

## **The All-In-Sensor**

**The new All-In-Sensor represents a completely new, independent product group on the market. The new sensor closes the gap between the two existing product groups:**

- Sensor works with its own control panel (monitoring and Smarthome products) and**
- Sensor works fully autonomous (smoke detectors, small alarm devices etc.)**

For the first time, a multifunction sensor will be available on the market that can work directly and without any other infrastructure with a smartphone/tablet and can also perform complex monitoring, information and control tasks. Completely new is the ability to link the various sensor signals to complex control tasks and signal messages. Due to the complete equipment with all commercially available sensors, its own integrated intelligence, high radio range, location-independent usability and simple programming via a smartphone app, the all-in switch sensor has the potential to open up completely new markets and change existing markets sustainably. The basis for high scalability in the coming years is provided by the higher performance and the low price compared to conventional technology.

### **The All-In-Sensor includes:**

#### **PIR motion detector**

Motion detector detects movements in up to 10 m distance, sensitivity is infinitely adjustable, so pets can be ignored.

#### **Window tilt and opening sensor**

In order to achieve a reliable security when leaving the house, it is important to be informed about the current condition of the windows. They say a tilted window is an open window. This is why the all-in switch sensor is able to detect the tilted or open position of a window, evaluate it in conjunction with the message when the front door is opened and report it at an early stage.

#### **Glass breakage sensor**

If the sensor is mounted on a pane, it can detect the breakage of the pane and trigger an alarm.

#### **Airpulse sensor**

When opening and closing a door or window, an inaudible, very special air pulse is generated. The sensor can also detect this impulse at a distance of 10 m and trigger a signal. This makes it possible to monitor all windows and doors in a room with just one all-in switch sensor and to trigger the desired switching and signals.

### **Magnetic sensor**

The sensor can be triggered by a magnet, e.g. by opening doors and windows or by a cord attached to a product (garden furniture, bicycle, etc.).

### **Sabotage detector**

If the all-in switch sensor is removed from its holder, the sabotage sensor triggers an alarm.

### **Light sensor**

The light sensor can detect daylight and darkness with adjustable sensitivity and trigger linked circuits and signals when set thresholds are exceeded or not reached.

### **Vibration sensor**

As soon as the sensor detects a vibration with adjustable sensitivity, a signal can be sent or a circuit linked to other sensors can be executed.

### **Gyroscope 3 axis sensor**

The 3-axis gyroscope sensor has a sensitivity of 1 degree deviation from the current position. Each of the X, Y and Z axes can be programmed individually or in combination by means of a threshold so that a signal is triggered when the values exceed or fall below the threshold values. This can be used, for example, to determine whether a window or door is being opened, a vehicle is being moved, an object is being removed from its position, and so on. In industrial applications, for example, it is possible to determine the position of a product or a machine in live mode with an exact degree display on the smartphone.

### **Humidity sensor**

The air humidity sensor enables signals to be transmitted or circuits to be carried out, also in conjunction with other sensors, when the set threshold values are exceeded or not reached. This is very important, for example, in air-conditioned rooms, greenhouses, pet shops, storage rooms, etc.

### **Temperature sensor**

The temperature sensor enables signals to be transmitted or circuits to be carried out, also in combination with other sensors, when the set threshold values are exceeded or not reached. This is very important in air-conditioned rooms, greenhouses, pet shops, storage rooms, etc.

### **Fire alarms**

Each fire with an open flame generates a very special infrared light spectrum, which can be perceived by the flame sensor even at greater distances. The flame sensor is connected to the all-in switch sensor like a gas or water detector via USB-C plug and can therefore send alarm signals or, in combination with other sensors, e.g. the temperature sensor, carry out special circuits and alarms. Due to the optical evaluation, the flame sensor is a very good supplement to smoke detectors and can also report fire without major smoke development at an early stage of fire development.

### **Gas detector**

A gas detector can be connected to the all-in switch sensor via a USB-C plug and can thus send alarm signals or carry out special switching and alarming in combination with other sensors, e.g. the fire sensor.

### **Water detector**

A water detector can be connected to the all-in switch sensor via a USB-C plug and can thus send alarm signals or, in combination, carry out special circuits such as switching a solenoid valve off and on independently. This can be used in animal and plant breeding or for alerting.

### **Infrared light barrier**

In contrast to the PIR motion detector, an infrared light barrier allows the use indoors and outdoors to monitor larger areas up to 25 m distance between sensor and IR signal transmitter, and an IR light barrier works reliably even at higher ambient temperatures above 30 degrees C.

### **Repeaters**

Even though the all-in switch sensor has very high radio ranges (up to 100m in buildings and up to 500m in open spaces) due to the use of Bluetooth® 5.0 radio technology, it can be helpful in difficult environmental conditions if a radio signal is transmitted from one sensor to the next and then to the smartphone. This is achieved by the integrated repeater function and thus enables even large and complex building structures to be secured and controlled.

### **Time switch**

The integrated timer makes it possible to carry out certain tasks controlled by date and time or to send or not to send signals. For example, the time control can be used to switch the all-in switch sensor from transmit mode to receive mode and thus receive the control or monitoring commands of the smartphone. For example, the complete status and operational readiness of the all-in switching sensor can be queried to ensure functional safety. Or the timer is used for signalling and switching defined tasks and states.

### **Smart Home device control**

In order to make the All-In-Sensor usable for a wide range of applications, a complete Smarthome control has been integrated. This enables the All-In-Sensor to perform control tasks in the building or at any location in conjunction with a smartphone or completely independently according to previously defined parameters. For example, the All-In-Sensor directly interact with switches, sockets or receiver modules in LED lamps or any electrical devices. The smartphone can be connected to the network between the All-In-Sensor and switches as an information device or as a control and programming device.