

STEINEL Vertrieb GmbH
Dieselstraße 80-84
33442 Herzebrock-Clarholz
Tel: +49/5245/448-188
www.steinel.de



Contact

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STEINEL
PROFESSIONAL



US 360



SINGLE US



DualTech



Dual US

CONTROL
PRO
SYSTEM

Information

US 360 COM1
US 360 COM2
US 360 DIM

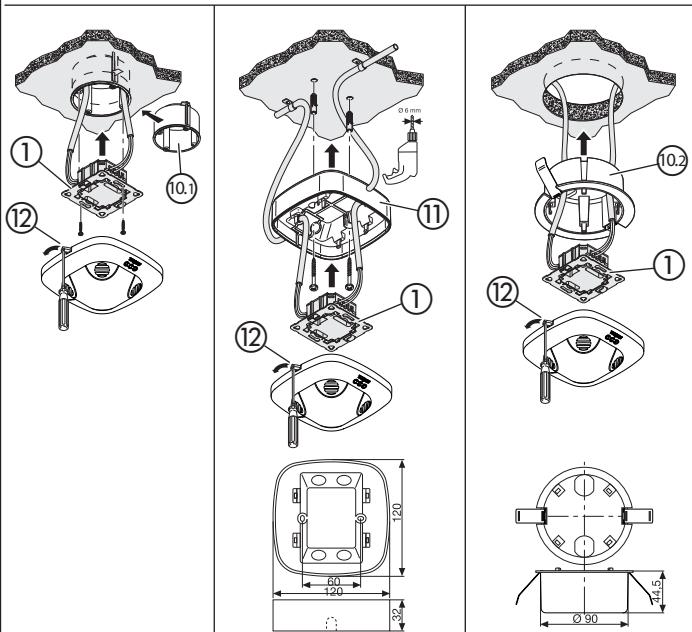
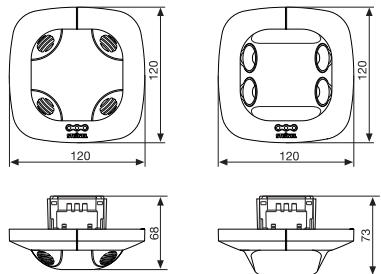
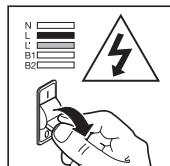
DualTech COM1
DualTech COM2
DualTech DIM

SINGLE US COM1
SINGLE US COM2
SINGLE US DIM

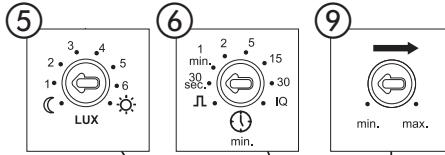
Dual US COM1
Dual US COM2
Dual US DIM

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CN	BG	RU	LV	LT	EE	HR	SI	RO	PL	SK	CZ		

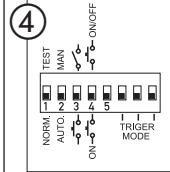
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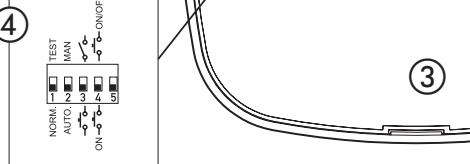
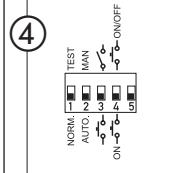
COM1



