hz
Rated load	Maximum 20pcs DALI devices, Maximum 40mA
Power consumption	< 1.5W
Detection angle	360°
Detection area (Max.)*	Installation Height : 15m Detection Range (Ø) :18m
Detection range	10% / 50% / 75% / 100%
Hold time	2s / 30s / 1min / 5min / 10min / 15min / 20min / 30min
Stand-by time	0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞
Stand-by dimming level	10% / 20% / 30% / 50%
Daylight threshold	2 ~ 500Lux, Disable
RF transmission distance	30 meters in the open area
RF frequency	868MHz (FSK mode)
Warming up time	30s
Operating temperature	-20°C ~ +50°C
IP rating	IP65
Sensor mode	HF, PIR, HF+PIR, HF / PIR

HC034RF

Product type	RF wireless receiver
Operating voltage	220-240V 50Hz
Rated load	Capacitive:400W; Resistive:1200W
IP rating	IP20

3. Rotary Switch for RF grouping

Rotary switch for RF grouping
(Please see the location in 2. Installation)

15 channels are available for fast grouping via rotary switch. By simply selecting the same channel on each unit, the grouping is automatically completed.

Noted: channel "0" is not for fast grouping, and sensors can only be grouped by remote control.

4. Functions

4.1 Tri-level Control (Corridor Function)

Hytronik builds this function inside the motion sensor to achieve tri-level control, for some areas it requires a light change notice before switch-off.
It offers 3 levels of light: 100%-->dimmed light-->off; and 2 periods of selectable waiting time: motion hold-time and stand-by period; Selectable daylight threshold and freedom of detection area.

4.2 Lux Off Function

The built-in daylight sensor can read ambient natural light and switch off the fixture automatically whenever artificial light is not required (natural light lux level exceeds daylight threshold).
Note: if the stand-by time is preset at "+∞", the fixture never switches off even when natural light is sufficient.

4.3 Load Indication

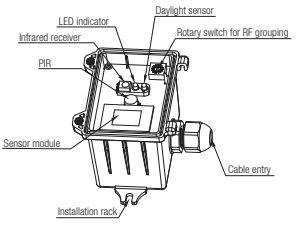
The light will flash ONCE rapidly after receiving the command from the remote controller.
Note: There is no load indication (the light will not flash) when button ON/OFF, POWER 100% or POWER 80% is pressed.

2. Installation

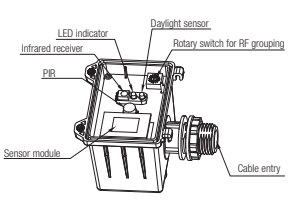
⚠ **Warnings:**

1. Installation must be carried out by a qualified engineer in accordance with local regulations.
2. Disconnect power supply before installing.
3. Install to a solid surface - vibrations may cause mis-triggering.
4. Ensure environmental conditions are suitable for electronic equipment

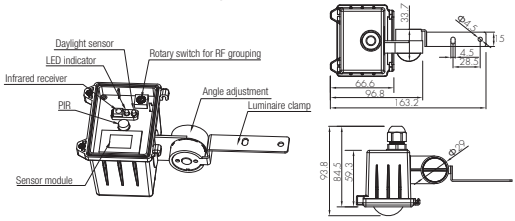
A. Ceiling mount



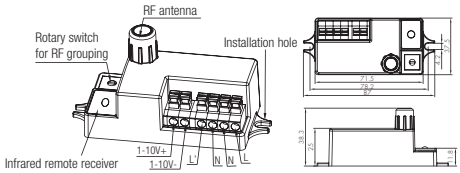
B. Screw to the Luminaire by conduit



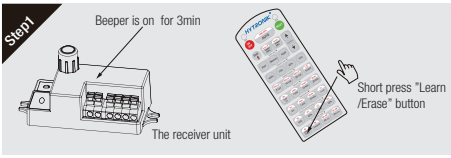
C. Attach to the shade by clamp



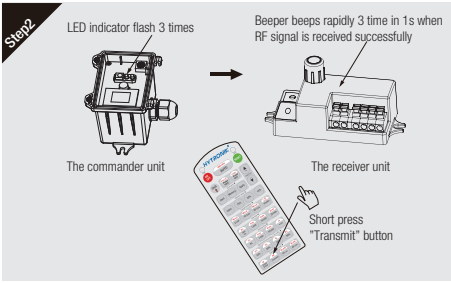
HC034RF (RF receiver)



5. RF grouping by remote controller



Short press "Learn/Erase" button on RC to the receiver to activate pairing mode, and the LED indicator on receiver unit will flash slowly.
Note: up to 30 units can be paired.

