One-way narrow beam wall/ceiling mounted sensor

BMSE2004

Description

Control and command device, powered by the SCS BUS, with two different sensors, the combination of which enables managing the light level inside the room, taking into account both the presence of people, and the level of natural light, therefore ensuring efficient energy savings and better user comfort.
The device has an IP42 protection index and must be installed indoors, either on the wall or the ceiling, using the bracket supplied.

The sensor is fitted with:
- RJ45 clamp for the connection of the BUS cable
- passive infrared PIR movement sensor
- light sensor
- two-way IR receiver for adjustment using the remote control BMS04001 and BMS04002
- pushbutton for enabling the adjustment of the parameters using the remote control
- configurator socket.

PIR movement sensor:
it detects the presence of people inside the room. It's used inside rooms with free view, without obstacles, for the detection of people.

Light sensor:
it detects the light level inside the room, switching the load ON or OFF based on whether the light threshold set on the sensor (adjustable by the user) is lower/higher than the value detected. The light sensor has priority on the movement sensor: if the PIR sensor detects a presence, but natural light is sufficient, no load management signal is sent by the device. In order to avoid continuous switching ON and OFF, a tolerance on the threshold values must be set.

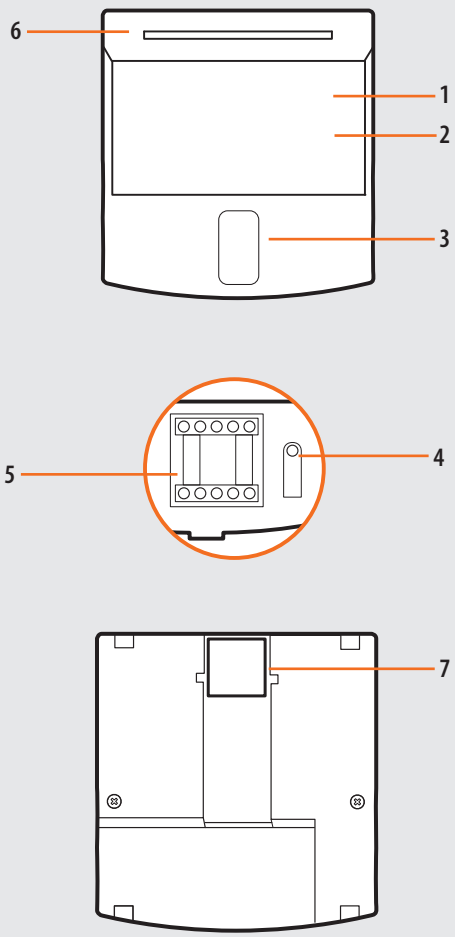
The sensor may be installed in a MY HOME system and can be configured both physically and virtually, or as a component of the Lighting Management system using specific configuration procedures (Plug&Go, Push&Learn, Project&Download).

Standards, Certifications, Marks

Standards:	Safety standard:
- CE directive	EN 60669-2-1

Dati tecnici

Power supply:	27 Vdc
Absorption:	12 mA
Operating temperature:	(-5) – (+45) °C
Sensor type:	PIR
Protection index:	IP42
Sensitivity:	5 – 1275 lux
Time delay:	30 S -255 h 59 min 59 s
Coverage of the PIR sensor at 2.5 m:	10 m x 27 m (210 m^2)
Covering angle:	30°/90°
Maximum installation height:	6 m
Type of connection:	RJ45



Legend

1. Light sensor
2. Infrared PIR movement sensor
3. Two-way IR receiver
4. Pushbutton enabling remote control adjustments
5. Configurator socket (attention, it must only be used in MY HOME systems with physical configuration)
6. LED indicator
7. RJ45 clamp for the connection of the BUS cable - RJ45/SCS BMAC1001 adaptor

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Impostazioni di base

Parametri di rilevamento		Valore di default	Parametri modificabili	Telecomandi per la configurazione	
				BMS04001	BMS04003
Tempo di ritardo		15 min.	3, 5, 10, 15, 20 min.	-	✔
			30s - 255 h 59 min. 59s	✔	-
Sensibilità		PIR (molto alto)	Bassa, media, alta, massima	✔	✔
Soglia di luminosità		300 lux	20, 100, 300, 500, 1000 lux	-	✔
			0 - 1275 lux	✔	-
Modalità	Auto	Disabilitata	Abilitata/Disabilitata	✔	✔
	Walkthrough	Abilitata	Abilitata/Disabilitata	✔	✔
	Eco	Disabilitata	Abilitata/Disabilitata	✔	✔
	Parziale ON/gruppo OFF	Disabilitata	Abilitata/Disabilitata	✔	-
Schema di rilevamento	Iniziale	PIR	Non modificabile	✔	-
	Mantenimento	PIR	Non modificabile	✔	-
	Re-trigger	PIR	PIR/Disabilitata	✔	-
Allarme		Disabilitata	Abilitata/Disabilitata	✔	-
Modalità avanzata	Calibrazione	-	0 - 99995 lux	✔	-
	Regolazione luminosità	Disabilitata	Abilitata/Disabilitata	✔	-
	Contributo di luce	Auto	Auto - 1275 lux	✔	-