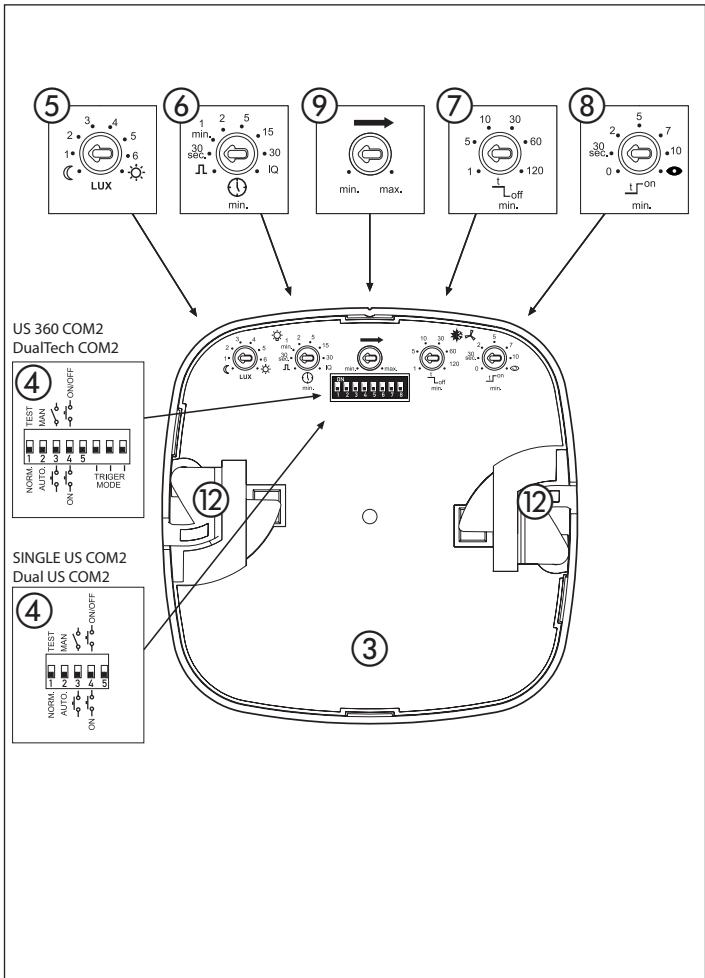
US 360 COM1
DualTech COM1



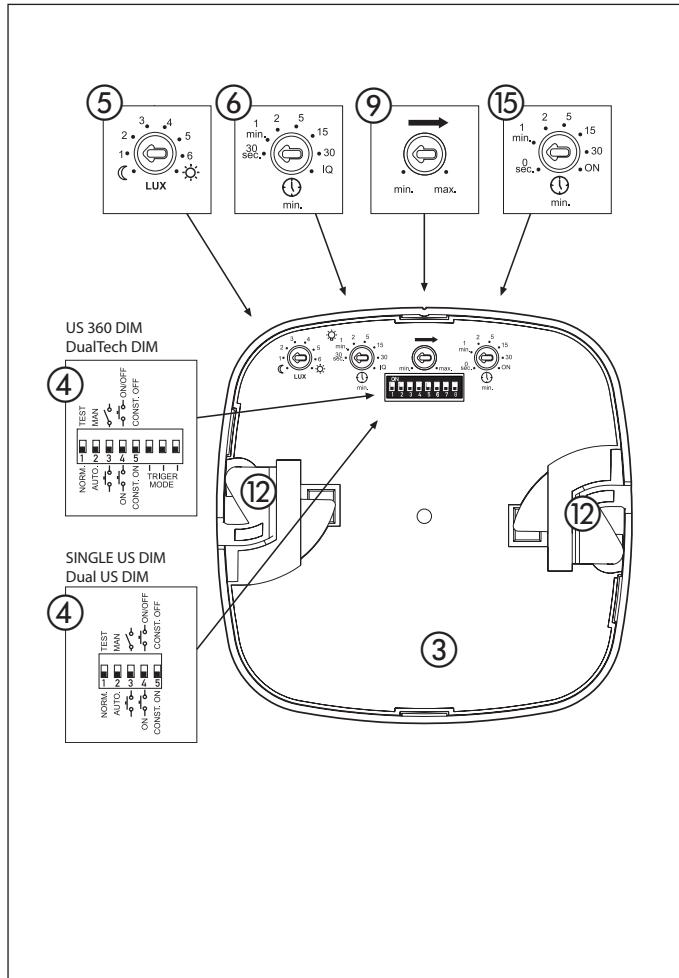
SINGLE US COM1
Dual US COM1



COM2

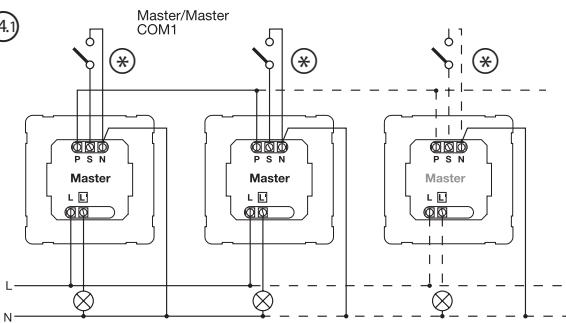


DIM

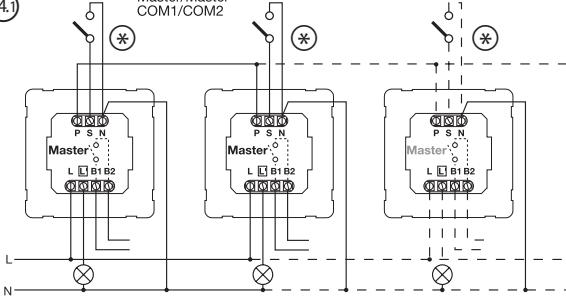


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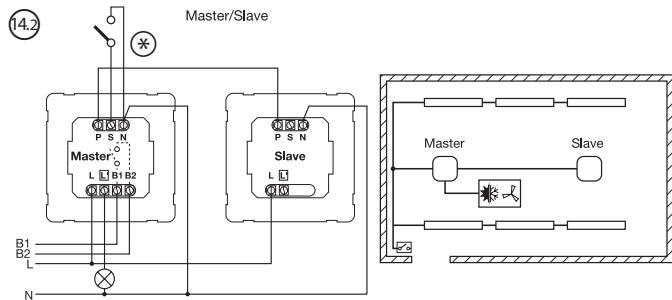
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14.1

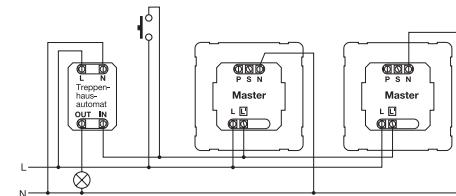


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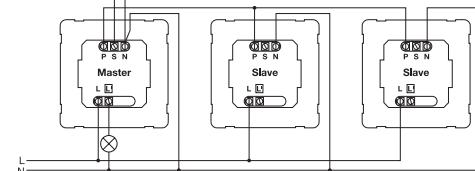


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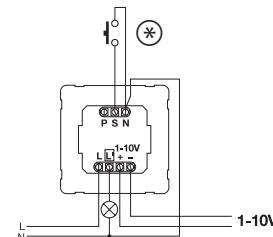
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14.4



14.5



(*) Kabellänge < 50 m / Cable length < 50 m

Entsorgung

Elektrogeräte, Zubehör und Verpackungen sollen einer umweltgerechten Wiederverwertung zugeführt werden.



Werfen Sie Elektrogeräte nicht in den Hausmüll!

Herstellergarantie

Herstellergarantie für Unternehmer, wobei Unternehmer eine natürliche oder juristische Person oder eine rechtsfähige Personengesellschaft ist, die bei Abschluss des Kaufes in Ausübung ihrer gewerblichen oder selbständigen beruflichen Tätigkeit handelt.

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Herstellergarantie
der STEINEL Vertrieb GmbH,
Dieselstraße 80-84, 33442 Herzebrock-Clarholz

Alle STEINEL-Produkte erfüllen höchste Qualitätsansprüche. Aus diesem Grund leisten wir als Hersteller Ihnen als Kunde gerne eine unentgeltliche Garantie gemäß den nachstehenden Bedingungen:

Wir leisten Garantie durch kostenlose Behebung der Mängel (nach unserer Wahl: Reparatur oder Austausch mangelhafter Teile ggf. Austausch durch ein Nachfolgemodell oder Erstellung einer Gutschrift), die nachweislich innerhalb der Garantiezeit auf einem Material- oder Herstellungsfehler beruhen.

Die Garantie für
- Sensorkit / Außenleuchten / Innenleuchten beträgt:
5 Jahre und beginnt mit dem Kaufdatum des Produktes.

