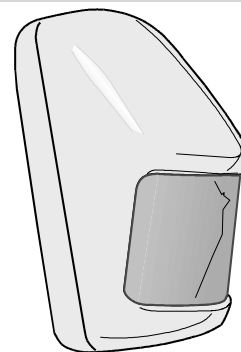# JS-10 Harmony P.I.R. detector

Description

- Passive Infrared Motion Detector
- Advanced digital signal processing
- SMD circuitry, excellent RFI immunity (CE)
- White light immunity, insect proof housing
- Automatic temperature compensation, self testing software
- Alarm memory function, TAMPER protection
- Two output relays, optional functions
- Fast, easy installation, high reliability

Specifications:

power consumption	9-15 V DC		
stand-by	16 mA (both relays OFF)	ALARM relay	60 V / 0,1 A (N.O., N.C.)
	30 mA (both relays ON)	OUT relay	60 V / 0,1 A (N.O.)
data processing	digital analysis (3 optional rates)	TAMPER switch	60 V / 0,1 A
detection speed min.	0,1 m/sec.	warm up time	max. 90 sec.
max.	4 m/sec.	operating temperature	-10 to +55 °C
detection coverage	12 m / 120°	RF immunity	to 1 GHz 20V/m (modulated sig.)

Complies with: EN 50131-4 grade 2, enviromental class II indoor general, EN 50 130-4, EN 55022 class B.
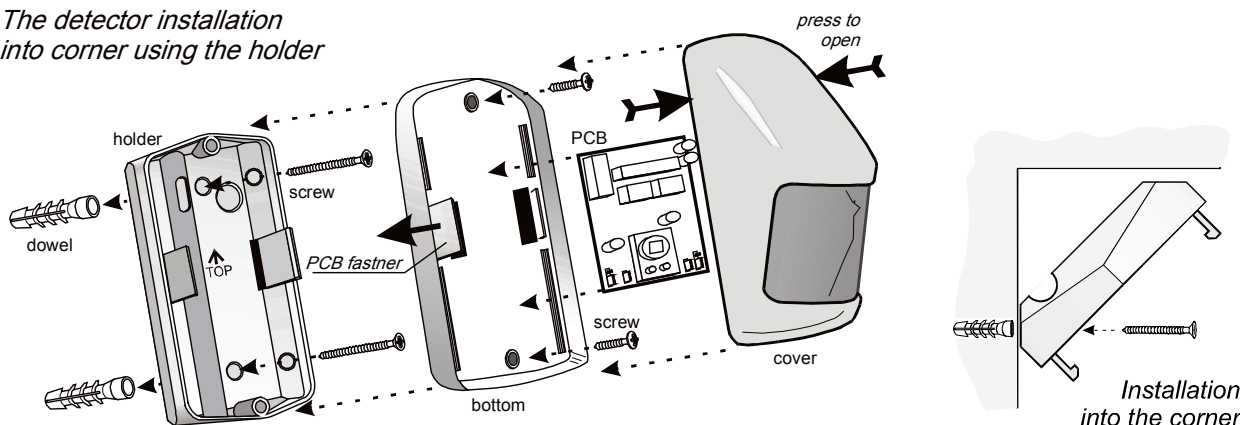
Complies with the essential requirements of: 89/336/EC EMC Directive - Protection concerning electromagnetic compatibility when is used for its intended purpose. Original of the conformity assessment can be found at the web page www.jablotron.cz, section Technical support.
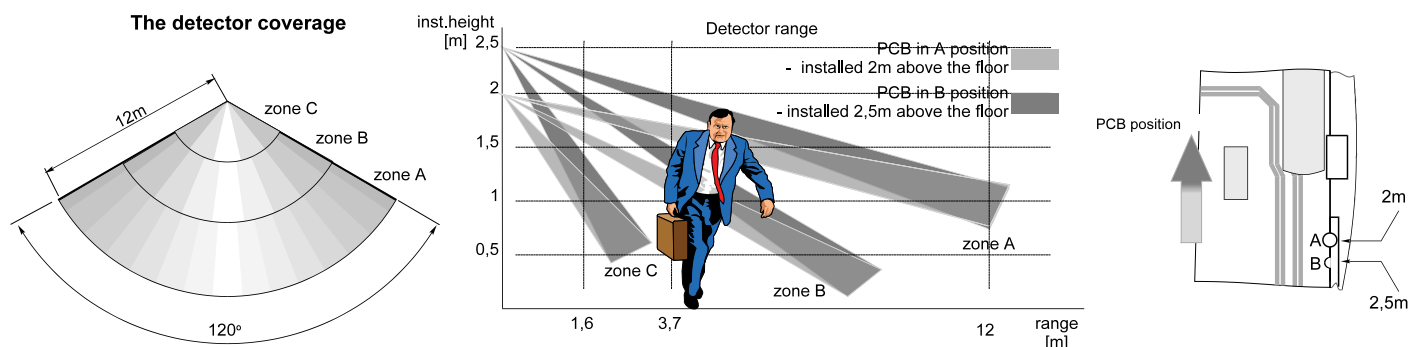
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Installation:

