TECHNICAL DATASHEET

MODEL NAME

BD-IOT-SEN (Motion Sensor)

MAIN APLICATION

Presence control in spaces like fitting room as example
Lighting control through presence detection
Step direction detection using 3 sensors in cascade mode
Invisible presence control works behind wood, glass, plastic...
Proximity detection system
Barrier crossing control system

DESCRIPTION

X-Band Motion Sensor compatible to BD-IOT-GTW Gateway.

Microwave motion sensor module are X-Band Mono-static DRO Doppler transceiver front-end module. These modules are designed for movement detection, like intruder alarms, occupancy modules and other innovative ideas.

This device is designed to be used as a presence sensor in spaces that require knowing in real time if they are occupied or not.

The system can indicate the status of the sensor by means of a light indicator, in addition to communicating its status to the gateway (BD-IOT-GTW) for centralized management or display.

KEY FEATURES

Sensitivity adjustment

The sensor allows adjustment of gain and sensitivity for motion detection by adjusting sensitivity to fast movements and slow movements. This setting varies both the signal amplitude and the range.

Sensor Slave Device Option

Motion detection sensors can manage another cascading device connected to them that acts as a data gateway to the main gateway (BD-IOT-GTW), like RFID Reader of the same series: BD-IOT- RDR, or other BD-IOT-SENS Sensor for double detection in larger spaces.
For example, the BD-IOT-RDR connected to the sensor as a slave allows RFID tags to be read when the BD-IOT-SENS sensor is activated by motion, sending the data to the gateway.

One Cable Interconnect

The system is designed so that, from a single centralized point where the Gateway is installed, we only have to deploy a single UTP cable to each sensor, which makes it a robust system and very easy to install.
The UTP cable itself contains data channels and power channels for the sensor.
The load is connected to the Output terminal connector in each sensor.

Output

This device, allows an output that is activated when the sensor detects presence, is used to give signal to light indicators in general, although it can be used for other purposes.

Signal output:
+ 12VDC 0.2A max shared for 3 channels (R-G-B)
This output allows powering any other device or actuator.

RGB output:
By combining the signal output with the RGB PWM output, you can control an RGB light fixture by PWM, such as the BD-IOT-RGB same series indicator, allowing a very low power RGB light source to indicate the activation and / or deactivation of the sensor.

It is possible to adjust the colour tone, when the device does not detect movement, the colour while movement is detected, and even make effects such as fade between them.

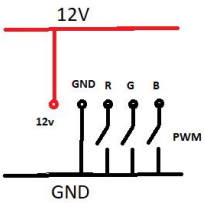
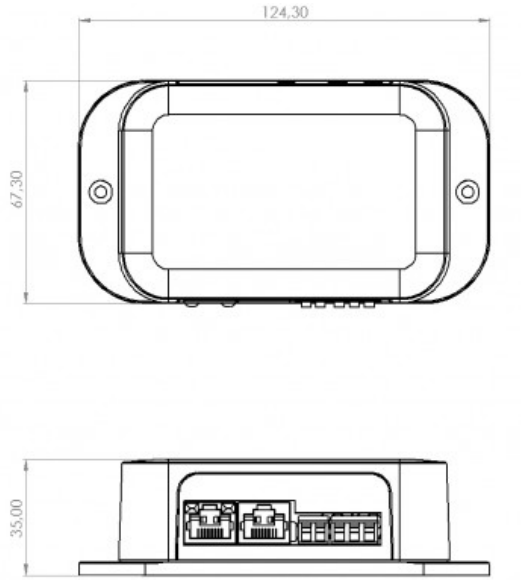


Figure 1.BD-IOT-SEN OUTPUT PINOUT

TECHNICAL DATASHEET

PRODUCT DETAIL

DIMENSIONS



GENERAL ESPECIFICATIONS

Model	BD-IOT-SENS
Colour	Black, White
Dimensions	124mm x67mm x35mm
Weight	80gr
Distance range	0,5m to 3m
Operating Temperature	-15 ºC to 45 ºC
Storage Temperature	-40 ºC to 70 ºC
Standards	In the process of obtaining certificates in different market areas.

ELECTRICAL ESPECIFICATIONS

Input voltage	+5VDC for Logical +12VDC for Output
Power Supply	BD-IOT-GTW Device (Sensor Port)
Output	+12VDC (0,2A) & 3 channels PWM

COMUNICATIONS

I/O Ports	2 x Rj45 Data Bus
To Master Gateway	Data Bus connection to BD-IOT-GTW
To Slave Sensor/Reader	Data Bus connection to Slave Sensor/Reader BD-IOT-Series