Ausdrücklich ausgenommen von dieser Garantie sind alle auswechselbaren Leuchtmittel. Darüber hinaus ist die Garantie ausgeschlossen:

- bei einem gebrauchsbedingten oder sonstigen natürlichen Verschleiß von Produktteilen oder Mängeln am STEINEL-Produkt, die auf gebrauchsbedingtem oder sonstigem natürlichem Verschleiß zurückzuführen sind,
- bei nicht bestimmungs- oder unsachgemäßem Gebrauch des Produkts oder Missachtung der Bedienungshinweise,

Nur für EU-Länder:

Gemäß der geltenden Europäischen Richtlinie über Elektro- und Elektronik-Altergeräte und ihrer Umsetzung in nationales Recht müssen nicht mehr gebrauchsfähige Elektrogeräte getrennt gesammelt und einer umweltgerechten Wiederverwertung zugeführt werden.

GB Operating Instructions

Dear Customer,

Congratulations on purchasing your new STEINEL 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 because prolonged, reliable and trouble-free operation

will only be ensured if it is fitted and used properly.

We hope your new STEINEL sensor will bring you lasting pleasure.

⚠ Safety precautions

- Disconnect the power supply before attempting any work on the sensor!
- During installation, the electrical wiring you are connecting must be dead. Therefore, switch off the power first and use a voltage tester to make sure the wiring is off circuit.
- Installing the sensor 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 (VDE 0100).
- Terminal B 1, B 2 is a switching contact for low-energy circuits, not more than 1 A. This must be protected a fuse of the appropriate rating.
- Only electronic ballasts with a floating control signal may be used at DIM 1-10 V control output.

Assembly / Installation ⑬ (see fig. on page 2)

The sensor is only intended for concealed, indoor installation in ceilings. A clamping-type ceiling adapter or surface-mounting adapter is not included.

Sensor and load module come ready assembled and must be plugged together after fitting the load module and setting the potentiometers/dip switches. The sensor module must now be locked in place with the catch mechanism ⑫, using a screwdriver if necessary.

Accessories:
Kaiser hollow-wall box,
EAN no.: 4007841 000370
Clamping-type ceiling adapter,
EAN no.: 4007841 002855
Surface-mounting adapter,
EAN no.: 4007841 000363
Guard cage,
EAN no.: 4007841 003036
Service remote control,
EAN no.: 4007841 559410
User remote control,
EAN no.: 4007841 592806

System Components

- | | | |
|-------------------------------------|--|---|
| ① Load module | (6)(7)(8)
Trigger mode
(DT Quattro only) | ⑩ Kaiser hollow-wall box,
optional |
| ② Sensor module | ⑤ Light-level setting | ⑪ Clamping-type ceiling adapter,
optional |
| ③ Sensor base | ⑥ Time setting
Switching output 1 | ⑫ Surface-mounting adapter
IP 54, optional |
| ④ Dip switches | ⑦ HVAC stay-ON time
Switching output 2 | ⑬ Locking mechanism |
| (1) Normal/test mode | ⑧ HVAC switch-ON delay
Switching output 2 | ⑭ Assembly/Installation |
| (2) Semi-/fully automatic mode | ⑨ Reach setting | ⑮ Parallel-connected
configurations |
| (3) Button/switch | | ⑯ Stay-ON time
Orientation light
DIM option |
| (4) ON / ON-OFF button | | |
| (5) DIM option | | |
| Constant lighting control
ON/OFF | | |

5 JAHRE
HERSTELLER
GARANTIE

How it works / Basic function

The ultrasonic and DualTech presence detectors from the Control PRO range control lighting as well as heating, ventilation and air-conditioning (COM 2 only), e.g. in offices, schools, public buildings or at home, in

relation to ambient light level and the presence of persons. The presence detector's switching outputs and reach are set at the potentiometers and dip switches or by using the optional remote control.

Presence Control has a low intrinsic power consumption.

Presence Control PRO

US 360 COM1
Single US COM1
DualTech COM1
Dual US COM1

1 switching output operating in relation to light-level setting and presence of persons.

