

The JA-87P dual zone outdoor wireless motion detector - curtain

The JA-87P wireless outdoor detector is a component of OASIS system. It is designed to detect human body movement in an outdoor environment. It is the FTN-RAM-PT detector produced by Optex with a Jablotron transmitter. The optical part of the detector has curtain characteristics of its lenses with a 5° angular width detection zone which makes it very suitable for guarding narrow spaces such as balconies, French doors, terraces, etc. The detector is equipped with dual-beam optics with a high immunity against false alarms and the detection of small animals. The detector also has an anti-masking function – i.e. protection against shielding its view. It is also equipped with two tamper contacts 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

The following instructions should be followed when selecting the place for detector installation:

1. The detector should be attached to a vertical wall
2. The detector should be installed 0.8 – 1.2 m above the ground
3. The best movement detection is provided when the detection zones intersect
4. 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).

Detector installation procedure

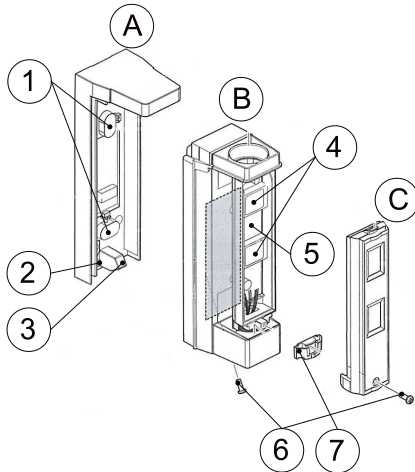


Figure 1.: Detector housing: A – detector installation pad, B – detector base with the PCB, C – front cover of the detector with lenses, 1 – mounting holes, 2 – blasting part of tamper contact, 3 – facing surface to be assembled by a screw, 4 – lenses, 5 – DIP switch for setting up, 6 – locking screws for assembling, 7 – retractable fixation bracket

1. Unscrew the locking screws (6) and separate parts A and B.
2. Fix the installation pad (A) to the required place using mounting holes (1). Caution, if you want to use a tamper contact it is necessary to screw the blasting part (2) of the housing to ensure when someone tamper the detector it breaks off this part.
3. Now take out the front cover to set up the detectors view and options by DIP switches (5).
4. Position of the detection part is fixed by a plastic bracket (7), remove it in upper direction.
5. When you set up the required angle of view, lock it by pushing of plastic bracket (7) back to default position.
6. Set the required options by the DIP switches (5).
7. Now enroll the detector to the system.

Do not touch the detector sensing face during the handling



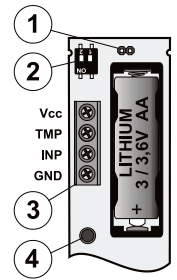
If you touch it coincidentally, it is necessary to clean it up by a piece of cotton wool soaked in alcohol.

Switching on and enrolling the detector into the system

Study the control panel (receiver unit) installation manual before inserting the battery. The control panel must be equipped with the JA-82R radio module. Use AA 3.6 V lithium batteries only. The correct position of the battery is indicated on the battery holder. When the battery has been installed, the transmitter sends a signal which enrolls it to the control panel. The control panel must be in enrollment mode at that time. Use switch no. 2 to set system reaction to detected movement (ON = instant or OFF = delay). Switch no. 1 should remain in the OFF position.

Figure 2:

- 1 – Jumper – let it connected
 - 2 – Function switch;
 - 3 – Terminals for detector to be connected;
- Vcc** – red; **TMP** – blue; **INP** – yellow;
GND – white, green, black
 4 – Indication LED



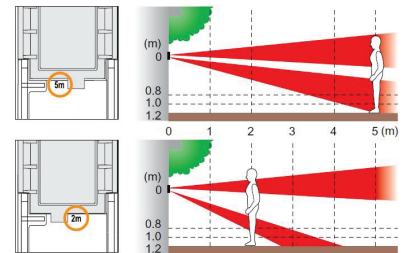
Tabulka nastavení přepínače funkcí (2)

1	ON	State
	1	Pulse *)
2	ON	Instant reaction
	2	Delay reaction

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 the picture below). Do not turn the upper lens!