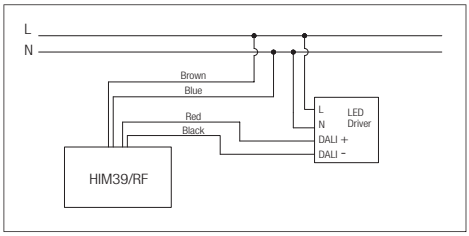


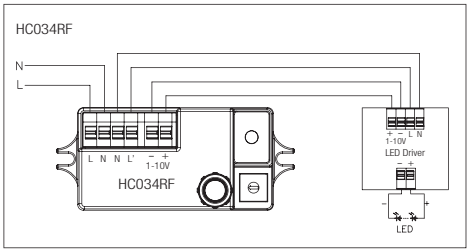
Short press "Transmit" button on RC to the commander, the LED indicator on commander unit will flash for 3 times to send the transmission signal.

Upon receiving the transmission signal, the indicator on receiver unit will flash quickly then slowly to indicate the success of pairing. One more short press on "Learn/Erase" button to the receiver unit to complete the pairing process, the receiver unit will quit the pairing mode.

Erase:
Long press "Learn/Erase" button for 3s to the sensor unit, the indicator rapidly flashes 12 times, all commands it has received before will be erased.

6. Wiring Diagram

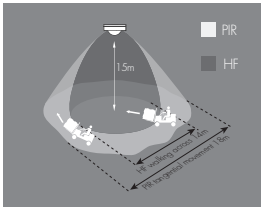




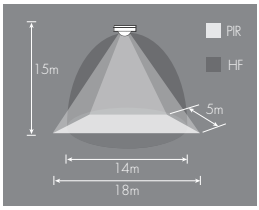
7. Three Options for PIR Lens and Detection Patterns (End user can choose the suitable lens in real application for various requirements)

* For single person walking across, the detection range is reduced by 1/3.

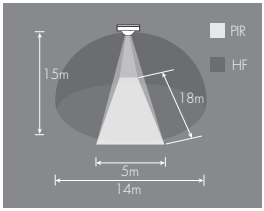
① ② ③



PIR detection: H x D:1.5 x 18m (max.)
HF detection: H x D:1.5 x 14m (max.)

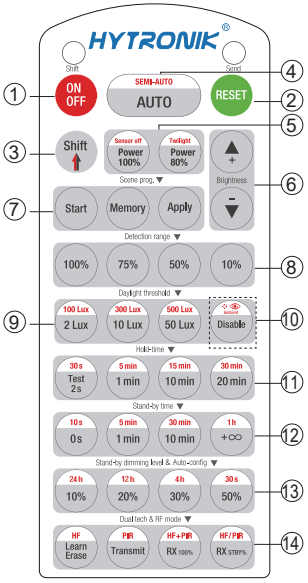


PIR detection: L x W x H:18 x 5 x 15m (max.)
HF detection: H x D:15 x 14m (max.)



PIR detection: L x W x H:5 x 18 x 15m (max.)
HF detection: H x D:15 x 14m (max.)

8. Descriptions of the Button Functions (remote control HRC-11)



HRC-11

Permanent ON/OFF [button ①]
Press button ①,to select permanent ON or permanent OFF mode.
* Press button ②/④ to resume automatic operation.
The mode will change to AUTO Mode after power failure.

RESET[button ②]
Press button ②, all settings go back to the default setting :
HIM39RF:Detection range:100%, hold time:1min,
stand-by time:5min,stand-by dimming level:20%,
daylight sensor:lux disable, RX 100%
HC034RF: Detection range:100%, hold time:10min,
stand-by time:30min,stand-by dimming level:20%,
daylight sensor:lux disable, RX 100%

Shift [button ③]
Press button ③, 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 [button ④]
Press button ④ to initiate automatic mode. The sensor starts working and all settings remain as before the light was switched ON/OFF.
Note: the function of semi-auto is disabled.