- Settings:
 - Light-level setting
 - Stay-ON time, pulse mode, IQ mode
- Settings:
 - Stay-ON time
 - Switch-ON delay
 - Room surveillance

Presence Control PRO

US 360 COM2
Single US COM2
DualTech COM2
Dual US COM2

1 switching output as COM 1. An additional 2nd switching output for operating HVAC (heating/ventilation/air-conditioning) in relation to the presence of persons.

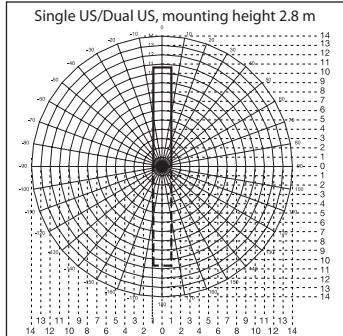
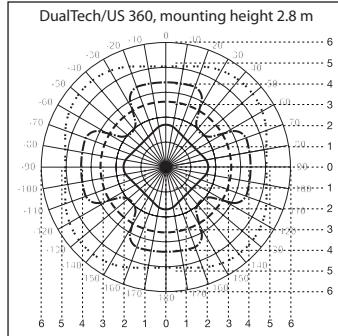
Presence Control PRO

US 360 DIM
Single US DIM
DualTech DIM
Dual US DIM

1 switching output operating in relation to light-level setting and presence of persons.

- Settings:
 - Light-level setting
 - Stay-ON time, IQ mode
 - Orientation light
 - Constant-lighting control

Detection zone



DualTech

- PIR radial & presence detection
- - - PIR tangential detection
- - - US tangential & presence detection
- - - - US radial detection of substantial movements

US 360

- - - US tangential & presence detection
- - - - US radial detection of substantial movements

Single US

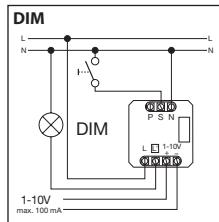
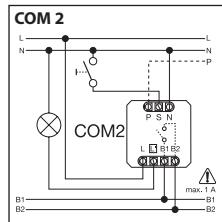
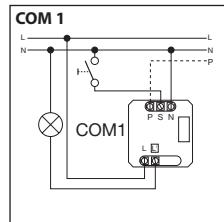
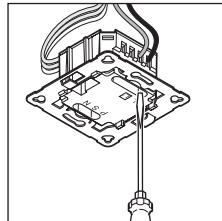
Dual US

Electrical installation / Automatic mode

In selecting the wiring leads, it is important to meet the wiring regulations laid down in VDE 0100 (see Safety warnings on page 19). Wiring up the presence detector: Under section 6 of VDE 0100 520, a multiple-core lead containing both the mains

voltage leads and the control leads (e.g. NYM 5 x 1.52) may be used for the wiring between sensor and electronic ballast. The mains connection lead must be no greater than 10 mm in diameter. The mains connection terminal accepts 2 x 2.5 mm² cables.

When installing the surface-mounting version, connect a circuit breaker (16 A) on the line side.



