Product data for intelligent lighting control

January 2010

Intelligent lighting control

You are most welcome to contact us for help and guidance on our products and solutions. Contact our distributor or visit us at www.servodan.com for more information on intelligent lighting control.

The support is near...
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Outdoor lighting control
Minilux day/night switch

230 V

- Smart design
- Internal lux-setting 2–200 lux (cannot be deactivated by unauthorised persons)
- Handles heavy loads 3.000 W / 3.000 VA
- Test button for correct connection
- On mounting base
- Energy saver: turns on only when daylight is insufficient
- The daylight switch can be connected to a time switch for night-time turn-off

The Minilux day/night switch is specifically designed for controlling outdoor lighting. The lighting turns on automatically when daylight decreases below the preset lux level (adjustable in the range 2 – 200 lux) and turns off when the daylight switch detects daylight above the preset level.

The day/night switch has been designed so it has the ideal technical angle for detecting daylight. The light sensor is placed under the slightly upward-tilting front cover so the sensor points skywards.

Activating the test button under the front cover will turn on the lighting for 1 minute.

The day/night switch is easy to mount and service, as all electronic parts are placed in the front cover. This makes it easy to carry out the wiring after mounting the sensor. The entire base is used as the connection housing.

Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
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</thead>
<tbody>
<tr>
<td>Minilux day/night switch 41-047</td>
<td>5703102 201294</td>
<td></td>
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</table>

Product data

Minilux day/night switch 41-047

Input
Supply voltage 230 V AC ±10 %
Power consumption approx. 1 W

Output
Relay contact 16 A, 230 V AC

Max load:
- Incandescent lamps 3.000 W
- Fluorescent lamps (uncompensated) 3.000 VA
- Tungsten-halogen lamps (230 V AC) 3.000 W
- Vapour lamps (high/low pressure) 1.000 W
- Low-pressure sodium/Mercury lamps 1.000 W
- Actuating current max. 165 A/20 mS

Performance
Lux range 2...200 lux
Hysteresis approx. 50 %
Time delay approx. 1 min.
Protection class IP 54
Cable 2 x Ø8...13
Ambient temperature -50° C...+ 50° C

Light-emitting diode for indication of current light level.

Approval
CE according to EN 60669-2-1
Product data

Minilux day/night switch
230 V

- Classic design
- External lux-setting 5–300 lux
- On mounting base
- Energy saver: turns on only when daylight is insufficient
- The daylight switch can be connected to a time switch for night-time turn-off

The Minilux day/night switch is specifically designed for controlling outdoor lighting.

The lighting turns on automatically when daylight decreases below the preset lux level and turns off when the daylight switch detects daylight above the preset level.

The LED acts as an adjustment aid, and therefore responds without any time delay. The LED is turned on when the measured lux level is lower than or equal to the scale value setting.

The entire base is used as the connection housing, which ensures a quick and easy installation.

Technical data

Input
Supply voltage 230 V AC ± 10 %
Power consumption 1 W

Output
Relay contact NO, µ10 A, 250 V AC
Max load:
Incandescent lamps 2,300 W
Fluorescent tubes, not compensated 1200 VA
Halogen incandescent lamps 500 W
Max. compensation capacity 140 µF
Max. starting current 80 A / 20 ms

Performance
Lux range 5 ... 300 lux
Protection class IP 54
Ambient temperature -25° ... +45° C

Approvals
CE according to EN 60669-2-1

Connection

Order number
Product Minilux day/night swi. Type 41-054 EAN no. 5703102 203588
Product data

Minilux day/night switch
230 V with integrated radio-controlled clock

- With integrated radio-controlled clock (DCF) and seven activation programmes
- The clock function can be used without the DCF signal
- Classic design
- External lux-setting 5–500 lux
- Energy saver: turns on only when daylight is insufficient
- Easy to install and to programme

The Minilux day/night switch is specifically designed for controlling outdoor lighting.

The lighting turns on automatically when daylight decreases below the preset lux level and turns off when the daylight switch detects daylight above the preset level. During the lighting period the switch can be programmed to turn off light when needed - for instance in the middle of the night or during weekends.

The entire base is used as the connection housing, which ensures a quick and easy installation.

The callsign DCF77 stands for
D = Deutschland (Germany)
C = Long wave signal
F = Frankfurt
77 = frequency: 77.5 kHz

Technical data

Input
Supply voltage 230 V AC ± 10 %
Power consumption <1 W

Output
Relay contact NO, µ10 A
Dry relay contact
Max load:
Incandescent lamps 2 300 W
Fluorescent tubes, not compensated 1200 VA
Halogen incandescent lamps 2 300 W
Energy saving light bulbs 58 pcs. (18 W)
Max. compensation capacity 140 µF
Max. starting current 80 A / 20 ms

Performance
Lux range 5–500 lux
Protection class IP 54
Temperature range -25°...+50° C

Approvals
CE according to EN 60669-2-1

Order number
Product Type EAN no.
Minilux day/night swi. 41-055 5703102 204202
Product data

Minilux day/night switch

24 V AC/DC

- Smart design
- Internal lux-setting 2–200 lux (cannot be deactivated by unauthorised persons)
- Test button for correct connection
- On mounting base
- Energy saver: turns on only when daylight is insufficient
- The day/night switch can be connected to a time switch for night-time turn-off

The Minilux day/night switch is specifically designed for controlling outdoor lighting. The lighting turns on automatically when daylight decreases below the preset lux level (adjustable in the range 2 – 200 lux) and turns off when the daylight switch detects daylight above the preset level.

The day/night switch has been designed so it has the ideal technical angle for detecting daylight. The light sensor is placed under the slightly upward-tilting front cover so the sensor points skywards.

Activating the test button under the front cover will turn on the lighting for 1 minute.

The day/night switch is easy to mount and service, as all electronic parts are placed in the front cover. This makes it easy to carry out the wiring after mounting the sensor. The entire base is used as the connection housing.

Technical data

Input
Supply voltage 24 V AC/DC
Power consumption approx. 1 W

Output
Relay contact NO, µ4A, Cos ϕ =1
Max load:
Incandescent lamps 80 W
Minimum load > 150 mA/24 V DC

Performance
Lux range 2...200 lux
Hysteresis approx. 50 %
Time delay approx. 1 min.
Protection class IP 54
Cable inputs 2 x M 20
Ambient temperature -50° C...+ 50° C

Light-emitting diode for indication of current light level

Approval
CE according to EN 60669-2-1

Order number

Product Type EAN no.
Minilux day/night switch 41-044 5703102 201287

Connection

Dimensions

Lux setting

Test button
Pressing the button turns on the lighting for 1 minute.

Light-emitting diode for indication of current light level

Preset at factory - 35 lux
Lux setting 2...200 lux

Order number

Product Type EAN no.
Minilux day/night switch 41-044 5703102 201287

Connection

Dimensions

Lux setting

Test button
Pressing the button turns on the lighting for 1 minute.

Light-emitting diode for indication of current light level

Preset at factory - 35 lux
Lux setting 2...200 lux

Order number

Product Type EAN no.
Minilux day/night switch 41-044 5703102 201287

Connection

Dimensions

Lux setting

Test button
Pressing the button turns on the lighting for 1 minute.

Light-emitting diode for indication of current light level

Preset at factory - 35 lux
Lux setting 2...200 lux

Order number

Product Type EAN no.
Minilux day/night switch 41-044 5703102 201287

Connection

Dimensions

Lux setting

Test button
Pressing the button turns on the lighting for 1 minute.

Light-emitting diode for indication of current light level

Preset at factory - 35 lux
Lux setting 2...200 lux

Order number

Product Type EAN no.
Minilux day/night switch 41-044 5703102 201287

Connection
Product data

Minilux day/night switch
12 V AC/DC

- Smart design
- Internal lux-setting 2–200 lux (cannot be deactivated by unauthorised persons)
- Test button for correct connection
- On mounting base
- Energy saver: turns on only when daylight is insufficient
- The daylight switch can be connected to a time switch for night-time turn-off

The Minilux day/night switch is specifically designed for controlling outdoor lighting. The lighting turns on automatically when daylight decreases below the preset lux level (adjustable in the range 2 – 200 lux) and turns off when the daylight switch detects daylight above the preset level.

The day/night switch has been designed so it has the ideal technical angle for detecting daylight. The light sensor is placed under the slightly upward-tilting front cover so the sensor points skywards.

Activating the test button under the front cover will turn on the lighting for 1 minute.

The day/night switch is easy to mount and service, as all electronic parts are placed in the front cover. This makes it easy to carry out the wiring after mounting the sensor. The entire base is used as the connection housing.

Technical data

Input
Supply voltage 12 V AC/DC
Power consumption approx. 1 W

Output
Relay contact NO, µ4A, Cos ϕ =1
Max load: Incandescent lamps 40 W
Minimum load > 300 mA/12 V DC

Performance
Lux range 2 – 200 lux
Hysteresis approx. 50 %
Time delay approx. 1 min.
Protection class IP 54
Cable inputs 2 x M 20
Ambient temperature -50° C...+ 50° C
Light-emitting diode for indication of current light level

Approval
CE according to EN 60669-2-1

Order number

Minilux day/night switch 41-042  5703102 201270
Product data

Minilux control (day/night switch) with separate light sensor

- 17,5 mm module
- Lux range 3-300 lux
- For installation in distribution board or simple casing
- Class I product – The sensor lead must be installed as a high voltage installation
- LED indicating current light level

The light is switched on at the pre-set lux level (default 35 lux). The light is switched off again when the daylight exceeds the Lux on setting by 10 %.

Minilux 18-092 control switches on the light immediately after a power failure for one minute, and on startup.

The LED acts as an adjustment aid, and therefore responds without any time delay. The LED goes off when the measured lux level is lower than or equal to the pre-set lux level.

The product is class I, so the sensor lead must be installed as a high voltage installation, max. length 100 m, 3 x 1.5 mm².

Technical data

Input
Supply voltage 230 V AC ± 10 %
Power consumption <1 W
Signal from light sensor 0-10 V

Output
Relay contact NO, μ10 A, 250 V AC
Max load:
- Incandescent lamps 2.300 W
- Fluorescent tubes, not comp. 1.200 VA
- Halogen incandescent lamps 500 W
- Max. compensation capacity 140 µF
- Max. starting peak 80 A / 20 ms
Output voltage 56 V DC

Performance
Lux range 3...300 lux
Adjustment range for Lux on 3...270 lux
Tolerance of lux range ±10 %
Time delay 1 min.
Protection class IP 20
Insulation class Class I
Cable to 43-196 3 x 1,5 mm²
Max cable length to 43-196 100 m
Temperature range +5° C...+50° C

Approval
CE according to EN 60669-2-1

Order numbers:

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<td>Minilux Control 18-092</td>
<td>18-092</td>
<td>5703102 203250</td>
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<tr>
<td>Minilux light sensor 43-196</td>
<td>43-196</td>
<td>5703102 203373</td>
</tr>
<tr>
<td>Complete with light sensor (18-092 + 43-196)</td>
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<td>5703102 203472</td>
</tr>
</tbody>
</table>

Minilux light sensor

- 17,5 mm module
- Lux range 3-300 lux
- For installation in distribution board or simple casing
- Class I product – The sensor lead must be installed as a high voltage installation
- LED indicating current light level

The light is switched on at the pre-set lux level (default 35 lux). The light is switched off again when the daylight exceeds the Lux on setting by 10 %.

Minilux 18-092 control switches on the light immediately after a power failure for one minute, and on startup.

The LED acts as an adjustment aid, and therefore responds without any time delay. The LED goes off when the measured lux level is lower than or equal to the pre-set lux level.

The product is class I, so the sensor lead must be installed as a high voltage installation, max. length 100 m, 3 x 1.5 mm².

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<td>5703102 203472</td>
</tr>
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Servodan A/S | Tel +45 7442 4726 | Fax + 45 7442 4035 | info@servodan.dk | www.servodan.com
### Product data

#### Dimensions

<table>
<thead>
<tr>
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<th>Height</th>
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<tr>
<td>180 mm</td>
<td>180 mm</td>
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</tbody>
</table>

#### Technical data

**Input**
- Supply voltage: 56 V DC ± 10%

**Output**
- Output voltage: 0-10 V

**Performance**
- Lux range: 3...300 lux
- Connection: Screws & terminal
- Distance from Control: Max. 100 m
- Cable: 3 x 1.5 mm²
- Ambient temperature: -40°C...+50°C

#### Placement

- By placement on a wall you must make allowance for the shadow effects on the sensor. (see fig. 1)
- The sensor must be placed notherly, because north is lightneutral in proportion to the suns daily cycle east-south-west.

#### Order numbers

<table>
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<tr>
<th>Product Type</th>
<th>Type</th>
<th>EAN no.</th>
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<td>Minilux light sensor</td>
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<td>Minilux Control</td>
<td>18-092</td>
<td>5703102 203250</td>
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<tr>
<td>Complete with Day/night switch</td>
<td>(18-092 + 43-196)</td>
<td>5703102 203472</td>
</tr>
</tbody>
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**Minilux light sensor 0-10 V for outdoor mounting**

- For connection to Minilux Control 18-092
- 56 V DC
- Screw terminal connection
- Protection class IP 54

Minilux light sensor 43-196 is for outdoor lighting control.

The light sensor has screw terminal connection, so there is no need for extra junction boxes.

The light sensor has a IP 54 protection class.

**Please note!**

The light sensor must be connected to a class I Minilux Control, and therefore wiring to sensor must be set up as for power current.

**Placement:**

By placement on a wall you must make allowance for the shadow effects on the sensor. (see fig. 1)

The sensor must be placed notherly, because north is lightneutral in proportion to the suns daily cycle east-south-west.
Minilux Control (day/night switch) with separate setting of morning and evening level.
Integrated clock function for night blocking.

- 17.5 mm module
- Lux on 3–300 lux
- Easy setting via display
- For installation in distribution board or simple casing
- Class I product - The sensor lead must be installed as a high voltage installation

Minilux Control 18-093 is easy to programme via display. In the display you can set Lux on, Lux off, time and night blocking.

The light is switched on at the pre-set lux level (default 35 lux). In the morning, the light is switched off again at the lower Lux off setting. Lux off can be set to 10–70 % of Lux on (but min. 3 lux and max. 90 lux).

Minilux Control 18-093 has an integrated clock function allowing the light to be switched off completely during a pre-defined period. Switching off the lighting for example during the night means more energy saving.

The time blocking period can be deactivated by mounting a switch between terminals øC1 and øC2.

After a power failure and on startup the light will be switched on for one minute.

The product is class I, so the sensor lead must be installed as a high voltage installation, max. length 100 m, 3 x 1.5 mm².

