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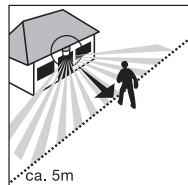
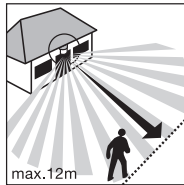
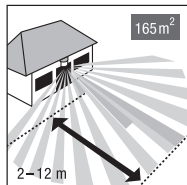
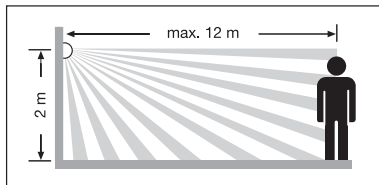
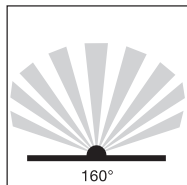
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PROFESSIONAL

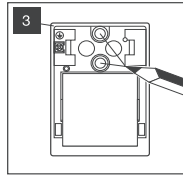
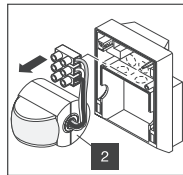
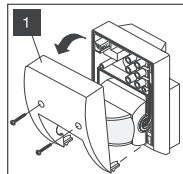
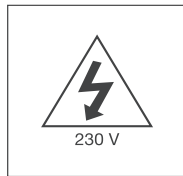
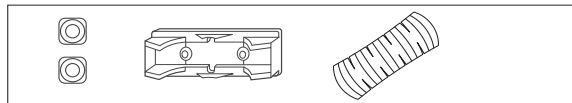


Information
IS 2160 ECO

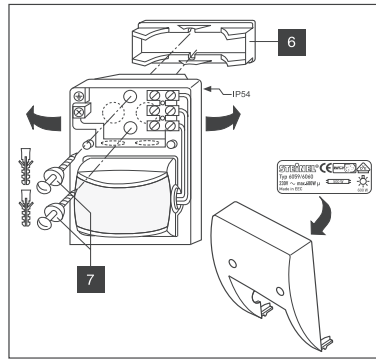
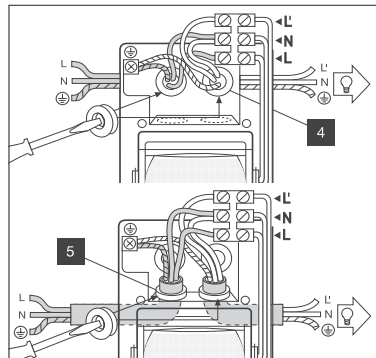
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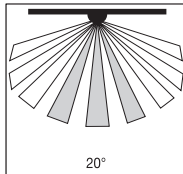
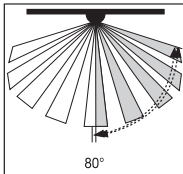
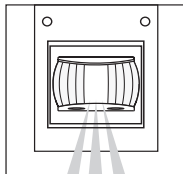
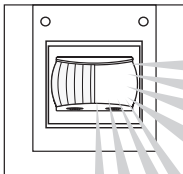
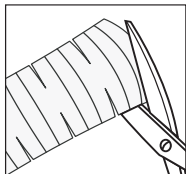
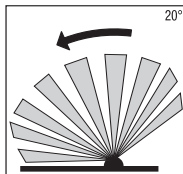
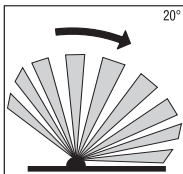
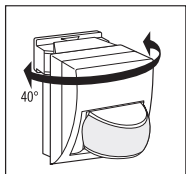
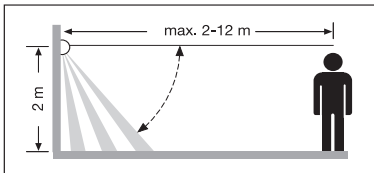
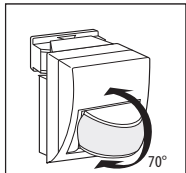


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DE Montageanleitung

Sehr geehrter Kunde,

vielen Dank für das Vertrauen, das Sie uns mit dem Kauf dieses STEINEL-Infrarot-Sensors entgegengebracht haben. Sie haben sich für ein hochwertiges Qualitätsprodukt entschieden, das mit größter Sorgfalt produziert, getestet und verpackt wurde.

