





WARNING: PLEASE READ CAREFULLY AND THOROUGHLY. It is important that you read the entire manual for safe an accurate operation. If you have any questions please feel free to contact us.

When mounting a product by using screws, always ensure that there are no electrical cables behind the mounting location.

your Direct-Smarter team



All-In-Sensor 24/01/2022 (16)



Content Quick Start Guide...... 2 Switching on / off...... 4 Battery indicator 7 Inserting batteries......7 Explanation of the individual sensors......14



Your system has already been configured, you just have to switch on the sensors and save your data such as your telephone number and email address. Please note that the inserted sim card is a pure data sim card, if you want to get calls, please insert a own sim card.

Important information if you use the Direct Smarter World Sim Card inside your alarm center/ connector

If you use the Direct Smarter World Sim Card, please note that the credit on the SIM is sufficient for up to 5 years if you use a maximum of 100 signals per day (if you use fewer daily signals the Sim Card will last longer), In the event you use more than 100 Signals per day, we recommend connecting to Wi-Fi. (Please note that if your Android alarm center/connector is connected to your Wi-Fi and in an alarm mode it will only send out an email but NO text message to your phone in the event an alarm is triggered. To make sure you receive a text message and email please, switch back to use the SIM card) The World Sim Card can be recharged at any time for a fee of \$49. To recharge your World Sim Card please contact info@directsmarter.com

Quick Start Guide

In this video you can see how the All-In-Sensor can be connected to the smartphone within 30 seconds.



To do this, simply switch on the All-In-Sensor and press the "+" sign in the app.



Description of the control elements and sensors

- 1. Holder for adhesive or screw fastening
- 2. Blue signal LED
- 3. Red warning and repeater LED
- 4. LCD display showing sensor number, battery level and operating mode
- 5. Infrared light sensor for infrared light barrier
- 6. Daylight Sensor
- 7. Left USB-C connector for external sensors and mains power cable
- 8. Temperature sensor
- 9. Magnet for sabotage sensor
- 10. Activation button for operating mode selection, factory reset and update installation
- 11. Operating mode Radio button
- 12. On/Off switch button, emergency call signal button and

Factory reset

- 13. Right USB-C connector for external sensors and mains power cable
- 14. Air Humidity Sensor
- 15. Fire Sensor
- 16. PIR motion detector lens



Connector in holder



Connector in holder backside

Connector in Connector in weatherproof housing



Switch on the display (alarm center/ connector)

To switch on the alarm center / connector's display, you have to swivel it sideways.



When mounting a product by using screws, always ensure that there are no electrical cables behind the mounting location.

Wall mounting connector

There is a magnetic pad on the back of the connector for wall mounting.



Switching on / off

To turn the All-In-Sensor on and off, press and hold the large button for about 3-4 seconds.

Setting the operating mode

The sensor has 3 indicators for the operating mode:

- **O** = Sun symbol in the upper left of the sensor display, this is the setting mode
- **R** = Symbol at the top centre of the sensor display, this is the reception and repeater mode
- \mathbf{S} = Symbol at the top right of the sensor display, this is the Send mode

To set the mode, follow the procedure below:

Switch on the sensor, the display is illuminated in blue for approx. 8 seconds. You can switch on the display lighting again by pressing the middle button.

To change the current mode, briefly press the left button, the display is illuminated and the symbol at the top of the display flashes.



Each time you press the middle button, the icon display jumps one step further, allowing you to select a mode. Confirm this mode with the left button, the symbol stops flashing.

In setting mode, the lighting remains on for several minutes. In "R" mode, the display lighting switches off after approx. 8 seconds, the LCD display remains visible. In the "S" mode the display switches off completely due to battery power saving reasons. You can switch on the display and the lighting by pressing the middle button to check the display.

R mode = setting mode



When you want to send signals from the smartphone to change settings or request current data you need to use the R mode. With "R" mode, the power consumption is approx. 8 times higher than in "S" mode, therefore the operation with mains power is recommended by using a USB wall charger. You can safely insert batteries and connect mains power at the same time.

Note: In "R" mode the connected sensors are only checked for changes every 10 seconds.

For a short period of time the "R" mode can only be used with batteries, but due to the higher power consumption the blue display lighting may flicker a little.