**Technical data**

**Input**
- Supply voltage 230 V AC ± 10 %
- Power consumption <1 W
- Signal from light sensor 43-198 0–10 V

**Output**
- Relay contact NO, μ10 A, 250 V AC
- Max load:
  - Incandescent lamps 2.300 W
  - Fluorescent tubes, not comp. 1.200 VA
  - Halogen incandescent lamps 500 W
  - Compensation capacity 140 μF
  - Max. starting peak 80 A / 20 ms
- Supply voltage 43-198 24 V DC

**Performance**
- Lux range 3...300 lux
- Lux on 10...300 lux
- Lux off 10 %...70 % of Lux on (Min. 3 lux, max. 90 lux)
- Tolerance of lux range ±10 %
- Time delay 1 min.
- Protection class IP 20
- Backup for clock > 2 hours (when the unit has been connected at least 5 minutes.)
- Clock stability at 20°C, per day ± 1 s
- Insulation class Class I
- Temperature range +5° C...+50° C

**Approval**
- CE according to EN 60669-2-1

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minilux Control</td>
<td>18-093</td>
<td>5703102 203267</td>
</tr>
<tr>
<td>Minilux sensor</td>
<td>43-198</td>
<td>5703102 203595</td>
</tr>
<tr>
<td>Complete with light sensor</td>
<td>(18-093 + 43-198)</td>
<td>18-193 5703102 203489</td>
</tr>
</tbody>
</table>
Minilux light sensor for outdoor mounting

- 43-198 for connection to Minilux Control 18-093, Minilux Control 36-092 and Control 36-080
- 24 V DC
- Screw terminal connection
- Protection class IP 54

Minilux light sensor 43-198 is for outdoor lighting control.

The light sensor has screw terminal connection, so there is no need for extra junction boxes.

The light sensor has a IP54 protection class.

Please note!
If the light sensor is connected to a class I Minilux Control (18-093), the wiring to the sensor must be set up as for power current.

Placement:
By placement on a wall you must make compensation for the shadow effects on the sensor. (see fig. 1)

The sensor must be placed notherly, because north is lightneutral in proportion to the suns daily cycle east-south-west.

Order numbers

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Minilux light sensor</td>
<td>43-198</td>
<td>5703102 203595</td>
</tr>
</tbody>
</table>
**Product data**

**Dimensions**

![Dimensions Diagram]

**36-092**

**Technical data**

- **Input**
  - Supply voltage: 230 V ± 10 % 50 Hz
  - Load: max. 40 mA (no short circuit protection)
  - Power consumption: ca. 2 W
  - Signal from light sensor: 0-10 V

- **Output**
  - Relay contact: NO, µ10 A, 250 V AC
  - Max load:
    - Incandescent lamps: 2,300 W
    - Fluorescent tubes, not compensated: 1,200 VA
    - Halogen incandescent lamps: 500 W
    - Compensation capacity: 140 µF
    - Max. starting peak: 80 A / 20 ms
    - Secondary voltage: 24 V DC ±10 %
    - Ripple: max. 0.5 Vpp

- **Performance**
  - Lux range: 3...300 lux
  - Setting range: 3...270 lux
  - Tolerance of lux range: ±10 %
  - Positive hysteresis: 10 %
  - Protection class: IP 20
  - Insulation class: Class II
  - Ambient temperature: +5° C ... +50° C

- **Approvals**
  - CE according to EN 60669-2-1

**Minilux Control (day/night switch) with separate light sensor**

- 35 mm modul
- 3 lux ranges
- For installation in distribution board or simple casing
- Class II product – cable to light sensor can be installed as low-voltage
- Easy settings via display

The Minilux 36-092 Control is designed for fitting in boards on DIN rails.

External Light Sensor 43-198, which measures the current daylight level, is connected to 36-092.

The light is switched on at the preset Lux on value (default 35 lux). In the morning the light is switched off once more when a value of Lux on +10 % is reached.

The night switch is easy to programme via the display. Lux on can be set in the module. There is also a facility to test the installation.

The current light level can be read off from the display.

In the event of a power failure and at startup, the light is switched on for 1 minute.

The product is designed as class II – the cable to the light sensor can be installed as low-voltage.

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minilux Control 36-092</td>
<td>36-092</td>
<td>5703102 203908</td>
</tr>
<tr>
<td>Minilux light sensor</td>
<td>43-198</td>
<td>5703102 203595</td>
</tr>
<tr>
<td>Complete with light sensor (36-092 + 43-198)</td>
<td>36-192</td>
<td>5703102 203915</td>
</tr>
</tbody>
</table>

---

**Connection**

**Minilux Control 36-092**

**Function**

- Light Off Lux on +10% (38.5 lux)
- Light On Lux on 35 lux

**Order numbers**

- Servodan A/S | Tel +45 7442 4726 | Fax + 45 7442 4035 | info@servodan.dk | www.servodan.com

13
Minilux movement sensor (230 V) type 41-227 for outdoor lighting control

- Connection for 230 V
- Detection angle 200°
- Range 14 m
- Time delay up to 12 min.
- External setting of lux level, time and sensitivity

The Minilux PIR Sensor 41-227 responds to movement and temperature differences. The sensor, with its detection angle of 200°, is suitable for controlling lighting in surrounding outdoor areas.

A built-in light sensor prevents the lightning to switch on by day.

The lighting can by switched on with an indoor switch (Switches off when the adjusted time expires).

The head of the sensor can be moved slightly up and down.

---

## Product data

### Input
- Supply voltage: 230 V AC ±10 %
- Power consumption: < 1 W

### Output
- Relay contact: NO, μ 10 A, 250 V, cos ϕ = 1
- Max load:
  - Incandescent lamps: 2.300 W
  - Fluorescent tubes, not compensated: 1.200 VA
  - Compensation capacity: 140 μF
  - Tungsten-halogen lamps (230 V): 2.300 W
- Max. starting peak: 80 A/20 ms

### Performance
- Detection angle: 200°
- Detection range: 3-14 m.
- Time delay: 6 sec...12 min.
- Lux range: from 3 Lux
- Protection class: IP 44
- Sensitivity: Adjustable
- Mounting height: 2-3 m
- Ambient temperature: -20° C...+40° C

### Approvals
- CE according to EN 60669-2-1

---

### Technical data

#### Connection

- PIR
- Brown
- Blue
- Red
- L1
- N

#### Dimensions

- 41-227
- 95 × 85 × 122 mm

---

### Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
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<tr>
<td>Servolux PIR</td>
<td>41-227</td>
<td>5703102 006806</td>
</tr>
</tbody>
</table>
Product data

Dimensions

![Dimensions](image_url)

Technical data

**Input**
- Supply voltage: 230 V ± 10 % 50 Hz
- Power consumption: <1W

**Output**
- Relay contact: NO, μ10 A
- Max load:
  - Incandescent lamps: 2.300 W
  - Fluorescent tubes, not compensated: 1.200 VA
  - Halogen incandescent lamps: 2.300 W
- Compensation capacity: 140 μF
- Max. starting peak: 80 A/20 ms

**Performance**
- Detection angle: 180°
- Detection range: 0–14 meter
- Time delay: 8 sec...30 min
- Lux range: 5...∞ lux
- Protection class: IP 54
- Insulation class: Class II
- Ambient temperature: -20° C...+45° C
- Cable entry: 2 x ø12.5 mm bushes fitted

**Approvals**
- CE according to EN 60669-2-1

Minilux movement sensor (230 V) type 41-231 for outdoor lighting control

- 230 V connection
- Detection angle 180°
- Detection range 14 meters
- Time delay up to 30 mins.
- Setting of lux, time and meters below cover
- Facility to block detection range

The sensor has an integrated light sensor, which guarantees that the lighting is only switched on when detecting people in motion and the daylight level (lux level) is below the preset level.

The lighting remains switched on as long as moving people are detected.

The sensor’s integrated timer is used to set the required time delay, which ensures that the light remains on for a period after the last person has left.

Recommended installation height: 2-3 m.

At 2.5 m the sensor has a range of 14 m over 180°.

A switch can be integrated if manual activation is required. The button must be activated for >4 seconds in order for the sensor to be switched on. The sensor will switch on independently of lux, and the light will remain on in the set time.

The sensors can be fitted directly to a wall.

The enclosed cover can be used if you wish to screen off an area from detection.

Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
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</thead>
<tbody>
<tr>
<td>Minilux sensor</td>
<td>41-231</td>
<td>5703102 203335</td>
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</tbody>
</table>
Minilux movement sensor (230 V) type 41-232 for outdoor lighting control

- 230 V connection
- Detection angle 180°
- Detection range 14 meters
- Time delay up to 30 meters
- Setting of lux, time and meters below hidden cover
- Facility for ceiling installation
- Facility to block detection range

The sensor has an integrated light sensor, which guarantees that the lighting is only switched on when detecting people in motion and the daylight level (lux level) is below the preset level.

The lighting remains switched on as long as moving people are detected.

The sensor’s integrated timer is used to set the required time delay, which ensures that the light remains on for a period after the last person has left.

Recommended installation height: 2-3 m. At 2.5 m the sensor has a range of 14 m over 180°.

A switch can be integrated if manual activation is required. The button must be activated for >4 seconds in order for the sensor to be switched on. The sensor will switch on independently of lux.

The sensors can be fitted directly to a wall. For ceiling installation, fitting 41-904 (accessory) must be used.

The sensor head can be rotated 25° (horizontally) to the right or the left.

The enclosed cover can be used if you wish to screen off an area from detection.

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
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</thead>
<tbody>
<tr>
<td>Minilux PIR</td>
<td>41-232</td>
<td>5703102 203342</td>
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<tr>
<td>Ceiling bracket</td>
<td>41-904</td>
<td>5703102 203885</td>
</tr>
</tbody>
</table>
Minilux movement sensor with dim (230 V) type 41-233 for outdoor lighting control

- 230 V connection
- Dim function for increased comfort
- Integrated clock function for night blocking
- Detection range 180°
- Detection range 14 meters
- Time delay up to 30 mins.
- Setting of Dim, lux, time and meters below hidden cover
- Facility for ceiling installation
- Facility to block detection range

The sensor’s integrated light sensor measures the daylight level continuously. If the daylight level falls below the preset level (LUX), the sensor switches on the light. The light is switched on at the present dimmer level (DIM), and at the same time the sensor becomes sensitive to movement.

If the sensor registers movement, the light level increases to max. When the sensor no longer registers movement, the light remains at the max. light level for the preset time (TIME). The light is then dimmed once more.

When the integrated light sensor registers that the daylight level is higher than the preset level (LUX), the sensor switches off the light. If the light is switched on to max. via PIR, the light is only switched off when the preset time (TIME) has expired.

The sensor has an integrated clock function that allows the light to be switched off (blocked) for a predefined period, e.g. at night. During this period the sensor will still switch on the light at max. light level if it registers movement.

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
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</thead>
<tbody>
<tr>
<td>Minilux PIR Dim</td>
<td>41-233</td>
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<tr>
<td>Ceiling fitting</td>
<td>41-904</td>
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<td>5703102 203359</td>
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<tr>
<td></td>
<td>5703102 203885</td>
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</tbody>
</table>

Note!
Parallel connection NOT allowed!
Connection - outdoor lighting control

Energy-saving off (optional) 41-262 Push button for switching on

Technical data

Indgang
Supply voltage 230 V ± 10 % 50 Hz
Load max. 40 mA (not short circuit-proof)
Power consumption approx. 2 W
Signal from light sensor 0-10 V

Output
Relay contact NO, μ10 A, 250 V AC
Max load:
- Incandescent lamps 2,300 W
- Fluorescent tubes, not comp. 1,200 VA
- Halogen incandescent lamps 500 W
- Max. compensation capacity 140 µF
- Max. starting peak 80 A / 20 ms
- Output voltage 24 V DC ± 10 %
- Ripple max. 0,5 Vpp

Performance
Lux range 3...270 Lux (3...300)
30...2,700 Lux (30...3,000)
300...27,000 Lux (300...30,000)
Tolerance of lux range ±10 %
Positive hysteresis 10 %
Time delay 0-60 min
Protection class IP 20
Insulation class Class II
Ambient temperature +5° C ... +50° C

Approval
CE according to EN 60669-2-1

Minilux control for switching on and off the light automatically. Programming via LCD display
- 1st priority: movement sensor
- 2nd priority: daylight
- 230 V AC
- LCD display
- 3 lux ranges
- Test function
- Possibility of manual functions

Function
The lighting will only be switched on when the movement sensor is activated, and only if the light sensor measures insufficient daylight. The lighting will be switched off after the cut off delay of the control has elapsed.

Products for this function:

Minilux 36-080 Control switches on the light immediately after a power failure for one minute, and on startup.
Possibility of manual switch off (Save switch) via push button.
In test mode the lighting is switched on for 5 seconds everytime there is activity from the movement sensor.
The product is also for indoor lighting control.
Sensor PIR with or without built-in light sensor is available.

Order numbers

Product Type EAN no.
Minilux Control 36-080 5703102 203298
Minilux PIR movement sensor for outdoor lighting control - with built-in light sensor

- 24 V DC
- Sensitivity setting
- Up to eight sensors on one control
- Built-in walk-test function
- 90° detection range
- Detection length up to 15 meter

Minilux PIR 41-262 is a passive infrared sensor which react to temperature changes and movements by people (and cars).

The Minilux sensor 41-262 is used in combination with Minilux Control 36-080 for outdoor lighting control.

After connection to the power supply, PIR sensors are ready for operation after 1-2 min. (power-up time).

The built-in light sensor blocks off lighting in the daylight hours if there is sufficient daylight. The lux level is set on the Minilux Control.

The sensors are supplied with brackets for ceiling and wall installation.

If you wish to connect more than one movement sensor, please use type 41-272 which is the same sensor just without the built-in light sensor. 41-262 Master 41-272 Slave

For outdoor installation the cover 41-902 must be used.

**Product data**

### Input
Supply voltage: 24 V DC ±10 %
Max. current load: 50 mA (24 V DC)
Power consump. - worst case: <5 mA (24 V DC)
Power consump. - standby: <3 mA (24 V DC)

### Output
- Output signal: On/Off, NPN
- Output voltage Lux: 0-10 V

### Performance
- Detection angle: 90°
- Detection range: 0,5...15 m
- Lux range (41-262 only): 3...300 lux
- Protection class: IP20
- Protection class with cover 41-902: IP54
- Cable entry: 2 x Ø 5 mm
- Cable length: Max 200 m
- 2 x 2 x 0,6 mm
- Ambient temperature: -20° C...+50° C

### Technical data

#### Input
- Supply voltage: 24 V DC ±10 %
- Max. current load: 50 mA (24 V DC)
- Power consump. - worst case: <5 mA (24 V DC)
- Power consump. - standby: <3 mA (24 V DC)

#### Output
- Output signal: On/Off, NPN
- Output voltage Lux: 0-10 V

#### Performance
- Detection angle: 90°
- Detection range: 0,5...15 m
- Lux range (41-262 only): 3...300 lux
- Protection class: IP20
- Protection class with cover 41-902: IP54
- Cable entry: 2 x Ø 5 mm
- Cable length: Max 200 m
- 2 x 2 x 0,6 mm
- Ambient temperature: -20° C...+50° C

### Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>EAN no.</th>
</tr>
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<tbody>
<tr>
<td>Minilux sensor</td>
<td>5703102 203229</td>
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<tr>
<td>Minilux sensor</td>
<td>5703102 203564</td>
</tr>
<tr>
<td>IP54 Cover</td>
<td>5703102 203458</td>
</tr>
</tbody>
</table>
Minilux Control with Dim type 74-360 for lighting control

- For 230 V AC
- Dim function for 20-90 %
- Integrated clock function for night blocking
- Setting of Dim, lux and time on control
- Automatic detection of load RL/RC
- Test function
- Push button for manual turn on/off the light

Minilux Control 74-360 continuously measures daylight levels. If the daylight level is below the set lux value (Lux on), Minilux Control switches on the lighting at a set Dim level.