Bitte machen Sie sich vor der Installation mit dieser Montageanleitung vertraut. Denn nur eine sachgerechte Installation und Inbetriebnahme gewährleisten einen langen, zuverlässigen und störungsfreien Betrieb.

Wir wünschen Ihnen viel Freude an Ihrem neuen Infrarot-Sensor.

Das Prinzip

Der eingebaute Pyro-Sensor erfasst die unsichtbare Wärmestrahlung von sich bewegenden Körpern (Menschen, Tieren etc.). Diese so erfasste Wärmestrahlung wird elektronisch umgesetzt, und ein angeschlossener Verbraucher (z.B. eine Leuchte) wird eingeschaltet. Durch Hindernisse wie z.B. Mauern oder Glasscheiben wird keine Wärmestrahlung erkannt, es erfolgt also auch keine Schaltung.

Mit einem Erfassungswinkel von 160° und einer Reichweite von max. 12 m überwacht der Sensor eine Fläche von ca. 165 m². Soll nur ein kleinerer Bereich abgedeckt werden, kann die Reichweite durch vertikales Schwenken der Sensoreinheit reduziert werden. Bei Verwendung der beiliegenden Schwenkvorrichtung lässt sich das Gerät ebenfalls in der Horizontalen schwenken, so dass der Erfassungsbereich gezielt

(s. Abb. Seite 2)

ausgerichtet werden kann. Zusätzlich kann der Erfassungswinkel durch Aufsetzen von Abdeckblenden individuell eingestellt werden.

Wichtig: Die sicherste Bewegungserfassung haben Sie, wenn das Gerät seitlich zur Gehrichtung montiert wird und keine Hindernisse (wie z.B. Bäume, Mauern etc.) die Sicht des Sensors behindern.

⚠ Sicherheitshinweise

- Vor allen Arbeiten am Bewegungsmelder die Spannungszufuhr unterbrechen!
- Bei der Montage muss die anzuschließende elektrische Leitung spannungsfrei sein. Daher als Erstes Strom abschalten und Spannungsfreiheit mit einem Spannungsprüfer überprüfen.
- Bei der Installation des Sensors handelt es sich um eine Arbeit an der Netzspannung. Sie muss daher fachgerecht nach den handelsüblichen Installationsvorschriften und Anschlussbedingungen durchgeführt werden (DE - VDE 0100, AT - ÖVE-EN 1, CH - SEV 1000).
- Beachten Sie bitte, dass der Sensor mit einem 10 A-Leitungsschutzschalter abgesichert werden muss. Die Netzleitung darf max. einen Durchmesser von 10 mm haben.

- wenn Wartung und Pflege der Produkte nicht entsprechend der Bedienungsanleitung erfolgt sind,
- wenn Anbau und Installation nicht gemäß den Installationsvorschriften von STEINEL ausgeführt wurden,
- bei Transportschäden oder -verlusten.

Diese Herstellergarantie lässt Ihre gesetzlichen Rechte unberührt. Die hier beschriebenen Leistungen gelten zusätzlich zu den gesetzlichen Rechten und beschränken oder ersetzen diese nicht.

Die Garantie gilt für sämtliche STEINEL-Produkte, die in Deutschland gekauft und verwendet werden. Es gilt deutsches Recht unter Abschluss des Übereinkommens der Vereinten Nationen über Verträge über den internationalen Warenkauf (CISG).

Geldentmachung

Wenn Sie Ihr Produkt reklamieren wollen, senden Sie es bitte vollständig und frachtfrei mit dem Original-Kaufbeleg, der die Angabe des Kaufdatums und der Produktbezeichnung enthalten muss, an Ihren Händler oder direkt an uns, die STEINEL Vertrieb GmbH – Reklamationsabteilung –, Dieselstraße 80-84, 33442 Herzebrock-Clarholz. Wir empfehlen Ihnen daher, Ihren Kaufbeleg bis zum Ablauf der Garantiezeit sorgfältig aufzubewahren. Für Transportkosten und -risiken im Rahmen der Rücksendung übernehmen wir keine Haftung.

