The JA-152P / JA-152P (G) Wireless PIR motion detector

The JA-152P (JA-152P (G)) is a wireless device of the **JABLOTRON 100** system. It is used to detect movement of persons in interiors of buildings. Its guaranteed detection coverage is 90° horizontally and the detection range is 12 m. The detector with a **white lens** (JA-152P) provides a standard immunity against white light required by the norm (up to 6000 Lux). The detector with a **grey lens** (JA-152P (G)) provides an increased immunity against white light well above values required by the norm (up to 10 000 Lux). This lens helps to reduce false alarms caused by car lights, sunsets, lightning or reflective surfaces. False alarm immunity is adjustable to two levels. The detector has a pulse reaction (reports only its activation) 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. **This product is compatible with the JA-103K, JA-107K and subsequent control panels.**

Installation

It is necessary to take into consideration that there should be no obstacles in the detector's field of view which quickly change temperature (electrical heaters, gas appliances, etc.), which move (curtains hanging above a radiator, robotic vacuum cleaners, etc.) or the movement of pets. Despite the detector being very immune to false alarms, it is not recommended to install the detector in places with intense air circulation (close to ventilators, air conditioning, vents, unsealed doors, etc.). There should be no obstacles in the detector's field of view that would also obstruct its view into the guarded space.
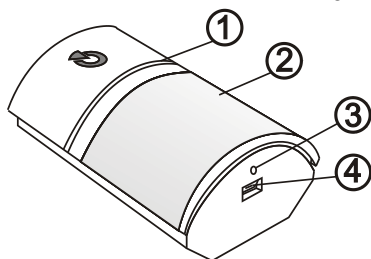

Figure 1.: 1 – LED indicators; 2 – PIR lens;
3 – hole for locking screw; 4 – cover tab

1. Open the detector cover by pressing the cover tab (4). Avoid touching the PIR sensor inside (9) – you could damage it.
2. Take out the PCB – it is held by a tab on a lower part of the plastic.
3. Prepare holes for screws on the rear part. The recommended installation height is 2.5 m above the floor. For the proper detection of detector removal, it is necessary to also use holes on the segment for tamper detection.
4. Insert the PCB back and proceed according to the control panel installation manual. Basic procedure:
   a. The control panel must contain a 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. Inserting the battery (mind the correct polarity) will send an enrollment signal to the control panel and the detector will be enrolled to the selected position.
   d. This is followed by an up to three-minute detector stabilization phase indicated by a red LED indicator (6) flashing
5. Close the detector cover. In order to comply with the norms, the front cover must be secured with the supplied locking screw (3).
6. Configure the detector by following the *Detector internal settings* chapter in this manual
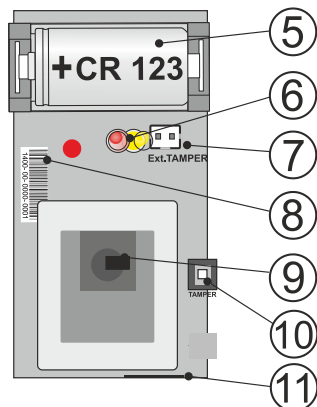

Figure 2.: 5 – battery holder; 6 – LED indicators;
7 – the JA-191PL external tamper connector; 8 – production code;
9 – PIR sensor; 10 – cover tamper contact; 11 – antenna

Notes:

– The detector can also be enrolled into the system by entering its production code in the F-Link software. You can find the production code on the sticker (8) placed inside the detector. All numbers under the bar code must be entered (example: 1400-00-0000-0001).
– If you want to remove the detector from the system, erase it from its position in the control panel.

Detector communication in the system

The detector is equipped with bi-directional asynchronous communication with the JA-11xR radio module which enables changing the internal settings with ease (just as it is with BUS detectors) while taking into account the battery life time in normal operational mode.

When the detector is enrolled into the system it works in a so-called *accelerated 90-second mode* until Service mode is terminated (no longer than 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 the LED indicator should indicate motion during a walk test.

In the normal operational mode of the system, the detector communicates periodically (it receives only regular reports, maximum 1x per 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 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:

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

Detector internal settings

The detector settings can be set in the **Devices** tab of the F-link software. Click on the **Internal settings** button at the detector's position to open a dialogue window where you set *(* indicates default settings)*:

External tamper sensor: *Disables*/Enables* monitoring of an additional tamper contact of the JA-191PL jointed bracket.

Immunity level: Defines false alarm immunity. The *Standard** level combines basic immunity with a rapid reaction. The *Increased* level provides higher immunity but the detector reaction is slower.