The batteries are designed for long life with low current, so the display lighting may flicker, but this has no effect on the function and ends after approx. 8 seconds when the lighting switches off.

S mode = normal operation mode

This is the pure transmission mode, the sensor sends the detected values to the smartphone according to the settings, but no values can be requested or settings can be changed. The "S" mode is designed for pure battery operation, but can also be operated permanently with mains power.



Note: In "S" mode the connected sensors are only checked for changes every 60 seconds.



Add a new sensor

If you use a own smartphone, please see on page 9 how to install the AIS Center App.

1. Make sure that you are not in close proximity to other transmitters such as <u>WLAN routers</u>, <u>Bluetooth music players</u>, <u>TV</u>, etc., this could prevent programming.



Also make sure that the sensor to be programmed is the only sensor that is switched on. Other sensors must not be in "R" mode.

2. Set the sensor to the setting mode (the sun symbol in the upper left corner of the Sensor Display is visible and does not flash). The Sensor Display shows the number 99. If another number is displayed, reset the sensor by pressing and holding the left and right large buttons for 5 seconds in the setting mode. The blue LED will flash briefly and the number will change to 99.

Turn the All-In-Sensor off and on again with the right button.

3. Now press the "+" sign in the app in the/connector. A note text is displayed, click on "Next".

The connector now connects to the sensor, recognisable by a brief flash of the blue LED. The data is then loaded and you will receive a confirmation in the smartphone display if the pairing was successful.

If you cannot connect the All-In-Sensor or receive signals, please activate <u>GPS</u> in your smartphone connector. Depending on your smartphone model, it may be necessary to activate the location to receive Bluetooth LE signals.

Now sensors and smartphone (connector) are exclusively connected with end-to-end encryption, other devices cannot intercept and use the signals from the smartphone and sensor.

If there are problems during the pairing process, perform the reset on the sensor again and try again.



Normally, a new reset and, if necessary, restart of the smartphone (connector) will remove all connecting issues.

The meaning of the numbers on the display

The number in the display is assigned automatically when pairing with the smartphone (connector) and cannot be changed. You can use the sensor number to identify the relevant sensor in the app. The number 99 indicates that the sensor is not yet paired.

Battery indicator

The battery indicator is used (in the future) to indicate the remaining energy remaining in the batteries. At present, this indicator is not yet in function; this will be activated as soon as possible by means of an update.

Inserting batteries



The sensor works with 1 or 2 batteries of type ER14500, these have a nominal voltage of 3.6 V and a capacity of 2600mAh. Operation is parallel, which means that the batteries are inserted in identical positions. Ensure that **the <u>negative pole is</u>** <u>on the metal spring</u> inside the battery compartment, the <u>positive pole</u> with the round, flattened tip must be <u>on the</u> <u>flat battery contact</u>.



Warning: Under no circumstances should these batteries be charged with external chargers; there is a risk of fire and explosion. However, you can safely insert the batteries into the All-In-Sensor and supply it with mains power because they will not be charged.



If the batteries are empty, please dispose of them properly. Make sure that the batteries are not inserted with the wrong polarity, this can lead to a short circuit and fire.



Warning: you must only use type ER14500 batteries

inside the All-In-Sensor.

These special lithium batteries have a lot of energy, so please handle these high performance batteries with care.

Use USB-C power supply unit

To supply the sensor with mains power permanently, you can connect the USB-C power (need to be purchased separately) supply unit to the right or left USB port. The batteries can remain in the battery compartment as back-up batteries, the batteries are disconnected from the mains power and become active as back-up batteries when the mains power fails.

Select mounting position

The sensor can be used standing on a table or cabinet, mounted on the wall, window and door or lying in a suitcase- / vehicle.

If you want to use the PIR motion detector, make sure that the position is more than 1.2 m / 3.9 feet above the floor, this will extend the sensor field. The bracket can be fixed to the wall with an adhesive pad or screws.

If the substrate is rough, screw mounting may be necessary. After mounting the bracket, the sensor can be inserted and secured with a screw from below.

When inserting the sensor into the holder, make sure that the sensor engages in the holder at the top and bottom before securing it with a screw.

