

The JA-157P dual zone outdoor wireless motion detector - curtain

The JA-157P wireless outdoor detector with curtain lens characteristics is designed to indicate disturbances outside the building caused by human bodies. It is a dual zone outdoor detector by Optex with a 5° angular width detection zone which makes it very suitable for guarding narrow spaces such as balconies, French doors, terraces, etc. It is supplemented with a transmitter compatible with the JABLOTRON 100 system. The device is equipped with dual-beam optics with a high immunity against false alarms and the detection of small animals. The detector has an anti-masking function – i.e. protection against shielding its view. The detector is also equipped with three tamper contacts. One on the detecting part and the next two on the transmitter part with both of them immediately reporting tampering of the detector or removal from the installation place. The detector should be installed by a trained technician with a valid certificate issued by an authorised distributor.

Detector position and installation rules

When selecting the place for detector installation, please keep in mind following instructions:

- The detector has to be installed onto a vertical wall
- The detector has to be installed 0.8 – 1.2 m above the ground
- The best movement detection is provided when the detection beams intersect
- No other moving objects (bushes, trees, high grass, etc.) should be situated in the field of sight of the detector. Avoid direct action by strong sources of light (sun reflections).

Installation

1. The detector consists of two parts: the detection part (1) and the transmission part (2). Their mutual position can be adjusted according to the picture. Punch holes for wires in the plastic transmission part of the detector depending on which position for the parts you have selected (there are holes indicated on the plastic for this purpose).

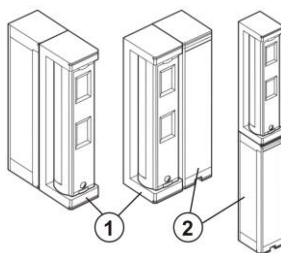


Fig. 1

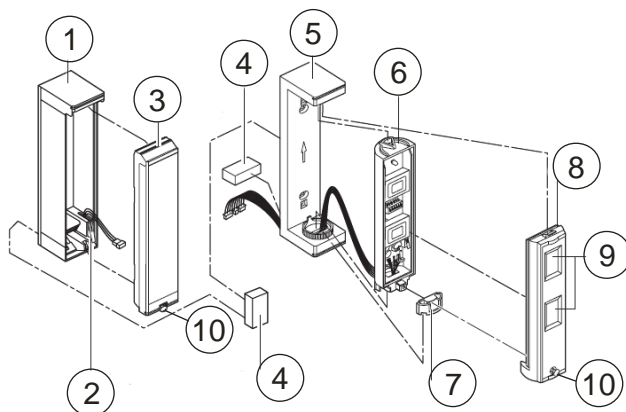


Fig. 2: Detector parts: 1 – Transmitter plastic part, 2 – tamper contact for transmitter part, 3 – transmitter part cover, 4 – sealing sponge, 5 – rear detection part, 6 – detection part, 7 – pull-out sealing cover, 8 - detection part cover, 9 – lenses, 10 – locking screw for the detection and transmission part

2. Unscrew the locking screw (10) and remove the detection part cover (8). The position of the detection part is fixed with a toothed plastic lug (7) which should be moved upwards. Then remove the whole part with the electronics (6) by bending the upper part of the plastic and pulling the swivel part towards you. You will thus make the installation holes located under this part accessible.

Warning : Do not touch the sensors during handling

3. Pull the bundle of cables through the punched hole into the transmission part from the detection part.

4. Attach the detection and transmission part to the wall using the supplied screws (mind the correct orientation – marked with an upward-facing arrow on the plastic).
5. Use supplied self-adhesive plastic posts to attach the transmission module to the bottom of the transmission part so that the function switch is located at the top left corner. Place the PCB as high as possible – the bottom screw which attaches the plastic base to the wall must be visible. You will thus avoid possible interference with the antenna resulting in reduced detector range. The module has to be fixed with the antenna upwards.
6. Use connectors to interconnect the wiring between the detector parts (can't be mixed up).
7. Reassemble the detector.

Switching on and enrolling the detector into the system

When the detector has been mounted at the chosen place it is necessary to enroll it to the system according to following procedure:

- a. There must be a JA-110R radio module installed in the system.
- 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). The enrollment signal is transmitted when the battery is inserted into the detector and it is enrolled to the chosen position.

Use a CR123A 3 V lithium battery only. The system reacts to triggering the detector according to the settings in **F-Link / Settings / Devices / Reaction**.

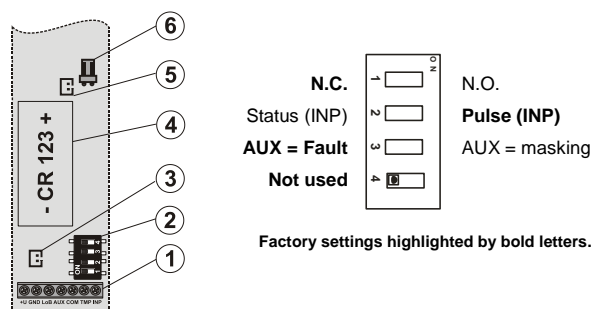


Fig. 3: Radio transmitter: 1 – terminals, 2 – option DIP switch (pre-set from factory – DIP switch description see the figure), 3 – external tamper connector, 4 – battery holder, 5 – external antenna jumper, 6 – external antenna connector

If needed the transmitter can be equipped with an AN-80 or AN-81 external antenna connected to the connector (6) and disconnect the jumper (5).