Movement sensor
If the connected movement sensor is activated, the light increases to maximum. When the sensor no longer detects movement, the light remains on at the maximum light level for the preset time (Off delay), after which time the light returns to its dimmed setting.

When Minilux Control detects that the daylight level is above the set lux value (Lux on), it switches off the light. If movement causes the light to come on at maximum power, the light will only go off once the set time (Off delay) has expired.

Night blocking
Minilux Control has an integrated clock function that allows the light to be switched off (blocked) for a predetermined period of time, e.g. overnight. During this period, Minilux Control will turn the light on to maximum level whenever the PIR detects movement.

Light sensor
Can be connected separately if necessary.

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minilux Control Dim 74-360</td>
<td>74-360</td>
<td>5703102 203274</td>
</tr>
<tr>
<td>PIR sensor w/ L/S. 41-262</td>
<td>41-262</td>
<td>5703102 203229</td>
</tr>
<tr>
<td>PIR sensor 41-272</td>
<td>41-272</td>
<td>5703102 203299</td>
</tr>
<tr>
<td>IP64 cover 41-902</td>
<td>41-902</td>
<td>5703102 203458</td>
</tr>
<tr>
<td>Minilux light sensor 43-198</td>
<td>43-198</td>
<td>5703102 203595</td>
</tr>
</tbody>
</table>
Indoor lighting control
Control for switching on and off the light automatically. Programming via LCD display

1st priority: daylight
2nd priority: movement sensor

230 V AC

LCD display

3 lux ranges

Test function

Possibility of manual functions

Function
The lighting will only be switched on when the movement sensor is activated, and only if the light sensor measures insufficient daylight. If there is sufficient daylight the sensor will switch off the lighting after 1 min., even if the controller’s cut off delay has expired.

Products for this function: 36-080 + 41-272 + 43-197

The Control 36-080 switches on the light immediately after a power failure for one minute, and on startup.

You can change function from automatic on to manual on by placing a jumper between øC3 and øC2 and by connecting a push button.

Possibility of manual switch off (Save switch) via push button.

In test mode the lighting is switched on for 5 seconds every time there is activity from the movement sensor.

Enclose the product you will find a calculation form, which you can use for correct setting and as documentation by projects.

The product is also for outdoor lighting control.

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>36-080</td>
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<tr>
<td>Safeswitch</td>
<td>(optional)</td>
<td></td>
</tr>
<tr>
<td>Push button for switching on (optional)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Product data

Control On/Off, 24 V DC, 1-3 channels

Optimal daylight control with zone-based light control - Energy saving up to 60 %

- Standard pre-programmed from factory
- 5 pre-programmed applications
- Settings via the display
- Choose 1, 2 or 3 zones
- Topical light level in display

Control 78-000 is intended for indoor lighting control from one to three zones.

The controller is pre-programmed for several standard applications.

One light sensor, a 4-push button switch, movement and presence sensors can be connected to the controller. The controller automatically detects connected devices.

A 78-983 type Power Pack can be used as a power supply (SELV) for the controller. In the Power Pack there are three relay outputs for 230 V.

Bus-wire 30 cm is enclosed controller, 78-000.

More information on www.servodan.com

Application example

(See more overleaf)

Application table

<table>
<thead>
<tr>
<th>App.</th>
<th>Light sensor 43-197</th>
<th>Movement sensor</th>
<th>Push button switch by door 74-593</th>
<th>Push button switch by blackboard 74-593</th>
<th>Time switch 74-592</th>
<th>4-push button switch 74-592</th>
<th>Energy-saving switch</th>
</tr>
</thead>
<tbody>
<tr>
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* Optional

Order numbers

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<tr>
<th>Produkt</th>
<th>Type</th>
<th>EAN nr.</th>
</tr>
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<tbody>
<tr>
<td>Control On/Off</td>
<td>78-000</td>
<td>5703102 201348</td>
</tr>
<tr>
<td>Bus-wire adaptor</td>
<td>78-901</td>
<td>5703102 201638</td>
</tr>
<tr>
<td>Power Pack</td>
<td>78-983</td>
<td>5703102 201379</td>
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<td>Light sensor</td>
<td>43-197</td>
<td>5703102 203311</td>
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<tr>
<td>4-push button</td>
<td>74-592</td>
<td>5703102 201461</td>
</tr>
<tr>
<td>Push button</td>
<td>74-593</td>
<td>5703102 201478</td>
</tr>
<tr>
<td>PIR movement sensor</td>
<td>41-272</td>
<td>5703102 203564</td>
</tr>
</tbody>
</table>

Technical data

Input

Power supply 24 V DC ±10 % SELV
Via RJ 12-1

Power consumption, act./standby 4 VA/1 VA

Output

Load
Connected via
Power Pack 78-983

Output signal CH1-2-3 NPN 24 V, ≥ 25 mA
Max 40 mA
Via RJ 12-1

Performance

On delay (Lux) 0-60 sek.
Off delay (Lux) 0-60 min.
Off delay (PIR) 1-60 min.
Hysteresis 10-80 %
Protection class IP 20
Ambient temperature 5° C...50° C

Approvals

CE according to EN 60669-2-1

Dimensions

Buswires

78-901 Buswire with adapter
78-902 Buswire

More information on www.servodan.com

Control On/Off, 24 V DC, 1-3 channels

Optimal daylight control with zone-based light control - Energy saving up to 60 %

- Standard pre-programmed from factory
- 5 pre-programmed applications
- Settings via the display
- Choose 1, 2 or 3 zones
- Topical light level in display

Control 78-000 is intended for indoor lighting control from one to three zones.

The controller is pre-programmed for several standard applications.

One light sensor, a 4-push button switch, movement and presence sensors can be connected to the controller. The controller automatically detects connected devices.

A 78-983 type Power Pack can be used as a power supply (SELV) for the controller. In the Power Pack there are three relay outputs for 230 V.

Bus-wire 30 cm is enclosed controller, 78-000.

More information on www.servodan.com

Application example

(See more overleaf)

Application table

<table>
<thead>
<tr>
<th>App.</th>
<th>Light sensor 43-197</th>
<th>Movement sensor</th>
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<th>Time switch 74-592</th>
<th>4-push button switch 74-592</th>
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<td>Light sensor</td>
<td>43-197</td>
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<td>4-push button</td>
<td>74-592</td>
<td>5703102 201461</td>
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<td>Push button</td>
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</tr>
<tr>
<td>PIR movement sensor</td>
<td>41-272</td>
<td>5703102 203564</td>
</tr>
</tbody>
</table>

More information on www.servodan.com
Application 00.01
E.g. Corridors/Halls (factory setting)
- 3-zone daylight control
- Automatic on/off via movement sensor

Function description:
www.servodan.com

Application 01.01
E.g. Exhibition premises
- 3-zone daylight control
- Manual on/off via an external time switch

Function description:
www.servodan.com

Application 02.01
E.g. storeroom
- 3-zone daylight control
- Manual on/off
- Automatic off via movement sensor

Function description:
www.servodan.com

Application 03.01
E.g. School premises
- 2 channel daylight control on/off, 1 channel on/off
- Manual on/off, automatic off via movement sensor

Function description:
www.servodan.com

Application 04.01
E.g. Production premises
- 3-zone daylight control
- Manual on/off
- Automatic off via external timer switch

Function description:
www.servodan.com

Function description for factory setting
Application 00.01
When the movement sensor detects activity, the 3-zone on/off daylight control is switched on. As long as there is activity, the light will now be daylight-controlled in three zones in accordance with set parameters.

As daylight incidence increases, the light in the premises will be switched off depending on the set levels.

The light switches off automatically after a preset period when the movement sensors do not detect any movement in the coverage area.

Option for manual on/off via switch.

www.servodan.com
Luxstat Control DIN

24 V DC, 1-3 channels

Optimal daylight control with zone-based light control - Energy saving up to 75 %

- Standard pre-programmed from factory
- 5 pre-programmed applications
- Programmed via the display
- Measures the daylight automatically
- Input for energy saving
- Choose 1, 2 or 3 zones
- Topical light level in display

The Luxstat Control DIN 78-050 is intended for indoor lighting control from one to three zones with dimming.

The Luxstat Control DIN is pre-programmed for several standard applications.

One light sensor, a 4-push button switch and movement sensors can be connected to the Luxstat Control. The controller automatically detects connected devices.

The load shedding capability can reduce light level during critical periods.

A 78-983 power pack is used as the voltage supply (SELV) for the Luxstat Control DIN, and to control outputs.

Bus-wire 78-902 is delivered with control 78-050. Bus-wire 78-901 with terminal screw connections is not included.

To find out more see www.servodan.com

Technical data

Input
- Power supply 24 V DC ±10 % SELV
  Via RJ 12-1
- Power consumption, act./standby 6 VA/2 VA

Output
- Load Connected via Power Pack 78-983
- Output signal CH1-2-3 NPN 24 V, ≥ 25 mA
  Max 40 mA
  Via RJ 12-1
- Output signal to HF CH1-2-3: 1-10 V/50 mA
- Output signal 1-10V minimum: 1-4 V
- Output signal 1-10V maximum: 6-10 V

Performance
- Off delay (Lux) 0-20 min/∞
- Off delay (PIR) 1-60 min.
- Ramp time 5-60 sek.
- Energy saving (Loadshed) 0-10 V
- Protection class IP 20
- Ambient temperature 5° C...50° C

Approvals
- CE according to EN 60669-2-1

Input RJ12-2: Not to be used! Intended for updating software.

Application table

<table>
<thead>
<tr>
<th>App.</th>
<th>Light sensor 43-197</th>
<th>Movement sensor</th>
<th>Push button switch by door 74-593</th>
<th>Push button switch by blackboard 74-593</th>
<th>Time switch</th>
<th>4-push button switch 74-592</th>
<th>Energy-saving switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.01</td>
<td>☀️</td>
<td>✕</td>
<td>✕</td>
<td>✕</td>
<td>✕</td>
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<tr>
<td>12.01</td>
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</tr>
<tr>
<td>13.01</td>
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<td>14.01</td>
<td>☀️</td>
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<td>✕</td>
<td>✕</td>
<td>✕</td>
<td>✕</td>
</tr>
</tbody>
</table>

* Optional functions

Buswires

78-901 Bus-wire with adaptor
78-902 Bus-wire

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control DIN</td>
<td>78-050</td>
<td>5703102 201355</td>
</tr>
<tr>
<td>Bus-wire adaptor</td>
<td>78-901</td>
<td>5703102 201638</td>
</tr>
<tr>
<td>Power Pack</td>
<td>78-983</td>
<td>5703102 201379</td>
</tr>
<tr>
<td>Light sensor</td>
<td>43-197</td>
<td>5703102 203311</td>
</tr>
</tbody>
</table>
Application 10.01
E.g. Corridors (factory setting)

- 3-zone daylight control
- Automatic on/off via movement sensor

Function description: www.servodan.com

Application 11.01
E.g. Exhibition premises

- 3-zone daylight control
- Manual on/off via an external time switch

Function description: www.servodan.com

Application 12.01
E.g. Offices/conference premises

- 3-zone daylight control
- Manual on/off
- Automatic off via movement sensor

Function description: www.servodan.com

Application 13.01
E.g. School premises

- 2-zone daylight control
- Manual on/off
- Manual on/off blackboard lighting
- Automatic off via movement sensor

Function description: www.servodan.com

Application 14.01
E.g. Production premises

- 3-zone daylight control
- Manual on/off
- Automatic off via external time switch

Function description: www.servodan.com

Function description for factory setting
Application 10.01

The light switches on when the movement sensor detects activity and there is a need for light. As long as there is activity, the light will now be daylight-controlled in three zones in accordance with set parameters.

As daylight incidence increases, the light dims in the premises so that the set, required, minimum light level is obtained.

The light switches off automatically after a preset period, when the movement sensors do not detect movement in the coverage area, or when a sufficient light level has been achieved in the room.

Option for manual on/off and dimming via switch.

www.servodan.com
Luxstat Power Pack - power supply for Luxstat Controls

- Power supply: 230 V AC
- Secondary: 24V DC ±10 %, max. 1A
- Built-in protection against overload
- For DIN rail installation

The Power Pack 78-983 is mainly used as a power supply and relay module for the Luxstat Control 78-0X0.

Connects to a Luxstat Control using an RJ12 adapter (supplied with the Luxstat Control).

The built-in protection is activated when an overload occurs. This protection is reset on power down.

The power supply can be loaded with a maximum of 1 A.

An LED on the front of the unit illuminates when 230 V is connected.

NPN movement sensors can be connected directly to the Power Pack.

**Product data**

**Connection**

<table>
<thead>
<tr>
<th>Input Power supply 230 V AC</th>
<th>Output Relay contact NO, μ10 A, 250 V AC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power consumption, act/standby: 30 W/1.2 W</td>
<td>Max load CH1-2-3: 2,300 W</td>
</tr>
<tr>
<td>Input CH1-2-3: NPN 24 V, ≥ 25 mA</td>
<td>Max. starting peak: 80 A / 20 ms</td>
</tr>
<tr>
<td>Low level ≤ 2 V</td>
<td>Output voltage (SELV) 24 V DC ±10 % max. 1A</td>
</tr>
</tbody>
</table>

**Technical data**

- **Input**: Power supply 230 V 50 - 60 Hz, Power consumption, act/standby 30 W, 1.2 W, Input CH1-2-3: NPN 24 V, ≥ 25 mA, Low level ≤ 2 V
- **Output**: Relay contact NO, μ10 A, 250 V AC, Max load CH1-2-3: 2.300 W, Incandescent lamps: 2,300 W, Fluorescent tubes, not comp.: 1,200 VA, Compensation capacity: 140 μF, Max. starting peak: 80 A / 20 ms, Output voltage (SELV) 24 V DC ±10 % max. 1A
- **Performance**: Protection class: IP 20, Ambient temperature: -10° C...+50° C
- **Approvals**: CE according to EN 60669-2-1

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Pack</td>
<td>78-983</td>
<td>5703102 201379</td>
</tr>
<tr>
<td>Bus-wire adapter</td>
<td>78-901</td>
<td>5703102 201638</td>
</tr>
</tbody>
</table>
Product data

**Technical data**

4-push button switch for Luxstat Control 78-0XX

For flush mounting  
Model OPUS

Dimensions  
66 x 66 mm

Protection class  
IP 20

Voltage  
5-24 V DC

Power consumption  
Max. 24 mW/diode @ 24 V DC

Cable dimension  
single core Ø 0.3 to 0.6 mm  
multi core Ø 0.4 to 0.8 mm

Looping  
Max. two of the same dimensions

For plate mounting, mounting plate type 74-589 is used.