Operating the App - alarm center/connector

The alarm center /connector phone has to stay not further than 30 Meter / 150 feet away from the All-In-Sensor in order to receive the signals. The distance may vary because of local conditions.



Coupling the sensor with a smartphone



Note: This app includes call and SMS functions. These features are no longer supported by the Google Play Store. Therefore the app cannot be downloaded from the Play Store, but only from the download area of the manufacturer at <u>https://shop.amg-alarmtechnik.de/app-download-center</u>. See first app at the top "AIS Center".

Alternatively, you can download the app directly via the following link.

Direct-Download AIS Center for Android

<u>Please make sure that the settings of your smartphone allow</u> <u>you to load apps from external sources</u>. After a successful download, please confirm all access rights that are requested and finally restart your smartphone.

Make settings using the app – alarm center/connector

Note:

Please note that the sensor is in the "R" mode (receive and repeater mode) if you want to change settings on the sensor via smartphone or if you want to request current values manually.

As the "R" mode requires considerably more power than the pure transmit mode "S", a mains power supply via USB-C cable and 5V power supply unit is recommended for continuous operation.

If the sensor is used in "R" mode with batteries only, the 2 pieces of lithium batteries of the type LS14500 3.6V 2600mAh are exhausted after approx. 3 weeks and have to be replaced.

In pure "S" transmission mode, the batteries last for about 4-5 months, and work is currently underway to extend this battery life to 6-12 months by means of an update.



When the USB-C mains power cable is connected, the batteries serve as an emergency power source in case of a mains power failure.

After successful pairing you will see the following view on the main display of your smartphone.

25 sensors can be coupled, more sensors may be possible, but this has not been verified at this time.



With the loudspeaker symbol in the top right-hand corner, you can switch the information tone on and off when a radio signal is received. The volume of the sound is controlled by the volume key on your smartphone.

With the "3 points" in the upper right corner you reach the setting range, this range is valid for all coupled sensors. In the setting range you can see the individual ID number that allows coupling with the All-In-Sensor Live Signal App, for more information see the description of the All-In-Sensor Live Signal App.

This ID number is only required if you use an smartphone or Tablet PC as the central unit in the house, and all signals are to be transmitted directly to the All-In-Sensor Live Signal app on your smartphone.



If you move the **arming** slider to the right to the "ON" position, you arm your phone connector. If a signal is received, the stored phone/text message numbers and e-mail addresses are now informed. Please note that notification by phone and text message works only with a phone sim card. If you have the Direct-Smarter World Sim Card inside your alarm center app/connector, you will receive a text message but no call as the World Sim Card is a M2M sim card and those sim cards cannot make calls.

Please note that the receiver app/your phone is a kind of remote alarm center, which means that the receiver app is **not informed of every signal** that the alarm center app (connector) receives. That would trigger too many signals on your phone if, for example, the family is at home and every movement, every change of light, etc. would generate a signal on your phone.



ATTENTION: To make sure **you receive the alarm message** from the connector on your phone (receiver app), please arm the connector.

Receive alarm message/notificaton from connector.

Please note that the connector **will need a phone SIM card** in order to send out calls and text notification to your phone when the connector is armed. If you do not have a SIM card in your connector and the connector is only connected to your Wi-FI, the connector will only send out an email message to your email account. If the connector is only connected to Wi-Fi and does not have a phone sim card it **cannot send out** a call or text message.

If you have the Direct-Smarter World Sim Card inside your connector, please note that this Sim Card is a M2M sim card which means it **can only send out** text messages to your phone and emails to your email account but does not make calls in case of an alarm when connector is armed. If you wish to receive calls from the connector please use a phone sim card inside your connector/ alarm center.



If you move the **sensor messages** slide switch to the left to the "OFF" position, all signal reception from all sensors is switched off.

To switch off the signals from individual sensors, move the slide switch in the middle of the respective sensor field to the left, the background will turn reddish brown to indicate that this sensor is deactivated.

Press and hold the name of the All-In-Sensor No. xx for about 2 seconds and a dialogue box opens. Here you can give the sensor an individual name (e.g. living room) or delete the sensor from the app if necessary.



