

**PIR+US flush-mounted SCS Green Switch**

574048 - 574098 - 067226 - 078486

AC5220MW - AC5220MB

AM5658 - HD/HC/HS4658 - L/N/NT4658N - YW/YD/YG4658

**Description**

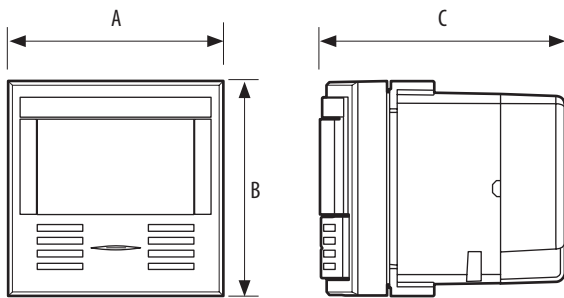
This device features a PIR and US (ultrasound) movement detector, and a brightness sensor for automatic activation of various types of loads following the detection of a movement, and a brightness level lower than the set level.

The enabling/disabling of the load can also be performed manually using the appropriate front pushbutton and/or using an external BUS control device.

It is possible to configure several operating modes; for the detailed descriptions see page 5.

**Dimensional data**

Size: 2 flush mounted modules.

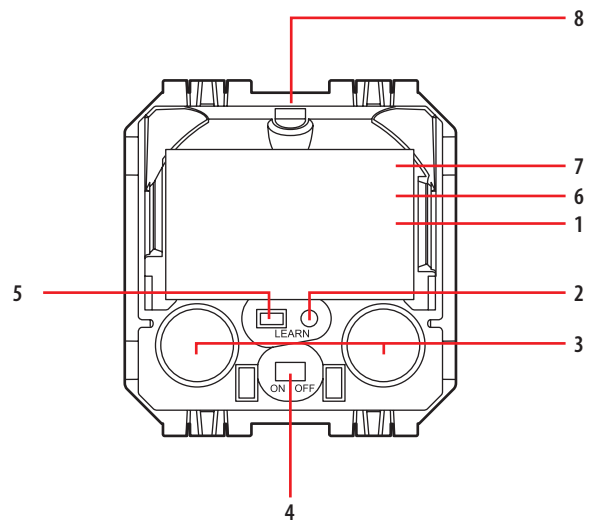


A	B	C
45 mm	45 mm	51 mm

**Technical data**

Voltage:	27 V=
Current draw:	15 mA
Connection between sensor and actuator:	SCS BUS connector
Sensor type:	movement detector (PIR+US) with 180° detection angle and brightness sensor.
Flush mounted box depth:	40 mm
Weight:	60 g
Impact resistance:	IK04
Penetration of solids and liquids:	IP20
Time delay:	from 5 sec to 59 min. 59 sec
Brightness:	20 – 1275 lux
Operating temperature:	(- 5) – (+ 45) °C
Storage temperature:	(- 20) – (+ 70) °C

Front view

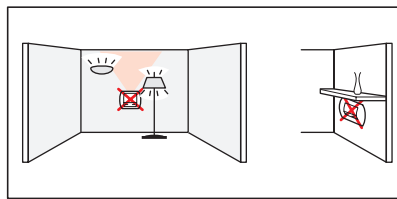
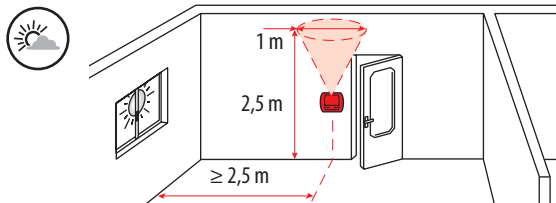
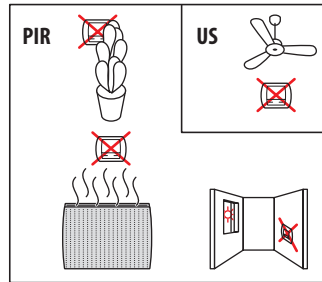
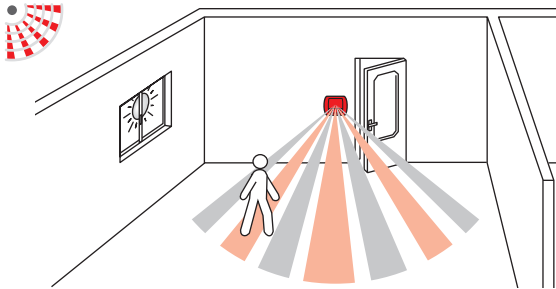