5 JAHRE
HERSTELLER
GARANTIE

GB Installation instructions

Dear Customer,

Congratulations on purchasing this STEINEL Infrared Sensor and thank you for the confidence you have shown in us. You have chosen a high-quality product that has

been manufactured, tested and packed with the greatest care. Please familiarise yourself with these instructions before attempting to install the sensor since prolonged reliable and

trouble-free operation will only be ensured if it is installed properly.

We hope your new Infrared Sensor will give you lasting satisfaction.

Principle

(s. fig. page 2)

The integrated pyroelectric infrared detector senses the invisible heat radiated from moving objects (people, animals, etc.). The heat detected is electronically converted into a signal that switches on loads (e.g. a light) connected to it. Heat is not detected through obstacles, such as walls or panes of glass. Heat radiation of this type will, therefore, not trigger the sensor.

With a detection angle of 160° and a max. reach of 12 m the sensor watches over an area of approx. 165 m². If you only wish to cover a smaller area, reach may be reduced by tilting the sensor unit. Using the swivel mount supplied, the sensor unit can also be turned horizontally, making it possible to target the detection zone exactly as you choose.

The detection angle can also be adjusted to suit individual requirements by fitting shrouds.

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.

Safety warnings

- Disconnect the power before attempting any work on the motion detector.
- The electrical connection lead must be dead during installation. Therefore, switch off the power first and use a voltage tester to check that the power supply is disconnected.
- Installation of the sensor involves work on the mains power supply. This work must therefore be carried out professionally in accordance with the applicable wiring regulations and electrical operating conditions. (DE - VDE 0100, AT - ÖVE-EN 1, CH - SEV 1000).
- Please note that the sensor must be protected by a 10 A circuit breaker. The mains supply lead must be no greater than 10 mm in diameter.

Installation

(s. fig. page 3)

The site of installation should be at least 50 cm from a light because heat radiated from it may trigger the sensor unintentionally. To obtain the specified reach of 12 m, the sensor should be installed at a height of approx. 2 m. Please observe the safety warnings on page 12.

Installation procedure:

- Undo screws on housing [1]
- Do not detach wiring from terminal block, but gently pull entire terminal assembly, including sensor unit [2] (cylindrical section), to remove it.
- Hold mounting plate [3] against wall/ceiling, mark drill holes, paying attention to wiring runs concealed in wall/ceiling. Drill holes, insert wall plugs (6 mm).
- Break open pre-punched cable entry holes as appropriate for concealed [4] or surface-mounted [5] installation, insert grommets, pierce and pass cable through.

Installation with swivel mount

The swivel mount [6] allows you to turn the motion detector horizontally. This provides additional adjustment for the detection zone.

- Press cupped pieces [7] out of swivel mount [6] provided with sensor unit.

Note: For surface-mounted wiring, it is recommended to install the swivel mount [6] (see below). Alternatively, the unit may be pierced at the thinner section to pass the cable through.

- Screw mounting plate [3] to wall.

6a) Connecting the mains lead

The mains lead consists of a 2-3 phase cable

- L** = phase conductor
N = neutral conductor
PE = protective-earth conductor

If you are in any doubt, you must identify the cables using a voltage tester; then disconnect the power supply again. The phase (**L**) and neutral conductor (**N**) are connected according to terminal assignment. The protective-earth conductor is connected to the earth terminal [8]. A mains switch for 'ON' and 'OFF' switching can of course be installed in the mains lead.

6b) Connecting the load supply lead

The load supply lead (e.g. light) is also a 2 to 3-core cable which is connected to terminals **N** and **L'**. The live conductor must be connected to the terminal marked **L'**. Connect the neutral conductor to the terminal marked **N** together with the neutral conductor of the mains power supply lead. The protective-earth conductor is connected to the earth terminal [8].

- Once wiring is completed, insert terminal block together with sensor unit [2] into mounting plate [3], fit housing cover [1] and secure in place with fastening screws.

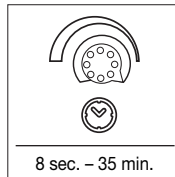
swivel mount [6] in such a way that the screw head is positioned on the smooth side and the domed side rests against the mounting plate [3] (see diagram).