---

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-push button, Opus</td>
<td>74-592</td>
<td>5703102 201461</td>
</tr>
<tr>
<td>Mounting plate, white</td>
<td>74-589</td>
<td>5703102 005106</td>
</tr>
</tbody>
</table>

---

Push button, Opus

**Technical data**

Push button for Luxstat Control 78-0XX

For flush mounting  
Model OPUS

Dimensions  
66 x 66 mm

Protection class  
IP 20

Voltage  
5-24 V DC

Cable dimension  
Min. Ø 0.6 mm

For plate mounting, mounting plate type 74-589 is used.

---

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Push button, Opus</td>
<td>74-593</td>
<td>5703102 201478</td>
</tr>
<tr>
<td>Mounting plate, white</td>
<td>74-589</td>
<td>5703102 005106</td>
</tr>
</tbody>
</table>
**Luxstat control box for 2 zone control with potential free relay, 230 V AC**

- Luxstat control box for controlling 1-10V, potential free relay and built-in IR-receiver
- External units like sensors, push-buttons, luminaires etc. are connected directly to the Luxstat
- Easy mounting and installation directly in the room – no connection to distribution boards.

The Luxstat controller, type 77-050, consists of an integrated unit containing 1-10 V control, a potential-free relay and an IR receiver. All external units, such as motion sensors, push-buttons, light sensors and luminaires are connected directly to the Luxstat unit, which can be wall-mounted directly in the room. If the Luxstat unit is installed above a false ceiling, it can be connected to an external IR receiver, type 77-910 (optional) via an RJ12 plug so that an IR remote control, type 77-920 (optional) can be used.

The Luxstat control box can be installed and operated using the factory settings for 2 zones and 3 applications:
- Manual switch on/off via push-button – automatic switch off via movement sensor
- Automatic switch on/off via movement sensor
- Class room solution with manual switch on, aut. switch off 1 og 2 push-buttons can be used optional. Using 2 push-buttons enables switching off the light in zone 1 and 2 individually.

The controller also contains a potential-free relay for controlling ventilation, CTS or similar.

All connections are made directly to the controller, which contains a 24 V DC power supply for sensors. All Servodan 24 V DC movement sensors can be connected to the Luxstat.

**Order number**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxstat control box</td>
<td>77-050</td>
<td>5703102 204523</td>
</tr>
<tr>
<td>External IR receiver</td>
<td>77-910</td>
<td>5703102 205049</td>
</tr>
<tr>
<td>IR-remote</td>
<td>77-920</td>
<td>5703102 204591</td>
</tr>
</tbody>
</table>
**Product data**

**Technical data**

- **Diameter**: Ø38 mm
- **Depth**: 47 mm
- **Mounting whole in ceiling**: Ø32-35 mm
- **Cable length**: 100 cm

**External IR receiver**

The IR receiver is equipped with a RJ12-plug, which can be connected directly to the Luxstat controller, 77-050.

If the Luxstat unit is installed above a false ceiling, it can be connected to the external IR receiver in order to set the Luxstat controller.

**Order number:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>External IR receiver</td>
<td>77-910</td>
<td>5703102 205049</td>
</tr>
</tbody>
</table>

**Technical data**

- **Dimension**: H: 100 mm, W: 55 mm
- **Range**: 2-3.5 m
- **Battery type**: CR 2032 3 V

**IR remote**

The IR remote for Luxstat control in order to change the factory settings, to choose between various applications, to set daylight factor, to dim light etc.

**Order number:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR remote</td>
<td>77-920</td>
<td>5703102 204691</td>
</tr>
</tbody>
</table>
Luxstat Wireless Control type 79-050

- Daylight-based lighting control of up to 3 zones and with the possibility of division up to 5 areas
- Wireless communication between sensors, push-buttons and luminaires
- Wireless installation via laptop, USB-stick and user-friendly Windows software.

The Luxstat Wireless Control contains 5 pre-set applications and 1 user-defined application, which easily can be set via the menu in the Basic installation software.

20.1 Hall areas
Daylight control in 3 zones
On/Off via movement sensor

21.1 Exhibition room
Daylight control in 3 zones
On/Off via wireless push-button or another wireless transmitter, i.e. clock-signal

22.1 Office/conference room
Daylight control in 3 zones
Manual On/Off – Off via movement sensor

23.1 Classrooms
Daylight control in 3 zones
Manual On
Manual On/Off of blackboard light
Off via movement sensor

24.1 Manufacturing premises
Daylight control in 3 zones
On/Off via wireless push-button
Off via push-button or another wireless transmitter, i.e. clock-signal

25.1 User-defined
Can be set to:
Daylight control in 3 zones
Division of rooms in up to 5 areas
Optional function for push-button and movement sensor

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxstat wireless control</td>
<td>79-050</td>
<td>5703102 204592</td>
</tr>
<tr>
<td>Luxstat wireless cut-off control</td>
<td>79-210</td>
<td>5703102 204844</td>
</tr>
<tr>
<td>Luxstat power supply</td>
<td>79-980</td>
<td>5703102 204660</td>
</tr>
<tr>
<td>Luxstat USB-stick</td>
<td>79-930</td>
<td>5703102 204639</td>
</tr>
<tr>
<td>Luxstat basis software</td>
<td>79-990</td>
<td>5703102 204684</td>
</tr>
</tbody>
</table>
Luxstat Wireless Cut-off Control type 79-210

- Wireless communication with Luxstat Wireless Control type 79-050
- Luminaires are connected directly to Luxstat Cut-off control
- Wireless installation via laptop, USB-stick and user-friendly Windows software.

The Luxstat Cut-off Control 79-210 is used together with the Luxstat Wireless Control (79-050) controls for indoor daylight-based lighting control in 1 or more zones.

If daylight control is needed in 1 or more zones, 1 Luxstat Cut-off control is used per zone. If the room needs divided in up to 5 areas, 1 Luxstat Cut-off control is used per area.

The Luxstat Cut-off control is used for controlling luminaires equipped with ballast, 1-10 V ballast for dim or standard ballast for On/Off control. The Luxstat Cut-off control can supply luminaires with 230 V and control signal 1-10 V.

If standard ballast for On/Off control is connected only the relay output on the Luxstat Cut-off control is used. If 1-10 V for dim control is used, the 230 V supply for the luminaires is disconnected (Cut-off), when the light is dimmed to minimum.

Every Luxstat Cut-off Control can operate up to 100 luminaires (1-10 V signal).

Product data

- **Input**
  - Supply voltage: 230 V AC 50 Hz ±10 %
  - Power consumption: <3 W

- **Output**
  - Relay contact: NO, μ 10 A
  - Load:
    - Incandescent lamps: 2300 W
    - Fluorescent tube uncompensated: 1200 VA
    - Halogen incandescent lamps: 2300 W
    - Max. compensation capacity: 140 μF
    - Energy-saving lamps: 58 pcs. (18 W)
    - Max. starting peak: 80 A/20 m sec.
    - DIM: 1 - 10 V / max. 50mA

- **Performance**
  - Receiver: Wireless 2.4 GHz
  - RF range: 30 metres
  - Enclosure class: IP 20
  - Insulation class: Class II
  - Ambient temperature: -5° C to +50° C.

- **Approvals**
  - CE pursuant to: EN 60669-2-1

---

Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxstat wireless cut-off control</td>
<td>79-210</td>
<td>5703102 204844</td>
</tr>
</tbody>
</table>
**Product data**

### Luxstat USB-stick

**Description**
The Luxstat USB-stick enables you to perform installation and configuration of the components in the Luxstat wireless lighting system on site after having installed and connected the various components - controllers, luminaires, sensors, push-buttons etc.

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxstat USB-stick</td>
<td>79-930</td>
<td>5703102 204639</td>
</tr>
</tbody>
</table>

### Luxstat Installation Software – Basic & Service

**Description**
The basic installation software enables you to configure the Luxstat wireless lighting system according to a range of standard applications. With the service software you can change the factory settings and adjust the:
- function settings for push-buttons
- function settings for PIR sensor
- energy-save settings – reducing the light level with 0-100 %
- comfort light settings between 0-100 % etc.

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luxstat basic software</td>
<td>79-990</td>
<td>5703102 204684</td>
</tr>
<tr>
<td>Luxstat service software</td>
<td>79-995</td>
<td>5703102 205063</td>
</tr>
</tbody>
</table>

### Technical data - Power Supply for Luxstat Wireless Controller

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply, 24V DC/30W</td>
<td></td>
</tr>
<tr>
<td>Supply voltage</td>
<td>230 V ± 10 %</td>
</tr>
<tr>
<td>Output voltage</td>
<td>Norm. 24 V DC</td>
</tr>
<tr>
<td>Load</td>
<td>30W</td>
</tr>
<tr>
<td>Temperature cutout for transformer</td>
<td>125°C</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>+10°C to +40°C</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 20</td>
</tr>
<tr>
<td>Dimensions Width</td>
<td>143 mm</td>
</tr>
<tr>
<td>Height</td>
<td>30 mm</td>
</tr>
<tr>
<td>Cable length</td>
<td>300 mm</td>
</tr>
</tbody>
</table>

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply (Controller)</td>
<td>79-980</td>
<td>5703102 204660</td>
</tr>
</tbody>
</table>

### Technical data - Power Supply for LED Luminaires

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply, 24V DC/60W</td>
<td></td>
</tr>
<tr>
<td>Supply voltage</td>
<td>230 V ± 10 %</td>
</tr>
<tr>
<td>Output voltage</td>
<td>Norm. 24 V DC</td>
</tr>
<tr>
<td>Load</td>
<td>60W</td>
</tr>
<tr>
<td>Temperature cutout for transformer</td>
<td>125°C</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>+10°C to +40°C</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 20</td>
</tr>
<tr>
<td>Dimensions Width</td>
<td>180 mm</td>
</tr>
<tr>
<td>Height</td>
<td>35 mm</td>
</tr>
<tr>
<td>Cable length</td>
<td>300 mm</td>
</tr>
<tr>
<td></td>
<td>equipped with Wieland connection, type 92.932.3053.1 on primary side (230 V)</td>
</tr>
</tbody>
</table>

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply (Luminaire)</td>
<td>79-981</td>
<td>5703102 204745</td>
</tr>
</tbody>
</table>
Product data

**Input**
- Supply voltage: 230 V ± 10 % 50 Hz
- Power consumption: 4 W
- Power loss (incl. inherent consumption): 6 W

**Output**
- Relay contact: NO, µ10 A, 250 V AC
- Max load:
  - Incandescent lamps: 2.300 W
  - Fluorescent tubes, not compensated: 1.200 VA
  - Halogen incandescent lamps: 500 W
  - Compensation capacity: 140 µF
  - Max. starting peak: 165 A / 20 ms
  - Secondary voltage: 24 V DC ±10 %
  - Ripple: max. 0.5 Vpp
  - Load: max. 40 mA (not short circuit-proof)

**Performance**
- Protection class: IP 20
- Insulation class: Class II
- Ambient temperature: -10° C ... +50° C

**Approvals**
- CE pursuant to EN 60669-2-1

**Power Pack with built-in relay**
- For 230 V AC
- 24 V DC secondary voltage
- For DIN rails
- NPN input

Power Pack 36-982/36-984 is designed for fitting in boards on DIN rails.

Power Pack is a stabilised direct current supply with an in-built relay function.

If constant light is required, a switch/relay can be installed.

If several 36-982 units are used, they can have their own phase.

Hint! In Fig. 2, one unit can be daylight-controlled, while the other is controlled by motion alone.

**Max connection:**

<table>
<thead>
<tr>
<th>Type</th>
<th>Fig. 1</th>
<th>Fig. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>43-205</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>43-208</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>43-215</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>43-222</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>43-225</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**More...**
It is possible to connect up to 16 sensors by using power supply type 78-980. Please see data-sheet for 78-980.

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Pack NPN</td>
<td>36-982</td>
<td>5703102 203496</td>
</tr>
<tr>
<td>Power Pack PNP</td>
<td>36-984</td>
<td>5703102 203519</td>
</tr>
</tbody>
</table>
Product data

Power Supply -
Stand alone power supply

- Primary: 230 V AC
- Secondary: 24V DC ±10 %, max. 1A
- Built-in protection against overload
- For DIN rail installation

Power Supply 78-980 is designed as a stand alone power supply.

When overloading occurs, the built-in protection operates. The protection is reset on power down.

The power supply can be loaded with a maximum of 1 A.

An LED on the front of the unit illuminates when 230 V is connected.

Technical data

**Input**
- Power supply: 230 V 50 - 60 Hz
- Power consumption, act/standby: 30 W/1,2 W

**Output**
- Output voltage (SELV): 24 V DC ±10 % max. 1A

**Performance**
- Protection class: IP 20
- Ambient temperature: -10° C...+50° C

**Approvals**
- CE according to: EN 60669-2-1

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>78-980</td>
<td>5703102 201775</td>
</tr>
</tbody>
</table>
Product data

Movement sensor PIR for indoor lighting control. For flush mounting and plate mounting.

- 24 V DC
- Can be wired as for low-voltage
- The front cover determines the detection range
- Mounting at the ceiling and on the wall

Sensor PIR 41-270 is a passive infra-red movement sensor which responds to temperature changes and movements by people.

The Sensor is designed for flush mounting or mounting on a junction box (plate mounting).

If you turn the front cover 90° you get a detection range of 40°.

The bottom part can be rotated, so that it fits for mounting on the wall or at the ceiling.

After connection to the power supply, the Minilux PIR Sensor is ready for operation after 1-2 min. (power-up time).

The sensor is adapted to the Euro-junction system.

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR 41-270</td>
<td>5703102 203540</td>
</tr>
<tr>
<td>Junction for:</td>
<td></td>
</tr>
<tr>
<td>- masonry wall</td>
<td>54-903 5703102 001917</td>
</tr>
<tr>
<td>- sheet wall</td>
<td>54-904 5703102 001924</td>
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<tr>
<td>- plate mounting</td>
<td>54-905 5703102 001931</td>
</tr>
<tr>
<td>Bracket for 54-905</td>
<td>54-906 5703102 001962</td>
</tr>
</tbody>
</table>

Input
Supply voltage 24 V DC ±10 %
Max. current load 50 mA (24 V DC)
Power consump. - worst case <5 mA (24 V DC)
Power consump. - standby <3 mA (24 V DC)

Output
Output signal On/Off, NPN

Performance
Detection angle 90°/40°
Detection range 0,4...5 m
Protection class IP20
Cable length Max 200 m
Ambient temperature -20° C...+50° C

Dimensions

Connection

Technical data

Detection area

Connection

Parallel connection

Detection area

Order numbers
**Movement sensor PIR for indoor lighting control**

- 12 V DC
- Sensitivity setting
- Built-in walk-test function
- 90° detection angle
- Detection range up to 15 meter

Sensor PIR 41-271 without built-in light sensor, is a universal sensor for 12 V DC. With NPN output.

The sensor PIR 41-271 is a passive infrared movement sensor which responds to temperature changes and movements by people.

The sensor PIR is supplied with brackets for ceiling and wall installation.

After connection to the power supply, the sensor PIR is ready for operation after 1-2 min. (power-up time).

