

## **PRODUCT CATALOGUE LIGHT CONTROL**

Grässlin products for the intelligent  
control of light

# Light control: Selective use of lighting thanks to intelligent light control

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Motion and presence  
detectors

Twilight switches

Staircase lighting time-  
switches

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## Excellent products

The reliable devices for light control from Grässlin offer maximum functionality. They individually switch the desired situation in residential, office, commercial or industrial buildings or the entire outside area and also provide noticeably more safety, comfort and energy efficiency.

## Impressive advantages

Whether for indoor applications such as energy-saving lamps, ballasts, show windows or exterior applications such as staircases or street lighting: You are well-prepared for every task using these robust motion and presence detectors, sensor-controlled twilight switches, and individually adjustable staircase lighting time switches.







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## Motion and presence detectors The reliable solution to detect motion

### UNOBTRUSIVE DESIGN, COMPLETE DETECTION

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#### talis product line

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Whether for surface or flush mounting, whether for indoor or outdoor use: You can always find the right motion or presence detector in the talis product line. The devices reliably detect different movements and turn the lights on and off again. This results in three significant advantages:

Great security – talis activates light sources in dark entrances and driveways exactly when needed and thus you are literally never in the dark.

More energy efficiency – talis activates the light sources only when they are needed, thereby significantly reducing energy costs.

High comfort – talis activates light sources in situations where your hands are not free and therefore provides more comfort.



## Motion and presence detectors

### ► Motion detectors



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Motion detector – Selection guide

	talis MW 180-12-1	talis MW 240-16-1
		
Scope of application	Inside and outside	Inside and outside
Communication type	2-wire	2-wire
Angle of detection	180°	240°
Photosensitivity	5 lux - infinity	5 lux - infinity
Range	12 m (At an installation height of 2 m, at 20 - 25° C)	16 m (At an installation height of 2.5 m, at 20 - 25° C)
Time setting	about 5 seconds - 12 minutes	about 5 seconds - 30 minutes
Learning function	–	●
Test mode	–	●
Protection type	IP54	IP55
Mounting	Construction	Construction
Page	10	10



talis MFM 360-6-1			talis MWF2 200-9-1			talis MWF3 200-9-1		
								
Inside			Inside			Inside		
2-wire			2-wire			3-wire		
360°			200°			200°		
10 lux - infinity			10 lux - infinity			10 lux - infinity		
6 m (At an installation height of 2.5 m, at 20 - 25° C)			9 m (At an installation height of 1.5 m, at 20 - 25° C)			9 m (At an installation height of 1.5 m, at 20 - 25° C)		
about 1 minute - 15 minutes			about 5 seconds - 30 minutes			about 5 seconds - 30 minutes		
—			●			●		
●			●			●		
IP44			IP40			IP40		
Installation			Flush mounting			Flush mounting		
12			14			14		

## Motion detector – talis MW

### talis MW 180-12-1



### talis MW 240-16-1



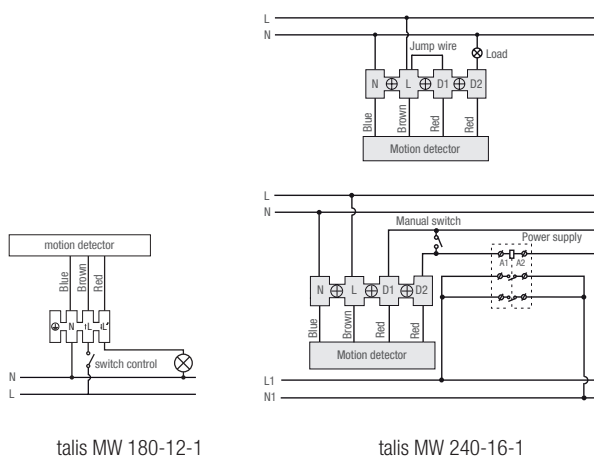
#### PRODUCT DESCRIPTION

The talis MW 180-12-1 and talis MW 240-16-1 outdoor motion detectors function according to the principle of passive infra-red sensors (PIR sensor) like all motion detectors from Grässlin. They react to temperature changes within their detection range, for example, people passing by, and turn on the connected load for a set period of time, depending on the set light value. Three knobs at the bottom allow for easy setting of the parameters detection area, switching time and light value. The talis MW 240-16-1 also has a pivoting and rotating head and provides a standard corner adapter. Other useful functions are an alternating holiday program and a visual LED display of detections in monitor mode.