Attention: if you delete the sensor from the app, a factory reset must be carried out in the sensor to reconnect it. At the bottom of the sensor field, the last signal received is displayed with date and time.

When you tap this item, a **list** opens **with the recording of** the last 20 signals. Older recordings are automatically overwritten by new recordings, and it is not necessary to delete recordings manually.

Tap on the **gear symbol**, a new view with all single sensors opens, see the following 3 pictures.





When opening the sensor list, the current data for temperature, humidity and daylight are automatically retrieved. However, this only works in the "R" mode, if the sensor is in the "S" mode for battery operation only, no data is retrieved.

In the "S" mode, the sensor can only transmit, but cannot receive any queries or setting commands from the smartphone.

When you open the list of sensors, you will briefly see that the sensor values are updated in the background. It takes approx. 3-4 seconds per sensor to retrieve the data.

You can recognise when the current sensor data is being fetched by the fact that the blue LED of the sensor flashes briefly three times at intervals of 3-4 seconds. You can continue with the settings of the other sensors regardless of the current update.



In the sensor list you have the option of switching off each individual sensor. A distinction is made between 2 types of switching off:

Few types of sensors, e.g. light, humidity and magnet, only deactivates the signal reception on the connector. This means the sensor is still active, but the connector ignores the signal. Other sensors are switched off by a radio signal in the sensor itself, recognisable by the text display: **sensor is switched off**, and if deactivation is successful, confirmation is briefly displayed that the respective sensor is switched off and the sensor field turns red-brown.

To switch on, push the switch back to the right.

Recommendation: only switch on the individual sensors that you really want to use. Especially in battery operation the battery working time is shortened, the more sensors work to collect and transmit data. If possible, mains operation is recommended, so you can get the maximum power from the sensors.

Explanation of the individual sensors

With the button **Refresh** you manually get the current data of the sensor, please note that the sensor must be in the "R" mode.

With the **Thresholds** button you can set the lower and upper thresholds. As soon as the set values falls below or exceeds, the sensor sends a corresponding signal to the connector. As long as the current value is between the set thresholds, no signal is sent, but the current value can be called up and displayed by clicking on the Update button. In the "R" mode all sensors are checked for changes every 10 seconds and a signal is sent. In the "S" mode every 60 seconds. This serves to save energy.

The built-in sensors are accurate to 1° degree or 1%. If you notice a deviation from other measuring instruments, you can correct the displayed values using the **correction setting** (in the threshold setting).



Basically, the sensors need about 10 - 30 seconds after being switched on via app until they are "powered up" and work properly.

A **PIR motion detector** is generally a sensor with the highest false alarm potential. In order to avoid false alarms, it is important to select a suitable installation location. The PIR must not be aimed at warm areas such as a heating system; even warm light bulbs in the sensor area can trigger a signal.

When using the motion sensor, please supply power to the Allin-Sensor as follows:

- **R** = mains power with batteries
- **S** = batteries only

In "R" mode, the All-In-Sensor can send and receive signals at any time. This results in current fluctuations which can trigger the motion detector.

It is recommended to start with the low sensitivity level, the sensitivity influences the sensor range. The low setting is usually sufficient for sensor ranges of 4-5m / 13–16 feet. The larger the area to be monitored by PIR, the higher the sensitivity must be set.

Select the lowest sensitivity that is sufficient for the respective monitored area.

Please note that a PIR motion detector needs about 15-30 seconds to warm up after being switched on for the first time before it is ready for use. If you have activated the motion detector via Smartphone App, please wait for this warm-up period before you start your tests.

The time between messages helps to save power in battery mode and reduces the number of radio signals in daily use.



Example 15 seconds: As soon as the PIR has sent a signal, it starts a pause of 15 seconds. Only after this time has elapsed can the PIR detect movement again and send a new signal. Movements that occur during the pause time are not reported. If you perform a test, you leave the room, wait for the pause time and only then enter the monitored room at normal walking speed. As soon as the PIR has detected them, the blue LED flashes briefly.

Direction

Each PIR motion detector has a diffusion lens that detects the heat radiation from the body and directs it to the sensor. If you walk directly towards the sensor, the PIR sensor will detect later than if you walk past the side of the PIR sensor. For this reason, select the sensor's mounting position so that people usually pass the sensor from the side (at a distance of 1-10 metres / 3.28 – 32.8 feet).