---

**Technical data**

Supply voltage 12 V DC ±10 %
Output signal On/Off, NPN
Detection angle 90°
Detection range 0.5...15 m
Max. current load 50 mA (12 V DC)
Power consump. - worst case <5 mA (12 V DC)
Power consump. - standby <3 mA (12 V DC)
Protection class IP20
Ambient temperatur -20° C...+50° C
Cable entry 2 x Ø 5 mm
Cable length Max 200 m
2 x 2 x 0.6 mm

---

**Order number:**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR 12 V</td>
<td>41-271</td>
<td>5703102 203557</td>
</tr>
<tr>
<td>IP54 Cover</td>
<td>41-902</td>
<td>5703102 203458</td>
</tr>
</tbody>
</table>
### Movement sensor PIR for indoor lighting control

- **24 V DC**
- **Sensitivity setting**
- **Up to 8 sensors on one Control**
- **Built-in walk-test function**
- **90° detection range**
- **Detection length up to 15 meter**

The sensor 41-272 is a passive infrared movement sensor which responds to temperature changes and movements by people.

The movement sensor PIR is used for indoor lighting control.

The movement sensor can be connected to Control 36-080, Luxstat Control 78-0X0 and BMS systems fx. Comlux.

After connection to the power supply, the sensor is ready for operation after 1-2 min. (power-up time).

Sensor 41-271 is 12 V DC with same specifications as 41-272.

### Technical data

**Input**
- Supply voltage 41-272: 24 V DC ±10%
- Max. current load: 50 mA (24 V DC)
- Power consump. - worst case: <5 mA (24 V DC)
- Power consump. - standby: <3 mA (24 V DC)

**Output**
- Output signal: On/Off, NPN

**Performance**
- Detection angle: 90°
- Detection range: 0,5...15 m
- Protection class: IP20
- Protection class with cover: 41-902 IP54
- Cable entry: 2 x Ø 5 mm
- Cable length: Max 200 m
- 2 x 2 x 0,6 mm
- Ambient temperature: -20°C...+50°C

### Setting and placement

The sensor 41-272 is a passive infrared movement sensor which responds to temperature changes and movements by people.

The movement sensor PIR is used for indoor lighting control.

The movement sensor can be connected to Control 36-080, Luxstat Control 78-0X0 and BMS systems fx. Comlux.

After connection to the power supply, the sensor is ready for operation after 1-2 min. (power-up time).

Sensor 41-271 is 12 V DC with same specifications as 41-272.

### Product data

**Input**
- Supply voltage 41-272: 24 V DC ±10%
- Max. current load: 50 mA (24 V DC)
- Power consump. - worst case: <5 mA (24 V DC)
- Power consump. - standby: <3 mA (24 V DC)

**Output**
- Output signal: On/Off, NPN

**Performance**
- Detection angle: 90°
- Detection range: 0,5...15 m
- Protection class: IP20
- Protection class with cover: 41-902 IP54
- Cable entry: 2 x Ø 5 mm
- Cable length: Max 200 m
- 2 x 2 x 0,6 mm
- Ambient temperature: -20°C...+50°C

### Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor, 24 V</td>
<td>41-272</td>
<td>5703102 203564</td>
</tr>
<tr>
<td>Sensor, 12 V</td>
<td>41-271</td>
<td>5703102 203557</td>
</tr>
<tr>
<td>IP54 Cover</td>
<td>41-902</td>
<td>5703102 203458</td>
</tr>
</tbody>
</table>
**Product data**

**Dimensions**

**Connection**

**Technical data**

**Input**
- Supply voltage: 24 V DC ±10%
- Max. current load: 50 mA (24 V DC)
- Power cons. - worst case: <5 mA (24 V DC)
- Power cons. - standby: <3 mA (24 V DC)

**Output**
- Output signal: On/Off, NPN

**Performance**
- Detection angle: 90°
- Detection range: Up to 9 m
- Protection class: IP 20
- Cable entry: 2 x Ø 5 mm
- Cable length: Max 200 m
- Ambient temperature: -20° C...+50° C

The sensor 41-274 is a passive infrared movement sensor which responds to temperature changes and movements by people.

The movement sensor PIR is used for indoor lighting control - especially in high-rise warehouses.

The movement sensor can be connected to Control 36-080, Luxstat Control 78-0X0 and BMS systems - e.g. Comlux.

The movement sensor PIR is supplied with brackets for ceiling and wall installation.

After connection to the power supply, the sensor is ready for operation after 1-2 min. (power-up time).

**Order numbers**

<table>
<thead>
<tr>
<th>Produkt</th>
<th>Type</th>
<th>EAN nr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
<td>41-274</td>
<td>5703102 203571</td>
</tr>
</tbody>
</table>
Product data

**Movement sensor PIR 360° (24 V DC) for flush mounting**

- Small design and elegant finish - only Ø90 mm
- 360° detection angle
- Connected to a controller
- More sensors can be connected
- 4 sensitivity settings

Depending on the type of controller connected, the PIR sensor 41-440 can control the light, based on the function chosen in the controller.

The maximum number of PIR 41-440 in the same system is depending of the type of controller chosen.

**Technical data**

**Input**
- Power supply: 24 V DC ±10 %
- Power consumption:
  - Worst case: <5 mA (24 V DC)
  - Standby: <4 mA (24 V DC)

**Output**
- Max current load: 50 mA (24 V DC)
- Output signal PIR: ON/OFF, NPN.

**Performance**
- Detection range: 360°, dia. Ø7-Ø12 m
- Installation height: 2.5 - 4 m
- Sensitivity: 4 settings
- Protection class: IP 20
- Ambient temperature: -5° C…+50° C

**Approval**
- CE according to EN 60669-2-1

**Connection:**
- 2 or more parallel-connected PIR sensors

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR 24 V DC</td>
<td>5703102 204004</td>
</tr>
</tbody>
</table>
Sensor DT-A
An intelligent sensor - small movements keep the lighting on.

- Occupancy sensor
- Combines the advantages of infrared and ultrasound detection
- For 24 V DC
- Self-adjusting “Fuzzy logic”
- No triggering errors
- Registers small movements down to 2 - 3 cm
- Blocks in daylight
- Output for movement, light and ventilation
- Detection areas 180° and 360°

The intelligent DT-A occupancy sensor is available in several different models. The differences lie in the area covered and in whether daylight blocking and relay output are required.

The occupancy sensors are self-adjusting, which means that they find the optimal setting for the area automatically.

When the two technologies (infrared and ultrasound) are combined, for example a weak infrared signal and a strong ultrasound signal will be sufficient to turn on the lighting. The sensor will thus ensure error-free triggering and register small movements while the lighting is turned on.

Different power supplies are available:
- 78-980 230 V/24 V DC 1 A
- 36-982 230 V/24 V DC 40 mA

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>EAN no.</th>
<th>Power pack 36-982</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor 50 m²</td>
<td>43-205</td>
<td>5703102 005687</td>
</tr>
<tr>
<td>Sensor 100 m²</td>
<td>43-215</td>
<td>5703102 005700</td>
</tr>
<tr>
<td>Sensor 200 m²</td>
<td>43-225</td>
<td>5703102 005724</td>
</tr>
<tr>
<td>Sensor base</td>
<td>43-992</td>
<td>5703102 006189</td>
</tr>
<tr>
<td>Power pack</td>
<td>36-982</td>
<td>5703102 203496</td>
</tr>
<tr>
<td>Power Supply</td>
<td>78-980</td>
<td>5703102 201775</td>
</tr>
<tr>
<td>Sensor base</td>
<td>43-992</td>
<td>5703102 006189</td>
</tr>
</tbody>
</table>

PLEASE NOTE
The detection area is given for an installation mounted at a height of 2.5 meters in an open area without furnishings.

Max installation height is 3 meters.
If there are partitions in the area the ultrasound detection area may be reduced down to 25 %.

Sensor base Ø 129 X 30 mm
Cable length to power supply:
- Cable, double stranded, Ø 0,6 max. 50 m
- Cable, 0,75 mm² max. 100 m
Ambient temperature 0° C...40° C
Humidity 0-95 %

Technical data
Input
- Power supply voltage: 24 V DC ±10 %
- Power consumpt., 180° max. 18 mA (0,4 VA)
- Power consumpt., 360° max. 33 mA (0,8 VA)

Output
- Output short-circuit protected
- Movement (blue) NPN, max. 50 mA
- Movement + light (grey) NPN, max. 50 mA
- Relay (movement) Potential-free switch max. 24 V DC, 500 mA

Performance
- Detection angle: 180°/360°
- Detection range: 50...200 m²
- Time delay: 8-40 min.
- Lux range: 10-1,000 lux
- Protection class: IP 40
- Installation height: 2,5...3 m.
- Ultrasound frequency: 32 KHZ, standard
- Sensor base: Ø 129 X 30 mm

Sensor DT-A
An intelligent sensor - small movements keep the lighting on.

- Occupancy sensor
- Combines the advantages of infrared and ultrasound detection
- For 24 V DC
- Self-adjusting “Fuzzy logic”
- No triggering errors
- Registers small movements down to 2 - 3 cm
- Blocks in daylight
- Output for movement, light and ventilation
- Detection areas 180° and 360°

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The occupancy sensors are self-adjusting, which means that they find the optimal setting for the area automatically.

When the two technologies (infrared and ultrasound) are combined, for example a weak infrared signal and a strong ultrasound signal will be sufficient to turn on the lighting. The sensor will thus ensure error-free triggering and register small movements while the lighting is turned on.

Different power supplies are available:
- 78-980 230 V/24 V DC 1 A
- 36-982 230 V/24 V DC 40 mA

Order numbers

<table>
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<tr>
<th>Product Type</th>
<th>EAN no.</th>
<th>Power pack 36-982</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor 50 m²</td>
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<td>5703102 005687</td>
</tr>
<tr>
<td>Sensor 100 m²</td>
<td>43-215</td>
<td>5703102 005700</td>
</tr>
<tr>
<td>Sensor 200 m²</td>
<td>43-225</td>
<td>5703102 005724</td>
</tr>
<tr>
<td>Sensor base</td>
<td>43-992</td>
<td>5703102 006189</td>
</tr>
<tr>
<td>Power pack</td>
<td>36-982</td>
<td>5703102 203496</td>
</tr>
<tr>
<td>Power Supply</td>
<td>78-980</td>
<td>5703102 201775</td>
</tr>
<tr>
<td>Sensor base</td>
<td>43-992</td>
<td>5703102 006189</td>
</tr>
</tbody>
</table>

PLEASE NOTE
The detection area is given for an installation mounted at a height of 2.5 meters in an open area without furnishings.

Max installation height is 3 meters.
If there are partitions in the area the ultrasound detection area may be reduced down to 25 %.

Sensor base Ø 129 X 30 mm
Cable length to power supply:
- Cable, double stranded, Ø 0,6 max. 50 m
- Cable, 0,75 mm² max. 100 m
Ambient temperature 0° C...40° C
Humidity 0-95 %

Technical data
Input
- Power supply voltage: 24 V DC ±10 %
- Power consumpt., 180° max. 18 mA (0,4 VA)
- Power consumpt., 360° max. 33 mA (0,8 VA)

Output
- Output short-circuit protected
- Movement (blue) NPN, max. 50 mA
- Movement + light (grey) NPN, max. 50 mA
- Relay (movement) Potential-free switch max. 24 V DC, 500 mA

Performance
- Detection angle: 180°/360°
- Detection range: 50...200 m²
- Time delay: 8-40 min.
- Lux range: 10-1,000 lux
- Protection class: IP 40
- Installation height: 2,5...3 m.
- Ultrasound frequency: 32 KHZ, standard
- Sensor base: Ø 129 X 30 mm

Sensor DT-A
An intelligent sensor - small movements keep the lighting on.

- Occupancy sensor
- Combines the advantages of infrared and ultrasound detection
- For 24 V DC
- Self-adjusting “Fuzzy logic”
- No triggering errors
- Registers small movements down to 2 - 3 cm
- Blocks in daylight
- Output for movement, light and ventilation
- Detection areas 180° and 360°

The intelligent DT-A occupancy sensor is available in several different models. The differences lie in the area covered and in whether daylight blocking and relay output are required.

The occupancy sensors are self-adjusting, which means that they find the optimal setting for the area automatically.

When the two technologies (infrared and ultrasound) are combined, for example a weak infrared signal and a strong ultrasound signal will be sufficient to turn on the lighting. The sensor will thus ensure error-free triggering and register small movements while the lighting is turned on.

Different power supplies are available:
- 78-980 230 V/24 V DC 1 A
- 36-982 230 V/24 V DC 40 mA

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>EAN no.</th>
<th>Power pack 36-982</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor 50 m²</td>
<td>43-205</td>
<td>5703102 005687</td>
</tr>
<tr>
<td>Sensor 100 m²</td>
<td>43-215</td>
<td>5703102 005700</td>
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<td>Sensor 200 m²</td>
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<td>Power pack</td>
<td>36-982</td>
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<tr>
<td>Power Supply</td>
<td>78-980</td>
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</tr>
<tr>
<td>Sensor base</td>
<td>43-992</td>
<td>5703102 006189</td>
</tr>
</tbody>
</table>

PLEASE NOTE
The detection area is given for an installation mounted at a height of 2.5 meters in an open area without furnishings.

Max installation height is 3 meters.
If there are partitions in the area the ultrasound detection area may be reduced down to 25 %.
Product data

Product Type  EAN no.
Sensor 40 m² PIR 43-208 5703102 005809
Power pack 36-982 5703102 203496
Power Supply 78-980 5703102 201775
Sensor base 43-992 5703102 006189

Sensor PIR-A - an intelligent, self-adjusting PIR (Passive infrared) sensor
- Occupancy sensor
- For 24 V DC
- Self-adjusting “Fuzzy Logic”
- Install and forget solution!
- Blocks in daylight
- Detection 360° - 40 m²
- Output for
  - movement
  - movement with daylight blocking
  - Relay (movement)

The occupancy sensor PIR-A is an intelligent sensor based on passive infrared technology.

The occupancy sensor is self-adjusting (adaptive) which means that after a testing period the sensor will “learn” to recognise air currents and the periods when the area is in use over a period of four weeks. Thus the sensor will only be sensitive when there is activity, and less sensitive when there are no people present.

Different power supplies are available:
78-980 230 V/24 V DC 1 A
36-982 230 V/24 V DC 40 mA

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor 40 m² PIR</td>
<td>43-208</td>
<td>5703102 005809</td>
</tr>
<tr>
<td>Power pack</td>
<td>36-982</td>
<td>5703102 203496</td>
</tr>
<tr>
<td>Power Supply</td>
<td>78-980</td>
<td>5703102 201775</td>
</tr>
<tr>
<td>Sensor base</td>
<td>43-992</td>
<td>5703102 006189</td>
</tr>
</tbody>
</table>

Covering area to a height of 2.5 meters

<table>
<thead>
<tr>
<th>4.5</th>
<th>3</th>
<th>1.5</th>
<th>0</th>
<th>1.5</th>
<th>3</th>
<th>4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Max installation height is 3 meters.

Connection

1. Red +
2. Grey (movement-controlled + light)
3. Blue (movement-controlled)
4. Black -
5. Black/white
6. Yellow/white
7. Blue/white

Movement-controlled relay e.g. ventilation/monitoring etc.

