

# JA-120PB Bus combined PIR motion and glass-break detector

The JA-120PB is a component of the **JABLOTRON 100** system. It serves for the detection of human movement in building interiors and for the detection of breaking glass windows. This detector combines two sensors (PIR motion & acoustic glass break) in one housing. The detector is enrolled to two consecutive positions in the system. The detector uses a PIR sensor for human movement detection. Breaking glass is detected by a GBS sensor, which analyses air pressure changes and sounds to detect the breaking of a glass window. The detector should be installed by a trained technician with a valid certificate issued by an authorized distributor.

## Installation

The detector can be installed onto a wall or in the corner of the room. There should be no objects which quickly change temperature (electric heaters, gas appliances, etc.) or which move (e.g. curtains hanging above a radiator) or pets in the detector's field of sight. There should be no obstacles in front of the detector which might obstruct its view.

It is not recommended to install the detector opposite windows or floodlights or in places with over-intense air circulation (close to ventilators, heat sources, air conditioning outlets, or any sources of changeable air pressure, high level sound sources, vibrations, etc.).

1. Open the detector cover by pushing the tab (12). Avoid touching the PIR sensor inside (10) – you could damage it.
2. Take out the PCB – it is held by a tab (2). It is not necessary to disconnect the connector (5) from the PCB.
3. Punch through the holes for the screws and the cable in the plastic base. The recommended detector installation height is 2.5m above the floor.
4. Insert the bus cable and attach the plastic base on the wall using screws (vertically, with the cover tab facing downwards).
5. Put the PCB back and connect the bus cables to the terminals (8).

**⚠ When connecting the detector to the system bus, always switch the power off.**

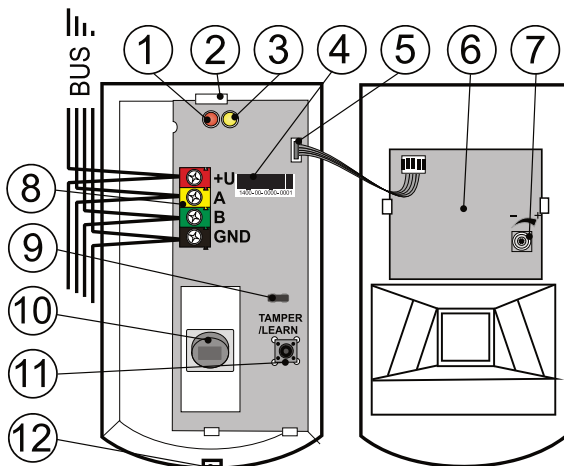


Figure 1: 1 – red detector activation indicator; 2 – PCB tab; 3 – yellow fault indicator; 4 – production code; 5 – GBS detector connector; 6 – GBS PCB; 7 – GBS sensitivity setting; 8 – digital bus terminals; 9 – test jumper; 10 – PIR sensor; 11 – tamper contact; 12 – cover tab

6. Proceed according to the control panel installation manual. Basic procedure:
  - a. When the device is switched on, the yellow LED (3) starts flashing repeatedly to indicate that the module has not been enrolled into the system.
  - b. Go to the F-Link software, select the required position in the Devices tab and launch enrollment mode by clicking on *Enroll* option.
  - c. Press the tamper contact in the detector (11) – the detector is thus enrolled and the yellow LED indicator goes off.
7. Close the detector cover.

**Note:** The module is enrolled to two positions (each input is enrolled to one position). If a position is occupied by another device, this device will be re-enrolled by JA-120PB(B).

## Detector internal settings

The detector properties can be set in the **Devices** tab of the F-Link software. When at the detector position, use the **Internal settings** button to open a dialog window where you can set:

**Activation indicated by LED:** *disable\** / *enable* movement and glass break indication by a red LED. In service mode indication always works.

**PIR immunity level:** selection of immunity to false alarms.

**Standard\*** combines very good immunity with fast sensor reactions **Increased** is higher immunity with a slower reaction time and is only used for problematic installations.

**GBS detector sensitivity setting:** Sensitivity to air pressure changes (1<sup>st</sup> detection phase) can be adjusted with a trimmer (7) on the PCB (6).

When the system is switched to **service mode**, LED indication is given by the jumper (8) on the PIR PCB.

**Jumper on:** PIR indication; **Jumper off:** GBS indication

When you are out of service mode, the jumper's position has no effect on LED indication or the detector's functions.

## Detection characteristics

The standard lens that is supplied with the JA-120PB detector covers an area of 110 degrees /12m. The area is covered by 3 beams – see the following figure 2.

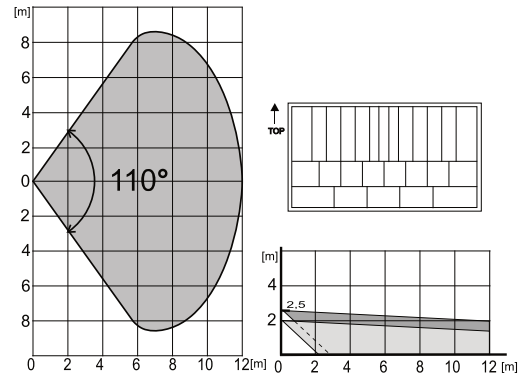


Figure 2: Detection characteristics of PIR detector

The properties can be changed by using an alternative lens:

<b>JS-7904</b>	For long corridors – with a working range of up to 20m <b>Increased immunity cannot be used with this lens!</b>
<b>JS-7910</b>	Equipped only with the upper beam covering 120 degrees /12m and not covering the floor (can ignore the movement of small pets on the floor)
<b>JS-7902</b>	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:** with a different lens test whether the detector covers the area correctly (a wrongly installed lens can cause detection errors).

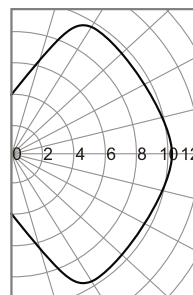


Figure 3: Detection characteristics of GBS detector.

## Technical specifications

Power	from the control panel bus 12 V (9 ... 15 V)
Current consumption in standby mode	5 mA
Current consumption for cable choice	10 mA
Recommended installation height	2.5 m above the floor
Detection angle / coverage PIR	110 degrees /12 m ( standard lens)
Detection distance GBS	9m (window glass size min. 0.6x 0.6 m)
Dimensions	60 x 95 x 55 mm
Classification	Grade II
according to	EN 50131-1, EN 50131-2-2, CLC/TS 50131-2-7-1
Operational environment	EN 50131-1 II. Indoor general
Operational temperature range	-10 to +40 °C
Also complies with	EN 50130-4, EN 55022



JABLOTRON ALARMS Inc. hereby declares that the JA-120PB is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC. The original of the conformity assessment can be found at [www.jablotron.com](http://www.jablotron.com), Technical Support section



**Note:** Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the manufacturer after use. For more detailed information visit [www.jablotron.com](http://www.jablotron.com).