The **daylight sensor** also has a lower and an upper threshold value that triggers the signal. The red dot indicates the currently determined brightness value. You can thus define and save the lower and upper threshold value by moving it along the horizontal line.

To change the position of the red dot, the daylight sensor must receive less or more light. To do this, change the lighting to the desired brightness and update the value by clicking the Update button. Then you can define the threshold values when you want to be notified.

If the daylight sensor does not work, despite switching it off and on several times, please re-learn the AIS in your smartphone. Delete and reset the sensor first.





The **fire sensor** is a light spectrum analysis sensor. Please note that the fire sensor may only be used inside the building/home and can detect up to 20 Square meters / 215 square feet. The fire sensor analyses the specific light spectrum of open flames and then triggers an alarm.

Unlike smoke detectors, which must be mounted in the middle of a ceiling and detect smoke particles in the air, the fire sensor does not need to be mounted on the ceiling. However, the fire sensor must not be aimed at windows or fireplaces with fire or at conventional light bulbs with filament, which would most probably lead to false activation.

The fire sensor detects flames even through panes of glass, e.g. a fireplace with a windscreen. Sunlight must be avoided, because the sun is a huge fireball and therefore the sunlight contains the light spectrum that triggers the alarm.



Therefore always point the sensor away from the window into the room.

Adjust the sensitivity of the fire sensor using the slide switch.

<u>Please wait at least 1 minute after switching on the fire sensor</u> <u>until it has calibrated itself.</u>

You can best test the fire sensor by placing a lighter at a distance of approx. 30 cm / 12 inch. Light it in front of the sensor.



Attention: The fire sensor has a delay of 5-10 seconds, during this time the light spectrum is analysed, the alarm is only triggered after more than 5-10 seconds, therefore the flame must burn for more than 5 seconds before the alarm is triggered. A real fire produces much bigger flames in the room than e.g. a lighter, therefore the sensor will trigger in case of fire even if the sensitivity is lower.

The **3G sensor** is a position and acceleration sensor. The 3G sensor performs several tasks.

It can be used as an alternative to the usual magnet window/door sensors. The advantage is that the complicated installation and alignment of magnets is no longer necessary. The 3G sensor detects when a window or door is moved by opening or tilting a window. To do this, the All-In-Sensor must be mounted on the window sash or door leaf. In addition, the 3G sensor detects the slightest vibration as it occurs when trying to open windows and doors and will trigger an alarm at a very early stage, usually before windows and doors have been opened.

Furthermore, the 3G sensor detects the vibrations that occur when a pane of glass is broken, so that the panes of the window in question are also protected as with a glass breakage sensor. The 3G sensor reacts to changes in the initial position, either by tilting or by acceleration when the sensor is removed. For this reason, it is necessary that you first "tell" the sensor the position in which it should carry out the monitoring. This is done by setting the zero point.



To do this, press the Set zero point button in the sensor window when the sensor is at its planned working position.

If the zero point is not set, the 3G sensor will still trigger, but it will not work as precisely as with zero point set.

Note: the 3G sensor has 2 operating settings: normal mode and super sensitivity mode.

We recommend to use the normal mode, the other mode is a preparation for later applications such as angle measurement and to detect finest vibrations, e.g. of machines etc. Set the sensitivity to achieve the desired purpose, please remember that a setting that is too sensitive can lead to unwanted false triggers.

The Sabotage sensor

This is a magnetic reed contact, which is located in the sensor on the left side of the housing. A magnet is built into the holder, which activates the sensor when it is inserted into the holder. When the sensor is then removed from the cradle, an alarm is given if the tamper/sabotage sensor is switched on in the sensor list.

The Magnetic contact

This is a magnetic reed contact, which is located in the sensor on the right side of the housing. When a magnet is applied to the right side of the sensor and will be removed from the housing, an alarm is triggered.

The **USB sensor**

The All-In-Sensor has 2 x USB-C connectors, both of which can be used for mains power supply and for connecting external sensors. These external sensors can be e.g. magnetic contacts on the window, or gas, water and additional cable temperature sensors etc. Suitable accessories and sensors will be offered in our shop soon.