Covering area to a height of 2.5 meters

- 4.5
- 3
- 1.5
- 0
- 1.5
- 3
- 4.5

Detection sensitivity - ultrasound

- Small movements
- Body movements

NB! The detection area is given for an installation mounted at a height of 2.5 meters in an open area without furnishings.

Technical data

Input
- Power supply voltage 24 V DC ±10 %
- Power consumption max. 18 mA (0.8 VA)

Output
- Output short-circuit protected
- Movement (blue) NPN, max. 50 mA
- Movement + light (grey) NPN, max. 50 mA
- Relay (movement) Potential-free switch max. 24 V DC, 500 mA

Performance
- Detection angle 180°/360°
- Detection range 40 m²
- Time delay 8-40 min.
- Lux range 20-3.000 lux
- Protection class IP 40
- Installation height 2.5 m
- Sensor base Ø 129 X 30 mm
- Cable length to power supply:
  - Cable, double stranded, Ø 0,6 max. 50 m
  - Cable, 0.75 mm² max. 100 m
- Ambient temperature 0° C...40° C
- Humidity 0-95 %

Dimensions

<table>
<thead>
<tr>
<th>360°/40 m²</th>
<th>360°/40 m²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Connection

Red +
Grey (movement-controlled + light)
Blue (movement-controlled)
Black -
Black/white
Yellow/white
Blue/white
Movement-controlled relay e.g. ventilation/monitoring etc.

43-208
43-992
Sensor UL-A
An intelligent and self-adjusting ultrasound sensor 200 m²/360°

- Occupancy sensor
- For 24 V DC
- Registers small movements down to 2 - 3 cm
- No triggering errors
- Install and forget solution!
- Output for
  - movement
  - movement with daylight blocking
  - Relay (movement)

The occupancy sensor UL-A has all-round 360° detection and detects via ultrasound. The sensor is therefore suitable for turning lighting on and off automatically in conference rooms, large teaching areas, open-plan offices etc.

The occupancy sensor requires no manual adjustment after it is installed. Adjustment is carried out automatically in the course of a period of four weeks. After this it will be sensitive in periods of activity and less sensitive when there are no people present.

Different power supplies are available:
- 78-980 230 V/24 V DC 1 A
- 36-982 230 V/24 V DC 40 mA

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor 200 m²</td>
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<tr>
<td>Power pack</td>
<td>36-982</td>
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<td>Power Supply</td>
<td>78-980</td>
<td>5703102 201775</td>
</tr>
<tr>
<td>Sensor base</td>
<td>43-992</td>
<td>5703102 006189</td>
</tr>
</tbody>
</table>
**Product data**

**Movement sensor PIR 360° BMS for use in intelligent systems**

- 24 V DC
- Potential free output relay for movement
- Time delay 1-30 min.
- Lux-output 0-10 V
- Lux range 30-3000 lux
- 360° detection angle
- 140 m² detection range
- 9 m² detection range for “small movements”

The sensor PIR 360° BMS is especially suitable for use in intelligent installations like EIB, LON and CTS systems.

With a separate output for light signal 0-10 V and relay for movement signal 1-30 min. you can program the settings of the system yourself.

You can connect the output relay (PIR) in parallel. Use only the light signal (LUX) from one sensor.

**Mask**

To avoid undesired lighting in particular areas, the sensor must be constrained with the enclosed mask.

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR BMS, 24 V DC</td>
<td>41-340</td>
<td>5703102 201201</td>
</tr>
</tbody>
</table>

---

**Product data**

**Technical data**

**Input**
- Supply voltage: 24 V DC ± 10 %
- Power consumption act/pas: 0.75/0.25 W

**Output**
- Output relay: 0.5 A, 24 V DC
  - NO potential free
- Output for light signal: 0-10 V (Source) $R_j > 2 \, \Omega$

**Performance**
- Detection angle: 360°
- Detection range - Small movements: 9 m²
- Detection range - Body movements: 140 m²
- Time delay: 1-30 min.
- Lux range: 30-3000 lux
- Protection class: IP 20
- Cover colour: RAL 9010 (white)
- Cable max. dimension: 2xØ12 mm
- Mounting height: 2.5 - 3 m
- Ambient temperature: -5°C…+50°C
- Sensitivity:
  - Option
- Test mode:
  - Option
- LED indicator on/off (PIR): Option

**Cable length:**
- 0.05 A: 0.5 A
- 0.25 mm²: 100 m 50 m
- 0.5 mm²: 200 m 100 m
- 0.75 mm²: 300 m 150 m
- 1.0 mm²: 400 m 200 m
- 1.5 mm²: 600 m 300 m

**Planning**

To ensure optimal detection at the entrance to the room, reduce the range as shown in Fig. 3 when positioning the sensors. Effective detection of a person is achieved at minimum 0.8 m height above floor level.
Product data

Movement sensor PIR 360° (24 V AC/DC) with built-in relay

- 360° detection angle
- Built-in time delay up to 60 min.
- Small design - only Ø80 mm
- Automatic switch-on and off of lighting
- 4 sensivity settings

Sensor PIR 360°, 41-549 is designed for mounting on ceilings for e.g. movement control of HVAC and CTS systems or for use together with Servodan controls.

The PIR Sensor is a universal movement sensor for 24 V AC or DC. The integrated timer can be adjusted using the DIP switch to set the time delay for the potential-free contact (reed relay).

Technical data

Input
- Power supply: 24 V AC/DC ±10 %
- Power consumption:
  - Worst case: <15 mA (24 V DC)
  - Standby: <4 mA (24 V DC)
  - Worst case: <20,5 mA (24 V AC)
  - Standby: <8,5 mA (24 V AC)

Output
- Contact (Reed relay): max. 48 V / 0,2 A (NO) potential-free

Performance
- Time delay: 5 sec., 30 sec. - 60 min.
- Detection range: 360°, dia. ø7-12 m
- Installation height: 2.5 - 4 m
- Sensitivity: 4 settings
- Protection class: IP 20
- Ambient temperature: -5° C…+50° C

Approval
- CE according to EN 60669-2-1

Connection: 2 or more parallel-connected PIR sensors

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR 360°</td>
<td>41-549</td>
<td>5703102 204547</td>
</tr>
</tbody>
</table>
Sensor PIR 41-279 is a passive infrared movement sensor which responds to temperature changes and movements by people. The Sensor PIR 41-279 is used for ventilation control in halls, exhibition areas, offices and conference rooms. Can be connected directly to HVAC systems for control of ventilation. The sensor can also be connected to BMS systems i.e. Comlux. The Sensor PIR is supplied with brackets for ceiling and wall installation. After connection to the power supply, the Sensor PIR is ready for operation after 1-2 min. (power-up time). For outdoor installation the cover 41-902 must be used.

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor</td>
<td>41-279</td>
<td>5703102 204318</td>
</tr>
<tr>
<td>IP54 Cover</td>
<td>41-902</td>
<td>5703102 203458</td>
</tr>
</tbody>
</table>
Product data

Dimensions

Connection

Connection using the master/slave principle.

Connection using the master/master principle. Lux, Meters and Time can be set separately for each sensor

41-201

Technical data

Input
Supply voltage 230 V AC ± 10 %
Power consumption 1 W

Output
Relay contact NO, µ10 A, 250 V AC
Max load:
Incandescent lamps 2.000 W
Fluorescent tubes, not comp. 1.200 VA
Halogen incandescent lamps 500 W
Compensation capacity 140 µF
Max. starting Peak 80 A/20 mS

Performance
Detection angle 200°
Detection range 8-9 m
Time delay 20 sek./1 min./5 min./15 min./30 min.
Lux range 5...1.000 lux
Protection class IP 40
Installation height 0,8...2 m
Ambient temperature -5° C...+45° C

Approvals
CE according to EN 60669-2-1

Settings

Order numbers

Movement sensor for automatic control of indoor lighting

- Connection for 230 V AC
- For flush and plate mounting
- Detection 200°/8-9 m
- Master/slave function
- Test function
- Hidden settings

The movement sensor is switching on the lighting when it detects moving of persons and the lux level is lower than the preset level.

Settings
To change the sensor’s settings, open the front cover. Here you can set the off delay (the time when the light must be switched on after last movement), lux level and sensitivity.

The movement sensor has 5 fixed settings for time: 20 sec. - 1 min. - 5 min. - 15 min. and 30 min. The movement sensor has 4 fixed settings for lux: 5/30/100 lux / independent of lux. You can also save the topical lux level, when there is the desired minimum lighting in the room.

Constant On or Off is easy to select by pushing the upper part of the sensor to the left or to the right. Automatic is selected by setting the upper part in neutral positon.

Detection
The sensor is designed to be fitted to a wall at a height of 0.8 m to 2.0 m. The coverage area is up to 9 m at an installation height of up to 1.5 m, and up to 8 m at an installation height from 1.5 m to 2.0 m.

You are advised not to place the sensor where it is exposed to direct sunlight, airflows from air conditioning/ radiators, etc.

Detect range

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minilux sensor</td>
<td>41-201</td>
<td>5703102 203366</td>
</tr>
<tr>
<td>Junction box</td>
<td>41-901</td>
<td>5703102 203441</td>
</tr>
</tbody>
</table>
Product data

Movement sensor PIR 360° (230 V AC) for flush mounting

- Small design and elegant finish - only Ø90 mm
- With or without automatic lux-function
- Manual switch-on and off - automatic switch off
- 360° detection angle
- 4 different settings of functions via DIP-switch

Movement sensor PIR 41-400 is a passive infrared sensor which react to temperature changes and movements by people.

The built-in light sensor blocks off lighting in the daylight hours if there is sufficient daylight. The lux level is set in the sensor.

The movement sensor can be used with its factory settings, or the settings can be modified using the remote control – IR Remote 41-920 (accessory).

DIP-switch settings (functions):

App. 1) Daylight dependent
Aut. On/off via PIR
Manual on/off via push button

App. 2) Daylight dependent
Manual on/off via push button
Aut. Off via PIR

App. 3) Movement controlled only
Activates and controls the light with PIR sensor
Manual on/off via push button

App. 4) Movement controlled only
Activates and controls the light with PIR sensor
Aut. Off via PIR

Technical data

Input
Supply voltage: 230 V AC ±10 % 50 Hz
Power consumption: 1 W

Output
Switch: NO, μ 10 A
Max load:
- Incandescent lamps: 2300 W
- Fluorescent lamps: 1200 VA
- Halogen incandescent lamps: 2300 W
Max. compensation capacity: 140 μF
Max. inrush current: 80 A / 20 ms

Performance
Lux range: 30...2000 Lux
Time delay: 5 sec., 2...30 min
Detection range: 360°, dia. Ø7-12 m
Installation height: 2.5 - 4 m
Sensitivity: 4 settings
Protection class: IP 20
Ambient temperature: -5° C…+50° C

Approval
CE according to EN 60669-2-1

Accessory
IR Remote 41-920

Dimension (mm)

Detection
Plan view, diameter indicated at floor height (mounted at height 2.5 m)

Diameter indicated at table height.

Planning
To ensure optimal detection at the entrance to the room, reduce the distance between door and sensor, when positioning the sensors. Effective detection of a person is achieved at minimum 0.8 m height above floor level.

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR 230 V AC</td>
<td>41-400</td>
<td>5703102 203601</td>
</tr>
<tr>
<td>IR remote</td>
<td>41-920</td>
<td>5703102 204028</td>
</tr>
</tbody>
</table>

41-400
Product data

Movement sensor PIR 360° (230 V AC) for indoor light and ventilation control.

- Type 41-300 light control (1 channel)
- Type 41-320 light and ventilation control (2 channels)
- 360° detection angle
- Large range - 140 m²
- Registers small movements in a range of 9 m²
- Extra energysave feature. The light can be switched off manually upon leaving.

Sensor PIR 360° is available in 2 versions:
- 41-300 Movement and daylight control (1 channel)
- 41-320 As for 41-300, with additional potential free output relay for ventilation control (2 channels)

If the light has been forgotten when leaving the room, then it will automatically switch off, after the preset time has elapsed.

Sensitivity can be adjusted post-installation, if necessary.

To avoid undesired lighting in particular areas, the sensor lens can be delimited with the enclosed mask.

Manual operation of push button switch
- Press briefly (0.5-2 sec) to switch off the light upon leaving the room.
- Constant light on upon prolonged press > 2 sec. (returns to auto again when pressed briefly)
- Constant light off upon prolonged press > 2 sec. (returns to auto again when pressed briefly)

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR</td>
<td>Standard</td>
<td>41-300 5703102 201065</td>
</tr>
<tr>
<td>Light/vent</td>
<td>41-320</td>
<td>5703102 201072</td>
</tr>
</tbody>
</table>

Type 41-320 (Light/Vent.)
Extra potential free relay output (ventilation) is daylight independent.
Time delay = Timer setting + 25 %
Remaining data as for relay (Light)

Parallel connection
Mounting of two sensors on the same switch will because of lux-function, affect the control system and is not recommended.
Without lux-function - parallel connection is possible.
Product data

Technical data

Input
Supply voltage 230 V AC ±10 % 50 Hz
Power consumption approx. 1 W

Output
Relay contact NO, μ 10 A
Max load:
Incandescent lamps 2,300 W
Fluorescent lamps 1,200 VA
Compensation capacity 140 μF
Max. starting peak 80 A / 20 ms

Performance
Detection angle 360°
Detection range - Small movements 9 m²
Detection range - Body movements 140 m²
Lux range 10...1000 Lux
Hysteresis +10 %
Time delay 1...30 min
Sensitivity Selected manually
Activation indicator on/off Selected manually
Test modes Selected manually
Protection class IP 20
Cable max. dimension 2 x ø12 mm
Ceiling installation height 2,5 - 3 m
Ambient temperature -5° C...+50° C

Approval
CE according to EN 60669-2-1

Please note!
All slave units MUST have the same PHASE as the master unit.

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR master/slave</td>
<td>41-302</td>
<td>5703102 203922</td>
</tr>
</tbody>
</table>

Movement sensor PIR
360° (230 V AC) for indoor light control - Master/slave model

- Master/slave model - Create a system easily
- Automatic switch-on and off of lighting
- 360° detection angle
- Large range - 140 m²
- Registers small movements in a range of 9 m²

The integrated light sensor measures the light level in the area continuously.

The light is switched on if the light level falls below the preset value and the movement sensor detects activity in the coverage area.

The sensors can be connected in a master/slave system, so you are able to cover a larger area. On the master unit Lux and Time are set, on the slave unit Time only.

The way you install and set the unit, determines if the unit is functioning as master or slave.

Calculating the total off delay:
Master unit eg. set to 15 min.
Slave unit eg. set to 10 min.
Total off delay is 25 min.

The shortest possible off delay is 2 minutes (master 1 min. + slave 1 min.).

If only the master unit is used, the shortest possible off delay is 1 minute.

To avoid undesired lighting in particular areas, the lense must be constrained with the enclosed mask.

Pushbutton operation
Option to use a pushbutton to switch on the light, provided the light level is lower than the preset value.

Plan view, diameter indicated at floor level.