- Surface mounting for easy and quick installation
- Increased weathering resistance for outdoor applications
- Simple and modern design
- Ensuring the defined power-on time by one-time light balancing with detection



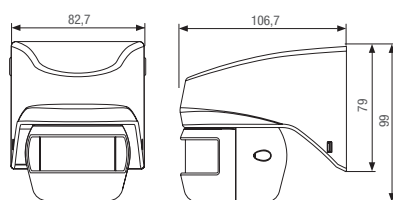
#### CIRCUIT DIAGRAMS



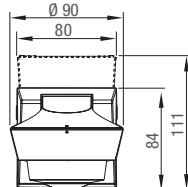
#### APPLICATION AREAS

- Staircases
- Building entrances and corridors
- Reception areas and cellar rooms

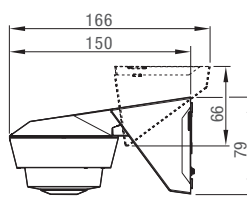
#### DIMENSIONAL DRAWINGS



talis MW 180-12-1



talis MW 240-16-1



Corner adapter talis MW 240-16-1

**Electrical specifications**

Supply voltage	AC 230 V $\pm$ 10 % 50-60 Hz
Power consumption	1 VA (in standby mode)
Parallel switching	Max. 6 sensors

**Communication type**

Wired	2-wire
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**Display and format**

Photosensitivity	5 lux - infinity
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**Operating conditions**

Temperature (operation)	-20° C ... +45° C
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**General data**

Scope of application	Inside/outside
Colour	White
Mounting	Construction
Sensor	Passive infra-red (PIR)

**Standard compliance**

Protection class	II, after appropriate mounting
Approvals	CE

**REPLACEMENT PART / ACCESSORY**

- **Scope of delivery**  
**Corner adapter**  
**talis MW 240-16-1**

**PRODUCT VARIANTS**

	<b>talis MW 180-12-1</b>	<b>talis MW 240-16-1</b>
Item no.	18.06.0002.1	18.06.0003.1
EAN Code	4010940043957	4010940043964

**Electrical specifications**

Load incandescent bulb	1,000 W	2,300 W
Load halogen lamp	500 W (AC)	1,000 W (AC)
	–	1,000 VA / 600 W (LV conventional)
	–	1,000 VA / 900 W (LV electronic)
Load fluorescent lamps	200 W (not compensated)	900 VA (compensated); 1,000 VA (not compensated)
	–	600 W (not compensated)
Load LED lamp	150 W	400 W
Load energy-saving bulbs	–	600 VA / 400 W (incl. CFL and PL lamp)

**Display and format**

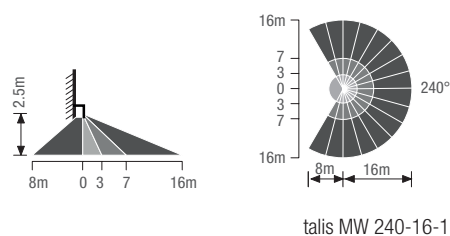
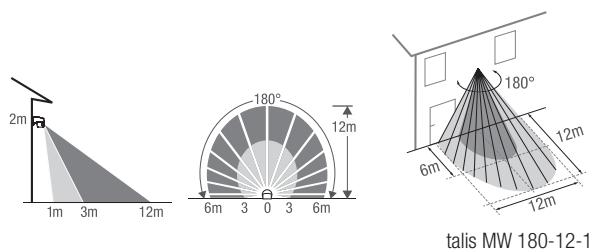
Angle of detection	180°	240°
Range	12 m (At an installation height of 2 m, at 20 - 25° C)	16 m (At an installation height of 2.5 m, at 20 - 25° C)
Time setting	5 seconds - 12 minutes	about 5 seconds - 30 minutes

**Standard compliance**

Protection type	IP54	IP55
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**Operating data**

Operating mode	–	Learning function; test mode
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**DETECTION / RANGE**



## Motion detector – talis MFM 360-6-1

ITEM NO. 18.06.0009.1 / EAN CODE 4010940044022



### PRODUCT DESCRIPTION

The talis MFM 360-6-1 motion detector with a detection range of 360° functions according to the principle of passive infra-red sensors (PIR sensor).

It reliably detects even the smallest movements and switches on the connected load for a set period of time, depending on the set light value. This extremely compact motion detector is the ideal solution for small and narrow spaces and can be built into the ceiling to save space.

The parameters are set via the large, visible rotary knobs. The sensor adapts to the conditions and increases its detection field as needed up to 11 m.