   The detector should be installed on a flat wall 2 to 2,5 m above the floor. Use the two provided screws to attach the housing to the surface. If you install the detector into a corner, use the plastic holder (see following diagrams). The coverage zone can be adjusted by changing the position of the PCB module inside the detector. The diagram below shows the three zones (A,B & C) of coverage.

The detector installation into corner using the holder

Installation into the corner

The detector coverage

Content of the set :

- JS-10 detector
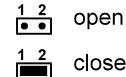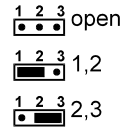- holder
- dowel (2x)
- screw (4x)

Terminals:

OUT   - auxiliary relay output (optional function)
ARM   - alarm memory input (GND when system armed - optional)
TAMP   - TAMPER switch output N.C.
+12V   - power supply +12VDC
GND   - ground
ALARM   - alarm relay output (N.C. or N.O.)

Selectable links:

J1 - ANALYSIS - rate of the digital signal analysis
  1,2   fast reaction, good immunity (normal environment)
  2,3   high immunity, slower speed (high RF noise)
  open   excellent immunity, slow reaction
          (very high RF noise, frequent temperature changes)

Jumper positions

J2 - NC/NO - alarm relay output function	**J3 - LED ON** - LED function
closed relay has Normally Closed contact	**closed** normal walk test function
open relay has Normally Open contact	**open** green LED is OFF, red LED function is reduced (only alarm memory and trouble signals)

J4 - OPTION - OUT auxiliary output relay contact function
  1,2   switches ON if any movement is detected, will stay on for 1 minute after the motion has stopped (N.O.)
          Can be used for automatic light control.
  2,3   OUT relay switches ON for 2 seconds when any movement is detected (N.O.)
          Can be used to switch a corresponding CCD camera when a CCTV system is installed.
  open   detector trouble function output = self testing (N.O.)

LED functions:

green   - indicates if any movement is detected (signal analysis started). If J3 jumper is open this LED will be completely OFF

red   - periodically flashes (twice a second) indicates the warming-up time after power connection
     - three seconds signal indicates ALARM relay output triggering. If jumper J3 is open, the triggering will not be indicated
     - fast short flashes indicate an alarm memory (will be reset after next control panel arming)
     - permanent light with two fast pauses indicates that a P.I.R. function trouble was detected. These signals are provided even if the J3 link is open.

Note: after power supply connecting, the detector needs about 90 seconds for warming up and the automatic self-testing procedure. The red LED will flash periodically during this period.

Function description:

Digital signal analysis: the built-in sensor detects any movement of objects which a temperature being close to the human body temperature. The signal from the sensor is converted to digital form and analyzed by software. This software checks if the signal has a form which is characteristic to human body movement This way, false alarms are almost eliminated and attempts to block the detector's function can also be recognized (optional trouble function output). Results of the digital analysis depend on the analysis rate. This rate can be adjusted by jumper J1. If you install the detector in a very problematic location (frequent changes of temperature, high RF noise etc.) leave the J1 jumper open for longer analysis.

Alarm triggering: when a valid signal is analyzed, the ALARM relay is activated for 3 seconds (N.C. or N.O. function can be selected with J2 link). ALARM relay triggering is indicated by the red LED (if J3 link is closed).

ARM Input: is a control input for the alarm memory function. If the ARM terminal is activated (connected to the GND), the alarm system is armed. If the memory function is not used, do not connect this terminal. Voltage on this input can be from 0 V to +12VDC.

Alarm memory: If the ALARM is triggered when the ARM input is on GND (control panel armed), the detector's red LED will continue flashing rapidly after the control panel is disarmed. This acts as an alarm memory signal. This signal is reset by the next control panel arming.

Notes: If you want to change the JP4 jumper position, we recommend that you first disconnect the power supply.

Your control panel must first be turned to the SERVICE position whenever you are going to open the detector housing.

Warning: Do not touch the sensor inside. If you must touch it, be sure to avoid using your fingers!

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

EXAMPLE OF USE
OUT relays setting by J4:

PIR1 - 2,3 two seconds pulse
PIR2 - 1,2 one minute pulse
PIR3 - 1,2 one minute pulse