Functions

The system can be put into operation once the sensor

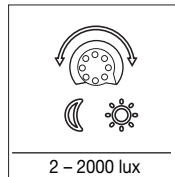
has been connected and installed. Two setting controls

are provided on the bottom of the unit.



Switch-off delay (time setting)

The chosen light 'ON' time can be varied continuously from approx. 8 sec. to a maximum of 35 min. The shortest period, approx. 8 sec., is selected by turning the control fully clockwise. The longest period, approx. 35 mins.



Twilight setting (response threshold)

The chosen detector response threshold can be adjusted continuously from approx. 2 lux to 2000 lux. Turning the control fully clockwise will select daytime operation at approx. 2000 lux.

is selected by turning the control fully anticlockwise. It is recommended to select the shortest time for adjusting the detection zone and for performing the walk test. Any movement in the detection zone will reactivate the time setting.

Turned fully anti-clockwise, the control is set to dusk-to-dawn operation at approx. 2 lux. When adjusting the detection zone and for the performance test in daylight, the adjusting screw must be turned fully clockwise.

Reach adjustment

(s. fig. page 4)

Reach can be reduced by tilting (70°) the sensor. The sensor can be turned horizontally through 40°

(only with swivel mount) to align the detection zone in exactly the way you require.

Precision adjustment using shrouds

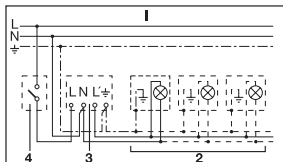
(s. fig. page 4)

The adhesive shrouds provided may be used to adjust the sensor's detection

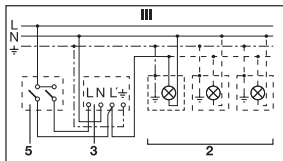
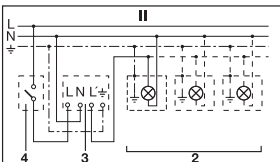
angle to suit individual requirements. This makes it possible, for example,

to blank out neighbouring premises from detection or specifically target paths.

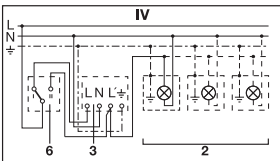
Wiring examples



1. Light without neutral conductor



3. Connection using series switch for manual and automatic operation



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

Setting I: automatic operation
Setting II: manual operation for permanent light 'ON'
Important: the unit cannot be switched off, but operated only at settings I and II.

- 1) e.g. 1-4 × 100 W filament bulbs
- 2) Service load, light of 600 W max. (see Technical specifications)
- 3) IS 2160 connection terminals
- 4) Indoor switch
- 5) Indoor series switch, manual, automatic
- 6) Indoor double-throw switch, automatic, permanent light 'ON'

Operation/Maintenance

The Infrared Sensor is suitable for switching light 'ON' and 'OFF' automatically. The unit is not suitable for special burglary alarm systems since it lacks the tampering protection prescribed for this pur-

pose. Weather conditions may affect the way the motion detector works. Strong gusts of wind, snow, rain or hail may cause the light to come 'on' when it is not wanted because the sensor is unable to distin-

guish sudden changes of temperature from sources of heat. The detector lens may be cleaned with a damp cloth if it gets dirty (do not use cleaning agents).

Technical specifications

Dimensions:	(H × W × D) 113 × 78 × 73 mm	
Output:	Incandescent / halogen lamp load	600 W
	Fluorescent lamps, electronic ballast	430 W
	Fluorescent lamps, uncorrected	500 VA
	Fluorescent lamps, series-corrected	406 VA
	Fluorescent lamps, parallel-corrected	406 VA
	Low-voltage halogen lamps	500 VA
	LED < 2 W	16 W
	2 W < LED < 8 W	64 W
	LED > 8 W	64 W
	Capacitive load	88 μF
Connection:	230 – 240 V, 50 Hz terminal block suitable for following supply leads: 3-core Ø 1.5 or 2.5 mm ² or 5-core Ø 1.5 mm ²	
Angle of coverage:	160° with sneak-by guard	
Pivoting range:	40° horizontal, 70° vertical	
Reach:	12 m max.	
Light threshold:	2 – 2000 lux	
Time setting:	8 sec. – 35 min. (factory setting: 10 sec.)	
Light threshold:	2 – 2000 lux (factory setting: 2000 lux)	
Enclosure:	IP 54	
Temperature range:	-20 °C to +50 °C	