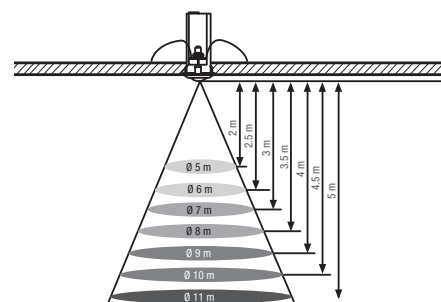
- Moisture proof, therefore appropriate for use in sanitary rooms or public toilets
- Two mounting springs for quick and easy flush or cavity mounting
- Ensuring the defined power-on time by one-time light balancing with detection



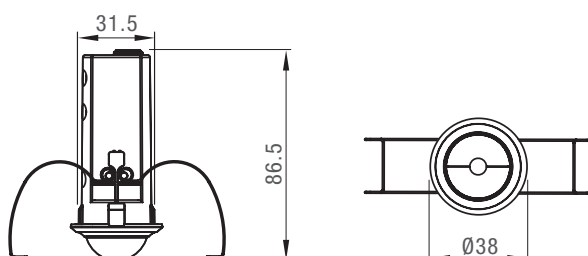
### AREAS OF USE

- Small and confined spaces such as toilets or storerooms

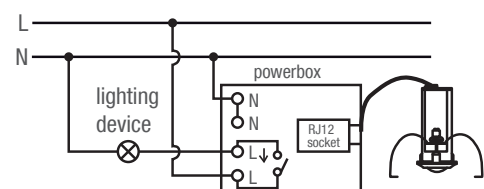
### DETECTION / RANGE



### DIMENSIONAL DRAWINGS



### CIRCUIT DIAGRAM



## TECHNICAL DATA

### Electrical Data

Supply voltage	AC 230 V ± 10 % 50-60 Hz
Load incandescent bulb	2,000 W
Load halogen lamp	1,000 W (AC) 1,000 VA / 600 W (LV conventional) 1,000 VA / 900 W (LV electronic)
Load fluorescent lamps	900 VA (compensated) 5 x 2 x 58 W 7 x 2 x 36 W 10 x 1 x 58 W 12 x 2 x 18 W 15 x 1 x 36 W 25 x 1 x 18 W
Load energy-saving bulbs	600 VA / 400 W (incl. CFL and PL lamp)
Load LED lamp	400 W
Power consumption	1 VA (in standby mode)
Parallel switching	Max. 6 sensors

### Communication type

Wired	2-wire
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### Operating data

Operating mode	Test mode
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### Display and format

Angle of detection	360°
Photosensitivity	10 lux - infinity
Range	6 m (At an installation height of 2.5 m, at 20 - 25° C)
Time setting	about 1 minute - 15 minutes

### Environmental conditions

Temperature (operation)	0° C ... +45° C
-------------------------	-----------------

### General data

Scope of application	Inside
Colour	White
Mounting	Installation
Sensor	Passive infra-red (PIR)

### Standard compliance

Protection type	IP44, power supply IP20
Protection class	II, after appropriate mounting
Approvals	CE

## Motion detector – talis MWF

### talis MWF2 200-9-1



#### PRODUCT DESCRIPTION

The talis MWF2 200-9-1 and talis MWF3 200-9-1 interior motion detectors have a switch for manual adjustment of the operating mode (ON, AUTO and OFF) and have a range of up to 9 m. The talis MWF3 200-9-1 model can be connected in parallel and is ideally suited to reliably detect even over large distances.

- Mounting in standard flush-mounted boxes with a diameter of 68 mm, as well as cavity boxes
- Available as 2-wire and 3-wire variants
- Universal housing design, compatible with standard switching programs
- Ensuring the defined power-on time by one-time light balancing with detection