Setting up the optical part of the detector

A detection range of 5 m or 2 m can be set. The setting is done by turning the bottom detector lens (closer to the centre of the cover). The lens shape is designed so that its projecting part uncovers the detection distance which you have selected when it is inserted back into the plastic base (see Fig. 4). Do not turn the upper lens!

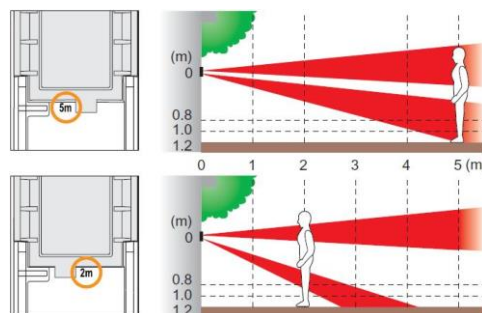


Fig. 4: 5m and 2m characteristics

Masking function

The detector has an Antimasking function – protection against shielding its view. When the function is enabled the detector sends infra-red pulses and detects possible shielding. The shielding is indicated if the obstacles are less than 10 cm from the detector.

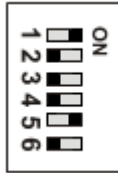
When the battery is inserted and both plastic covers closed the detector analyses its view in front of it for 1 minute – self-calibration.

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No movement should be detected at this moment for less than a 1 m distance. Then a 10 minute test mode runs. In the test mode pulses are sent every 20 s, so detector covering is indicated at least 20 s after covering starts. When test mode expires the detector goes to normal mode. Then the pulses are sent every 3 minutes so covering is indicated at least 3 minutes after covering starts. Covering is indicated as detector tampering. Detection is restored at least 20 s after the obstacle disappears. The function is disabled as default.

Options are adjustable by DIP switches inside the detector

Normal mode
Save mode 120s.
 NC
LED OFF
 Increased immunity
Anti-masking OFF

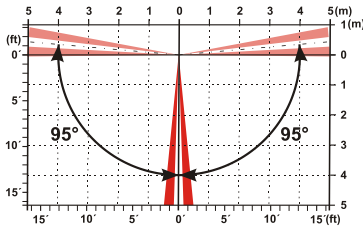


test mode
 5s.
 Fault signal switches NO
 LED ON
Normal immunity
 Anti-masking ON

Factory settings highlighted by **bold letters**.

- 1. Test mode:** LED indication enabled; save mode completely disabled (DIP switches 2 and 4 don't matter); Normal mode: DIP switches 2 and 4 are included.
- 2. Save mode:** Detector goes to sleep mode 5 or 120 s.
- 3. Selection of output relay logic in standby mode (NC / NO, for combination with Jablotron systems use the option NC)**
- 4. ON / OFF LED indication of movement**
- 5. False alarm immunity**
- 6. ANTI-MASKING-** see the paragraph Masking function

The detection part can be turned by 190° with 5° steps. When the required angle has been set, use the plastic lug to prevent further movement. The angle is fixed completely when the cover with the lenses is put back and the screw is tightened.



Checking the status of and replacing batteries

The detector checks the battery status and automatically reports a low battery to the system. The detector remains fully functional. The battery should be changed as soon as possible (within 1 week).

The control panel must be in service mode or bypassed by the system Administrator **before you start changing the battery**. Use a CR123A 3 V battery only. When the cover has been closed, the detector switches to the test mode.

Note: If you insert a nearly drained battery into the detector by mistake, the sensor does not start working and this status is indicated with the transmitter LED flashing. If the battery is completely drained, the detector does not react at all.

Technical specifications

Power 1x type CR123A (3 V / 1500 mAh) lithium battery
 Typical battery lifetime approx. 3 years (with 120 s save mode)
 Communication band 868.1 MHz, JA-100 protocol
 RF range up to 300 m (open area)

Optex detector parameters

Detection characteristic 2 or 5 m / 5°
 Detector installation height 0.8 – 1.2 m
 Object motion speed 0.3 – 1.5 m / s
 Detector cover conformance IP55
 Environment according to EN50131-1 IV
 Operational temperature range -20°C to +60°C
 Max. relative humidity 95 %
 Dimensions (mm) power supply with transmitter 34x154x43
 detector 34x 154x43

Weight 190 g
 Security grade according to OPTEX
 Complies with ETSI EN 300 220, EN 50130-4,
 EN 55022, EN 60950-1
 ERC REC 70-03

Can be operated according to



JABLOTRON ALARMS a.s. hereby declares that the JA-157P is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The original of the conformity assessment can be found at 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 producer after use. For more detailed information visit www.jablotron.com.