Technical Specifications

Dimensions (W x H x D):	120 x 120 x 68 mm DualTech 120 x 120 x 73 mm Single US 120 x 120 x 68 mm US 360 120 x 120 x 73 mm Dual US
Power supply:	230 – 240V, 50 Hz / 60 Hz
Capacity, switching output 1: (COM 1/COM 2):	Relay, 230V 2000 W max. resistive load ($\cos \varphi = 1$) 1000 VA max. ($\cos \varphi = 0.5$)
Electronic ballasts: (COM 1/COM 1 AP/COM 2/DIM)	Max. ON current 800 A/200 μ s 30 x (1 x 18 W), 25 x (2 x 18 W) 25 x (1 x 36 W), 15 x (2 x 36 W) 20 x (1 x 58 W), 10 x (2 x 58 W) Pay attention to specific ON currents of electronic ballasts! A relay or contactor must be provided on line side for higher switching capacities
Capacity, switching output 2: (COM 2 only):	Presence 230W/230V 1A max. ($\cos \varphi = 1$) for HVAC (heating/ventilation/air-conditioning)
Detection ranges: (Detection at 2.5 m / mounting height 2.5 m)	Tangential/presence (m): \emptyset 6 m max. (28 m^2) \emptyset 2 m min. (3 m^2) Radial: Reach up to \emptyset 10 m
	3 x 10 m / 3 x 20 m (30 / 60 m^3) max. 3 x 2.5 m / 3 x 5 m (7.5 / 15 m^3) min.
Light-level setting:	10 – 1000 lux, ∞ / daylight / DIM 100 – 1000 lux control threshold
Switching output 1: Time setting	30 sec. – 30 min., pulse mode (approx. 2 sec.), IQ mode (automatic adjustment to the usage profile)
Switching output 2: Time setting	COM2 only, for HVAC 0 sec. – 10 min. switch-ON delay 1 min. – 2 hrs. stay-ON time Automatic room surveillance
DIM:	30 sec. – 30 min., IQ mode (automatic adjustment to the usage profile)
Time setting	
Control output:	1 – 10 V / 50 electronic ballasts max, 100 mA max.
Mounting height: (mounted to ceiling)	2.5 m – 3.5 m
Point of installation:	Indoors
Sensor technology: DualTech	PIR (Passive Infrared), single pyro, 11 detection levels, 520 switching zones. Ultrasonic 40 kHz
US 360 / Single US / DualTech	Ultrasonic 40 kHz
IP rating:	IP 20
Protection class:	II
Temperature range:	-25 °C – +55 °C

Functions – Settings by DIP switch ④

Factory settings

DIP 1: OFF	DIP 6: ON
DIP 2: OFF	DIP 7: OFF
DIP 3: OFF	DIP 8: OFF
DIP 4: ON	Light-level setting ⑤: ☀
DIP 5: OFF	Time setting ⑥: 15 min.

Stay-ON time ⑦: 30 min.
Switch-ON delay ⑧: 5 min.
Reach setting ⑨: centre
Basic light level ⑩: 30 min.

COM 1 + COM 2

DIP 1

Normal mode / Test mode (NORM / TEST)

Test mode has priority over all other settings on the presence detector and serves the purpose of checking for proper working order as well for testing the detection zone. Irrespective of

ambient light level, the presence detector activates the light to stay on for approx. 8 sec. in response to movement in the room. (blue LED flashes when movement is detected).

All user-selected potentiometer settings apply in normal mode. The presence detector can also be set by means of the blue LED without any load connected.

DIP 2

Semi-automatic mode (MAN) / fully automatic mode (AUTO)

Semi-automatic mode: (MAN)

The light now only switches OFF automatically. Light is switched ON manually.

Light must be requested using the button and stays ON for the time set at the potentiometer

(pressing twice switches ON for 4 hours).

Fully automatic mode: (AUTO)

The light automatically switches ON and OFF in relation to light level when someone is present. Light can be switched ON and OFF manually at any time. This temporarily interrupts the auto-

matic switching function. Irrespective of the settings selected, light stays ON for 4 hours after manually pressing the button twice or switches OFF after manually pressing the button once.

Pressing the button before the 4 hours elapse returns the presence detectors to the normal operating mode.

DIP 3

Button/switch

Tells the sensor how to interpret the incoming signal. Assigning external buttons/switches allows you to operate the detector as a semi-automatic unit and override it manually at any time.

- Operation either by button or switch
- Several buttons possible on one control input
- Only use illuminated pushbutton with neutral conductor connected

Cable length between sensor and switch < 50 m

DIP 4

ON/ON-OFF button

In the ON-OFF setting, the light can be switched ON and OFF manually at any time (except in

pulse mode: no manual OFF). In the ON setting, light can no longer be switched OFF manual-

ly. The stay-ON time starts from the beginning again each time the button is pressed.

DIM

DIP 5

Constant light ON/OFF

Provides a constant level of brightness. Detector measures the prevailing level of daylight and activates sufficient artificial light to achieve the required level.

Level of brightness. As daylight changes, the switched-in artificial lighting component is adjusted accordingly. In addition to the daylight component, artificial

light is also switched ON and OFF in relation to whether or not persons are present.