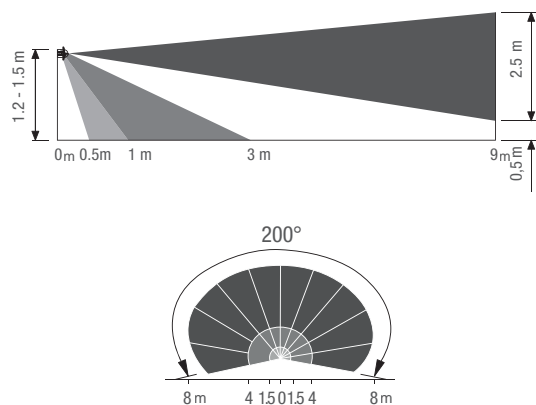
### talis MWF3 200-9-1



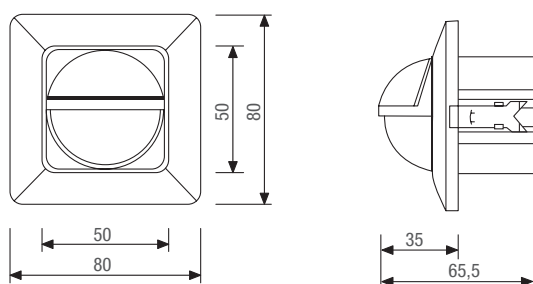
#### APPLICATION AREAS

- Corridors
- Hotel rooms
- Classrooms
- Work and meeting spaces

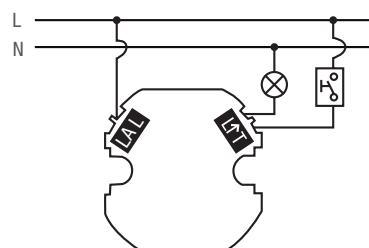
#### DETECTION / RANGE



#### DIMENSIONAL DRAWINGS



#### CIRCUIT DIAGRAM





## TECHNICAL DATA

### Electrical Data

Supply voltage	AC 230 V ± 10 % 50-60 Hz
Power consumption	1 VA (in standby mode)
Parallel switching	Max. 6 sensors

### Operating data

Operating mode	Learning function Test mode
----------------	--------------------------------

### Display and format

Angle of detection	200°
Photosensitivity	10 lux - infinity
Range	9 m (At an installation height of 1.5 m, at 20 - 25° C)
Time setting	about 5 seconds - 30 minutes

### Operating conditions

Temperature (operation)	0° C ... +45° C
-------------------------	-----------------

### General data

Scope of application	Inside
Mounting	Flush mounting
Sensor	Passive infra-red (PIR)

### Standard compliance

Protection type	IP40
Protection class	II, after appropriate mounting
Approvals	CE

## PRODUCT VARIANTS

	<b>talis MWF2 200-9-1</b>	<b>talis MWF3 200-9-1</b>
Item no.	18.06.0011.1	18.06.0012.1
EAN Code	4010940044046	4010940044053

### Electrical specifications

Load incandescent bulb	5 - 300 W	2,000 W
Load halogen lamp	5 - 300 W (AC) 5 - 150 W (LV conventional) 5 - 150 W (LV electronic)	1,000 W (AC) 1,000 VA / 600 W (LV conventional) 1,000 VA / 900 W (LV electronic)
Load fluorescent lamps	5 - 150 VA — — — — — —	900 VA (compensated) 5 x 2 x 58 W 7 x 2 x 36 W 10 x 1 x 58 W 12 x 2 x 18 W 15 x 1 x 36 W 25 x 1 x 18 W
Load energy-saving bulbs	5 - 150 VA (incl. CFL and PL lamp)	600 VA / 400 W (incl. CFL and PL lamp)
Load LED lamp	5 - 100 W	400 W

### Communication type

Wired	2-wire	3-wire
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## Presence detectors – Selection guide

talis PS 360-7-1



talis PF 360-8-1



talis PF 360-8-2






Channels	1	1	2
Photosensitivity	10 lux - infinity	10 lux - infinity	10 lux - infinity
Range	7 m (At an installation height of 2.5 m, at 20 - 25° C)	8 m (At an installation height of 2.5 m, at 20 - 25° C)	8 m (At an installation height of 2.5 m, at 20 - 25° C)
Time setting	about 5 seconds - 30 minutes	about 5 seconds - 30 minutes	Channel 1: about 5 seconds - 30 minutes Channel 2: about 10 seconds - 60 minutes
Learning function	●	●	●
Test mode	●	●	●
Remote operation	—	—	—
Function	—	—	—
Protection type	IP40	IP44	IP44
Mounting	Surface mounting ceiling	Recessed ceiling	Recessed ceiling

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20

			talis PFDR 360-8-1	talis PFMR 360-8-1	talis PFSL 360-8-1
					
			1	1	–
			10 lux - 2,000 lux	10 lux - infinity	–
			8 m (At an installation height of 2.5 m, at 20 - 25° C)	8 m (At an installation height of 2.5 m, at 20 - 25° C)	8 m (At an installation height of 2.5 m, at 20 - 25° C)
			about 5 seconds - 30 minutes	about 5 seconds - 30 minutes	–
			•	•	–
			•	•	–
			•	•	–
			Dimmable	Master	Slave
			IP44	IP44	IP44
			Recessed ceiling	Recessed ceiling	Recessed ceiling
			22	22	22



## Presence detector – talis PS 360-7-1

ITEM NO. 18.06.0004.1 / EAN CODE 4010940043971



### PRODUCT DESCRIPTION

The talis PS 360-7-1 surface-mounted presence detector works on the principle of passive infra-red sensors (PIR sensor) like all presence detectors from Grässlin. It reacts to temperature changes within its detection range, for example, people passing by, and turns on the connected load for a set period of time, depending on the set light value. The talis PS 360-7-1 is the ideal solution when a presence detector must be visibly attached, but should not be visually disruptive on the ceiling. Captive mounting screws allow easy installation of the housing body on the ceiling.

