HIR27/WM

DALI-2 PIR Lowbay wide range | minor movement detection | Integrated 60 mA PSU

Benefits

Sensitive: Detects micro movement for improved occupancy accuracy

Integrated: Built-in DALI power supply reduces external power

Efficient: One-key commissioning with IR controller

Applications

Offices

Meeting Rooms

Quiet Public Spaces (Libraries, Galleries)

Check Out the Complete System Solution on the Website:
https://www.hytronik.com/product/HIR27-WM

Product Description

HIR27/WM integrates a high-sensitivity PIR occupancy sensor and a light sensor, delivering reliable sensing input for DALI luminaires. Designed for offices and quiet public spaces, it features an integrated 60 mA DALI power supply, eliminating the need for external power devices to simplify installation and enhance system stability. All parameters—including sensitivity, hold time, lux threshold, and brightness levels—can be configured via the HRC-11 handheld remote, enabling fast setup and one-key commissioning for multiple devices.

Functions and Features

See additional details at the end of datasheet

Built-in DALI PSU

DALI Broadcast Ouput

Daylight Harvest

One-key Commissioning

Synchronization Control

Specifications

Main Capabilities	
Dimming (Output) Interface	DALI/DALI-2
Connector Type	Standard 2 cables

Sensor Data	
Detection angle	360°
Max. Detection range (Diameter)	20.0 m
Maximum Mounting Height	5.0 m
Detection area	314 m^2

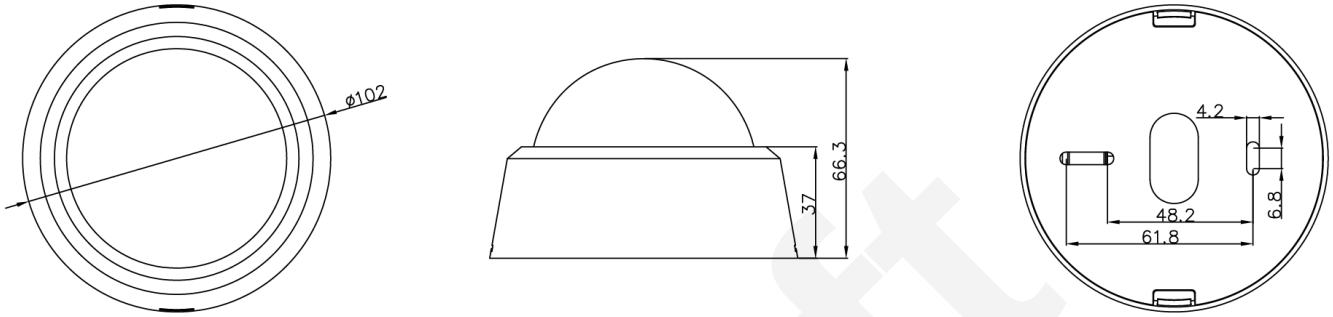
Electrical Data	
Operating voltage range	220-240 VAC 50/60 Hz
Stand-by power (Psb)	<0.5W
Warming-up	20 s
DALI bus maximum rated current (I_n max)	90 mA
DALI bus nominal DC voltage range (Un)	16 V
DALI bus nominal current (I guaranteed)	60 mA

Specifications

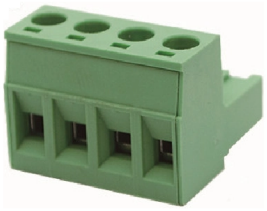
Technical	
Product height	66.3 mm
Product length	102.0 mm
Product width	102.0 mm
Ambient temperature	-20 ~ +50 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
IP Rate	IP54

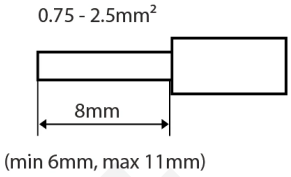
Standard	
EMC	EN 55015, EN61000-3-2/-3-3, EN 61547
LVD	AS/NZS 60669-1/-2-1, EN 60669-1, EN 60669-2-1