CPU

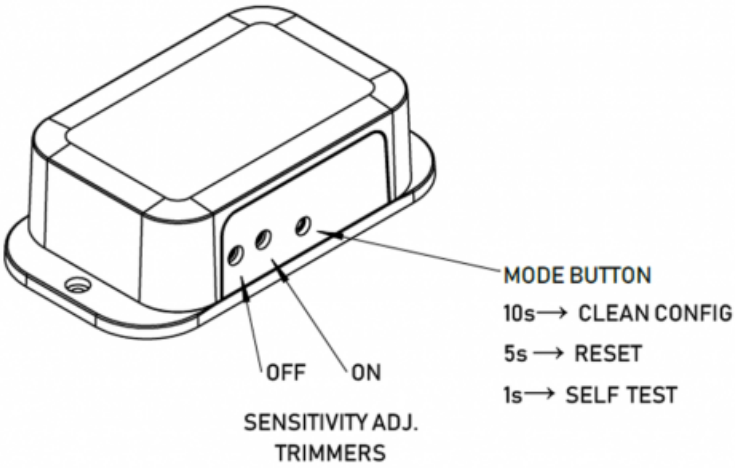
CPU speed	32MHz
Program Memory Size	28KB
RAM Memory Size	2KB
Integrated Interface Type	Synchronous serial data transfer

CONNECTIVITY

- **Mode Button**

The mode button allows 3 functions when pressed depending on the pressing time:

10s: Clean Config
5s: Reset
1s: Self Test



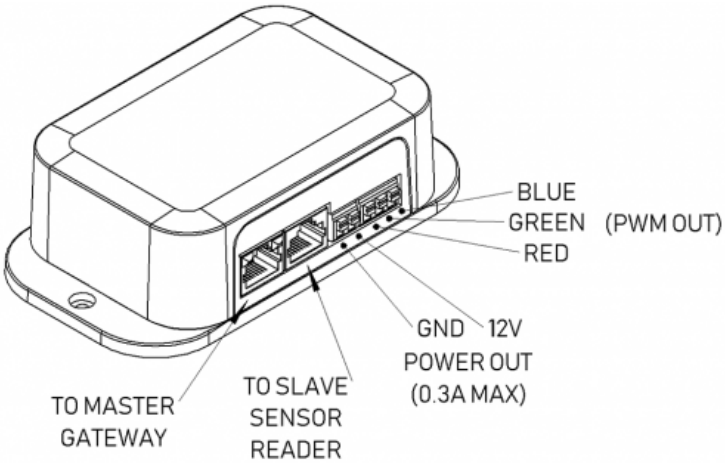
- **Sensitivity adjustment Trimmers**

Adjustment trimmers allow adjusting:

Activation (the threshold for the sensor to detect movement) – Trimmer ON.
Deactivation (the threshold for the sensor to deactivate after the last motion detection) – Trimmer OFF.

- **Master Port to Gateway**

The RJ45 connector provided to intercommunicate the sensor with the central unit (Master: BD-IOT-GTW) allows communication of both data and power from the sensor with the gateway.



- **Slave Port (Optional Slave device)**

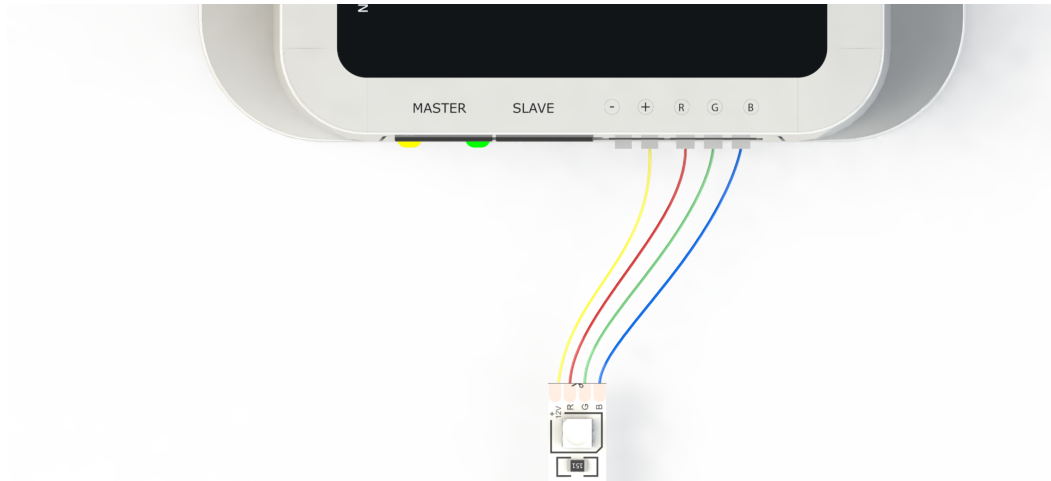
The RJ45 connector provided to intercommunicate the sensor with another similar sensor, to extend the detection range, or with another type of sensor, such as RFID (BD-IOT-RDR), allows the use of a second level of cascaded sensors.

* Only a second level of sensors is allowed, it is not possible to chain more than 2 in this way.

- **Output (RGB Banner)**

<u>ID LED banner Standard (1 color)</u>
12V - Anode
R - Cathode

<u>ID LED banner RGB (3 colors)</u>
12V - Anode
R - Red Cathode
G - Green Cathode
B - Blue Cathode



BD-IOT-RGB Series LED banner (256 colors)
12V - Yellow (VCC)
GND - Black (GND)
R - Red
G - Green
B - Blue