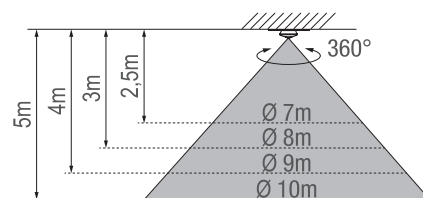
- ▶ Simple and modern design
- ▶ High energy efficiency through regular light balancing and offline function when there is sufficient daylight



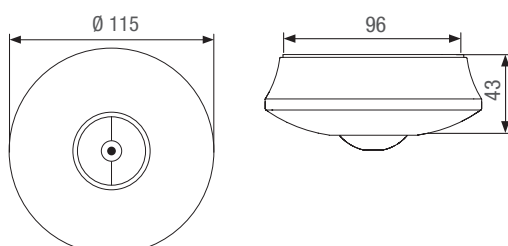
### AREAS OF USE

- ▶ Offices
- ▶ Staircases
- ▶ Building entrances
- ▶ Halls
- ▶ Corridors
- ▶ Passages
- ▶ Basement

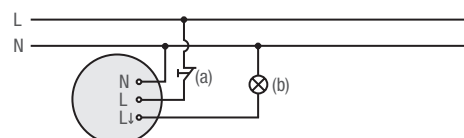
### DETECTION / RANGE



### DIMENSIONAL DRAWINGS



### CIRCUIT DIAGRAM



## TECHNICAL DATA

### Electrical specifications

Supply voltage	AC 230 V ± 10 % 50-60 Hz
Load incandescent bulb	2,000 W
Load halogen lamp	1,000 W (AC) 1,000 VA / 600 W (LV conventional) 1,000 VA / 900 W (LV electronic)
Load fluorescent lamps	900 VA (compensated) 5 x 2 x 58 W 7 x 2 x 36 W 10 x 1 x 58 W 12 x 2 x 18 W 15 x 1 x 36 W 25 x 1 x 18 W
Load energy-saving bulbs	600 VA / 400 W (incl. CFL and PL lamp)
Load LED lamp	400 W
Power consumption	1 VA (in standby mode)
Parallel switching	Max. 6 sensors

### Communication type

Wired	2-wire
-------	--------

### Operating data

Operating mode	Learning function Test mode
Channels	1

### Display and format

Angle of detection	360°
Photosensitivity	10 lux - infinity
Range	7 m (At an installation height of 2.5 m, at 20 - 25° C)
Time setting	about 5 seconds - 30 minutes

### Operating conditions

Temperature (operation)	0° C ... +45° C
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### General data

Scope of application	Inside
Colour	White
Mounting	Surface mounting ceiling
Sensor	Passive infra-red (PIR)

### Standard compliance

Protection type	IP40
Protection class	II, after appropriate mounting
Approvals	CE

## Presence detector – talis PF 360-8-1, talis PF 360-8-2



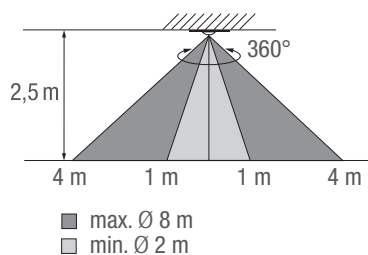
### PRODUCT DESCRIPTION

The PF 360-8-1 and talis PF 360-8-2 flush-mounted presence detector function according to the principle of passive infra-red sensors (PIR sensor) like all Grässlin presence detectors. They react to temperature changes within their detection range, for example, people passing by, and turn on the connected load for a set period of time, depending on the set light value. The talis PF 360-8-1 is particularly suitable for areas where people are present for a long time such as offices or gyms. Thanks to its two channels, the talis PF 360-8-2 not only activates light, but simultaneously controls additional loads such as the heating or air conditioning. It is primarily used in areas in which these applications are used in parallel, such as offices or conference rooms.

