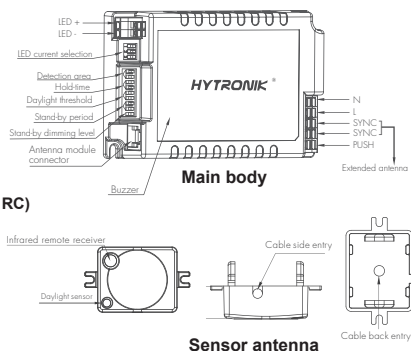


## INSTRUCTION MANUAL FOR INTEGRATED SENSORDIM LED DRIVER DAYLIGHT MONITORING VERSION, MODEL NO.: HEC7430

### Technical Specifications

<b>PRODUCT TYPE:</b>	Integrated sensorDIM LED driver
<b>OPERATING VOLTAGE:</b>	120-277VAC 50Hz/60Hz
<b>HF SYSTEM:</b>	5.8GHz CW radar
<b>TRANSMISSION POWER:</b>	<0.2mW
<b>DETECTION ANGLE:</b>	30° ~ 150°
<b>DETECTION RANGE:</b>	Max. 12 x 6m (DxH)
<b>TIME SETTING:</b>	5s ~ 10 min (30s ~ 30min on RC)
<b>DAYLIGHT SENSOR:</b>	5 ~ 50LUX, disable (2 ~ 50Lux, disable on RC)
<b>STAND-BY PERIOD:</b>	0s, 10s ~ 30min, +∞
<b>STAND-BY DIMMING LEVEL:</b>	10% ~ 30%
<b>MOUNTING:</b>	Indoors, ceiling & wall mounted
<b>WORKING TEMPERATURE:</b>	-20°C ~ +50°C
<b>IP RATING:</b>	IP20



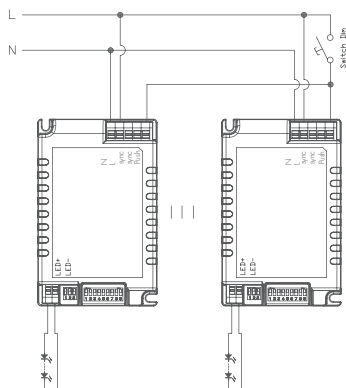
This is a smart integration of microwave motion sensor and multiple current selection LED driver.

With the help of detached sensor antenna, it requires very little space on the LED panel and gives pre-selected constant current to drive the LEDs to work based on movement detection.

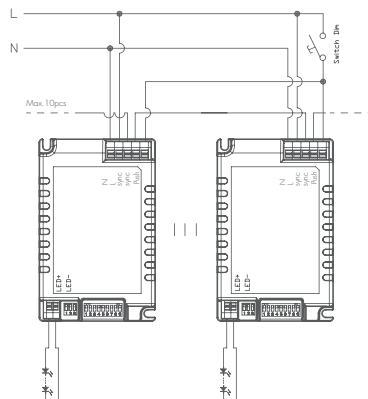
Note: the high-frequency output of this sensor is < 0.2mW, approximately just 1‰ of the transmission power of a mobile telephone.

### Section 1 Wiring

#### Wiring Diagram-Push



#### Wiring Diagram-Push + Sync



▪ Stranded wire: 0.5~1.5mm<sup>2</sup>

▪ American wire gauge: 16~20AWG

▪ Wire stripping length: 9~10mm

## Section 2 Settings

### Detection range

Detection range can be tuned by selecting the combination on the DIP switches to fit precisely for each specific application.

- I – 100%
- II – 75%
- III – 50%
- IV – Sensor OFF

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



### Hold-time

This setting determines the time period the lamp will remain at 100% upon detection.  
Note: the timer is reset upon each motion detection.

- I – 5s
- II – 30s
- III – 3min
- IV – 10min

	3	4	
I	●	●	5s
II	●	○	30s
III	○	●	3min
IV	○	○	10min




### Daylight sensor

The daylight threshold can be set on the DIP switches suit to the particular application.

- I – Disable
- II – 50Lux
- III – 10Lux
- IV – 5Lux

	5	6	
II	●	●	Disable
III	●	○	50Lux
IV	○	●	10Lux
V	○	○	5 Lux



### Stand-by period (corridor function)

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

- I – 0s
- II – 10s
- III – 30min
- IV – +∞

	7	8	
I	●	●	0s
II	●	○	10s
III	○	●	30min
IV	○	○	+∞




Note: "0s" means on/off control; "+∞" means bi-level dimming control, fixture never switch off. (i.e. the light remains at the stand-by dimming level until motion is detected.)