**Legend**

1. PIR sensor
2. LEARN LED
3. US sensor
4. ON-OFF button
5. LEARN button
6. Movement detector sensor (under the lens)
7. Infrared transmitter (under the lens)
8. Brightness sensor

**Installation**

**Positioning the sensor**



Position the sensor so that it is not affected by the artificial light already present in the room.

**Settings**

Sensor parameters	Default value	Adjustable parameters	Configuration remote control	
			88230 BMS04001	88235 BMS04003
<b>Time delay</b>	15 mn	3,5,10,15,20 min 30s - 255 h 59 min 59s	-	✓
<b>Sensitivity</b>	PIR (very high) / US (high)	Low, medium, high, very high	✓	✓
<b>Brightness threshold</b>	300 lux	20, 100, 300, 500, 1000 lux 0 - 1275 lux	-	✓
<b>Operating mode</b>	<b>Auto</b>	Not active	ON/OFF	✓
	<b>Walkthrough</b>	ON	ON/OFF	✓
	<b>Eco</b>	Not active	ON/OFF	✓
<b>Detection mode</b>	<b>Initial</b>	PIR and US	PIR and/or US, PIR, US	✓
	<b>Holding</b>	PIR or US	PIR and/or US, PIR, US	✓
	<b>Retrigger</b>	PIR or US	PIR and/or US, PIR, US, OFF	✓
<b>Alarm</b>	Not active	ON/OFF	✓	-
<b>Advanced mode</b>	<b>Calibration</b>	-	0 - 99995 lux	✓
	<b>Adjustment</b>	Not active	ON/OFF	✓
	<b>Contribution of light</b>	Automatic	Automatic - 1275 lux	✓

**Time delay**  
The period of time after which the load is switched off if no movement is detected. The time restarts whenever the sensor detects a movement.

**Sensitivity**  
Adjustment of the sensitivity of the detection technology used.

**Brightness threshold**  
Lighting level below which the sensor activates the load and above which it switches it off.

**Operating mode:**

**Auto**  
The load is automatically switched on:  
- upon detection of a movement if the level of natural light is insufficient.  
The load is automatically switched off:  
- if no movement is detected at the end of the set time delay + standby time.  
- or if the level of natural light is insufficient (adjustment on).  
Each new detection causes automatic switching on if the light is insufficient.

**Walkthrough**

If a movement is detected for a time of less than 20 s, the sensor will decrease the set time delay to 3 minutes. If the set delay time set is already less than three minutes, it will remain as such.



**Eco**

The load is switched on manually while switching off is automatic:  
 - if no movement is detected at the end of the set delay time.  
 After switching off the load, if any movement is detected within 30 s, the load is automatically switched back on (retrigger function on). At the end of this time interval, the load must be switched back on manually.

**Detection mode**

Set of technologies used for detection.

**Initial:** set of technologies used for the first detection.

**Holding:** set of technologies used after the first detection.

**Retrigger:** set of technologies used for the Retrigger function.

After switching off, any new detection within 30 seconds will cause the load to switch back on automatically. After 30 seconds, the load must be switched back on manually. Available only in Eco mode.

**Alarm:** before switching off the load the sensor emits an audible warning signal. Intervals: 1 minute, 30 seconds, and 10 seconds.

**Advanced mode:**



**Calibration**

To calibrate the sensor, it is necessary to measure the lighting level present using a lux meter and send the value to the sensor using a configuration remote control (BMS04001).

Calibration procedure:

Step 1: with only artificial light.

Switch the load on at maximum intensity and close the shutters (if you cannot do this then wait for sunset).

Measure the level of lighting and send it to the sensor via the remote control.

Step 2: with only natural light.