- ▶ Simple and modern design
- ▶ Two mounting springs for quick and easy flush or cavity mounting
- ▶ High energy efficiency through regular light balancing and offline function when there is sufficient daylight



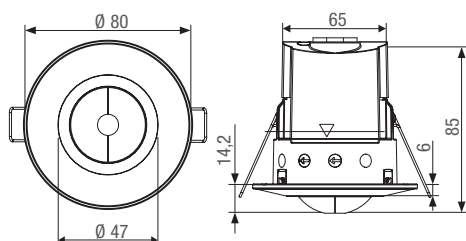
### DETECTION / RANGE



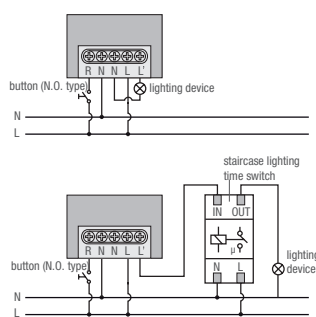
### AREAS OF USE

- ▶ Offices
- ▶ Conference rooms

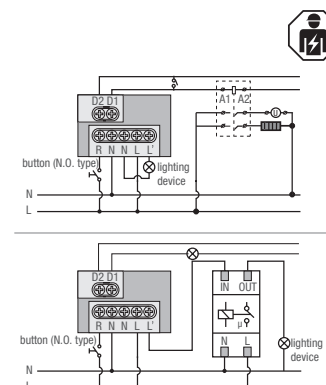
### DIMENSIONAL DRAWINGS



### CIRCUIT DIAGRAMS



talis PF 360-8-1



talis PF 360-8-2



## TECHNICAL DATA

### Electrical Data

Supply voltage	AC 230 V ± 10 % 50-60 Hz
Load incandescent bulb	2,000 W
Load halogen lamp	1,000 W (AC) 1,000 VA / 600 W (LV conventional) 1,000 VA / 900 W (LV electronic)
Load fluorescent lamps	900 VA (compensated) 5 x 2 x 58 W; 7 x 2 x 36 W; 10 x 1 x 58 W; 12 x 2 x 18 W 15 x 1 x 36 W; 25 x 1 x 18 W
Load energy-saving bulbs	600 VA / 400 W (incl. CFL and PL lamp)
Load LED lamp	400 W
Power consumption	1 VA (in standby mode)

### Communication type

Wired	2-wire
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### Display and format

Angle of detection	360°
Range	8 m (At an installation height of 2.5 m, at 20 - 25° C)

### Operating conditions

Temperature (operation)	0° C ... +45° C
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### General data

Scope of application	Inside
Colour	White
Mounting	Recessed ceiling
Sensor	Passive infra-red (PIR)

### Standard compliance

Protection type	IP44
Protection class	II, after appropriate mounting
Approvals	CE

## PRODUCT VARIANTS

	<b>talis PF 360-8-1</b>	<b>talis PF 360-8-2</b>
Item no.	18.06.0005.1	18.06.0006.1
EAN Code	4010940043988	4010940043995

### Electrical specifications

Parallel switching	Max. 6 sensors	Max. 6 sensors
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### Operating data

Operating mode	Learning function	Learning function
	Test mode	Test mode
Channels	1	2

### Display and format

Photosensitivity	10 lux - infinity	10 lux - infinity (channel 1)
Time setting	about 5 seconds - 30 minutes	about 5 seconds - 30 minutes (channel 1) about 10 seconds - 60 minutes (channel 2)

## Presence detector – talis PFDR 360-8-1, talis PFMR 360-8-1, talis PFSL 360-8-1



### PRODUCT DESCRIPTION

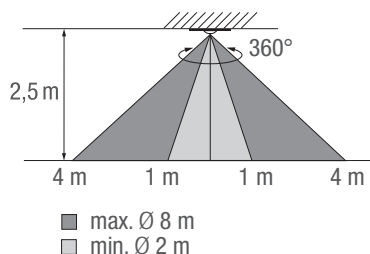
The talis flush-mounted presence detectors of the talis PF family function according to the principle of passive infra-red sensors (PIR sensor). In addition to the base model talis PF 360-8-1, Grässlin also offers the PFDR 360-8-1, which provides reduced backlight. With the master-slave variant (talis PFMR 360-8-1 and talis PFSL 360-8-1), motion can be efficiently detected even in large rooms.

There is a remote control switch for the talis PFDR 360-8-1 and talis PFMR 360-8-1 models, which is available in two versions: Variant talis RP with extensive functions or variant talis REU with reduced functionality.