### Stand-by dimming level

This is the dimmed low light output level setting after the hold-time has expired.

- I – 10%
- II – 30%

	9	
I	●	10%
II	○	30%

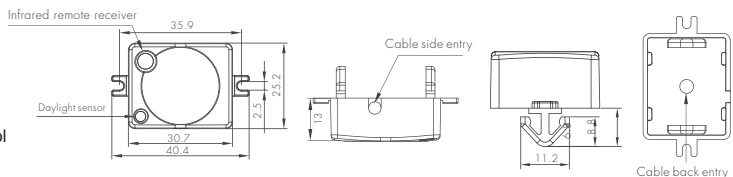


## Section 3 Sensor Antenna & RC Settings

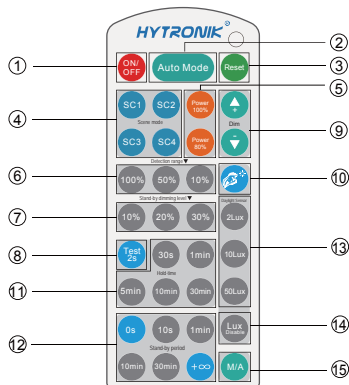
### Model SAM5

Super-compact sensor antenna, with optional cable entry (side entry and back entry)

Work with remote control HRC-05.



## Remote Control HRC-05



### HRC-05

Note: the buzzer beeps one time when RC receives signal successfully

#### Permanent ON/OFF [button ①]

1. Press button ①, to select permanent ON or permanent OFF mode.
2. Press button ② ③ ④ to resume automatic operation. (Please refer to explanation below)

#### Auto Mode [button ②]

Press button ② to initiate automatic mode. The sensor starts working and all settings remain as before the light was switched ON/OFF.

#### RESET [button ③]

Press button ③, all settings go back to the value of DIP switch settings.

#### Test 2s function [button ⑧]

1. Press button ⑧, the sensor goes into testmode (hold time 2s). N.B. the stand-by period and daylight sensor settings are disabled in test mode.
2. Press button ③ ④ ⑤ to exit from this mode, and the sensor settings are changed accordingly.

#### Ambient daylight threshold [button ⑩]

Press button ⑩, the latest surrounding lux value overwrites previous lux value learned, and is set as the daylight threshold. This feature enables the fixture to function well in any environment.

#### Power +/- [button ⑤]

Press button ⑤, the output shifts between 80% and 100%, for energy saving purposes.

#### Dim +/- [button ⑨]

Press button ⑨ to adjust the light brightness between 10%~100% during hold-time. "+" increases the light level, "-" will decrease the light level.

#### Lux disable [button ⑪]

Press button ⑪, the built-in daylight sensor is disabled, the light will always operate upon detection regardless of ambient light level.

#### Manual override/ semi-auto [button ⑫]

Press button ⑫, the sensor goes to manual override or semi-auto function.

Note: The buzzer beeps twice if it is in manual override mode, and beeps once if shifts to semi-auto mode.

#### Detection range [zone ⑥]

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

#### Hold time [zone ⑧]

Press buttons in zone ⑧ to set hold time at 30s / 1min / 5min / 10min / 30min.

#### Stand-by period [zone ⑩]

Press buttons in zone ⑩ to set the stand-by period at 0s / 10s / 1min / 10min / 30min / +∞.  
Note: "0s" means on/off control; "+∞" means bi-level of dimming control, the light will never switch off. (i.e. the light remains at the stand-by dimming level until motion is detected.)

#### Stand-by dimming level [zone ⑦]

Press buttons in zone ⑦ to set the stand-by dimming level at 10% / 20% / 30% .

#### Daylight sensor [zone ⑬]

Press buttons in zone ⑬ to set daylight sensor at 2Lux / 10Lux / 50Lux.

#### Scene mode options [zone ④]

There are 4 scene modes built into the remote control for different applications:

Scene options	Detection range	Hold time	Stand-by period	Stand-by dimming level	Daylight sensor
SC1	100%	1min	10min	10%	2Lux
SC2	100%	5min	10min	10%	2Lux
SC3	100%	10min	30min	10%	10Lux
SC4	100%	10min	+∞	10%	50Lux

Note: the end-user can fine tune the settings by pressing buttons of detection range ⑥ / hold time ⑧ / stand-by period ⑩ / stand-by dimming level ⑦ / daylight sensor ⑬, the last setting will over-write that feature of the pre-set scene.