Turn off the load and open the shutters.



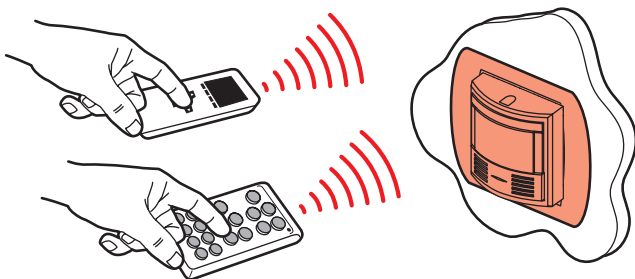
**Adjustment**

This function allows the sensor to switch off the load 10 minutes (plus a safety threshold to avoid inappropriate switching off) after the lighting level exceeds the brightness threshold, even though movement has been detected.

**Contribution of light:** amount of supplementary light supplied by switching on the load.

When the contribution of light parameter is set to "auto" the sensor automatically calculates the contribution of light.

**Modification of the parameters using the configuration remote controls**



• **BMS04001 - 088230:** advanced configuration remote control

• **BMS04003 - 088235:** simplified configuration remote control

When the sensor receives an IR command from a configuration remote control, it beeps to confirm that the modification has been acquired.

For more information on the parameters please refer to the technical info sheet of the remote control BMS04001.

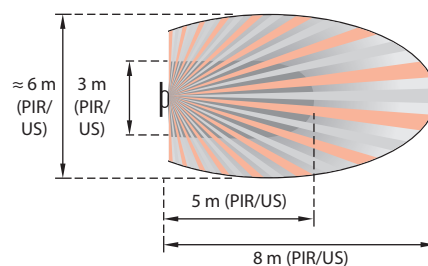
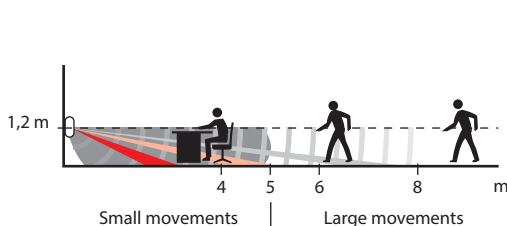
**Restoring the factory settings:**

1<sup>st</sup> press: Briefly press LEARN, the LED will blink slowly.

2<sup>nd</sup> press: Press and hold LEARN for 10 seconds until the LED flashes quickly.

**Performance**

**Height**



**Configuration**

**1. Lighting Management System**

When installed in a Lighting Management system, the device can be configured in the following ways:

- Plug & Go: automatic procedure for pairing devices connected to the inputs and outputs. The procedure is activated on powering the device. It is only available for Room Controllers or, in the case of other devices, paired with the Room Controllers.

- Push & Learn: procedure for pairing different connected devices or changing the assignments defined automatically in the Plug & Go procedure. For more details, please refer to the specific document.  
- Software Configuration: using the Virtual Configurator software; for more details, please refer to the specific manual.

**2. MyHOME system**

When installed in a MyHOME system, the device can be configured directly from Home + Project following the App flow, making the process much more simple and immediate. For device configuration and installation and for any other information, refer to the Apps or documentation that can be downloaded from the website:



[www.homesystems-legrandgroup.com](http://www.homesystems-legrandgroup.com)

Download App



Home + Control



Home + Project

•ANDROID: it requires Android 5.0 or later with access to Google Play



•iOS: it requires an iPhone running iOS 12.0 or later



In addition, PHYSICAL CONFIGURATION will continue to be guaranteed by inserting the configurators in the appropriate housings (\*). The configuration using Home + Project, which can be downloaded from the [www.homesystems-legrandgroup.com](http://www.homesystems-legrandgroup.com) website, has the advantage of offering many more options when compared with the physical configuration. For the list of modes and the corresponding meanings refer to the indications of this technical sheet and the Home + Project app.

