

GB - Installation instructions



Safety instructions

- Disconnect the power supply before attempting any work on the motion detector.
- During installation, the electric power cable to be connected must be voltage-free. Therefore, switch off the power first and check freedom from voltage with a voltage detector.
- Installing the motion detector involves work on the mains power supply. This work must therefore be carried out professionally in accordance with the applicable national wiring regulations and electrical operating conditions (DE-VDE 0100, AT-ÖVE-EN 1, CH-SEV 1000)

Principle

Lights, alarms, and many other things triggered by movement - for your convenience and safety.

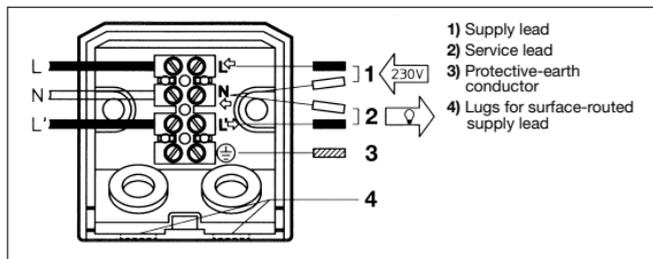
Whether a house door, garage, patio or carport, stairs, a storeroom or cellar are involved, this infrared motion detector is rapidly installed and ready for operation anywhere.

The IS 240 DUO is equipped with two 120° pyro sensors which detect the invisible heat emitted by moving objects (pedestrians, animals etc.).

The heat thus detected is electronically converted and switches ON connected consumers (e.g. a light). No heat radiation is detected through obstacles, such as walls or glass and no switching therefore occurs. The two pyro sensors have a detection angle of 240° with an opening angle of 180°.

Important: the safest motion detection is obtained when the device is mounted and aligned laterally to the walking direction and no obstacles (such as trees and walls, for example) obstruct the view.

Installation



■ Wall mounting

Warning: installation involves a mains connection. With 230 V, a risk of electrocution exists! Therefore, switch off the power first and check freedom from voltage with a voltage tester. Installation of the sensor involves work on the mains power supply; this work must therefore be carried out professionally in accordance with regulations. Please note that the motion detector must be protected by a 10 A circuit breaker.

The installation site should be at least 50 cm from a light, since the latter's heat radiation could result in false triggering of the sensor. The installation height should be approx. 2 m.

Unscrew the fastening screw **■** counterclockwise with a screwdriver, slide down the mounting plate **■** and remove it. Do not undo the internal wiring to the terminal block, but extract the block by pulling it gently.

Insert the rubber plugs into the mounting plate. Hold the mounting plate against the wall and mark the drill holes (paying attention to the wiring arrangement in the wall), drill the holes and insert the dowels. In order to be able to perform a switching operation, a power supply lead with at least two phases must run to the unit and a second lead out to the consumer. The two rubber plugs can be pierced for this purpose with a screwdriver. Two lugs are provided on the bottom of the wall fastener for surface wiring. These can be snapped off easily. After passing the wiring through, the mounting plate can be screwed in place.

■ Connection of the mains lead

The mains lead consists of a 2-3 phase cable.

L = phase conductor (usually black, brown or grey)

N = neutral conductor (usually blue)

PE = protective-earth conductor, if present (green/yellow)

If in doubt, the cable must be identified with a voltage tester. Switch off the current again. The wire terminals are for the mains lead. The phase conductor (**L**) is connected from above to the first terminal (see arrow) and the neutral conductor (**N**) to the second terminal.

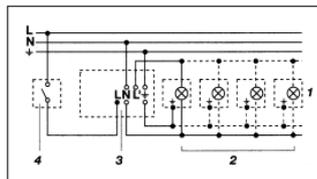
If the green/yellow protective-earth conductor is present, connect this to the bottom terminal provided.

Important: Getting the cable connections crossed will produce a short circuit in the unit or in your fuse box. In this case, the individual wires must be re-identified and re-connected. A mains switch for ON and OFF switching can of course be installed in the mains lead.

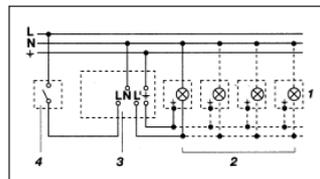
■ Connection of the service lead

The service lead (e.g. light) likewise consists of a 2-3 phase cable which is connected to terminals **N** and **L'**. The phase conductor of the consumer (black, brown or grey cable) is connected to the terminal marked **L'**. The neutral conductor (blue cable) is clamped to the terminal marked **N** together with the mains lead neutral conductor. Connect any green/yellow protective-earth conductor to the lower terminal.

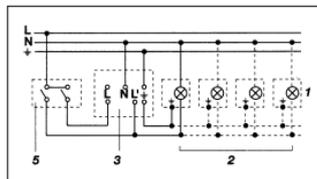
Wiring examples



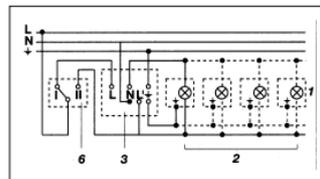
1. Fixture without neutral conductor



2. Fixture with neutral conductor



3. Connection via series switch for manual and automatic operation



4. Connection to double-throw switch for permanent light and automatic operation

Setting I:

automatic operation

Setting II:

manual operation for permanent light

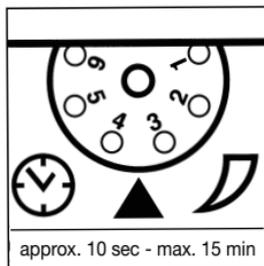
Important:

The unit cannot be switched off, only optional operation between settings I and II.