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIR master/slave</td>
<td>41-302</td>
<td>5703102 203922</td>
</tr>
</tbody>
</table>
**Product data**

**Movement sensor PIR 360° 2-CH (230 V AC) for indoor light control in classrooms**

- Type 41-330 Sensor PIR 2-CH - for control of 2 series of ceiling lights + board lighting.
- Manual switch-on and automatic switch-off of lighting
- 360° detection angle
- Large range - 140 m²
- Registers small movements in a range of 9 m²

Sensor PIR 2-CH is used in classrooms and is equipped with 2 separate outputs (channels).

**Channel 1:** is daylight and movement controlled, and is applicable to ceiling lights in the series closest to the windows.

**Channel 2:** is movement controlled only, and it can be applied to ceiling lights remote from the windows, and board lighting. (Potential free relay)

**Operation**

Lights must always be turned on manually at the push button switch and can be turned off again manually when leaving. If the light has been forgotten upon leaving the room, then it will automatically switch off after the pre-set time has elapsed.

**Channel 1** is daylight controlled and will switch on and off dependent upon the level of daylight, provided there is human movement in the premises.

**Channel 2** will always switch on and off upon manual operation of the switch. Constant light off, such as for showing a film, is achieved by manual operation of the push button switch.

**Sensitivity**

Sensitivity can be adjusted post-installation, if necessary.

**Mask**

To avoid undesired lighting in particular areas, the sensor lens can be constrained with the enclosed mask.

**Technical Data**

**Input**
- Supply voltage: 230 V AC ±10 % 50 Hz
- Power consumption active/passive max. 1.5 W

**Output**
- Relay contact: NO, μ10 A, 250 V AC
- Max load:
  - Incandescent lamps: 2.300 W
  - Fluorescent lamps: 1.200 VA
  - Compensation capacity: 140 μF
  - Energisave lamps: 18 W / 58 pcs.
  - Low-voltage - Inductive (ring core): 500 VA
  - Low-voltage - Electronic ballast: 1.200 VA
  - Tungsten-halogen lamps 230V: 2.300 W
  - Max. starting peak: 80 A/20 ms

**Performance**

- Detection angle: 360°
- Detection range - Small movements: 9 m²
- Detection range - Body movements: 140 m²
- Time delay: 1...30 min.
- Lux range: 10...1,000 lux
- Hysteresis: +10 %
- Protection class: IP 20
- Cover colour: RAL 9010 (White)
- Cable max. dimension: 2 x Ø 12 mm
- Ceiling installation height: Max 2.5 - 3 m
- Ambient temperature: -5° C...+50° C

**Approval**
- CE according to: EN 60669-2-1

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR 2-CH (classroom)</td>
<td>41-330</td>
<td>5703102 201195</td>
</tr>
</tbody>
</table>

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**Detection**

To ensure optimal detection at the entrance to the room, reduce the range as shown in Fig. 3 when positioning the sensors. Effective detection of a person is achieved at minimum 0.8 m height above floor level.

**Parallel connection**

Mounting of two sensors on the same switch will because of lux-function affect the control system and is not recommended.

---

**Connection diagram**

**Dimensions**
Technical data
Protection cap type 43-997

Dimensions
- Height: 171 mm
- Width: 146 mm
- Depth: 108 mm

Colour: White

The protection cap is used to protect the sensors in e.g. sports centres, gymnasiuims, walking areas.
Use it as protection against both ball games and vandalism.

Fits:
- 41-262
- 41-271
- 41-272
- 41-274
- 41-231

Order number:

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection cap</td>
<td>43-997</td>
<td>5703102201843</td>
</tr>
</tbody>
</table>

Technical data
Protection cap type 43-998

Dimensions
- Height: 171 mm
- Width: 146 mm

Colour: White

The protection cap is used to protect the sensors in e.g. sports centres, gymnasiuims, walking areas.
Use it as protection against both ball games and vandalism.

Fits:
- 41-300
- 41-301
- 41-320
- 41-330
- 41-340
- 43-205
- 43-208
- 43-215
- 43-222
- 43-225

Order number:

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection cap</td>
<td>43-998</td>
<td>5703102201850</td>
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</table>
**Product data**

**Dimensions**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>16-901/903</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>35 mm</td>
</tr>
<tr>
<td>Height</td>
<td>35 mm</td>
</tr>
<tr>
<td>Diameter</td>
<td>21 mm</td>
</tr>
</tbody>
</table>

**Technical data**

**Type 16-901:**
- Power range: 16-125 W
- Connection time: 1.7 sec using 36 W lamp

**Type 16-903:**
- Power range: 4-22 W
- Connection time: 1.7 sec using 18 W lamp

**General information:**
- Supply voltage: 200-260 V
- Frequency: 50/60 Hz
- Ballast type: Inductive or capacitive
- Disconnection of defective lamps: max. 5 seconds
- Switch-on voltage: 1.5 kV Multi pulsing
- Temperature, Ta: -20°C...+80°C
- Min. start temperature: -20°C
- Casing: Polycarbonate
- Weight: 10 gr.

**Electronic starter for fluorescent lamps**

- Also for series-connected lamps
- Non-flash start of fluorescent lamps
- Reduction of maintenance costs (reduced frequency of defective lamp replacements)
- Electronic starter disconnects defective lamps, thus preventing irritating flashing and unnecessary power consumption
- 20-30% longer life of lamps
- Life of electronic starter > 50,000 hours
- Low temperature range -20°C
- Approved according to IEC 926 and EN 60926

Servodan’s electronic starter has a great number of advantages compared with traditional starter switches. The electronic starter ensures that many switch ON and OFF do not reduce the life of the lamp.

Servodan’s electronic starter can be used in a wide temperature range, and the built-in solid-state relay ensures optimum switching on of fluorescent lamps. Controlled heating of the cathode followed by a series of high-voltage start pulses ensure precise switching on of fluorescent lamps - without flashing.

The electronic starter switches off any defective lamps. Thus the irritating flashing occurring in traditional starter switches is avoided.

**Electronic starter type 16-903**

Used for 18 or 20 W 600 mm fluorescent series-connected lamps and for lamps in single and double-tube fittings in 4-22 W range.

**Order numbers**

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic starter</td>
<td>16-901</td>
<td>5703102 002587</td>
</tr>
<tr>
<td>Electronic starter</td>
<td>16-903</td>
<td>5703102 003263</td>
</tr>
</tbody>
</table>
Light sensor 0-10 V for indoor mounting

- For connection to:
  - Control 36-080
  - Luxstat Control 78-0XX
- Screw terminals
- Protection class IP 20
- 4 lux ranges:
  - 3...300 lux
  - 30...3000 lux
  - 300...30K lux
  - 600...60K lux

The Sensor 43-197 is a light sensor which covers a number of lux ranges and is intended to control indoor lighting.

The light sensor 43-197 has screw terminal connection, so there is no need for extra junction box.

If the location requires a higher protection class than IP20, use type 43-198 which has a IP54 protection class.

Placement:
Fig. 1: When daylight enters the room from the side, the light sensor must be placed so that it “sees” the incoming daylight.

Fig. 2: The light sensor must be placed behind any curtains or sunblinds fitted behind the window.

Fig. 3: The light sensor should be placed so that it “looks” directly up at the sky. To avoid direct sunlight, place the light sensor as shown.

Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light sensor</td>
<td>43-197</td>
<td>5703102 203311</td>
</tr>
</tbody>
</table>
Wireless, selfpowered light sensor with EnOcean transmitter

- Powered through solar cells
- For outdoor usage
- EnOcean STM110 transmitter
- 2 lux ranges:
  - 300...30,000 lux
  - 600...60,000 lux
- Unique address code via “learn mode”
- IP54

The wireless light sensor model 43-161 is a light sensor based on wireless technology. The light sensor transmits an RF telegram to a receiver module.

The light sensor measures the light level continuously and compares it with the RF telegram transmitted earlier. In the event of a change in the light level of more than 4 steps (1 step = 117 lx in the default lux range, otherwise 234 lx), a relevant RF telegram will be transmitted within 10 seconds.

In normal operation a current RF telegram will be transmitted approx. every 17 minutes.

The light sensor is designed to be installed outdoors on a typical façade wall. We recommend installation higher than 2.5 meters in order to reduce inconvenient lighting, distracting shadows, vandalism, etc.

As the power supply is generated by the internal solar cell, the light sensor must see a minimum of 400 lux for more than 5 hours, in order to have sufficient energy to transmit the necessary RF telegrams (for example throughout the night).

**Technical data**

Supply voltage: Two split solar cells + internal backup capacity

RF transmitter system:
- 43-161: Profile 2008 STM110 v.1.04
- Transmission frequency: 868 MHz
- Transmission output: <10 mW
- Transmission rate at default setting:
  - Less than 4 steps: every 17 min
  - More than 4-5 steps: less than 10 s

RF distance:
- Approx. 300 m (open field)
- Approx. 30 m (indoor)

Lux range 1:
- 300...30,000 lux
  - 117 lux / step STM110
  - PINS A/D0 (4LSB)
- 600...60,000 lux
  - 234 lux / step STM110
  - PIN6 A/D1 (5LSB)

Protection class: IP54

Ambient temperature: -20° C...+55° C

**Approvals**

CE according to EN 60669-2-1

EnOcean approval: See www.servodan.com

**Product data**

<table>
<thead>
<tr>
<th>Product Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light sensor wireless</td>
<td>43-161 5703102 205025</td>
</tr>
</tbody>
</table>

**Order number**
**Product data**

**Movement sensor PIR 360° Wireless 230 V AC and 24 V AC/DC for indoor lighting control**

- **Wireless technology** (EnOcean RF transmitter)
- **Light sensor:**
  1. Priority: Daylight
  2. Priority: Movement
- **Automatically on/off**
- **360° detection angle**
- **140 m² detection range**
- **9 m² detection range for “small movements”**

The model 41-301 PIR Sensor is a movement sensor based on wireless technology that sends an RF telegram to a receiver module, which switches the light on and off.

**Function**
The integrated light sensor measures the light level in the area continuously, and compares it with the preset value specified via the LUX setting button. If the light level falls below the preset value and the movement sensor detects activity in the coverage area, the light is switched on.

The integrated cut-out delay of 1-30 minutes (adjustable) makes sure that the RF switch-on telegrams are sent continuously (approx. once a minute) to the receiver, until the sensor does not register activity or the selected light level is reached.

If you press the LRN button, an RF status telegram will immediately be sent to the receiver. A simple and easy connection.

See available receivers on [www.enocean.de](http://www.enocean.de)

**Technical data**

**Input**
- Supply voltage: 230 V AC ±10 % 50 Hz
- Alternative voltage: 24 V AC / DC ±10 %
- Power consumption: 230 V AC/ 24 V 1 W/0.5 VA

**Output**
- RF system transmitter: EnOcean STM100

**Performance**
- Lux range: 10...1000 Lux
- Lux range off: LUX is turned towards max to position off, no daylight blocking.
- Hysteresis: > +10 %
- Time delay: 1...30 minutes, with daylight blocking
  10 sec….30 minutes, no daylight blocking
- Transmitter frequency: 868 MHz
- Transmitter output: < 10 mW
- Transmitter rate of recurrence: On standby once per approx. 100 sec. Immediately when PIR activation timer set

**RF – range**
- 100 meters in open space/free line of vision,
  approx. 30 meters in buildings

**Temperature**
- Sensitivity: Option
- Activation indicator on/off: Option
- Test modes: Option
- Protection class: IP 20
- Cable bush: 2 x Ø12 mm
- Ambient temperature: -5° C...+50° C

**Approvals**
- CE according to EN 60669-2-1

**Order numbers**

<table>
<thead>
<tr>
<th>Product Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR</td>
<td>41-301</td>
</tr>
<tr>
<td>Wireless</td>
<td>5703102 201768</td>
</tr>
</tbody>
</table>
**Product data**

**Dimensions**

![Dimensions Diagram]

**Connection**

![Connection Diagram]

**Movement sensor PIR 360° Wireless 230 V AC and 24 V AC/DC for indoor lighting control**

- Wireless technology (EnOcean RF transmitter)
- Light sensor:
  1. Priority: Daylight
  2. Priority: Movement
- Automatically on/off
- 360° detection angle
- 140 m² detection range
- 9 m² detection range for “small movements”

The model 41-380 PIR Sensor is a movement sensor based on wireless technology that sends an RF telegram to a receiver module, which switches the light on and off.

**Function**

The integrated light sensor measures the light level in the area continuously, and compares it with the preset value specified via the LUX setting button. If the light level falls below the pre-set value and the movement sensor detects activity in the coverage area, the light is switched on.

The integrated cut-out delay of 1-30 minutes (adjustable) makes sure that the RF switch-on telegrams are sent continuously (approx. once a minute) to the receiver, until the sensor does not register activity or the selected light level is reached.

If you press the LRN button, an RF status telegram will immediately be sent to the receiver. A simple and easy connection.

See available receivers on www.enocean.de

**Technical data**

**Input**

Supply voltage 230 V AC ±10 % 50 Hz  
Alternative voltage 24 V AC / DC ±10 %  
Power consumption 230 V AC/ 24 V 1 W/0,5 VA

**Output**

RF system transmitter:  
Profile 2008 STM110 v.1.04

**Performance**

Lux range 10...1000 Lux  
Lux range off LUX is turned towards max to position off, no daylight blocking.  
Hysteresis > +10 %  
Time delay 1...30 minutes, with daylight blocking  
10 sec...30 minutes, no daylight blocking  
Transmitter frequency 868MHz  
Transmitter output < 10 mW  
Transmitter rate of recurrence On standby once per approx. 100 sec.  
Immediately when PIR activation timer set  
RF range 100 meters in open field/free line of vision, approx. 30 meters in buildings  
Sensitivity Option  
Activation indicator on/off Option  
Test modes Option  
Protection class IP 20  
Cable bush 2 x Ø12 mm  
Ambient temperature -5°C...+50°C  

**Approvals**

CE accoding to EN 60669-2-1

**Order numbers**

**Product**  
Sensor PIR Wireless  
**Type**  
**EAN no.**  
41-380  5703102 204998

**Planning**

To ensure optimal detection at the entrance to the room, reduce the range as shown in Fig. 3 when positioning the sensors. Effective detection of a person is achieved at minimum 0.8 m height above floor level.
Wireless and batteryless movement sensor type 41-580 for indoor lighting control

- Zero-energy sensor supplied by a solar cell
- Detection range 7 meters/360°
- For ceiling mounting
- Setting of lux and time by the wireless receiver or a Com-lux system

The PIR sensor is a product in the Servodan wireless concept. Lighting is turned on manually by the wireless switch (76-922) and the PIR sensor ensures that lighting remains switched on as long as moving people are detected.

Via the wireless receiver (e.g. 70-100) the required time delay is set, which ensures that the light remains on for a period after the last person has left.

Recommended installation height is 2-4 m. At 2.5 m the sensor has a range of 7 m in 360° (38 m²).

A wireless and batteryless switch (76-922) must be integrated in order to switch on the light manually.

The solar-powered PIR sensor requires at least 80 lux in order to initiate and operate as required.