## Section 4 Functions

### 4.1 Synchronization Function

Maximum 10pcs HEC7430 can be connected in parallel by interconnecting the "SYNC" terminals of the units, no matter which one detects the movement, all HEC7430 connected in the group turn on the lights at the same time (as long as natural light is below daylight threshold), as if the sensor antenna is shared and extended (see wiring diagram). The detection area can be widely enlarged in this way. Nevertheless, other settings such as hold time, stand-by period, stand-by dimming level and daylight threshold on each individual sensor stays the same, not affected by the extended sensor.

### 4.2 Ambient daylight threshold

Switch the power supply to the sensor two times within 2 seconds, the sensor will set the ambient lux level as the new threshold.

Both the settings on DIP switch and the ambient lux threshold learned can overwrite each other.

This feature enables the daylight sensor to be commissioned to the environment in which it is installed. The last adjustment remains in memory.

### 4.3 8H Manual on Mode for LED Lamp

Turn off/on the power supply three times within 3 seconds, the light will be turned on for 8 hours, automatically returning to sensor mode after 8 hours.

Note: this 8H manual on mode can be cancelled by turning off/on the power supply one time within 1second.

### 4.4 Daylight Monitoring Function

Hytronik specially designed this function in software for deep energy-saving purpose. A built-in daylight sensor is designed to provide "smart photocell" function. This function can only be activated when stand-by period is set to "+∞". In this mode the lamp will automatically illuminate at the dim level setting when the natural light goes below the threshold setting. The fixture will also switch off as the natural light returns.

### 4.5 Manual Override

This sensor maybe over-ridden by the end-users to switch on/off the lights manually, or adjust the maximum brightness during motion hold-time with the push-switch. This makes the product more user-friendly and offers more options to fit for extra-ordinary demands.

\* Short push (<1s): on/off function;

ON → OFF: the light turns off immediately and cannot be lighten for a certain time (equals to hold time preset) even there is movement is detected. After this period, the sensor goes back to auto sensor mode.

OFF → ON: the light turns on 100% and goes to auto sensor mode, even when ambient Lux level exceeds the daylight threshold.

\* Long push (>1s): adjust the maximum brightness (between 10% and 100%) during hold-time.

\* If customers do not want to have this manual override function, we can just leave this "push" terminal alone, not connected to any wire.

Note: If the detection area is set at "Sensor OFF", it becomes a dimmable LED driver which can be dimmed (1% ~ 100%) by push-switch.

### 4.6 LED current selections



I	●	●	900mA
II	●	○	750mA
III	●	○	700mA
IV	○	○	550mA
V	○	○	500mA
VI	○	○	350mA
1	2	3	Current



The current can be easily configured by choosing the correct combination of the DIP switches (see table on the left).

### 4.7 LED driver specifications

Input: 33W / 120~277V / 280~140mA

Output: 3.5~17.5W (350mA)

5~25W (500mA)

5.5~26W (550mA@277V) / 5.5~25W (550mA@120V)

7~30W (700mA@277V) / 7~25W (700mA@120V)

7.5~30W (750mA@277V) / 7~25W (750mA@120V)

9~23W (900mA)

10~50V (350mA)

10~50V (500mA)

10~48V (550mA@277V) / 10~45V (550mA@120V)

10~43V (700mA@277V) / 10~36V (700mA@120V)

10~40V (750mA@277V) / 10~33V (750mA@120V)

10~25V (900mA)

## SECTION 5 TROUBLE SHOOTING

MALFUNCTION	CAUSE	REMEDY
The light will not come on	Incorrect light-control setting selected	Adjust daylight threshold setting
	Faulty lamp	Replace lamp
	No power supply	Check power to sensor
The lamp is always on	Continuous movement in the detection zone	Check detection area setting
The lamp is on without any identifiable movement	The sensor is not mounted for reliably detecting movement	Securely mount enclosure
	Movement occurred, but not identified by the sensor (Movement behind wall, movement of small object in immediate lamp vicinity etc.)	1. Reduce sensitivity. 2. Check the movement behind walls to avoid facilities such as water pipe, fan, which may mis-trigger the sensor.
The lamp will not work despite movement	Rapid movements are being suppressed to minimize malfunctioning or the detection radius is too small.	Check detection area setting