

JA-161PB Wireless combined motion and glass-break detector

TYP: 5PIRGBS2306MB



JABLOTRON



The product is a wireless component of **JABLOTRON** system. It is used for human motion detection in the interior of buildings and for detection of breakage of glass surfaces forming the building. It contains two independent detectors (it occupies 2 positions in the control panel). It uses a PIR detector to detect the motion and a GBS detector to detect the breakage of glass surfaces. The GBS alarm is evaluated based on changes in air pressure and the characteristic sounds of glass breaking. The detector has to be installed by a trained technician with a valid Jablotron certificate. **The device is compatible with control panels JA-152KRY, JA-102K, JA-103K, JA-107K.**

Installation

During the installation pay attention that there should be no obstacles in the detector's view, such as:

- items that change temperature quickly (electric stove, gas appliances etc.)
- objects that move (e.g. waving curtains over the heating, robotic vacuum cleaner)
- no obstacles obstructing the view of the protected area
- moving pets

We do not recommend installing the detector:

- against the windows or spotlights
- in places where air flows (ventilation, air conditioning, vents, leaky doors etc.)
- near air outlets, fans, or other sources of air pressure changes or intense sounds
- In a protected area where there are sources of vibrations or shocks.

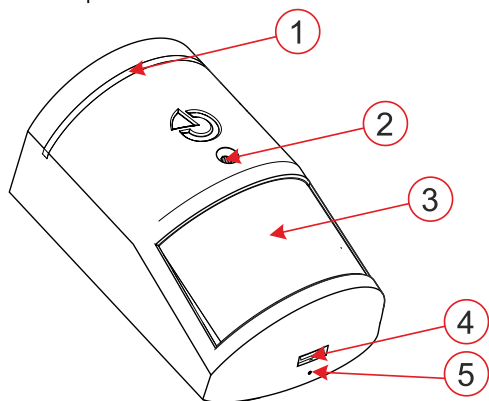


Fig. 1: Description of external parts of the product
1 – LED indicator; 2 – GB sensor; 3 – PIR lens;
4 – cover latch; 5 – hole for locking screw

1. Open the detector by using the cover latch (4). Do not touch the PIR sensor inside (10) – it could be damaged.
2. Release the PCB located in the rear cover by pressing the PCB latch (7) at the top of the rear part.
3. The recommended installation height is 2,2–2,5 m above the floor.
4. Screw the rear part to the wall (vertically, cover latch down). For proper detection of the detector being torn off the surface, use the tear holes in the oval part of the rear cover to screw it in as well.
5. Insert the PCB back and lock with the latch (7). Insert batteries to the battery holder (9). Make sure the batteries are inserted with the correct polarity. Close the detector cover, snap into the cover latch (4) and secure with the locking screw.

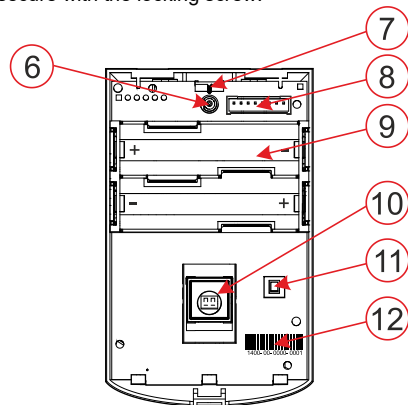


Fig. 2: Description of the internal parts of the product
6 – LED indicator; 7 – PCB latch; 8 – connector for GBS; 9 – battery holder;
10 – PIR sensor; 11 – tamper switch; 12 – serial number

6. Proceed according to the control panel installation manual.

Basic procedure:

- a. The control panel must contain already enrolled JA-11xR radio module.
 - b. Go to the **F-Link** software, select the required position in the **Devices** tab and launch the enrolment mode by clicking on the **Enrol** option.
 - c. Insert the batteries into the battery holder (9); mind the correct polarity. An enrolment signal is transmitted to the control panel and the detector is enrolled to the selected position.
7. Close the detector cover and test its functionality.
 8. Set the device parameters according to the **Internal settings** section.

