Wireless PIR Sensor

BSD-WPIR-BAT

smart-house

| Passive infrared detector (PIR) |
| Detects movement by e.g. a person |
| Indoor applications |
| Operating distance: 10 m |
| Operating angle: 70° |
| Walk test: LED indication |
| Switch for walk test LED on/off |
| Channel coding by BGP-COD-BAT |
| Supplied 2 x AAA battery |
| Wireless range up to 100 m in open air |
| Battery lifetime approximately 1 year |

GENERAL SPECIFICATIONS

Power ON delay	Typ. 1 min.
Walk test indication	LED, red
Switch ON	Walk test ON
Switch OFF	Walk test OFF
Environment	
Degree of protection	IP 40
	For indoor applications
Operating temperature	0° to +50°C (+32° to +122°F)
Storage temperature	-30° to +70°C (-22° to +158°F)

Material		
Housing	Colour	White
		Lens
Polyethylene		
Dimensions (WxHxD)		104 x 55 x 57 mm
Weight		Approx. 150 g
		Excluding batteries

INPUT SPECIFICATIONS

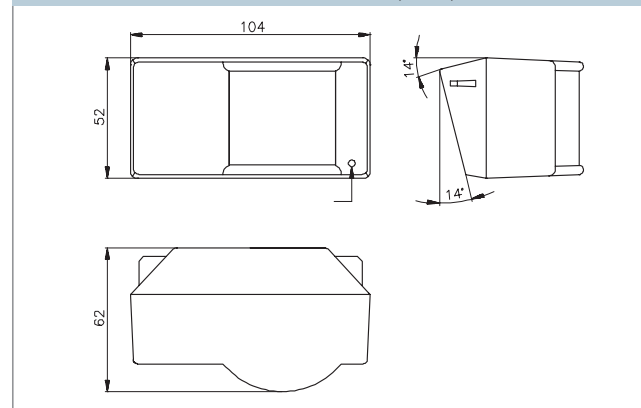|	
Inputs	PIR on I/O 1
Lens	Dual detecting zones
Segments	24
Levels	3
Angle	70°
Operating distance	≤ 10 m
	(see radiation diagram)
Wave length	7 to 14 µm
Input detection speed	0.5 to 5 pulses/s

SUPPLY SPECIFICATIONS

Power supply	Supplied by batteries
Rated operational current	2 x AAA battery (800 mAh). With 1700 activations a day, the lifetime of the batteries is approximately 1 year

WIRING DIAGRAM

PIR element
AAA
AAA
LED
ON
OFF
Associate button
BGP-COD-BAT connector
Walk test on/off

DIMENSIONS (mm)

104
52
14
14
62
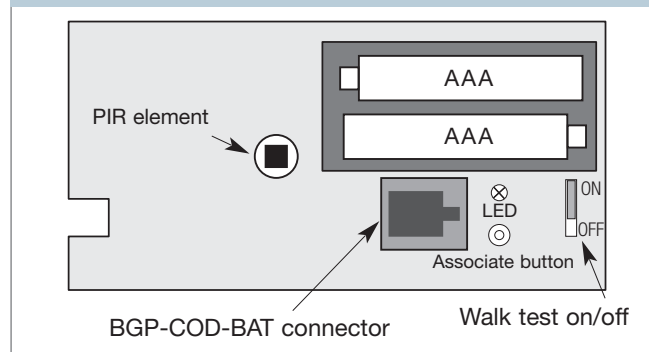
TYPE SELECTION

Supply	Ordering no.
	1 channel PIR detector
2 x AAA battery (800 mAh)	BSD-WPIR-BAT

Batteries are not included

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MODE OF OPERATION

BSD-WPIR-BAT is a 1-channel monostable transmitter with a PIR detector, which operates by means of a dual-element detector.

The transmitter is activated if the temperature suddenly changes (most often it will be heat radiation from a person) in relation to the background radiation. Consequently, the transmitter can be used for ON/OFF switching of lighting, air-conditioning etc. If a person moves within a detection zone, BSD-WPIR-BAT is activated.

Switch
If the walk test (switch) is ON, the LED turns ON when the PIR is activated for just 0.15 seconds. Then a non-trigger time period of 10 seconds will follow before the PIR and LED can be reactivated.

Slow movements between zones resulting in a detection speed of less than 0.5 pulses/sec will not be detected. Nor will rapid movements resulting in a detection speed of more than 5 pulses/sec be detected. As BSD-WPIR-BAT is a passive device, several detectors can be placed in the same room without interfering with each other.

The module should not be installed in the following places:

a) Outdoors.

b) In places exposed either to sunlight or to motor vehicle headlights pointing directly at the sensor.

c) In places exposed to direct air flow from a heater or air conditioner.

d) In places where rapid temperature changes occur.

e) In places exposed to severe vibration.

f) Close to glass or other objects which might reflect the infrared radiation.

The wireless BSD-WPIR-BAT is programmed as the standard PIR sensor BSD-PIR90A by using a BGP-COD-BAT (see data sheet for this unit).

The communication between BSD-WPIR-BAT and the BH4-WBUx-230 base is established in the following way:

- Push the "Mode" button on the BH4-WBUx-230 base until the red LED indicates association.
- Push the push-button on the module that you want to associate with the BH4-WBUx-230 base.

Once the association is complete, the LED will light up briefly (approx. 1 second).
If the association fails, e.g. because the range is exceeded, the LED in the PIR module will flash rapidly 5 times. This also occurs if, under normal circumstances, it is not possible to establish connection between the BH4-WBUx-230 base and the module.
It is possible to disable the communication between the BH4-WBUx-230 base and all the modules with which it is associated.

- Push the "Mode" button on the BH4-WBUx-230 base until the red "Disable" LED is lit.
This means that there is no connection between the BH4-WBUx-230 base and its associations.
To reestablish the connection, push "Mode" until neither "Associate" or "Deactivate" are lit.
Under normal circumstances, the "Supply" and "Dupline" LEDs will be lit continuously, whereas the LED for "Communication" only flashes briefly when you push the associated push-button.

The LED on the BSD-WPIR-BAT will light up brieflyy when the PIR sensor has been activated by motion. It is possible to disable the LED by moving the switch on BSD-WPIR-BAT to its off position.

RADIATION DIAGRAM (m)

Note:
The PIR is tilted 14°

70°

5 x 2

8 x 2

One detection zone

11 x 2

The diagram shows the relation between detection angle and operating distance.

−31.9°

−12.5°