Tempo di ritardo:
Ritardo di tempo dopo il quale viene spento il carico se non viene rilevata presenza e il livello di illuminazione è sufficiente.

Sensibilità:
Impostazione della sensibilità di rilevazione della presenza.

Soglia di luminosità:
Valore al di sotto del quale il carico si accende se l'illuminamento è inferiore, si spegne se è superiore.

Modalità Auto:
Il carico si accende automaticamente:
- se rileva una presenza ed il livello di luce naturale non è sufficiente.

Si spegne automaticamente:
- se non rileva nessuna presenza e si esaurisce il tempo di ritardo.
- oppure se il livello di luce naturale è sufficiente (impostazioni attivate).

Se la luce non è sufficiente ogni nuova rilevazione genera un'accensione automatica.

Walkthrough:
- Se il sensore rileva una presenza per un intervallo di tempo inferiore a 20 secondi, riduce il ritardo di spegnimento a 3 minuti (solamente nel caso in cui il valore impostato fosse maggiore).

Modalità Eco:
Si accende con un interruttore manuale, si spegne automaticamente:
- quando non si rileva presenza e si esaurisce il tempo di ritardo.

Dopo lo spegnimento, qualsiasi nuova rilevazione entro 30 sec. farà accendere automaticamente il dispositivo. Dopo 30 secondi deve essere acceso manualmente.

Modalità Parziale ON/gruppo OFF:
Possibilità di controllare uno o più punti luce separatamente.
In questa modalità è fondamentale creare un gruppo di luce:
- nella fase manuale di predisposizione.
- o tramite lo strumento per la configurazione avanzata art. BMS04001 con la funzione "PnL" (sensore PnL).

Il sensore accende il carico a cui è collegato tramite attuatore. Se non viene rilevata presenza o si esaurisce tramite il Time Dalay impostato, vedremo spenti tutti i carichi appartenenti allo stesso gruppo diel sensore.

Rilevazione iniziale: l'illuminazione si accende alla prima rilevazione.

Mantenimento: se si rileva una nuova presenza l'illuminazione resta attiva.

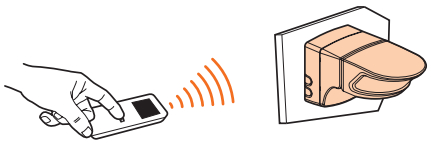
Re-trigger:
Se il sensore rileva una presenza nei 30 s immediamente successivi allo spegnimento del carico, quest'ultimo viene riacceso immediatamente, dopo questi 30 s il sensore riprende il suo normale funzionamento.

Calibrazione:
Per calibrare è necessario misurare il livello di luminosità presente con un luxmetro e ridare il valore al sensore tramite telecomando di configurazione (BMS04001)

Regolazione luminosità:
Spegnimento automatico dell'illuminazione 10 minuti dopo aver superato il valore prefissato di illuminazione. Se il livello di luce è inferiore al valore prefissato di Luce diurna, l'illuminazione si attiva automaticamente dopo 20 secondi.

Contributo di luce: quantità di luce supplementare fornita dal dispositivo d'illuminazione acceso.

Modifica dei parametri con i telecomandi di configurazione



- BMS04003: Strumento di configurazione semplificato
- BMS04001: Strumento di configurazione avanzato

Quando il sensore riceve un comando PIR con lo strumento di configurazione emette un bip che indica l'esecuzione della modifica.

Ritorno alle impostazioni di fabbrica:
1a pressione: se il tasto LEARN viene premuto per un periodo breve il LED lampeggia lentamente.
2a pressione: tenere premuto il tasto LEARN per 10 secondi finché il LED inizia a lampeggiare velocemente.
Nota: configurando il prodotto tramite CONFIGURAZIONE FISICA o CONFIGURAZIONE VIRTUALE non sarà possibile utilizzare i telecomandi di configurazione, pertanto tutte le funzionalità avanzate (non impostabili tramite confgiuratori)non saranno accessibili

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MY HOME configuration

When installed in a MY HOME system, the device may be configured in two ways:
- PHYSICAL CONFIGURATION, by connecting the physical configurators to their sockets.
- VIRTUAL CONFIGURATION, by connecting the system to the PC using the 3503N Kit or the web server. The Virtual configurator software must be installed on the PC.