Technical Drawing



Wire Preparation

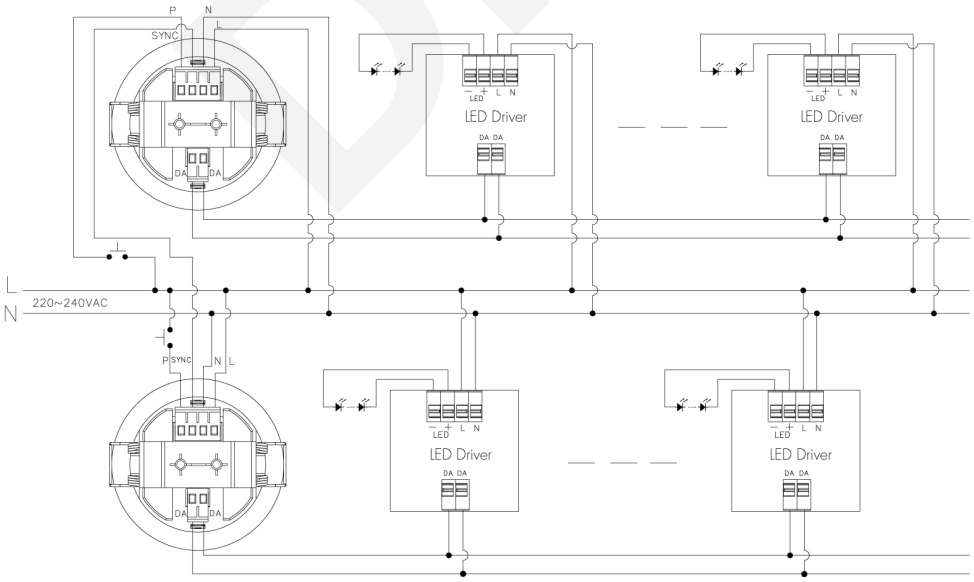




(min 6mm, max 11mm)

Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor 1. 200 metres (total) max. for 1mm² CSA (Ta = 50°C) 2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50°C)

Wiring Diagram

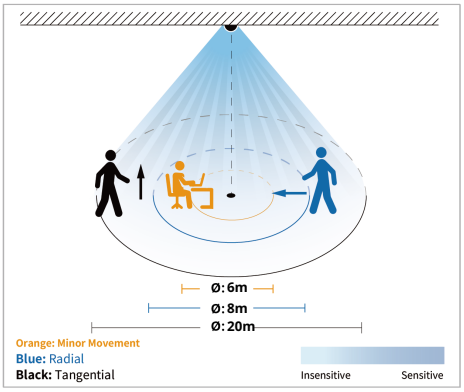


Detection Range

Single Person Walk & Small Movement (Ceiling mount)

The data below is tested under following conditions:
- Single person walking
- Sensor not connected to any driver that may have soft-on period
- Testing temperature Ta = 20°C
- The testing is conducted in an open and spacious indoor eld, without noticeable obstacles or inuences that may affect PIR performances

Detection example 2.5m mounting height:

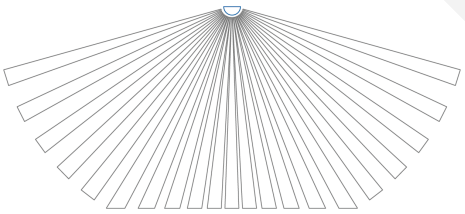


Minor Movement				
H[m]	2.5	3	4	5
Ø[m]	6	6	none	none

Tangential movement				
H[m]	2.5	3	4	5
Ø[m]	20	20	20	20

Radial movement				
H[m]	2.5	3	4	5
Ø[m]	8	8	8	8

Detection schematic diagram



Commissioning Instructions and Precautions

A. Installation Notes

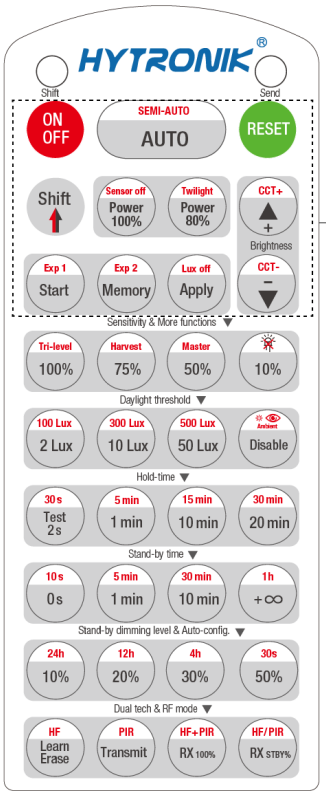
1. This product should be installed by a qualifed electrician.
2. Ensure the luminaire power is disconnected before installation or removal of the device.
3. Avoid installing the sensor near air vents, heat sources, or moving objects that may cause false triggering.
4. Do not cover the PIR lens or light sensor, as this may affect detection accuracy.

