



F&F Filipowski L.P.  
Konstantynowska 79/81, 95-200 Pabianice, POLAND  
phone/fax (+48 42) 215 23 83 / (+48 42) 227 09 71  
www.fif.com.pl; e-mail: biuro@fif.com.pl

**DR-09 24V**  
Motion sensor (PIR),  
with presence sensor function



**Do not dispose of this device in the trash along with other waste!**

According to the Law on Waste, electro coming from households free of charge and can give any amount to up to that end point of collection, as well as to store the occasion of the purchase of new equipment (in accordance with the principle of old-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature, pose a threat to the environment and human health.



## Purpose

The motion sensor is used for automatic and temporary switching on of lighting if a person or other object appears in places such as hallways, courtyards, driveways, garages, etc. It is suitable for use in narrow corridors.

## Functioning

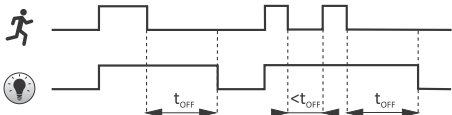
The sensor detects the infrared radiation sources. It analyzes the parameters such as the size of the object, the amount of heat emitted and the speed of movement between sectors of detection. The sensor detects movement within its own axis and radius. Movement in the detection area will automatically switch on the lighting. From this moment the light will stay on, as long as the sensor detects continuous movement. Only if there is no movement in the detection area triggers the lighting support time. Another movement in the detection area and its subsequent disappearance in the course of time measurement starts the support time from the beginning.

The specific of operation allows using the DR-09 as a presence sensor. The area of the detection field is: for presence up to 6 m in diameter and for movement up to 20 m in diameter. The motion sensor is equipped with a twilight sensor to prevent switching on the lighting during the day. The detection status and the readiness to switch on the lighting are only activated after dusk. The activation time of the sensor can be adjusted by the user using a potentiometer. In addition, it is possible to adjust the time of sensor switching off within the range of 10 s÷30 min.



Changes in temperature can affect the motion detection.

### Diagram



The minimum distance between the sensor and the light source is 60 cm. If the motion sensor is installed too close to the switched light source, the system may be activated, which means that the sensor will automatically switch on and off the light source. It is necessary to move the sensor to an appropriate distance away from the light source.

## Settings

### Switch-off time



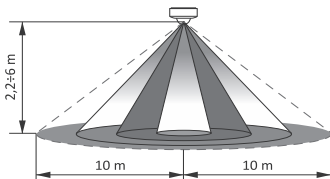
The time of the receiver switching off can be adjusted within the range of 10 sec to 30 min. Turning the control knob right [+] increases the switching on time, turning left [-] reduces the switching on time.

### The sensitivity of the twilight sensor

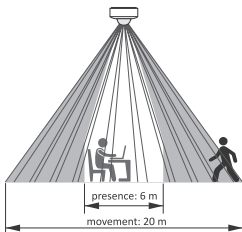


The sensitivity of the twilight sensor can be adjusted within the range of 3 lx to 2000 lx. Turning the control knob in the direction of the "moon" icon will switch the light later, turning it in the direction of the "sun" – will switch the light earlier. For the sensor to be active throughout the whole day, the control knob should be maximally turned in the direction of the "sun".

### Detection area

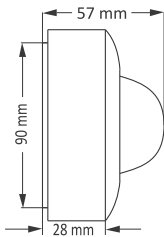
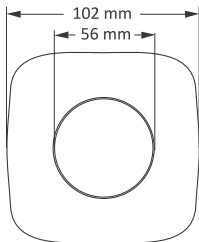


Sensor installation height (adjustable range of sensor detection)



The direction of movement in the detection area

## Dimensions



## Mounting

1. Remove the external sensor cover - squeeze the housing from both sides with your hand and gently pull it out of the internal housing.
2. Disconnect the power supply.
3. Connect the wires according to the wiring diagram.
4. Fasten the base to the floor with two screws.
5. Set the sensitivity of the twilight sensor and activation time.
6. Assemble the sensor housing – press it onto internal housing.
7. Switch on the sensor power supply.



If the motion sensor is installed too close to the switched light source, the system may be activated, which means that the sensor will automatically switch on and off the light source. It is necessary to move the sensor to an appropriate distance away from the light source.

---



The sensor is inactive for the first 30 seconds after the power supply is switched on. During this time, the PIR system warms up.

---



The motion sensor can work indoors and outdoors in places where it is not exposed to direct rain or snowfall and to the possibility of splashing the sensor housing and its electrical connection points with water or other liquid.

---

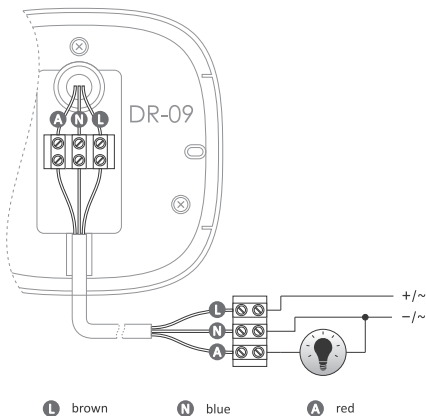


Avoid locations with large objects in the detection area such as trees that can be moved by the wind.



Do not install the sensor in the immediate vicinity of heating, air-conditioning and lighting devices.

## Wiring diagram



## Technical data

power supply	12÷24 V AC/DC
maximum load current (AC-1)	10 A*
twilight activation threshold	3÷2000 lx
motion detection	0.6÷1.5 m/s
switch-off time	10 s (±3 s)÷30 min. (±2 min.)
horizontal detection area	360°
max radius of detection (T<24°C)	20 m
sensor mounting height	2.2÷6 m
power consumption	
standby	0.10 W
on	0.5 W
terminal	1.5 mm <sup>2</sup> screw terminals
tightening torque	0.3 Nm
working temperature	-20÷40°C
dimensions	102×102 mm, H= 55 mm
mounting	surface
ingress protection	IP20

---

\* Load of a resistive nature [AC-1].

*For loads of a different nature (e.g. LED lighting), the maximum load current may be significantly lower.*

*More information:*

[www.fif.com.pl/en/content/24-wskazowki](http://www.fif.com.pl/en/content/24-wskazowki)



## Warranty

The F&F products are covered by a warranty of the 24 months from the date of purchase. Effective only with proof of purchase. Contact your dealer or directly with us.

## CE declaration

F&F Filipowski L.P. declares that the device is in conformity with the essential requirements of The Low Voltage Directive (LVD) 2014/35/EU and the Electromagnetic Compatibility (EMC) Directive 2014/30/UE.

The CE Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found at [www.fif.com.pl](http://www.fif.com.pl) on the product page.