**(\*) Physical configuration**

The sensor parameters are defined by 6 configurator sockets and the functions depend on the operating mode:

Local: A = 1 – 9

Light point: PL = 1 – 9

Mode: M = 0 – 4

Sensitivity of the movement sensor: S = 0 – 3

Control timer: T = 0 – 9

Sensitivity of the lights sensor: D = 0 – 5

Warning: the addresses A = 0 and PL = 0 do not exist

Available functions	Configurator mode
The sensor controls the light unit, the address of which defined in A and PL. When a movement is detected, and if the measured brightness is below the configured value, the system switches on the specified light unit and keeps it on until the expiry of the period configured using the configurator on T (automatic mode). The Sensitivity of the PIR movement detector is configured using the configurator on S. For appropriate operation, the sensitivity of the light sensor must be configured using the configurator on D. If a user manually switches off the lights, a control action can be used to disable the movement detector until a movement is detected, for a period set by T.	0
In this mode, the sensor only works based on the light conditions, and the movement sensor is disabled. When the brightness falls below the threshold configured, the system switches on the light unit, switching it off again when the brightness exceeds the set threshold (automatic mode). Configure A = 1 -9 and PL = 1 - 9, configurators GEN, AMB and GR cannot be connected. In this mode, configurators S and T are not connected.	1
In this mode the sensor does not manage the lights directly, but sends movement and brightness signals to the scenario programmer MH200N. In this case, the sensor address is entered in A and PL and must be unique inside the system. Therefore it is not possible to connect configurators GEN, AMB, and GR. In this mode the S and T configurators are not connected because these parameters are directly managed by the scenario programmer.	2
In this mode the system directly manages a light unit, ensuring a consistent brightness level inside the room (this mode is only effective if the sensor manages the dimmer). The system switches the lights on when a movement is detected and keeps them on based on the presence of people and the lighting threshold configured (automatic mode). When a movement is detected, and if the measured brightness is below the configured threshold, the sensor switches the specified light unit on and keeps it on until the expiry of the period configured using the configurator on T. During operation, the sensor keeps a constant brightness level, depending on the configurator on D. For example, when the brightness of the natural light increases, the sensor reduces the brightness of the light unit controlled. For appropriate operation, the brightness sensitivity threshold of the sensor must be configured using the D configurator. The threshold value can be modified using a brightness control. The new value is then configured as the new sensor threshold, until the next activation.	3
In this mode, the sensor only operates on the basis of the brightness conditions, and directly manages a light unit to ensure a constant brightness level inside the room (this mode is only effective if the sensor manages the dimmer). The movement sensor is disabled. The lights are manually switched on, and automatically switched off by the sensor, based on the configured brightness threshold (eco mode). Therefore, when the lights are off, the sensor does not switch them on; but it waits for the user to switch them on manually. During operation, the sensor keeps a constant brightness level, depending on the configurator on D. For example, when the brightness of the natural light increases, the sensor reduces the brightness of the light unit controlled. When the lights are off, if the level of natural light decreases, the sensor does not switch them on, but it waits for the user to switch them on manually. For appropriate operation, the brightness sensitivity threshold of the sensor must be configured using the D configurator. The threshold value can be modified using a brightness control. The new value is then configured as the new sensor threshold, until the next activation.	4

**Warning:** To manage scenarios using the sensor signals, via the MH200N scenario programmer, the sensor must be configured in Mode 2.

**1) Duration of the lights timer depending on the configurator on T:**

Configurator on T	Lights timer in minutes
No configurator	15
1	0.5
2	1
3	2
4	5
5	10
6	15
7	20
8	30
9	40

**2) Sensitivity of the PIR movement detector depending on the configurator on S:**

Configurator on S	Sensitivity
No configurator	Low
1	Medium
2	High
3	Very high

**3) Sensitivity of the lights sensor depending on the configurator on D:**

Configurator on D	Sensitivity in lux
No configurator	300
1	20
2	100
3	300
4	500
5	1000

## Maintenance

Keep the lenses clean.

Clean the surface with a cloth.

Do not use: acetone, detergents for removing tar, or trichloroethylene.

Maintenance using the following products:

- Hexane (En 60669-1)

- Methylated spirit

- Soapy water

- Diluted ammonia

- Bleach, diluted 10%

- Glass detergents

## Wiring diagram

