

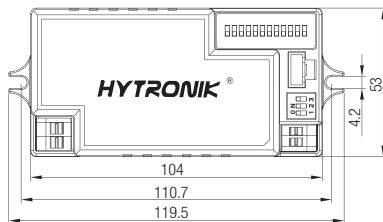
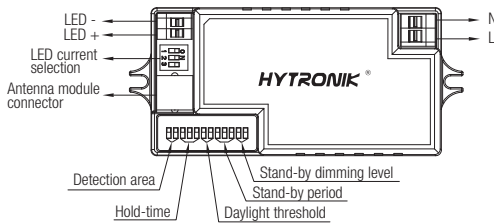
Integrated SensorDIM LED Driver HEC9025/I

Installation and Instruction Manual

Technical Specifications

Product Type:	Tri-level Control Microwave Motion Sensor
Operating Voltage:	220-240VAC 50Hz/60Hz
HF System:	5.8GHz CW radar
Transmission Power:	< 0.2mW
Rated output current/voltage/power:	350mA/10-43V/15.7W 500mA/10-42V/21W
	550mA/10-40V/22W 700mA/10-36V/25.2W
	750mA/10-34V/25.5W 900mA/10-28V/25.2W
Detection Angle:	30~150°
Detection Range(DxH):	Max. 12 x 6m
Time Setting:	10s ~ 30 min.
Light Control:	2~50 lux, disable
Mounting:	Indoors, Ceiling & walling mounted
Working Temperature:	-20 ~ + 60°C

Dimensions (mm)



Functions

1. Lux Off Function

The built-in daylight sensor can measure ambient natural light and switch off the fixture automatically whenever artificial light is not required (natural light lux level exceeds daylight threshold).

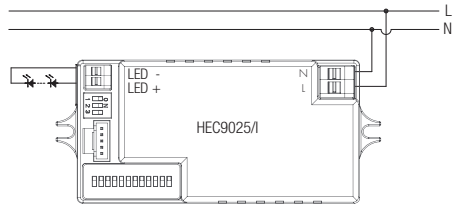
2. Tri-level Control (Corridor Function)

Hytronik builds this function inside the motion sensor to achieve tri-level control, for some areas which require a light change notice before switch-off. The sensor 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.

3. Zero-cross Relay Operation

Designed in the software, the sensor switches on/off the load right at the zero-cross point, to ensure the in-rush current is minimised, enabling the maximum life-time of the relay.

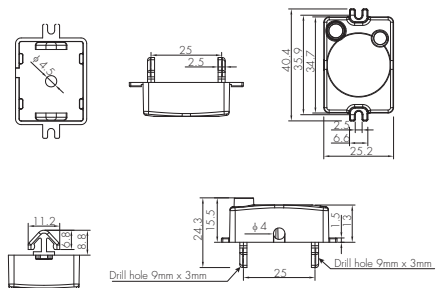
Wiring Diagram



Sensor antenna

Model SAM5/I

Super-compact sensor antenna, with Hytronik specially designed intelligent photocell built inside.



Settings

1 Detection Range

Sensor sensitivity can be adjusted by selecting the combination on the DIP switches to fit precisely for each specific application.

	1	2	
I	●	●	100%
II	●	○	75%
III	○	●	50%
IV	○	○	Sensor OFF

Note: by choosing "Sensor OFF", it becomes an ordinary driver without both occupancy detection and daylight sensor.

2 Hold Time

Select the DIP switch configuration for the light on-time after presence detection.

	1	2	3	
I	●	●	●	5s
II	●	●	○	30s
III	●	○	○	1min
IV	○	●	○	5min
V	○	●	●	10min
VI	○	○	●	20min
VII	○	○	○	30min

This function is disabled when natural light is sufficient.

3 Daylight Threshold

Set the level according to the fixture and environment. The light will not turn on if ambient lux level exceeds the daylight threshold preset.

	1	2	
I	●	●	Disable
II	●	○	50Lux
III	○	●	10Lux
IV	○	○	2Lux

Please note that the ambient lux level refers to internal light reaching the sensor.

