JA-151P-WW Wireless PIR motion detector

The JA-151P-WW is a wireless component of the **JABLOTRON 100+** system. It serves for the detection of human movement in building interiors. Its guaranteed detection coverage is 90° horizontally and detection range is 12 m. This PIR motion detector utilizes a **white lens** which provides standard immunity against white light required by the norm (up to 6000 lux). False alarm immunity is available in two options. The detector has a pulse reaction and takes one position in the system. *The detector should be installed by a trained technician with a valid certificate issued by an authorized distributor.*

Installation

It's necessary to take into consideration that there should be no obstacles in the detector's view which quickly change temperature (electric heaters, gas appliances, etc.), which move (e.g. curtains hanging above a radiator, robotic vacuum cleaners) or the movement of house pets. Despite the detector being very immune to false alarms, 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, unsealed doors, etc.). There should be no obstacles in front of the detector obscuring its view over the guarded space.
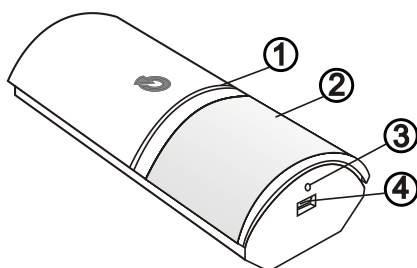

Figure 1.: 1 – LED indicators, 2 – PIR lens, 3 – Hole for locking screw, 4 – Cover tab

1. Open the detector cover by pressing the cover tab (4). Avoid touching the PIR sensor inside (6) – you could damage it
2. Take out the PCB – it is held by a tab in the lower part.
3. Punch through the holes for the screws and the cable in the plastic base. The recommended installation height is 2.5 m above the floor.
4. Set the DIP switches (9) according to the requirements, see the *Detector settings*.
5. Insert the PCB back and proceed according to the control panel installation manual. Basic procedure:
   a. The control panel must contain the JA-11xR radio module.
   b. Go to the **F-Link** software, select the required position in the **Devices** window and launch the Enrollment mode by clicking on the **Enroll** option.
   c. Insert the batteries (mind the correct polarity). When the second battery has been inserted into the detector, an enrollment signal is transmitted to the control panel and the detector is enrolled to the selected position. The detector can be enrolled by entering the production code (8).
   d. This is followed by a detector stabilization phase indicated with LED indicator (10) flashing which takes up to three minutes.
6. Close the detector cover. In order to comply with norms, the cover tab (4) must be secured with the supplied screw.
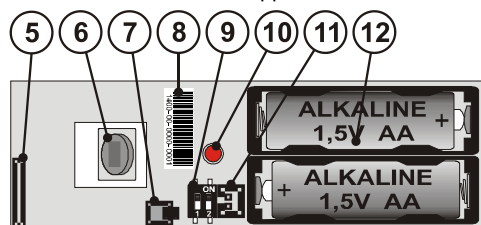

Figure 2: 5 – Antenna; 6 – PIR sensor; 7 – Tamper contact; 8 – Production code; 9 – Setting DIP switches; 10 – Red LED indicator; 11 – The JA-191PL external tamper connector; 12 – Battery holder

Note:
- The detector can be removed from the system by deleting it from its position in the **Devices** tab.

Detector internal settings

Internal settings can be configured by DIP switch on a PCB inside the detector (*factory defaults*).

Immunity level: DIP switch no. 1 determines a level of false alarm immunity. The **NORM*** level (default setting) combines basic immunity with a rapid reaction. The **HIGH** level (DIP switch ON) provides increased immunity but the detector reaction is slower.

External tamper sensor: DIP switch no. 2 can enable (DIP switch ON) /disable* the external tamper of the JA-191PL jointed bracket.

Detector function modes

The detector can work in two modes. They are indicated by one or two flashes of the LED light (10) when batteries are inserted.

One flash represents **Smartwatch*** mode. It's determined for the permanent monitoring of movement in the guarded area. If 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.