Notes:

- If you will enrol the device into control panel after it already had inserted batteries. Then firstly take out the batteries, press the tamper switch (11) several times for discharging all the energy in capacitors. After that you can enrol the device by inserting batteries as usual.
- The detector can be enrolled by entering the production code (12) in the F-Link software (or a bar code reader). Enter all digits located below the bar code (1400-00-0000-0001).
- If you want to remove the detector from the system, erase it from its position in the control panel. In case that only the GBS part is removed, the PIR remains functional.
- In order to comply with EN 50131-2-4, the front cover latch (4) must be secured with the supplied locking screw (5).

Detector communication with the system

The detector is equipped with bidirectional asynchronous communication. The reason is to preserve the convenience for possible changes in the internal setup (as with bus detectors), but at the same time the battery life in normal operation mode is taken into account.

When the detector is enrolled to the control panel it works in the so-called **accelerated 90-second mode** until Service mode is terminated (up to 24 h). The detector performs a check every 90 s to monitor whether the control panel remains in Service mode, whether it should apply new settings or should the LED light indicate motion during a walk test.

In the normal operational mode, the detector communicates periodically with the control panel 1x every 20 minutes. Therefore, it may take the detector up to 20 minutes to realize the control panel was switched to Service mode or to save changes made in the internal settings. This period of time can be shortened by triggering the detector which will switch it to the accelerated 90-second mode immediately (moving in front of it, opening it = triggering the tamper contact).

Important:

It is not necessary to wait for 90 s (or 20 minutes) for the detector to confirm a request to save the changes made in the internal settings. The control panel remembers such changes and transfers them to the detector the next time a periodical communication session occurs.

Properties

Open the **F-Link** software, go to the **Devices** tab. Click on the **Internal settings** option at the siren's position to open a dialogue window where you can set the following options: (* indicates default settings).

PIR Immunity level – Determines immunity to false alarms. The **Standard*** level combines basic immunity with a rapid reaction. The **High** level provides increased immunity, but the detector reaction is slower.

Glass break sensitivity: Adjusts the sensitivity to pressure change may be adjusted by a slider.

Operating mode: **Smartwatch*** is a setting intended for the permanent monitoring of movement in the protected area. If a permanent movement is detected, three reports are sent every 20 s. The next report is then sent after 2 minutes. If the detector does not detect any movement for 10 minutes, the mode with three reports every 20 s is used again.

The other available detector mode is **one minute interval***. When the detector detects a movement, it sends a report and is switched into sleep mode for 1 minute. When 1 minute runs out, the detector wakes-up and remains active until it is triggered by movement again. The settings remain the same after the batteries are replaced.

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Detection characteristics

The standard lens that is supplied with the JA-161PB detector covers an area of 110° / 12 m – see the following figure 3.

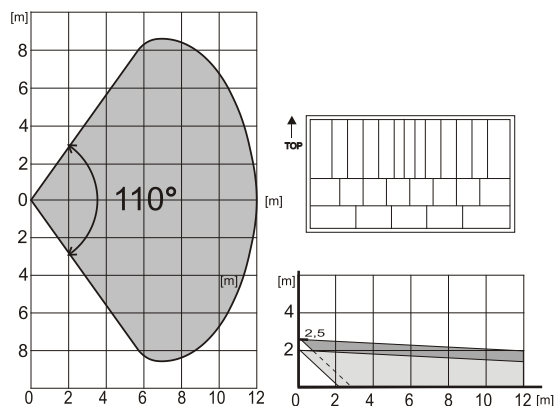


Fig. 3: Detection characteristics of PIR

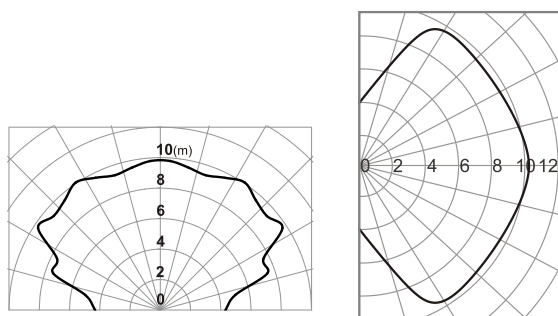


Fig. 4: Detection characteristics of GBS.

