HIGH BAY RF WIRELESS MICROWAVE DALI SENSOR HMW39/RF + HC034RF

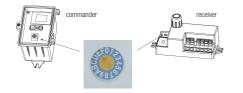## 1. Technical Specifications

HMW39/RF

Product type	RF wireless microwave DALI sensor (tri-level control)
Operating voltage	120~277VAC 50/60Hz
Rated load	Maximum 20pcs DALI devices, Maximum 40mA
Power consumption	< 1.5W
Detection angle	360°
Detection area (DxH)	10 x 12m (Maximum)
Mounting height	12m (Maximum)
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	20s
Operating temperature	-20°C ~ +50°C
IP rating	IP65

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

commander   receiver

15 channels are available for fast grouping via rotary switch on both HMW39/RF and HC034RF. 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 require 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.
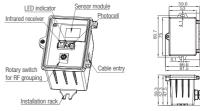
4.2 Lux Off Function

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).
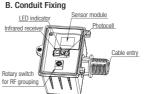Note: if the stand-by time is preset at "+∞", the fixture never switches off even when natural light is sufficient.

2. Installation

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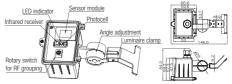4. Ensure environmental conditions are suitable for electronic equipment
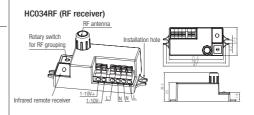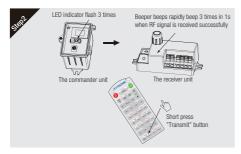
A. Surface Mounting

B. Conduit Fixing

C. Clamp Fixing

HC034RF (RF receiver)

5. RF grouping

Step1

Beeper is on for 3min

The receiver unit

Short press "Learn /Erase" button

Short press "Learn/Erase" button on RC to the receiver to activate pairing mode, and the receiver unit will beep once every second for 3min.
Note: up to 30 units can be paired.

Step2

LED indicator flash 3 times

Beeper beeps rapidly beep 3 times in 1s when RF signal is received successfully

The commander unit   The receiver unit

Short press "Transmit" button

Short press "Transmit" button on RC to the commander, the red indicator on commander unit will flash 3 times to send the transmission signal.
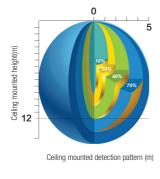
Upon receiving the transmission signal, the receiver unit will rapidly beep 3 times in 1s to indicate the success of pairing. One more short press on "Learn/Erase" button to the receiver unit to complete the pairing process, the receiver unit will quit the pairing mode.

Step3

Beeper is on
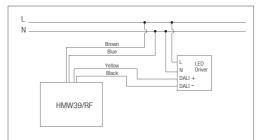
The receiver unit

Short press "Learn /Erase" button

Erase:
Long press "Learn/Erase" button for 3s, the beeper on receiver unit rapidly beeps for 5s, all commands it has received before will be erased.
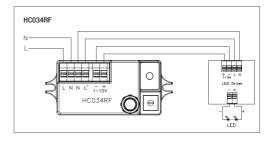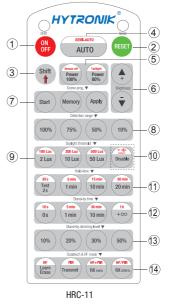
7. Detection Pattern

0

5

Ceiling mounted height(m)

10%
30%
50%
75%

12

Ceiling mounted detection pattern (m)

6. Wiring Diagram

L
N
Brown
Blue
Yellow
Black

L
N LED Driver
DALI +
DALI –

HMW39/RF

HC034RF

N
L

L N N L'
1~10V
HC034RF

+ – L N
1~10V
LED Driver
– +

– +
LED

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

① ON OFF — Shift
② RESET — Send
③ Shift
④ RESET
⑤ SEMI-AUTO AUTO / Sensor off Power 100% / Twilight Power 80%
⑥ Brightness + / –
⑦ Start / Memory / Apply
⑧ 100% / 75% / 50% / 10%
⑨ 100 Lux 2 Lux / 300 Lux 10 Lux / 500 Lux 50 Lux
⑩ Disable
⑪ 30s Test 2s / 5 min 1 min / 15 min 10 min / 30 min 20 min
⑫ 10s 0s / 5 min 1 min / 30 min 10 min / 1h +∞
⑬ 10% / 20% / 30% / 50%
⑭ HF Learn Erase / PIR Transmit / HF+PIR RX 100% / HF/PIR RX 5700%

Scene prog.
Detection range
Daylight threshold
Hold-time
Stand-by time
Stand-by dimming level
Dual tech & RF mode

HRC-11

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Permanent ON/OFF [button ①]

Press button ①,to select permanent ON or permanent OFF mode.
* Press button ②/④ to resume automatic operation.

RESET[button ②]

Press button ② , all settings go back to the rotary switch settings.

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 in 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 [button ⑤]

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 hreshold", 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%, steps should be:
Press button ⑦ Start, button ⑧ 100%, ⑩ Disable, ③ Shift, ⑪5min,③Shift,⑫ +∞,⑬ 30%,⑦ Memory. By pointing to the sensor unit(s) and pressing ⑦ Apply, 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%.
Note: Disabled for HC034RF.

Daylight threshold [zone ⑨]

Press buttons in zone ⑨ to set the daylight sensor at 2Lux / 10Lux / 50Lux / 100Lux / 300Lux / 500Lux or Disable.
Note: 1. To set daylight sensor at 100Lux / 300 Lux / 500Lux, press button ③ Shift at first.
2. Disabled for HC034RF.

Ambient daylight threshold [button ⑩]

1. Press button ③Shift, 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 button③Shift at first.
2. 2s is for test 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%.

Dual tech & RF mode [zone ⑭]

1. HF, PIR, HF+PIR, HF/PIR are disabled.
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 3 times to indicate the transmission signal has been sent. The receiver units will rapidly beep 3 times in 1s to indicate the success of pairing.
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 preset stand-by dimming level directly.

9. Trouble Shooting

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	Continued 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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