Anti-masking (shielding protection function)

The detector is equipped with an anti-masking function – protection against physical shielding. When enabled, any potential covering of the detector is detected by reflected IR ray pulses. Covering is indicated if the obstacle is nearer than 10 cm from the detector.

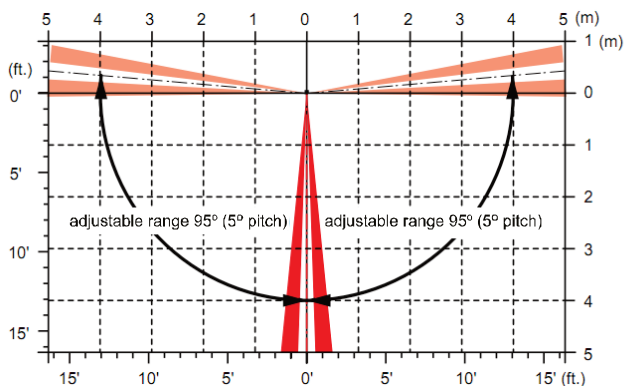
After inserting the battery and closing both plastic parts the detector does an analysis of the space in front of itself for 1 minute – to calibrate itself. In this time the detector does not detect any movement at a distance shorter than 1 m. Then anti-masking test mode starts running for 10 minutes. In test mode IR pulses are transmitted every 20 s; any covering is detected in 20 s maximum if covering continues. When test mode expires, the detector goes into the usual working mode. Now IR pulses are transmitted every 3 minutes. Covering detection is indicated in 3 minutes maximum if covering continues. The reaction to covering the detector is a tamper alarm. Recovery occurs in 20 s. Default setting: disabled.

Other detector properties can be set using a switch in the detector

	ON	OFF
1	test mode	normal operation
2	5 sec energy saving mode	120 sec
3	fault signal triggers N.O	NC
4	LED enabled	LED disabled
5	normal immunity of detection	increased immunity of detection
6	anti-masking enabled	anti-masking disabled

The default settings are in bold letters.

1. **Test mode:** indication by LED enabled; Energy saving mode completely disabled (DIP switches 2 and 4 are ignored, but not in Normal mode).
2. **Energy saving mode:** When movement has been detected, the detector goes into sleep mode for 5 or 120 s
3. **Selection of NO/NC logic for the output relay (for Jablotron systems use the OFF setting)**
4. **Enable/disable indication LED when the detector has been activated.**
5. **Immunity against false alarms.**
6. **ANTIMASKING-** see the paragraph Anti-masking (shielding protection function)



The detection part can be turned in a 190° range with locking after each 5°. 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 battery status and automatically reports a low battery to the system. The detector remains fully functional. The batteries should be changed as soon as possible (within 1 week).

The control panel must be in service or maintenance mode **before you start changing the battery**. Use 3.6 V AA batteries 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 transmitter LED flashing. If the battery is completely drained, the detector does not react at all.

Technical specifications

Power	1x type LS(T)14500 (AA 3.6 V / 2 Ah) lithium battery <i>Please note: Battery is not included</i>
Average battery lifetime	approx. 3 years (with 120 s energy saving mode)
Operating frequency	868.5 MHz, Oasis protocol
Range – distance from the control panel	up to 300 m (open area)
Optex detector parameters	
Detection characteristics	2 or 5 m / 5°
Recommended installation height	0.8 – 1.2 m
Object motion speed	0.3 – 1.5 m / s
Detector cover conformance	IP55
Environment according to EN 50131-1	IV
Operating temperature range	-20 °C to +60 °C
Max. relative humidity of the environment	95 %
Security rating	according to OPTEx
Complies with	ETSI EN 300 220, EN 50130-4, EN 55022, EN 60950-1
Dimensions	power supply part 34 x 154 x 43 mm detector 34 x 154 x 43 mm
Weight	190 g
Can be operated according to	ERC REC 70-03



JABLOTRON ALARMS a.s. hereby declares that the JA-87P is in a compliance with the relevant Union harmonisation legislation: Directives No: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2011/65/EU. 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.



JABLOTRON ALARMS a.s.
Pod Skalkou 4567/33
46601 Jablonec nad Nisou
Czech Republic
Tel.: +420 483 559 911
Fax: +420 483 559 993
Internet: www.jablotron.com