The properties can be changed by using an alternative lens:

JS-7904	Designed for long corridors – with a working range of up to 20 m. Increased immunity cannot be used with this lens!
JS-7910	Equipped only with the upper beam covering 110°/12 m and not covering the floor (can eliminate the motion detection of small pets on the floor).
JS-7902	Vertical curtain – it does not cover an area but creates a detection wall (can be used to create a barrier and report its breach).

Note: When utilizing an alternative lens, test whether the detector covers the area correctly (an incorrectly installed lens can cause detection errors).

Detector testing

During in the service mode, the detector indicates each activation with its LED indicator. Once service mode is exited, the device enters normal operation. During normal operation, LED indication is off, including fault indication (permanent lit of yellow LED). Each activation may be viewed within the **F-Link** software, within the **Diagnostics** tab.

Battery replacement

The control panel automatically detects and reports low battery status. We recommend replacing the batteries within two weeks of the low battery status being reported. The batteries should be replaced by a service technician while the control panel is in Service mode. Always replace both batteries!

After battery removal, it is necessary to wait for at least 10 s or close the detector without batteries before replacing them (this will activate the tamper contact (11) and discharge the remaining energy).

Notes:

- If you insert a discharged battery, the detector immediately detects it and starts indicating low battery status during the stabilization period (at least 15 s).
- The battery status can be monitored in the **Diagnostics** tab in the **F-Link** software.
- In order to make sure the detector works correctly; we recommend using the batteries supplied by a distributor (BAT-1V5-AA) or other quality alkaline batteries.
- Do not discard the battery into the trash; dispose of it at a waste collection point.

Technical specifications

Power	2x alkaline battery type LR6 (AA) 1.5 V / 2.45 Ah
	Please note: Batteries are not included.
Typical lifetime of batteries	approx. 2 years
Low battery voltage	< 2.4 V
Quiescent current consumption	53 µA
Maximal current consumption	50 mA
Communication band	868.1 MHz, JABLOTRON protocol
Maximum radio-frequency power (ERP)	< 25 mW
Recommended installation height	2.2–2.5 m
Detection angle / detection coverage (PIR)	110° / 12 m
Detection angle / detection coverage (GBS)	90° / 9 m
RF range	500 m (open area)
GBS detection type	acoustic
Dimensions	60 x 98 x 52 mm
Weight (w/o batteries)	91 g
Classification	Security grade 2 / Environmental class II (according to EN 50131-1)
Environment	indoor general
Operating temperature range	-10 °C to +40 °C
Average operating humidity	75% RH, non-condensation
Certification body	Trezor Test (no. 3025)
Complies with	EN IEC 63000, EN 50130-4, EN 55032, EN IEC 62368-1, ETSI EN 300 220-1, -2, EN 50131-1, EN 50131-2-2, EN 50131-5-3, EN 50131-2-7-1, EN 50131-6
Can be operated according to	ERC/REC 70-03
Recommended screw	2 x Ø 3.5 x 40 mm (countersunk head)

JABLOTRON a.s. hereby declares that the 5PIRGBS2306MB product is in a compliance with the relevant Union harmonisation legislation: Directives No.: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU, if it is used as intended. The original of the conformity assessment can be found at www.jablotron.com Section Downloads



Note: Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please return the product to the dealer or contact your local authority for further details of your nearest designated collection point.