Physical configuration

The features of the device are defined by 6 configurator sockets, and their functions depend on the operating mode:

Room: A = 1 – 9
Light point: PL = 1 – 9
Mode: M = 0 – 4

PIR movement sensor sensitivity: S = 0 – 3
Load ON time: T = 0 – 9
Lighting sensor sensitivity: D = 0 – 5
WARNING: there is no address A = 0 and PL = 0

Possible function	Configurator in M
The device controls the load with the address indicated in A and PL. When a movement is detected, if the light level is lower than the set level, the device switches the assigned load on, and keeps it on until the time set with the configurator connected to T expires (Auto Mode). The PIR movement sensor sensitivity is set with the configurator connected to S. For correct operation, it is necessary to set the sensitivity of the lighting sensor with the configurator connected to D. If the user switches the light OFF manually using a control device, the movement sensor is disabled until a movement is detected, for a time indicated by T.	0
In this mode the sensor operates as a pure twilight switch, the movement sensor is disabled. When the light level falls below the set threshold, the device switches the load on, and switches it OFF when the light level exceeds the threshold again (Auto Mode). Configure A = 1-9 and PL = 1-9. GEN, ROOM and GR configurators cannot be connected. In this mode configurators S and T are not connected.	1
In this mode the device does not directly manage a load, but sends to the MH200N scenario programmer the notification of a movement and the lighting value. In this case the device address will be connected to A and PL, which must be unique within the system. Therefore, the GEN, ROOM and GR configurators cannot be connected. In this mode the S and T configurators are not connected, as these parameters are managed directly by the scenario programmer.	2
In this mode the device directly manages the load, maintaining a constant light level inside the room (this mode is only valid if the sensor manages a dimmer); when a movement is detected the device switches the light on and keeps it on based on the presence of people and the desired light level (Auto Mode). When a movement is detected, if the lighting level is lower than the set level, the device switches the assigned load on, and keeps it on until the time set with the configurator connected to T expires. During its operation the sensor maintains a constant light level based on the configurator connected to D; for example, when the natural light level increases, the device decreases the brightness of the load driven. For correct operation, it is necessary to set the sensitivity (Set point) of the lighting sensor with the configurator connected to D. It is possible to change the threshold set using a control that changes the brightness: this new value is set as a new sensor Set point until the next switching ON.	3
In this mode the device operates as a twilight device, and directly manages a load, maintaining a constant light level inside the room (this mode is only valid if the sensor manages a dimmer), and disabling the movement sensor. The load is switched on manually and switched OFF automatically by the sensor, depending on the desired light level (Eco mode). When the light is OFF the sensor therefore does not switch the load on, but waits for the user to do so using a manual control. During its operation the sensor maintains a constant light level based on the configurator connected to D; for example, when the natural light level increases, the device decreases the brightness of the load driven. Once the load has been switched OFF, if the natural light level decreases the sensor will no longer switch the load on, but will wait for the user to do so manually. For correct operation, it is necessary to set the sensitivity (Set point) of the lighting sensor with the configurator connected to D. It is possible to change the threshold set using a control that changes the brightness: this new value is set as a new sensor set-point until the next switching ON. It is possible to change the threshold set using a control that changes the brightness: this new value is set as a new sensor Set point until the next switching ON.	4

1) Table of the active load times based on the configurator connected to T:

Configurator in T	Active load time in min.
No configurator	15
1	30 sec.
2	1
3	2
4	5
5	10
6	15
7	20
8	30
9	40

2) Sensitivity table for the PIR movement sensor based on the configurator connected to S:

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

3) Sensitivity table for the ligthing sensor based on the configurator connected to D:

Configurator in D	Sensitivity in Lux
No configurator	Wall mounted: 300 Ceiling mounted: 500
1	20
2	100
3	300
4	500
5	1000

Virtual configuration

Using the Virtual configurator software it is possible to perform all the functions listed below:
- local lighting/movement detector
- local lighting sensor
- local movement sensor
- local lighting/movement detector
- central lighting sensor
- central movement sensor
- PLUS IR scenario control

Lighting Management configuration

When installed in a Lighting Management system, the device can be configured in the following ways:
- Plug&Go (see the dedicated technical guide)
- Push&Learn
- Project&Download,

Using the Virtual configurator software it is possible to perform all the functions listed below:
- local lighting/movement detector
- local lighting sensor
- local movement sensor
- local lighting/movement detector
- central lighting sensor
- central movement sensor
- PLUS IR scenario control

For more information on the functions see the glossary before the Technical sheets chapter.