Two flashes represent a **One minute interval.** The detector enters standby mode for 1 minute after it has detected movement. When the standby mode times out, the detector wakes up and is ready to be triggered again.

To change the mode, press and hold the tamper contact (7) in the cover, insert the batteries at the same time. Release the tamper contact 3-5 seconds after the batteries insertion. The detector then flashes either once or twice to indicate the currently selected mode. When batteries are replaced the setting doesn't change.

Detector testing

When you close the detector cover, LED light indicates all movement for a period of 15 minutes and reports it to the control panel. After this time the detector switches to the mode which was selected during the battery insertion.

Detector functions can also be checked via the **Diagnostics** window in the **F-Link** software. You can check the selected mode and immunity level in **Internal settings**. This information serves as a preview and can't be changed by F-link software.

Battery replacement

The system sends automatic reports when the battery is low. Remember to switch the system to Service mode before changing the batteries. It's necessary to wait for 10 seconds or repeatedly press the tamper contact (7) in order to release the remaining charge before you insert new batteries. If you insert batteries with low energy (≤2,5V detected) the LED light will indicate that by flashing rapidly during the testing period.

Detection characteristics

The standard lens that is supplied with the detector has a white colour and covers an area of 90°/12 m. The area is covered by 3 beams (curtains) – see the following figure. **The lens cannot be replaced by a different type of lens.**
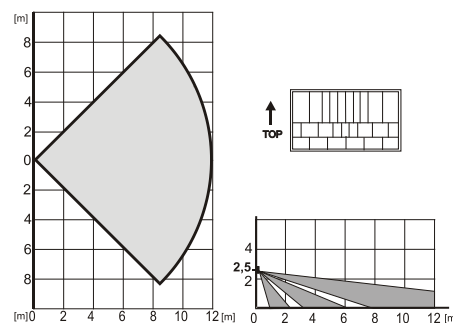

Figure 3. This detection characteristic is valid for standard PIR immunity.

Installation accessories

JA-193PL – Detector wall holder. Instead of installing the detector in a room's corner, it's possible to install it on a wall surface using a **JA-193PL** aesthetic frame which is distributed in two colours – white and grey. Using the frame, the detector is partially hidden under a plaster or plasterboard wall.

JA-191PL – PIR jointed bracket. It is used for special placement, such as installation on the ceiling or at a tilted angle (higher installation height). The jointed bracket is a certified detector accessory having its own tamper contact which is to be connected to the connector inside the detector (11).

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Technical specifications

Power	2x AA (LR6) / 1.5 V / 2400 mAh alkaline batteries
	Please note: Batteries are not included
Typical battery lifetime	approx. 2 years
	(the longest lifetime is achieved in smartwatch mode)
Low battery voltage	< 2,2 V
Quiescent current consumption	25 µA
Maximum current consumption	50 mA
Communication frequency	868.1 MHz, JABLOTRON protocol
Maximum radio-frequency power (ERP)	13 mW
Communication range	approx. 300 m (open area)
Recommended installation height	2.5 m above the floor
Detection angle / detection range	90 °/12 m
Dimensions	62 x 130 x 38 mm
Weight (without batteries)	139 g
Classification	Security grade 2 / Environmental class II
	(according to EN 50131-1)
Operational environment	Indoor general
Operating temperature range	-10 °C to +40 °C
Average operating humidity	75 % RH, without condensation
Certification body	Trezor Test s.r.o. (no. 3025), Telefication B.V.
Complies with	EN 50131-1, EN 50131-2-2, EN 50131-5-3, EN 50131-6, ETSI EN 300 220-1,-2, EN 50130-4, EN 55032, EN 62368-1, EN 50581, T 031
Can be operated according to	ERC/REC 70-03
Recommended screw	2x ▷▥▥▥▥▷ ø 3,5 x 40 mm (countersunk head)

JABLOTRON ALARMS a.s. hereby declares that the JA-151P-WW 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: Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use.