Warning: For additional important documents, including installation precautions, product guidelines, and guarantee conditions, please refer to the official downloads.

https://hytronik.com/service/downloads

Commissioning via Remote Control - Page 1

Settings (Remote Control HRC-11)

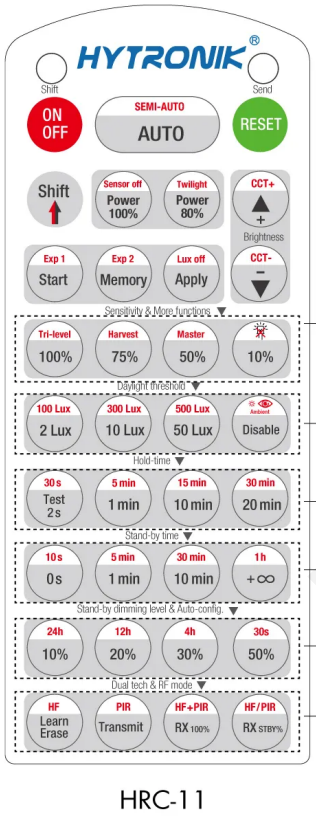


HRC-11

ON OFF	Press button "ON/OFF" to select permanent ON or permanent OFF mode. * Press button "AUTO"/ "RESET" to exit this mode.
RESET	Press button "RESET", all settings go back to default. The default settings are: Auton mode; Hold-time 5min; Daylight sensor 100 lux; Stand-by time 10min; Stand-by dimming level: 20%; Lux off activated;
Shift	Press button "Shift", the LED on the top left corner is on to indicate mode selection. All values / settings in RED are valid for 20 seconds.
AUTO	Press button "AUTO" to initiate automatic mode. The sensor starts working and all settings remain as before the light is switched ON/OFF;
SEMI-AUTO	1. Press button "Shift" ,the red LED on. 2. Press button "SEMI-AUTO" to initiate Semi-auto mode. The sensor is only activated with the manual press of push switch. To exit this mode, simply press button "AUTO"/ "RESET". *For Sensor LED indicator references: Remains on 2s, initiate "Semi-auto" mode from "Auto" mode.*
Power 100% 80%	Press buttons in zone "Power out" to select the light output at 80% (at initial 10,000 hours) or 100%.
Sensor off	This key is not appliable on this product.
Twilight	1. Press button "Shift", the red LED on. 2. Press button "Twilight", the function of movement detection is disabled, but the function of photocell is still working, and the product becomes a pure dusk/ dawn daylight sensor. To exit from "Twilight" mode, press button "AUTO"/"SEMI-AUTO"/"RESET".
▲ ▼	Press these two buttons to adjust the light output brightness and set a new target lux level. The daylight sensor can measure ambient daylight level and ignore the LED light, so as to calculate how much artificial light is needed to maintain the target lux level.
CCT+ CCT-	This key is not appliable on this product.
Start Memory Apply	1. Press button "Start" to program. 2. Select the buttons in "Detection range", "Daylight threshold", "Hold-time", "Stand-by time", "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 set detection range 100%, daylight threshold Disable, hold-time 5min, stand-by time +∞, stand-by dimming level 30%, the steps should be:* *Press button "Start", button "100%", "Disable", "Shift", "5min", "Shift", "+∞", "30%", "Memory". By pointing to the sensor unit(s) and pressing "Apply", all settings are passed on the sensor(s).*
Lux off	The "Lux off" function is activated as default. When the ambient lux level exceeds the target level continuously for more than 5 minutes, the lights will be turned off. In AUTO /SEMI-AUTO/Twilight modes, to disable "Lux off": 1. Press "Shift" button first, the red LED on. 2. Press "Lux off" button, the "Lux Off" function will be deactivated. The lights will not turn off even when the ambient lux level exceeds the target lux level but will dim down the brightness to the stand-by time level. *For Sensor LED indicator references: 1.Fast flash 1s, "Lux off" function activated.* *2.Remains on 2s, "Lux off" function deactivated.*
Exp 1 Exp 2	"Exp" refer to Expansion, these two buttons are reserved functions and pending future development.