- ▶ Simple and modern design
- ▶ Two mounting springs for quick and easy flush or cavity mounting
- ▶ Easy operation and adjustment by remote control
- ▶ High energy efficiency through regular light balancing and offline function when there is sufficient daylight



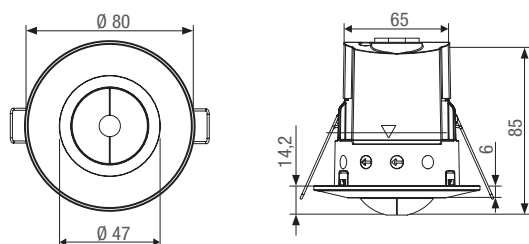
### DETECTION / RANGE



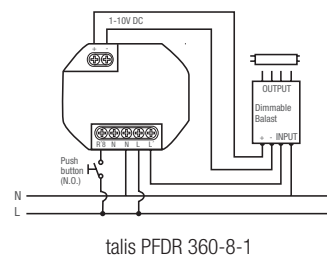
### AREAS OF USE

- ▶ Offices
- ▶ Classrooms
- ▶ Work and meeting spaces
- ▶ Hotel rooms
- ▶ Sport halls

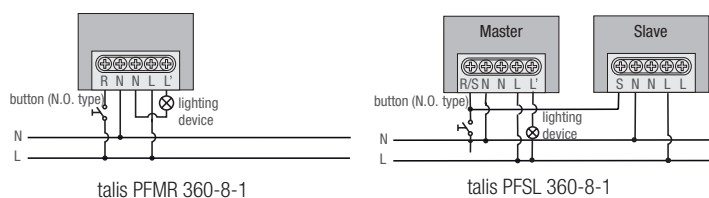
### DIMENSIONAL DRAWINGS



### CIRCUIT DIAGRAMS



talis PFDR 360-8-1



talis PFMR 360-8-1

talis PFSL 360-8-1



## TECHNICAL DATA

## Electrical specifications

Supply voltage	AC 230 V ± 10 % 50-60 Hz
Load incandescent bulb	2,000 W
Load halogen lamp	1,000 W (AC) 1,000 VA / 600 W (LV conventional) 1,000 VA / 900 W (LV electronic)
Load fluorescent lamps	900 VA (compensated) 5 x 2 x 58 W; 7 x 2 x 36 W; 10 x 1 x 58 W; 12 x 2 x 18 W 15 x 1 x 36 W; 25 x 1 x 18 W
Load energy-saving bulbs	600 VA / 400 W (incl. CFL and PL lamp)
Load LED lamp	400 W
Power consumption	1 VA (in standby mode)

## Communication type

Wired	2-wire
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## Display and format

Angle of detection	360°
Range	8 m (At an installation height of 2.5 m, at 20 - 25° C)

## Operating conditions

Temperature (operation)	0° C ... +45° C
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## General data

Scope of application	Inside
Colour	White
Mounting	Recessed ceiling
Sensor	Passive infra-red (PIR)

## Standard compliance

Protection type	IP44
Protection class	II, after appropriate mounting
Approvals	CE

## REPLACEMENT PART / ACCESSORY

## ► talis RP

Item no. 07.10.0002.1  
EAN Code 4010940035341



## ► talis REU

Item no. 07.10.0001.1  
EAN Code 4010940035358



## PRODUCT VARIANTS

	talis PFDR 360-8-1	talis PFMR 360-8-1	talis PFSL 360-8-1*
Item no.	18.06.0010.1	18.06.0007.1	18.06.0008.1
EAN Code	4010940044039	4010940044008	4010940044015

## Electrical specifications

Parallel switching	—	Max. 6 sensors	Max. 10 slaves per master
--------------------	---	----------------	---------------------------

## Communication type

IR interface	Remote operation talis RP, talis REU	Remote operation talis RP, talis REU	—
--------------	-----------------------------------------	-----------------------------------------	---

## Operating data

Operating mode	Learning function	Learning function	—
	Test mode	Test mode	—
Channels	1	1	—

## Display and format

Photosensitivity	10 - 2,000 lux	10 lux - infinity	—
Time setting	about 5 seconds - 30 minutes	about 5 seconds - 30 minutes	—

## General data

Function type	Dimming function Remote controllable	Master function Remote controllable	Slave function —
---------------	-----------------------------------------	----------------------------------------	---------------------

\* only to extend the range, load information  
valid only for talis PFDR and talis PFMR

## Twilight switches: The right solution to switch light on according to intensity and time

### INDIVIDUAL LIGHT CONTROL, VERSATILE USAGES

---

#### turnus product line

---

Lighting can be used selectively through individual light control with the twilight switches of the turnus family.

show window lighting, parking lot lighting, shutter controls, illuminated billboards or street lighting.