DualTech COM1 / COM2 / DIM

DIP 6 / 7 / 8

Trigger mode

The trigger mode enables the user to choose which sensing technologies should be used to initially turn the load on and which technologies are required to keep it on. The following settings are possible:

- Both: Requires movement recognition by PIR and US
- Either: Requires movement recognition by PIR or US
- PIR: Requires movement recognition by PIR
- US: Requires movement recognition by US

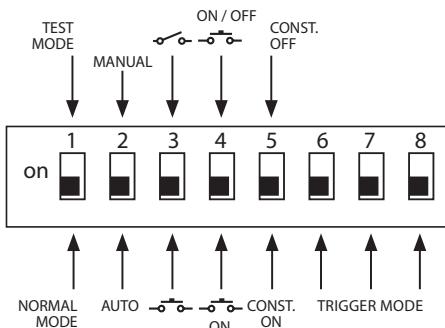
Initial occupancy:

Sensor technology used to turn the load on (PIR, US, Both, Either)

Maintain Occupancy:

Sensor technology used to keep the load on after initial occupancy (PIR, US, Both, Either)

The trigger mode is selected by DIP switches 6, 7 and 8.



Trigger mode options (4)	Initial presence	Maintain presence:	DIP 6	DIP 7	DIP 8
Option 1	Both	Either	OFF	OFF	OFF
Option 2	Both	Both	OFF	OFF	ON
Option 3	PIR	Either	OFF	ON	OFF
Option 4	US	Either	OFF	ON	ON
Option 5 (factory setting)	Either	Either	ON	OFF	OFF
Option 6	US	US	ON	OFF	ON
Option 7	PIR	PIR	ON	ON	OFF
Option 8	Either	Both	ON	ON	ON

Functions – Settings by potentiometer

COM 1 + COM 2

Potentiometer (5)

Twilight setting

The chosen response threshold can be infinitely varied from approx. 10 – 1000 lux.

Control dial turned fully clockwise: MAX daylight mode
Control dial turned fully anti-clockwise: MIN night mode

Depending on the site of installation, the setting may need to be corrected by 1-2 marks on the scale.

Examples of use	Light-level settings
Night-time mode	min
Corridors, foyers	1
Stairs, escalators, moving walkways	2
Washrooms, toilets, switchrooms, canteens	3
Sales floor, kindergartens, nursery school rooms, sports halls	4
Work rooms: offices, conference and meeting rooms, precision assembly activities, kitchens	5
Working areas requiring good light: Laboratory, technical drawing, precision work	>=6
Daylight mode	max

Note: Depending on the site of installation, the setting may need to be corrected by 1 – 2 marks on the scale. The light level is measured at the sensor.

Potentiometer (6)

Time setting

Stay-ON time for switching output 1
Setting 30 sec. – 30 min.

The chosen stay-ON time is infinitely variable from a minimum of approx. 30 sec. to a maximum of 30 min. Intrinsic light is cali-

brated after 3 min. When the threshold is exceeded, the sensor switches OFF after the stay-ON time expires.

Pulse mode (except DIM) □

If the dial is set to □ (fully anti-clockwise), the unit is in pulse mode, i.e. the output is switched ON for approx. 2 sec. (e.g. for stair-

well lighting timer). Afterwards, the sensor does not react to movement for approx. 8 sec. Day mode is the only mode possible here be-

cause of dazzle by light from external sources.

IQ-Modus

Turned fully clockwise: The stay-ON time is self-learning and adjusts dynamically to user behaviour.

The optimum time cycle is determined by means of a learning algorithm.

The shortest time is 5 min., the longest 20 min.

COM 2

Potentiometer ⑦

Stay-ON time for switching output 2 HVAC

- Setting 1 min. – 2 hr.
- Turned fully clockwise: max
- Turned fully anti-clockwise: min

Potentiometer ⑧

Switch-ON delay for switching output 2 HVAC

- Setting 0 sec. – 10 min.
 - Turned fully clockwise: Room surveillance
 - Turned fully anticlockwise: 0 sec. (OFF)
- Turning the potentiometer to the "Surveillance" setting reduces the sensitivity of the "Presence" switching output. The contact only closes on detecting a pronounced movement, signifying with a high degree of certainty that persons are present.