### Technical data

**Input**
- Power supply: Solar cell, zero-energy.
- Lux-level for function: more than 80 lx measured by luxmeter.
  - Guidance: 25W bulb, distance approx. 50 cm
- Power consumption: <10 µW
- Protection: IP20
- Temperature range: 5° C ... +50° C indoor use

**Performance**
- Installation height: 2.5 - 4 m
- Detection range: 360°, ø7 – ø12 m

**Type of signal/range**
- RF signal: EnOcean 868 MHz, <10 mW
- RF signal range:
  - 100 m in free range/
  - 30 m in buildings, see RF wireless information
- EnOcean transmitter: Profil 2008 STM110 v.1.04

**Approvals**
- CE int.
- R&TTE 1999/5/EC
- ETSI EN 301 489-1: 2005-09
- ETSI EN 301 489-3: 2002-08 (SRD class2)
- ETSI EN 300 220-3: 2000-09

**Penetration rates**

<table>
<thead>
<tr>
<th>Materials</th>
<th>Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood, plaster and glass without</td>
<td>90-100 %</td>
</tr>
<tr>
<td>surface foil</td>
<td></td>
</tr>
<tr>
<td>Brick, MDF and chipboard panels</td>
<td>65-95 %</td>
</tr>
<tr>
<td>Concrete reinforcement</td>
<td>10-80 %</td>
</tr>
<tr>
<td>Metal, aluminium panels, etc.</td>
<td>0-10 %</td>
</tr>
</tbody>
</table>

### Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor PIR 41-580</td>
<td>41-580</td>
<td>5703102 203991</td>
</tr>
<tr>
<td>Solar/EnOcean</td>
<td></td>
<td></td>
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<tr>
<td>Wireless receiver 70-100</td>
<td>70-100</td>
<td>5703102 204851</td>
</tr>
<tr>
<td>Wireless/batteryless push-button 76-922</td>
<td>76-922</td>
<td>5703102 201737</td>
</tr>
</tbody>
</table>
The wireless push-button is a batteryless and maintenance-free wall transmitter, which by the means of the wireless receiver can control electrical equipment. When programming a wireless Push-button to communicate with a wireless receiver, please follow the instructions for the wireless receiver.

A wireless push-button may – when in programming mode – not be more than 5 m away from a wireless receiver, because the receiver then has a limited range.

The wireless push-button can be adhered to flat, smooth surfaces such as painted walls, tiles, furniture, wood etc. using the accompanying adhesive strips.

Transmission range
The main factors that influence the transmission range of the wireless system are the antenna location of the receivers and transmitters, the building structure and the number of obstacles in the connection path.

Other factors are noise sources that affect the receiver and dead spots caused by signal reflection from nearby conductive objects.

Since the anticipated transmission range depends on these system conditions, range tests should be performed before a specific range is determined for an application.

<table>
<thead>
<tr>
<th>Transmission range</th>
<th>Technical data</th>
</tr>
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<tbody>
<tr>
<td></td>
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Order numbers

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<thead>
<tr>
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<th>Type</th>
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<tbody>
<tr>
<td>Push-button, 2 ch.</td>
<td>76-922</td>
<td>5703102 201737</td>
</tr>
<tr>
<td>Push-button, 4 ch.</td>
<td>76-923</td>
<td>5703102 201744</td>
</tr>
</tbody>
</table>
Wireless EnOcean receiver type 70-100 for indoor lighting control, 230 V AC

- 230 V AC receiver getting a RF-signal from Sensor PIR 360° Wireless/EnOcean and from EnOcean push-button
- Time delay from 0 to 30 min.
- Easy mounting and installation

The wireless receiver is a product in the Servodan wireless concept and can operate together with the wireless push-buttons for manual turning on and off the lighting. It can also operate together with both the wireless push-button and the wireless and battery less PIR sensor (type 41-580). In that case the lighting is turned on by the push-button and the PIR sensor will automatically turn the light off, if no activity is registered in the detection area of the sensor. Of course, the light can always be turned off by the push-button.

The wireless receiver control, which is supplied with 230 V, can be connected directly to 2300 W max. load.

Time delay for the PIR sensor is set optional from 0 to 30 min.

Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
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<td>5703102 204851</td>
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<tr>
<td>Sensor PIR</td>
<td>41-580</td>
<td>5703102 203991</td>
</tr>
<tr>
<td>Solar/EnOcean</td>
<td>41-580</td>
<td>5703102 203991</td>
</tr>
<tr>
<td>Wireless/battery less</td>
<td>76-922</td>
<td>5703102 201737</td>
</tr>
<tr>
<td>push-button</td>
<td>41-380</td>
<td>5703102 204998</td>
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<tr>
<td>Wireless sensor PIR</td>
<td>41-380</td>
<td>5703102 204998</td>
</tr>
</tbody>
</table>
Product data

Dimmer 700 W

• For low voltage halogen lamps via electronic transformer
• For recessed ceilings
• For incandescent lamps and tungsten-halogen lamps 230 V
• Push button operated
• Load up to 700 W

The Tronic built-in dimmer as trailing-edge dimmer is designed for installation in recessed ceilings.

It is controlled by common flush-mounted push buttons with the following operation principle:

Short touch = On/off switching of the lighting system
Long touch = Continuous dimming

Short-circuit and overload protection
The light dimmer is supplied with an electronic fuse. The switch-off time in connection with a short circuit is approximately 7 seconds.

Overload protection
Automatical switch-off at overload or to high temperatures.

Technical data

Input
Power supply 230 V AC
Power consumption approx. 1 W

Output
Load 50-700 W
- Elec. transformer + low volt halogen lamps
- Incandescent lamps 230 V
- Tungsten-halogen lamps 230 V
- Mixed load of the above

Performance
Ambient temperature max. 45 °C

Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>Tronic dimmer</td>
<td>74-010</td>
<td>5703102 002532</td>
</tr>
<tr>
<td>Amplifier unit</td>
<td>74-290</td>
<td>5703102 002549</td>
</tr>
</tbody>
</table>
**Product data**

**Dimensions**

74-290

**Technical data**

**Input**
- Supply voltage: 230 V AC
- Power consumption: approx. 1 W

**Output**
- Load: 100-700 W
- elec. trans. + low-voltage halogen lamps
- incandescent lamps
- incandescent halogen lamps 230 V AC
- combination load of above

**Performance**
- Ambient temperature: max. 45° C
- Casing temperature: max. 70° C

**Power up dimmer for installation and surface mounting**

- For dimming with trailing edge dimmers
- For 230 V AC
- Load up to 700 W

The power up dimmer 74-290 is used to dim large loads and is designed for concealed installation in the ceiling (take ventilation into consideration) or surface mounting.

If you combine several power up dimmers you can control loads of up to 2,300 W via one single dimmer.

The power up dimmer may not be used together with leading edge dimmers.

The power up dimmer is fitted with electronic protection. In the event of a short circuit of < approx. 7 sec., automatic reconnection will take place. In the event of a short circuit of > approx. 7 sec., the unit will cut out.

Overload protection provides temperaturedependent downward adjustment at 20 % overload or overheating.

**Order number**

<table>
<thead>
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<th>Product Type</th>
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</thead>
<tbody>
<tr>
<td>Power up dimmer 74-290</td>
<td>5703102 002549</td>
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</tbody>
</table>

*) Direct dimmer load
Product data

Push button controlled dimmer 1-10 V

- For adjustable ballasts 1-10 V
- Setting for minimum light
- Memory for last level

Flat built-in unit for switching and controlling of electronic ballasts with 1-10 V interface.

The minimum level of the light intensity can be adjusted on the dimmer.

It is controlled by common flush-mounted push buttons with the following operation principle:

**Short touch** = On/off switching of the lighting system

**Long touch** = Continuous dimming

Setting the memory button to on, the dimmer will always switch on the lighting at the last level.

The type of HF ballast is decisive for how many you can connect to one dimmer. Typical sources a HF ballast 0,5 to 2 mA.

**Technical data**

- Power supply: 230 V AC/50 Hz
- Switch: Relay
- Load:
  - Resistive and inductive load: 2,300 W
  - HF: Depend on type
  - Max. load: Max. 200 mA
- Galvanic insulation: 1-10 V 2 kV-basisinsulation
- Ambient temperature: Max. 50° C
- No-load protection: Yes
- Protection class: IP20

**Connection**

1 - Phase control

2 - Phase control

3 - Phase control

---

**Order number**

Product: Dimmer 1-10 V  Type: 74-040  EAN no.: 5 703102 006661
Electronic converters for low-voltage halogen lamps

- Soft start
- No-load protection
- Short-circuit and overload protection
- Over-temperature protection
- Adjustable with trailing-edge dimmer (R-C)

Electronic converters are used for low-voltage halogen lamps and are adjustable with trailing-edge dimmers.

Electronic converters are particularly suitable for being built into furnishings and in combination with low-voltage systems.

Electronic converters have a softstart system protecting the lamps; thus lifetime is extended. The converters have overload protection, short-circuit protection and overtemperature protection. Likewise, they have automatic restarting.

NB! Secondary leads to lamps must not exceed 2 m. Primary and secondary leads must not cross one another.

Primary and secondary cables must not cross one another. This can cause noise.

Technical data

Supply voltage 230 V ac
Secondary voltage 11.5 V eff
Lifetime 25.000 hours
Primary wire H03W-F 2 x 1.5 mm²
Secondary wire H03W-F 2 x 0.75 mm² as minimum

Type 74-210: 60 VA
Current 0.27 A at 60 W
Output 20-60 W
Ambient temperature, ta max. 50° C
Casing temperature, tc max. 70° C

Type 74-212: 105 VA
Current 0.47 A at 105 W
Output 10-105 W
Ambient temperature, ta max. 50° C
Casing temperature, tc max. 70° C

Type 74-213: 150 VA
Current 0.69 A at 150 W
Output 35-150 W
Ambient temperature, ta max. 45° C
Casing temperature, tc max. 80° C

Type 74-214: 200 VA
Current 0.8 A at 200 W
Output 50-200 W
Ambient temperature, ta max. 45° C
Casing temperature, tc max. 80° C

Order numbers

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converter 20-60 W</td>
<td>74-210</td>
<td>5703102 003751</td>
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<tr>
<td>Converter 10-105 W</td>
<td>74-212</td>
<td>5703102 003768</td>
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<tr>
<td>Converter 35-150 W</td>
<td>74-213</td>
<td>5703102 003805</td>
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<tr>
<td>Converter 50-200 W</td>
<td>74-214</td>
<td>5703102 006639</td>
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<td>Distribution terminal</td>
<td>74-291</td>
<td>5703102 002631</td>
</tr>
<tr>
<td>Distribution term. AMP</td>
<td>74-293</td>
<td>5703102 201799</td>
</tr>
<tr>
<td>Power amplifier</td>
<td>74-290</td>
<td>5703102 002549</td>
</tr>
</tbody>
</table>
Electronic converters with AMP plugs for low-voltage halogen lamps

- Flat models
- Soft start
- Off-load protection
- Short circuit and overload protection
- Overheating protection
- Adjustable with trailing edge dimmer (R-C)

Electronic converters are used for low-voltage halogen lamps and can be adjusted with rear edge dimmers.

The converters have a soft start, which protects the bulbs and thus extends their useful life.

The electronic converter cuts out automatically in the event of a short circuit or an overload 1.8 times the nominal output. The converter does not have a traditional built-in fuse. The secondary circuit with the load is therefore not separate. Once a fault has been corrected, the converter will automatically reconnect the load.

N.B. The length of the secondary cables to the lamps may not exceed 2 m.

Primary and secondary cables must not cross one another. This can cause noise.

### Technical data

- **Supply voltage**: 230 V 50-60 Hz
- **Secondary voltage**: 11.5 V output
- **Current**:
  - 70 W: 0.31 A
  - 120 W: 0.50 A
- **Output**:
  - 70 W: 10-70 W
  - 120 W: 20-120 W
- **Short circuit and overload protection**
  - Electronic cutout
  - Automatic reconnection once fault corrected
- **Connection**
  - Gentle connection of light source
  - Soft start prevents starting current peak
- **Ambient temperature**: maks. 50° C
- **Casing temperature**:
  - 70 W: maks. 70° C
  - 120 W: maks. 80° C
- **Overheating protection**
  - Thermal cutout
- **Low-voltage directive**: EN 61046
- **Primary cable**: 2 x 0.75 mm² x 2 meter with Euro plug
- **Secondary cable**: 6 AMP
- **Insulation class**: Class II

### Order numbers

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converter 70 W AMP</td>
<td>74-224</td>
<td>5703102 201645</td>
</tr>
<tr>
<td>Converter 120 W AMP</td>
<td>74-227</td>
<td>5703102 201669</td>
</tr>
<tr>
<td>Power amplifier</td>
<td>74-290</td>
<td>5703102 002549</td>
</tr>
</tbody>
</table>
Electronic converters for low-voltage halogen lamps

- Flat models
- Soft start
- Off-load protection
- Short circuit and overload protection
- Overheating protection

Electronic converters are used for low-voltage halogen lamps and can be adjusted with rear edge dimmers.

The converters have a soft start, which protects the bulbs and thus extends their useful life.

Overload or over-temperature protection by automatic reduction of power.

The electronic converters cut out automatically in the event of a short circuit. The converter does not have a traditional built-in fuse. The secondary circuit with the load is therefore not separate. Once a fault has been corrected, the converter will automatically reconnect the load.

N.B. The length of the secondary cables to the lamps may not exceed 2 m.

Primary and secondary cables must not cross one another. This can cause noise.

### Technical data

<table>
<thead>
<tr>
<th>Supply voltage</th>
<th>230 V 50-60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary voltage</td>
<td>70 W: 11,7 V eff.</td>
</tr>
<tr>
<td></td>
<td>105 W: 11,8 V eff.</td>
</tr>
<tr>
<td>Current</td>
<td>70 W: 0,33 A</td>
</tr>
<tr>
<td></td>
<td>105 W: 0,45 A</td>
</tr>
<tr>
<td>Effect</td>
<td>70 W: 20-70 W</td>
</tr>
<tr>
<td></td>
<td>105 W: 20-105 W</td>
</tr>
</tbody>
</table>

Short circuit and overload protection

Connection

Gentle connection of light source

Soft start prevents starting current peak

Ambient temperature

max. 50° C

Casing temperature

70 W: max. 70° C
120 W: max. 80° C

Secondary cable

2 x 1,5 mm² as minimum

Overheating protection

Thermal cutout

Low-voltage directive

EN 61046

Insulation class

Class II

### Order number

<table>
<thead>
<tr>
<th>Product</th>
<th>Type</th>
<th>EAN no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converter 20-70 W</td>
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<td>Converter 20-105 W</td>
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<td>5703102 203304</td>
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<td>5703102 002631</td>
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<td>Distrib. terminal AMP</td>
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<td>Power amplifier</td>
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<tr>
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<td>16-903</td>
<td>5703102 003269</td>
<td>Electronic starter 4-22 W</td>
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<td>Minilux control with light sensor</td>
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<td>Minilux control with right light</td>
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<td>5703102 203298</td>
<td>Minilux control - outdoor</td>
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<td>5703102 002549</td>
<td>Power up dimmer</td>
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The **support** is near...

You are most welcome to contact us for help and guidance on our products and solutions.

Contact our distributor or visit us at [www.servodan.com](http://www.servodan.com) for more information on intelligent lighting control.