Commissioning via Remote Control - Page 2

Settings (Remote Control HRC-11)



HRC-11

Sensitivity & More functions	
100% 75% 50% 10%	Function is temporarily undetermined.
Tri-level Harvest	This key is not appliable on this product.
Master	This key is not appliable on this product.
Daylight threshold	
2 Lux 100 Lux 10 Lux 300 Lux 50 Lux 500 Lux Disable	Press buttons in zone "Daylight threshold" to set daylight sensor at 2Lux/ 10Lux / 50Lux / 100Lux / 300Lux/500Lux / Disable. *Note: To set daylight sensor at 100Lux / 300Lux/500Lux , press "Shift" button first.*
Ambient	1. Press button "Shift", the red LED on. 2. Press button "Ambient", the surrounding lux level is sampled and set as daylight threshold / target Lux level.
Hold-time mode	
Test 2 s 30 s 1 min 5 min 10 min 15 min 20 min 30 min	In AUTO /SEMI-AUTO modes, press buttons in zone "hold-time" 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 "Shift" button 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 "RESET" or any button in "Hold-time".
Stand-by time mode	
0 s 10 s 1 min 5 min 10 min 30 min +∞ 1 h	Press buttons in zone "stand-by time" to set the stand-by period at 0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞. *Note: 1. To set stand-by-time at 10s/ 5min / 30min / 1h, press "Shift" button first.* *2. "0s" means on/off control;* *3. "+∞" means bi-level control, the fixture is 100% on when there is motion detected, and remains at the stand-by dimming level when no presence after motion hold-time. Only when the stand-by time is set in "+∞" and the ambient lux level is below the target lux level, the lux will auto-on.*
Stand-by dimming level & Auto-config.	
10% 20% 30% 50%	Press the button in zone "stand-by dimming level" to set the stand-by dimming level at 10% / 20% / 30% / 50%.
24h 12h 4h 30s	1.Press button "Shift" ,the red LED on. 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 setting remain unchanged.*
Dual tech & RF mode	
Learn Erase	This key is not appliable on this product.
Transmit	This key is not appliable on this product.
HF PIR HF+PIR HF/PIR	This key is not appliable on this product.

Functions and Features

Built-in DALI PSU

Built-in DALI PSU means the DALI bus power supply is integrated into the product, eliminating the need for an external DALI power unit.
This reduces wiring complexity, saves installation space, and simplifies commissioning, making the system more compact and efficient.

DALI Broadcast Ouput

This product supports DALI broadcast output, allowing control commands to be sent simultaneously to all devices on the DALI bus without individual addressing.
This enables simple group control, synchronized operation, and fast commissioning within a DALI lighting system.

Daylight Harvest

Right time, right place and the right amount of light! Daylight harvest (Also known as daylight regulating or daylight interaction) is a must in the future lighting norms. It automatically measures available natural light and adjusts artificial lighting output to maintain the target illuminance level. Using daylight sensor feedback, control signals are transmitted to the LED drivers via DALI or 0–10V interfaces, ensuring the required light output is delivered only when needed, improving visual comfort and reducing energy consumption.

One-key Commissioning

This feature allows commissioning to be completed with a single key operation on the remote controller. A predefined configuration sequence is executed automatically, enabling quick setup and reducing the time and effort required for on-site adjustments. One-key commissioning simplifies complex procedures and supports efficient, reliable deployment of lighting control systems.

Synchronization Control

The product supports synchronized operation across multiple sensors, allowing several units to control the same luminaires reliably in both wired and wireless applications. Synchronization can be achieved through high-voltage sync terminals, parallel L'connections or wireless communication methods such as Bluetooth mesh or RF (433 MHz / 868 MHz FSK). The hardware and software are designed to filter electrical noise and communication interference, ensuring stable and consistent performance when multiple sensors operate together.

Check out for further explanation of features

https://hytronik.com/solutions/lighting-control-features