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Operating mode

Auto mode:

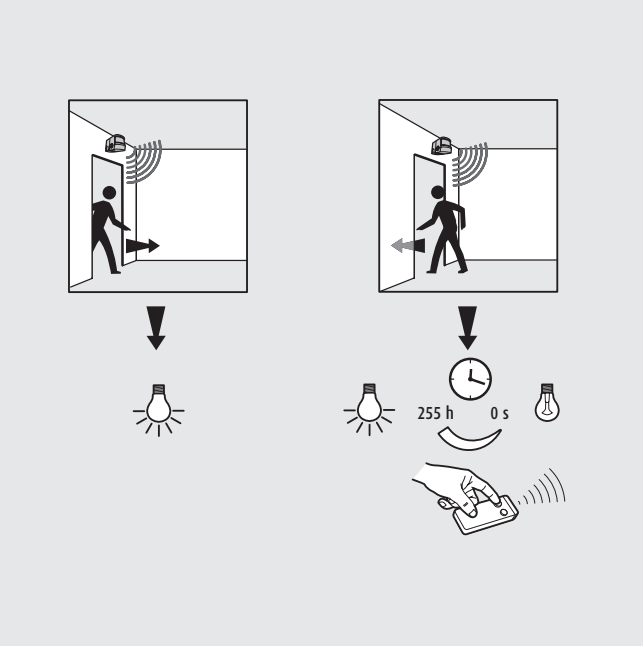
The switching ON/OFF of the load are ordered automatically by the dimmer/actuator, depending on people's presence and the desired light level as detected by the BUS sensor. The AUTO mode does not require the installation of a BUS control.

However, it is nevertheless possible to add a BUS control, with the function of forcing the switching ON/OFF of the automatism set by the dimmer/actuator.

The system remains in manual operation while a presence is being detected: after the switching OFF time delay due to non-detection of presence has elapsed, the system returns to automatic mode.

Modalità Walktrough:

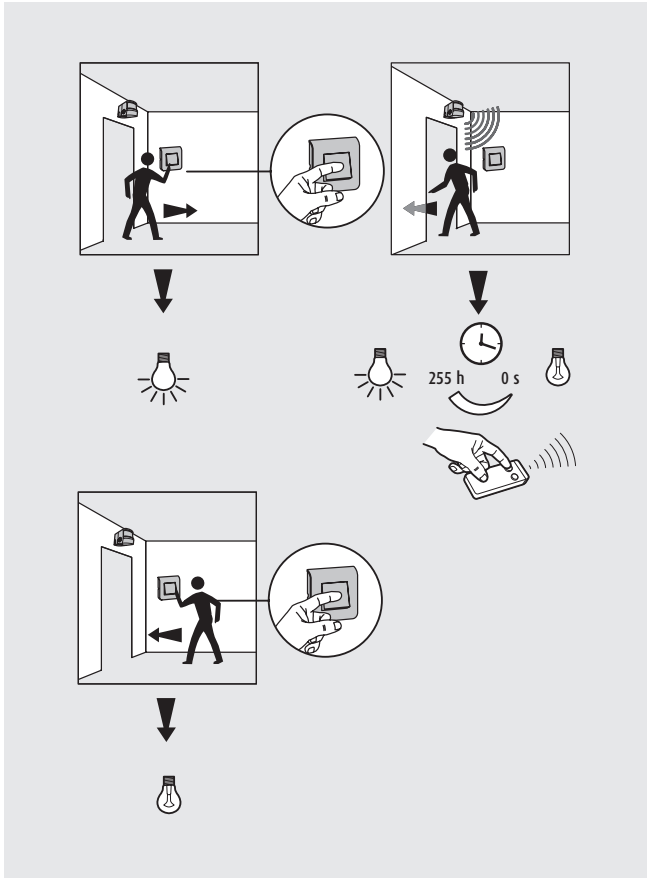
La funzione Walkthrough contribuisce ad incrementare ulteriormente il risparmio energetico: se il sensore rileva la presenza di persone all'interno dell'ambiente per un tempo inferiore a 20 secondi, il dispositivo riduce il tempo di ritardo in spegnimento a 3 minuti.