Disabling the daylight sensor will put the sensor into occupancy detection only mode.

4 Stand-by period (corridor function)

This is the time period you would like to keep at the low light output level before it is completely switched off in the long absence of people.

	1	2	3	
I	●	●	●	0s
II	●	●	○	10s
III	●	○	○	1min
IV	○	●	○	5min
V	○	●	●	10min
VI	○	○	●	30min
VII	○	○	○	1h
VIII	○	○	○	+∞

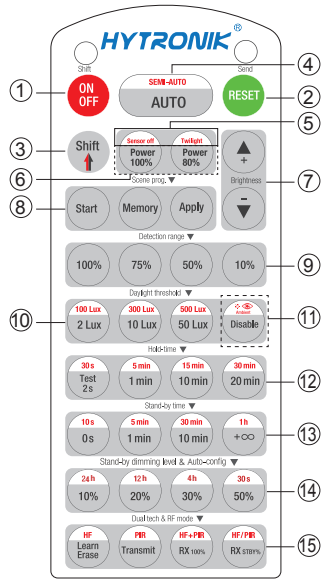
Note: "0s" means on/off control; "+∞" means the stand-by period is infinite and the light is effectively controlled by the daylight sensor, off when natural light is sufficient and automatically on at dimming level when insufficient.

5 Stand-by dimming level

The setting is used to select the desired dimmed light level used in periods of absence for enhanced comfort and safety.

	1	2	
I	●	●	10%
II	●	○	20%
III	○	●	30%
IV	○	○	50%

Description 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 ②/③ 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 DIP switch settings.

Shift [button ③]

Press button ③, the LED on the top left corner flashes 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.

Sensor off [button ⑤] (Daylight harvest without occupancy)

1. Press button ⑤, the red LED is on for indication.
2. Press button "Sensor off", the function of movement detection and daylight sensor both are disabled.

Twilight [button ⑥]

1. Press button "Shift", the red LED is on for indication.
2. Press button "Twilight", the function of movement detection is disabled.
This unit is now a LED driver plus daylight sensor with daylight harvest function.

Power output [button ⑦]

Press button ⑦, the light output shifts between 80% and 100%.

Brightness +/- [button ⑦]

Press the buttons under below modes:

AUTO mode: to adjust hold-time light brightness.

Sensor off mode: to adjust light brightness.

Twilight mode: to adjust light brightness and reset the output lux value in line with natural light for daylight harvest function. The higher natural lux level, the lower output brightness, and vice-versa.

Scene prog. [zone ⑥] (One-key-commissioning)

1. Press button "Start" to program.
2. Select the buttons in ⑥ "Detection range", ④ / ① "Daylight threshold", ⑥ "Hold time", ⑥ "Stand-by time", ⑥ "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 ⑥ Start, button ⑥ 100%, ⑥ Disable, ⑥ Shift, ⑥ 5min, ⑥ Shift, ⑥ +∞, ⑥ 30%, ⑥ Memory. By pointing to the sensor unit(s) and pressing ⑥ Apply, all settings are passed on the sensor(s).

Detection range [zone ⑥]

Press buttons in zone ⑥ to set detection range at 100% / 75% / 50% / 10%.

Daylight threshold [zone ④ / ①]

Press buttons in zone ④ / ① 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 ⑥ Shift at first.

Ambient daylight threshold [button ③]

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

Hold time [zone ⑥]

Press buttons in zone ⑥ 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 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 ②.

Stand-by time [zone ⑥]

Press buttons in zone ⑥ to set the stand-by period at 0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞.

Note: "0s" means on/off control; "+∞" means the stand-by period is infinite and the light is effectively controlled by the daylight sensor, *off when natural light is sufficient and automatically on at dimming level when insufficient.*

Stand-by dimming level [zone ⑥]

Press buttons in zone ⑥ to set the stand-by dimming level at 10% / 20% / 30% / 50%.

Note: the function of "Auto-config" is disabled.

Dual tech & RF mode [zone ⑤]

All buttons in zone ⑤ are disabled.

Troubleshooting

MALFUNCTION	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	Continuous 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, or open windows	Adjust zone, change installation site