- Turned fully anti-clockwise: min

The stay-ON time remains active. The switch-ON delay is inactivated.

Potentiometer ⑯

Basic light level (DIM version)

Provides basic illumination for the selected stay-ON time when ambient light falls below the selected light-level threshold that is set. This can be dimmed to 10% of maximum light intensity. As soon as a person enters the scene, the detector switches either to 100%

light intensity (constant-lighting controller OFF) or adjusts to the preselected light level (constant-lighting controller ON). When no movement is being detected, the detector dims back to basic light level after the stay-ON time expires. This is switched OFF when

stay-ON time (1 min. – 30 min.) has expired or the daylight component is sufficient to exceed the selected level of brightness. In the ON setting, the detector switches basic light level ON and OFF as soon as the level of light falls below the light-level threshold.

Reach adjustment

Potentiometer ⑨

The reach required (response threshold) is infinitely variable.

- US 360 / DualTech at least 2 x 2 m - 6 x 6 m presence

- Single US / Dual US at least 3 x 3 m - 10 x 3 m in each direction

Turned fully anticlockwise = minimum reach

Turned fully clockwise (factory setting) = maximum reach

Parallel-connected configurations

When using several detectors, they must be connected to the same phase!

As many as 10 sensors can be connected in parallel.

⑭ Master/master

A parallel-connected configuration also permits the use of several masters. In this case, each master operates the lighting group in accordance with the level of bright-

ness it measures. Delay times and light-level thresholds are selected at each master as required. The switched load is spread among the individual masters. Presence is still

detected collectively by all detectors. The presence output can be picked off from any master.

⑭ Master/slave

The master/slave configuration permits detection of movement in large-type rooms or spaces (load connected = master, no load = slave). The level of brightness pre-

vailing in the room is only evaluated at the master. The slaves report movements detected to the master. Lighting or HVAC is switched ON and OFF by the master only.

- Two detectors linked with an external stairwell lighting timer

Old building / building modernisation

External light source activated by button. No twilight mode, day mode only.

- Detector as stairwell lighting timer

- DIM detector

- * This external button cable is not intended to serve as a neutral conductor connection for loads (see page 6/7).

Remote control

Using the remote control (optional), functions can be conveniently activated from the floor.

Note: The pulse mode cannot be overridden by the remote control. Switch pulse mode OFF manually.

Presence Control remote control unit: EAN no: 4007841 559410

Troubleshooting

Malfunction	Cause	Remedy
Light does not switch ON	<ul style="list-style-type: none"> ■ No supply voltage ■ Lux setting too low ■ No motion being detected 	<ul style="list-style-type: none"> ■ Check supply voltage ■ Slowly increase lux setting until light switches ON ■ Ensure unobstructed sensor vision ■ Check detection zone
Light does not switch OFF	<ul style="list-style-type: none"> ■ Lux setting too high ■ Stay-ON time running out ■ Interference from unintended sources of motion, e.g.: ceiling fan, heater, HVAC, open doors and windows 	<ul style="list-style-type: none"> ■ Reduce lux setting ■ Wait until stay-ON time elapses; reduce stay-ON time if necessary ■ Readjust coverage zone or apply masking material
Sensor switches OFF in spite of persons being present	<ul style="list-style-type: none"> ■ Stay-ON time too short ■ Light-level threshold too low 	<ul style="list-style-type: none"> ■ Increase stay-ON time ■ Change light threshold
Sensor does not switch OFF quickly enough	■ Stay-ON time too long	■ Reduce stay-ON time
Sensor does not switch ON quickly enough when approached from the front	■ Reach is reduced when approached from the front	<ul style="list-style-type: none"> ■ Install additional sensors ■ Reduce distance between two sensors
Sensor does not switch ON when persons are present in spite of it being dark	■ Lux setting too low	<ul style="list-style-type: none"> ■ Sensor deactivated by switch/button? ■ Semi-automatic mode? ■ Increase light-level threshold

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