The Infrared light barrier

The infrared light barrier consists of 2 modules, the IR sensor in the All-In-Sensor and an infrared light beam in the external housing.

In order to prevent the IR light barrier from reacting to other IR light sources such as TV remote controls etc., an update for modulating the light source will be supplied subsequently. The IR light beam module is also supplied as an accessory.

This is battery operated and is expected to work for 1 year on 1 battery charge. Before the battery is empty the IR Light Beam will start blinking. The distance between the IR Light Beam Module and the All-In-Sensor can be up to 25m / 82 feet, if the invisible light beam is passed through, an alarm is triggered.

To avoid false alarms such as bird flight, a short delay before triggering is integrated. The IR light barrier can be used indoors and outdoors and is not affected by sunlight, wind or rain.

The Emergency alarm

The large button on the front of the All-In-Sensor serves as an emergency detector. If the emergency detector is activated in the sensor list and the button on the sensor is pressed, a silent or loud alarm is triggered with messages by phone, SMS and email. In regards to phone, SMS and e-mail alarm notification please see arming alarm center/connector for details.

The Real time

The All-In-Sensor has a real time module, this is set to the current time and date by the update in the button real time clock, synchronize time.

The real-time clock in the sensor transmits the time and date of the sensor triggers and displays them on the smartphone. Later, by means of an update, it is possible to switch certain sensors on and off according to the time, and also to carry out other control tasks by means of time control.



AIS Receiver App for Real-Time signals

AIS Center connector App = central unit for All-In-Sensor **AIS Receiver** App = Receiver App for your own Smartphone

With this app you can receive the signals from the All-In-Sensor in real time (with a delay of about 1 second) when you are on the move, as if you were next to the sensor.

You can also change the settings of the All-In-Sensor remotely.

You install this as follows:

Open the settings in the AIS Center app. There you will find the ID of your device above. <u>Please enter your e-mail address.</u>

Your e-mail address is only needed for connection with AIS Center.





The display of both smartphones should be switched on and they should be connected to the Internet, at best in the same WLAN network (only for connecting).

Open the AIS receiver APP and enter the ID. You may need to repeat the entry process until it works. If it fails three times, please check that the display is switched on and that the Internet connection is available.



Once connected, you will immediately receive all signals from the All-In-Sensor central unit and can also change the settings.



If you do not receive the signals, this may be due to the energy saving options of the AIS control unit.

Please open the Android settings of your smartphone and check under "Battery" if you can disable the energy saving options for these apps. Please contact us if this does not help.

Install / download APK file (App) manually

1. Access security settings

The option to install from unknown sources can be found in the **security settings** of your smartphone or tablet. Open the **settings** and navigate to the submenu "**Security**". It is possible that the manufacturer of your smartphone / tablet has given the menu a different name or hidden it in a submenu.

2. Allow "unknown origin"

In the security settings of Android you will find the item "**Unknown origin**". Switch this on. Android now warns you of the possible consequences.

You must confirm this with "OK".

3. Install Android apps from unknown sources

From now on you can download apps from different internet sites and install them on your smartphone / tablet. After downloading the app, go to the "memory" or file manager of your android. Then click on the APK file you downloaded to install it.



FAQ - Proposed solutions

| Problem | Solution |
|--|---|
| Temperature sensor shows 125°C / 257°F and Air humidity 100% | Remove the batteries Plug in power supply unit Press Refresh Reinsert batteries Disconnect power supply unit |
| All-In-Sensor 1 (01) Zum Aktualisieren und ändern von Schwellwerten muss sich der All-In-Sensor im R-Modus befinden DIESES GERÄT KANN KEINE SIGNALE PER BLUETOOTH LE SENDEN. | The APP can check whether your smartphone model supports Bluetooth LE. Bluetooth LE is necessary for the operation of the All-In-Sensor. The note below appears only when it is not compatibility and is displayed in the sensor settings. In this case please contact us. We can offer you a <u>Smartphone central for 129€.</u> |
| The AIS displays Ud | The AIS is in update mode because the middle button was pressed and held for 5 seconds. Please remove the batteries and insert them to restart AIS. |