HIGH BAY MICROWAVE DALI SENSOR HMW34
Installation and Instruction Manual

1. Technical Specifications

Product type	High bay microwave DALI sensor (Daylight harvest)
Operating voltage	220~240VAC 50/60Hz
Switched power	Maximum 20pcs DALI devices Maximum 40mA
Power consumption	<1W
Detection angle	360°
Detection area (Max.)*	Installation Height : 20m (forklift) 15m (person)
	Detection Range (Ø) :20m
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	50 ~ 500Lux , Disable
Warmming-up time	20s
Operating temperature	-20°C ~ +50°C
IP rating	IP65

3. Rotary Switch Settings

A rotary switch is built inside the sensor for scene selection / fast programming. Total 16 channels available:

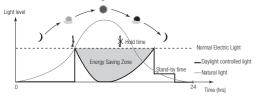Rotary switch preset (Please see the location in 2. Installation)

Channel	Detection range	Hold time	Stand-by time	Stand-by dimming level	Daylight threshold
0	100%	5s	10s	10%	Disable
1	100%	1min	5min	10%	50Lux
2	100%	5min	10min	10%	50Lux
3	100%	5min	+∞	10%	75Lux
4	100%	5min	+∞	10%	100Lux
5	100%	5min	+∞	30%	200Lux
6	100%	10min	30min	10%	50Lux
7	100%	10min	+∞	10%	75Lux
8	100%	10min	+∞	10%	100Lux
9	100%	10min	+∞	30%	200Lux
A	100%	20min	1h	10%	100Lux
B	100%	20min	+∞	30%	200Lux
C	100%	30min	+∞	10%	100Lux
D	100%	30min	+∞	30%	200Lux
E	100%	30min	+∞	50%	400Lux
F	100%	5s	10s	10%	100Lux

Note: settings can also be changed by remote control HRC-11. The last action controls.

4. Functions

4.1 Daylight Harvest (Daylight Regulating)

Daylight sensor measures the available natural light of the surrounding, calculates how much electrical light is needed to reach the total lux expected. The demand is given to the LED driver by DALI signal, so as to deliver the needed amount of electric light.
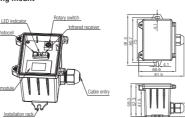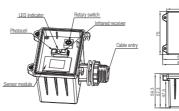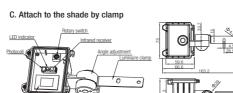

2. Installation

⚠ **Warnings:**
1. Installation of the sensor involves connecting it to the mains supply. This work must be carried out by a specialist in accordance with electrotechnical regulations.
2. Disconnect power supply before installing.

A. Ceiling mount

B. Screw to the Luminaire by conduit

C. Attach to the shade by clamp

Note:We recommend the mounting distance between sensor to sensor should be more than 2m to prevent sensors from false-triggering.
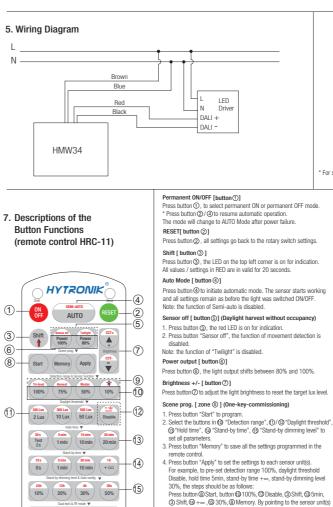
4.2 Lux Off Function

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.

5. Wiring Diagram

6. Detection Pattern

Ceiling mounted detection pattern (m)

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

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

HRC-11

Permanent ON/OFF [button①]
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 rotary switch settings.

Shift [button ③]
Press button ③, the LED on the top left corner is on for indication.
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.

Sensor off [button ⑤] (Daylight harvest without occupancy)
1. Press button ③, the red LED is on for indication.
2. Press button "Sensor off", the function of movement detection is disabled.
Note: the function of "Twilight" is disabled.

Power output [button⑥]
Press button ⑥, the light output shifts between 80% and 100%.

Brightness +/- [button⑦]
Press button⑦to adjust the light brightness to reset the target lux level.

Scene prog. [zone ⑧] (One-key-commissioning)
1. Press button "Start" to program.
2. Select the buttons in ⑩ "Detection range", ⑪/⑫"Daylight threshold", ⑬"Hold time", ⑭ "Stand-by time", ⑮ "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 ⑧ Start, button ⑩ 100%, ⑫ Disable, ③ Shift, ⑬ 5min, ③ Shift, ⑭ +∞ , ⑮ 30%, ⑧ Memory. By pointing to the sensor unit(s) and pressing ⑧ Apply, all settings are passed on the sensor(s).

Sensor function [button ⑨]
Note: the function of button ⑨ are all disabled.

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

Daylight threshold [zone ⑪]
Press buttons in zone ⑪ to set the daylight sensor at 50Lux / 100Lux / 300Lux / 500Lux or Disable as threshold / target Lux level.
Note: 2Lux / 10Lux are disabled.
To set daylight sensor at 100Lux / 300 Lux / 500Lux, press button ③Shift at first.

Ambient daylight threshold [button ⑫]
1. Press button ③Shift, the red LED is on for indication.
2. Press button ⑫, the ambient lux level is sampled and set as daylight threshold / target Lux level.

Hold time [zone ⑬]
Press buttons in zone ⑬ 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 ③Shift 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 ⑬ .

Stand-by time [zone ⑭]
Press buttons in zone ⑭ 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 is detected after hold-time.

Stand-by dimming level [zone ⑮]
Press buttons in zone ⑮ to set the stand-by dimming level at 10% / 20% / 30% / 50%.

Daylight harvest auto-configuration function
1. Press button "Shift", the red LED is on for indication.
2. Select a time period and the sensor will do light level measurement and determine/save the lowest light level (commission line) with 100% light on, so as to set the target lux level automatically.
Note: 1. Make sure the light level measurement covers the night time.
2. The fixture will go into sensor mode after the measurement, all sensor settings remain unchanged.

Dual tech & RF mode [zone ⑯]
All buttons in zone ⑯ are disabled.

8. 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