Eco mode:

The load is switched ON manually and switched OFF automatically by the sensor, depending on people's presence and the desired light level. The ECO mode requires the installation of a control. The function of the pushbutton is mainly to activate the automatism of the sensor: at the first pressure, the sensor compares the desired light level with the actual light level inside the room, and decides if the lights must be switched ON or not.

A subsequent pressure of the pushbutton will force the switching ON/OFF of the automatism determined by the sensor. The system remains in manual operation while a presence is being detected: after the switching OFF time delay due to non-detection of presence has elapsed, the system returns to automatic mode. A further functionality of the ECO mode is the temporary AUTO mode operation (30 seconds), following a switching OFF due to no presence being detected. After 30 seconds from switching OFF, the sensor returns to operate in ECO mode, therefore without performing an automatic switching ON.



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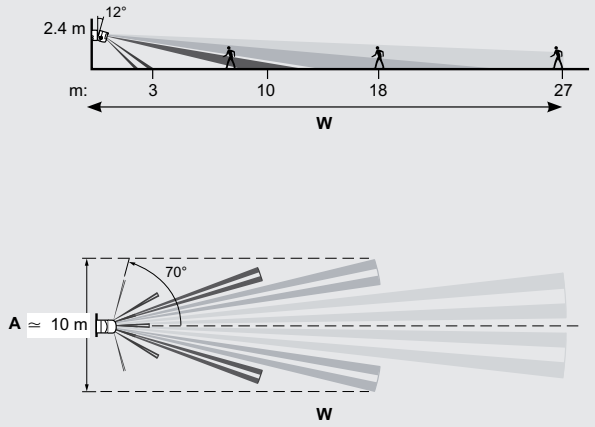
Area di copertura

Coverage of the PIR sensor

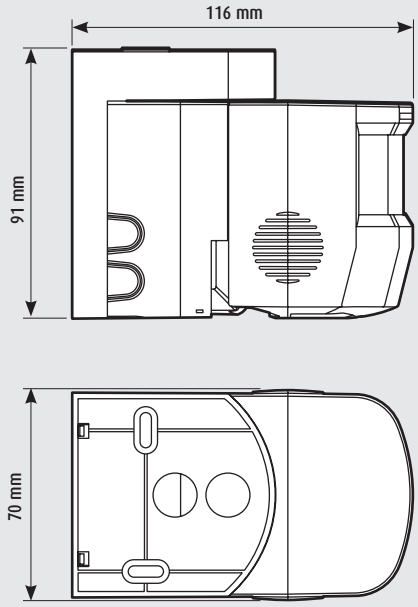
Area di copertura:
-PIR 90 m²



		Sensibilità Bassa (25%)			Sensibilità Medio (50%)		
		A	W	Area (m²)	A	W	Area (m²)
Altezza (m)	2.5	3	6	54	5	15	109
	3	3	6	54	5	15	109
	4	3	6	54	5	15	109
	5	3	6	54	5	15	109
	6	3	6	54	5	15	109

		Sensibilità Alta (75%)			Sensibilità Massima (100%)		
		A	W	Superficie (m²)	A	W	Superficie (m²)
Altezza (m)	2.5	8	21	156	10	27	210
	3	8	21	156	10	27	210
	4	8	21	156	10	27	210
	5	8	21	156	10	27	210
	6	8	21	156	10	27	210

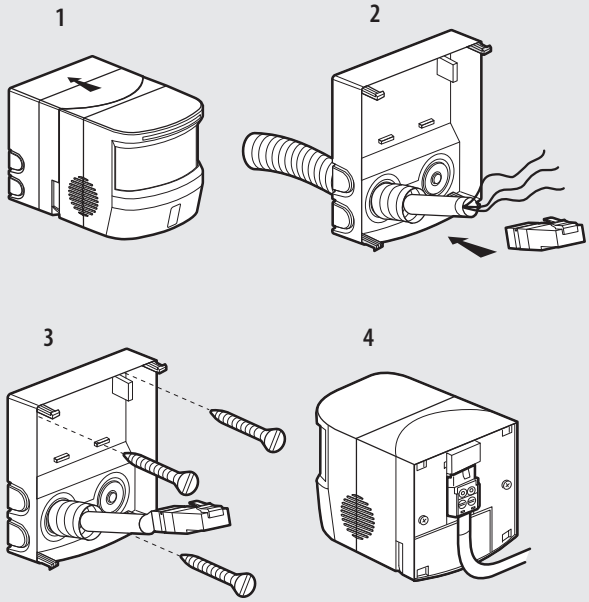
Dimensional data



Assembly, installation

The device is intended for indoor installation, on the wall or the ceiling, using the bracket supplied.

Wall mounted installation



Ceiling mounted installation