- 1) e.g. 1-4 x 100 W filament bulbs
- 2) consumer, lighting max. 1000 W (refer to Technical specifications)
- 3) IS 240 DUO connection terminals
- 4) indoor switch
- 5) indoor series switch, manual, automatic
- 6) indoor double-throw switch, automatic, permanent light

Function

After the motion detector has been connected and fastened to its wall mount, the system can be switched ON. Two setting options are available after removing the decorative ring **■**.



Switch-off delay (time setting)

(Factory setting: 10 sec.)

Light ON duration can infinitely varied from approx. 10 sec. to a maximum of 15 min.

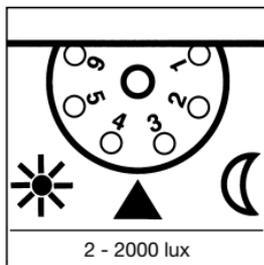
Control dial set to (1) =

shortest time (10 sec.)

Control dial set to (6) =

longest time (15 min.)

The shortest time setting is recommended when adjusting the detection zone and performing the function test.



Twilight setting

(Factory setting: 2000 lux)

The sensor's response threshold can be infinitely varied from 2 – 2000 lux.

Control dial set to (1) =

daylight operation at approx. 2000 lux.

Control dial set to (6) =

night-time operation at approx. 2 lux.

The adjusting screw must be turned fully anti-clockwise when adjusting the detection zone and performing the function test in daylight.

Reach setting/adjustment

Assuming an installation height of 2 m, the maximum reach of the sensor is 12 m. Optimum adjustment of the detection zone is possible according to needs. The shrouds **■** provided serve to cover any desired number of lens segments and individually reduce the reach. Fine adjustment is also possible by turning the sensor housing **■** by $\pm 80^\circ$. The shrouds **■** can be divided vertically or horizontally along

the grooved divisions, or cut with scissors. After removing the decorative ring **■**, the shrouds are to be suspended on the upper part of the sensor lens. The decorative ring **■** is subsequently to be reapplied and the shrouds **■** are fixed firmly in place. False switching by cars and pedestrians, etc. is therefore ruled out, or risk areas deliberately monitored.

Technical specifications

Dimensions (H x W x D):	90 x 60 x 100 mm
Output:	
	Filament bulbs, 1000 W max., operating on 230 V AC
	Fluorescent lamp, 500 W max., at $\cos \varphi = 0.5$, inductive load at 230 V AC
 	6 x 58 W each max., $C \leq 132 \mu\text{F}$ operating on 230 V AC ^{*)}
Connection:	230–240 V, 50 Hz
Angle of coverage:	240° (with 180° angle of aperture)
Pivoting range of the sensor:	Fine adjustment $\pm 80^\circ$
Reach:	max. 12 m (electronically stabilised)
Time setting:	10 sec. – 15 min.
Twilight setting:	2 – 2000 lux
IP rating:	IP 54

^{*)} Fluorescent lamps, low-energy bulbs, LED lights with electronic ballast (total capacity of all connected ballasts below the value specified).

Troubleshooting

Malfunction	Cause	Remedy
IS 240 DUO without power	<ul style="list-style-type: none"> ■ Fuse has blown; not switched ON ■ Short-circuit 	<ul style="list-style-type: none"> ■ Replace fuse, switch ON mains switch, check wiring with voltage tester ■ Check connections
IS 240 DUO does not switch ON	<ul style="list-style-type: none"> ■ Twilight setting in night-time mode during daytime operation ■ Bulb burned out ■ Power switch OFF ■ Fuse blown ■ Detection zone not correctly adjusted 	<ul style="list-style-type: none"> ■ Adjust setting ■ Replace light bulb ■ Switch ON ■ Replace fuse, check connection if necessary ■ Readjust
IS 240 DUO does not switch OFF	<ul style="list-style-type: none"> ■ Continued movement within the detection zone ■ Switched ON light is within detection zone and switches ON again as a result of temperature change ■ Set to continuous operation by indoor series switch 	<ul style="list-style-type: none"> ■ Check zone and readjust if necessary or apply shroud ■ Readjust zone or apply shroud ■ Series switch to automatic
IS 240 DUO keeps switching ON/OFF	<ul style="list-style-type: none"> ■ Switched ON light is within detection zone ■ Animals moving in detection zone 	<ul style="list-style-type: none"> ■ Adjust detection zone or apply shrouds, increase distance ■ Adjust zone or apply shrouds

Malfunction

IS 240 DUO switches ON when it should not

Cause

- Wind is moving trees and bushes in the detection zone
- Cars in the street are detected
- Sudden temperature changes due to weather (wind, rain, snow) or exhaust air from fans or open windows

Remedy

- Adjust zone or apply shrouds
- Adjust zone or apply shrouds
- Adjust detection zone or install in a different place

Maintenance/care

The motion sensor is suitable for automatic switching of lights or alarms. The unit is not suitable for special burglary alarm systems, since it lacks the sabotage protection prescribed for this purpose. Weather can affect operation of the sensor.

Strong gusts of wind, snow, rain and hail can cause switching errors, since the sudden temperature changes cannot be distinguished from heat sources. The detection lens **■** can be cleaned with a damp cloth (without detergents) if dirty.