Power output [button⑤]
Press button ⑤, the light output shifts between 80% and 100%.
Note: the function of "Sensor off" and "Twilight" are disabled.

Brightness +/- [button ⑥]
Press button ⑥ to adjust the light brightness between 10%~100% .

Scene prog. [zone ⑦] (One-key-commissioning)
1. Press button "start" to program.
2. Select the buttons in ⑧ "Detection range", ⑨/⑩ "Daylight threshold", ⑪ "Hold time",⑫"Stand-by time",⑬"Stand-by dimming level" to set all parameters.
3. Press button "Memory" to save all the settings programmed in the remote control.
4. Press button "Apply" to set the settings to each sensor unit(s). For example, to pre-set detection range 100%, daylight threshold Disable, hold time 5min, stand-by time +∞, stand-by dimming level 30%, the steps should be as follows: Press button ⑦Start, button ⑧100%, ⑩ Disable, ③Shift, ⑪5min,③Shift,⑫ +∞,⑬ 30%, ⑦Memory. By pointing to the sensor unit(s) and pressing ⑦Apply, all settings are passed on the sensor(s).

Detection range [zone ⑧]
Press buttons in zone ⑧ to set detection range at 100% / 75% / 50% / 10%.

Daylight threshold [zone ⑨]
Press buttons in zone ⑨ to set the daylight sensor at 2Lux / 10Lux / 50Lux / 100Lux / 300Lux / 500Lux or Disable.
Note: To set daylight sensor at 100Lux / 300 Lux / 500Lux, press button ③ Shift at first.

Ambient daylight threshold [button ⑩]
1. Press button ③ Shift, the red LED is on for indication.
2. Press button ⑩, the ambient lux level is sampled and set as the new daylight threshold.

Hold time [zone ⑪]
Press buttons in zone ⑪ to set the hold time at 2s / 30s / 1min / 5min / 10min / 15min / 20min / 30min.
Note: 1.To set hold-time at 30s / 5min / 15min / 30min, press button ③ Shift at first.
2. 2s is for testing purpose only, stand-by period and daylight sensor settings are disabled in this mode.
*To exit from Test mode, press button ② or any button in zone ⑪.

Stand-by time [zone ⑫]
Press buttons in zone ⑫ 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 detected, and remains at the stand-by dimming level when no presence after hold-time.

Stand-by dimming level [zone ⑬]
Press buttons in zone ⑬ to set the stand-by dimming level at 10% / 20% / 30% / 50%.
Note.the function of 24h / 12h / 4h / 30s are disabled.

Dual tech & RF mode [zone ⑭]
1. Press buttons in zone ⑭ to select sensor technology.
HF+PIR: Light is on when both HF and PIR sensors are activated.
HF/PIR: Light is on when HF or PIR sensors are activated.
2. Short press button "Learn/Erase" to activate pairing mode on all receiver (slave) units to be paired.
Note:up to 30 units can be paired.
3. Short press button "Transmit" at the commander unit(master), the LED will flash for 3 times to indicate that the transmission signal has been sent. The receiver units flashes slowly to indicate the success of pairing. Repeat this process for two way communications, a single sensor may act as both commander and receiver.
4. Long press "Learn/Erase" button for 3s, and the receiver unit clears all commands it has received before.
5. Press button RX100%, the light on receiver unit is 100% on upon receiving RF on signal; Press "RX STBY%" button, the light(s) goes to presset stand-by dimming level directly.

9. Troubleshooting

MALFUNCTION CAUSE REMEDY	CAUSE	REMEDY
The fixture does not light up	Incorrect daylight threshold setting	Adjust daylight threshold setting
	Faulty fixture	Replace fixture
	No power supply	Check power to sensor
	Detection zone not targeted	Check detection area setting
The fixture is always on	Continous movement in the detection zone	Check detection area setting
The fixture is on when it should not	Sudden change in temperature due to weather (wind, rain, snow) or air expelled from fans, open windows	Adjust zone, change installation site

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