Operational mode: *Smartwatch** is a setting intended for the permanent monitoring of movement in the guarded 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 operational mode is *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. When the battery is replaced the setting remains the same.

Detector testing

When in Service mode, the LED indicators indicate every movement. Upon leaving Service mode, the detector switches to an operational mode selected in the internal settings. Individual activations of the detector can also be monitored in the **Diagnostics** tab in the **F-Link** software.

The LED indicators, including the yellow fault LED indicator, are disabled in normal operational mode.

Battery replacement

The system automatically reports a low battery status. We recommend replacing the battery within two weeks from the low battery report. It is done by a service technician in Service mode.

Before inserting a new battery, it is necessary to wait for 10 s or to press the cover tamper contact (10) to consume the residual energy.

Notes:

– The detector immediately detects the insertion of a low battery and indicates it with the yellow LED indicator flashing during the stabilization period (min 15 s).
– The battery status can be monitored in the Diagnostics tab in the F-Link software.
– To ensure proper functionality of the detector, we recommend using the battery supplied by a distributor (BAT-3V0-CR123A) or other quality lithium batteries.
– Do not discard the battery into the trash; dispose of it at a civic amenity site.

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Detection characteristics

The detector is fitted with a lens (2) covering an area of 90°/12 m with 3 beams (curtains) – see figure 3. **The lens cannot be replaced by a different type of lens.** This detection characteristic is the same for both the white and the grey lens.
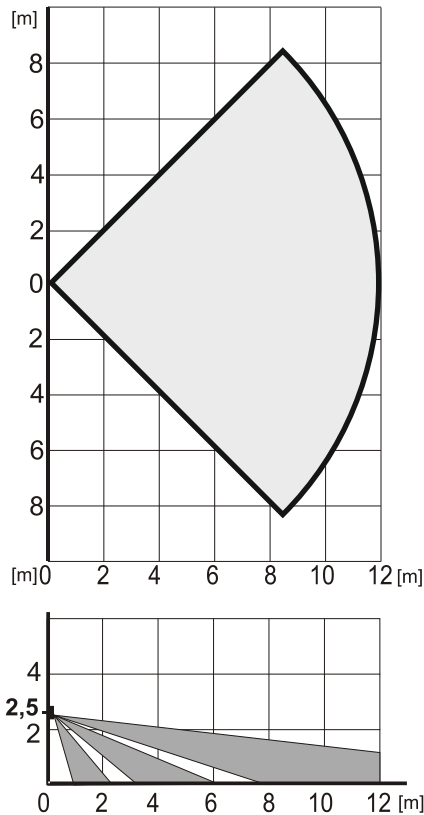

Figure 3. This detection characteristic is valid for standard PIR immunity.

Installation accessories

JA-196PL-B-S – Detector wall holder

When an aesthetic installation is required, it's possible to install the detector on a wall surface using a JA-196PL-B-S aesthetic frame and mounting box, 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 (7).

Technical specifications

Power	1 Lithium battery type CR123A (3 V/1500 mAh)
	Please note: Battery not included
Typical battery lifetime	4 years
	(the longest in smartwatch mode, at 20°C)
Low battery voltage	< 2.4 V
Current consumption in standby mode	30 µA
Maximum current consumption	100 mA
Communication band	868.1 MHz, JABLOTRON protocol
Communication range	approx. 300 m (open area)
Recommended installation height	2.2 – 2.5 m above the floor
Detection angle / detection coverage	90°/12 m
Dimensions	62 x 110 x 40 mm
Weight (without battery)	90 g
Classification	Security grade 2/Environmental class II
	(according to EN 50131-1)
Operational environment	Indoor general
Operational temperature range	-10 °C to +40 °C
Average operational humidity	75 % RH, non-condensing
Certification body	Trezor Test s.r.o. (no. 3025)
Complies with	EN 50131-1 ed. 2+A1+A2, EN 50131-2-2,
	EN 50131-5-3+A1, EN 50131-6 ed. 2+A1,
	ETSI EN 300 220-1,-2, EN 50130-4 ed. 2+A1,
	EN 55032, EN 62368-1, EN 50581

Can be operated according to ERC REC 70-30

JABLOTRON ALARMS a.s. hereby declares than the JA-152P (G) is in a compliance with the relevant European Union harmonisation legislation: Directives No: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU, when used as intended. The original of the conformity assessment can be found at www.jablotron.com –*Downloads* section.

Note: Although this product does not contain any harmful materials we suggest you return this product to the dealer or directly to the producer after use.