Troubleshooting

Malfunction	Cause	Remedy
Without power	■ Fuse blown, not switched 'ON'	■ Renew fuse, switch 'ON' mains power switch, check wiring with voltage tester
	■ Short circuit	■ Check connections
Does not switch 'ON'	■ Twilight setting in nighttime mode during daytime operation	■ Readjust
	■ Bulb blown	■ Replace bulb
	■ Mains switch 'OFF'	■ Switch 'ON'
	■ Fuse blown	■ Renew fuse, check connection if necessary
	■ Detection zone not properly targeted	■ Re-adjust

Malfuction	Cause	Remedy
Does not switch 'OFF'	<ul style="list-style-type: none"> ■ Continued movement in detection zone ■ Light is in detection zone and keeps switching on as a result of temperature change ■ Position Wi-Fi device very close to the sensor ■ Set to continuous operation by indoor series switch 	<ul style="list-style-type: none"> ■ Check detection zone and re-adjust if necessary or fit shrouds ■ Readjust zone ■ Increase distance between Wi-Fi device and sensor ■ Set series switch to automatic mode
Keeps switching 'ON'/OFF'	<ul style="list-style-type: none"> ■ Light is in detection zone ■ Animals moving in detection zone 	<ul style="list-style-type: none"> ■ Change zone, increase distance, reduce output ■ Tilt sensor higher or apply specific shrouds, adjust detection zone or fit shrouds
Switches 'ON' when it should not	<ul style="list-style-type: none"> ■ Wind is moving trees and bushes in the detection zone ■ Cars in the street are being detected ■ Position Wi-Fi device very close to the sensor ■ Sudden temperature changes due to weather (wind, rain, snow) or air expelled from fans or open windows 	<ul style="list-style-type: none"> ■ Adjust detection zone or fit shrouds ■ Change detection zone, tilt sensor down ■ Increase distance between Wi-Fi device and sensor ■ Adjust detection zone or change site of installation
Reach modification	<ul style="list-style-type: none"> ■ Change in ambient temperatures 	<ul style="list-style-type: none"> ■ When it is cold, shorten reach by tilting sensor down ■ When it is hot, tilt sensor up

Disposal

Electrical and electronic equipment, accessories and packaging must be recycled in an environmentally compatible manner.



Do not dispose of electrical and electronic equipment as domestic waste.

EU countries only:
Under the current European Directive on Waste Electrical and Electronic Equipment and its implementation in national law, electrical and electronic equipment no longer suitable for use must be collected separately and recycled in an environmentally compatible manner.

Manufacturer's Warranty

As purchaser, you are entitled to your statutory rights against the vendor. If these rights exist in your country, they are neither curtailed nor restricted by our Warranty Declaration. We guarantee that your STEINEL Professional sensor product will remain in perfect condition and proper working order for a period of 5 years. We guarantee that this product is free from material-, manufacturing- and design flaws. In addition, we guarantee that all electronic components and cables function in the proper manner and that all materials used and their surfaces are without defects.

Making Claims

If you wish to make a claim, please send your product complete and carriage paid with the original receipt of purchase, which must show the date of purchase and product designation, either to your retailer or contact us at **STEINEL (UK) Limited, 25 Manasty Road, Axis Park, Orton Southgate, Peterborough, PE2 6UP**, for a returns number. For this reason, we recommend that you keep your receipt of purchase in a safe place until the warranty period expires. STEINEL shall assume no liability for the costs or risks involved in returning a product.

For information on making claims under the terms of the warranty, please go to **www.steinel-professional.de/garantie**

If you have a warranty claim or would like to ask any question regarding your product, you are welcome to call us at any time on our Service Hotline **01733 366700**.

5 YEAR
MANUFACTURER'S
WARRANTY