Used either as a simple twilight switch or in combination with a time switch, the turnus product line devices switch the light with sensor control according to light intensity and time. They are therefore outstandingly suitable for



---

*Lighting can be simply and flexibly controlled and energy efficiently saved with the twilight switches.*

## Twilight switches

### ► Twilight switches

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---

### ► Accessories

<b>Twilight switches</b>	34
<b>Twilight and staircase lighting time switches</b>	35

## Twilight switches – Selection guide

turnus 501 A



turnus 501 E



turnus 502 A



Channels	1	1	2
Photosensitivity	2 - 500 lux	2 - 500 lux	2 - 500 lux
Switching delay	ON/OFF 100 seconds	ON/OFF 100 seconds	ON/OFF 0 - 100 seconds
Brightness sensor	Construction	Installation	Construction
Program	–	–	–
Memory spaces	–	–	–
Summer/winter time change	–	–	–
Power reserve	–	–	–
Tamper protection	–	–	Sealable
Ambient temperature	-20° C ... +55° C -30° C ... +70° C (sensor)	-20° C ... +55° C -30° C ... +70° C (sensor)	-20° C ... +55° C -30° C ... +70° C (sensor)
Protection type	IP20 IP65 (sensor)	IP20 IP65 (sensor)	IP20 IP65 (sensor)

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turnus 502.1



turnus 771 plus



turnus 772 plus



turnus 200



2	1	2	1
2 - 500 lux	2 - 500 lux	2 - 500 lux	2 - 2,000 lux
ON/OFF	ON/OFF	ON/OFF	ON/OFF
0 - 100 seconds	0 - 100 seconds	0 - 100 seconds	20 - 120 seconds
–	Construction	Construction	Integrated
–	Weekly program	Weekly program	–
–	50	50	–
–	Automatic	Automatic	–
–	3 years	3 years	–
Sealable	Sealable	Sealable	–
-20° C ... +55° C	-10° C ... +55° C	-10° C ... +55° C	-35° C ... +60° C
	-30° C ... +70° C (sensor)	-30° C ... +70° C (sensor)	
IP20	IP20	IP20	IP54
	IP65 (sensor)	IP65 (sensor)	

28

30

30

32



## Twilight switches – turnus

### turnus 501 A, turnus 501 E



#### PRODUCT DESCRIPTION

The turnus twilight switches offer maximum functionality and allow the individual control of the desired situation in residential, office, commercial and industrial buildings and on the entire outside area and also provide noticeably more energy efficiency. They precisely control according to light intensity through an external brightness sensor. The turnus is ideally suited for the use in shop windows, for illuminated billboards or street lighting.

- Easy and quick installation
- Superior manipulation protection through sealable housing



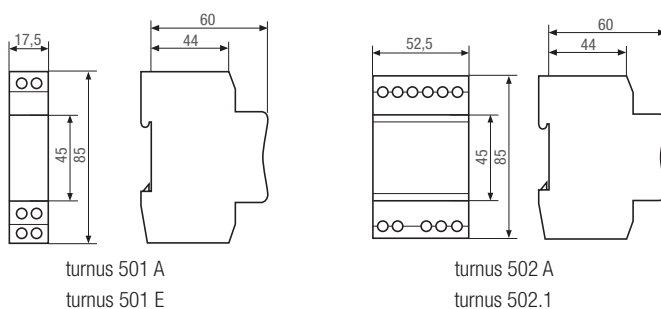
### turnus 502 A, turnus 502.1



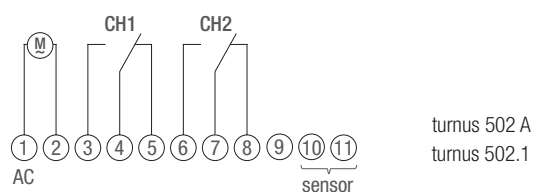
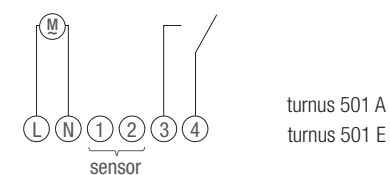
#### AREAS OF USE

- Show window lighting
- Parking lot lighting
- Roller shutter control
- Advertising lighting
- Street lighting
- Blinds

#### DIMENSIONAL DRAWINGS



#### CIRCUIT DIAGRAMS



## TECHNICAL DATA

## Electrical Data

Supply voltage	AC 230 V ± 10 % 50-60 Hz
Load incandescent bulb	2,000 W
Switching capacity - DC	150 mA / 220 V DC, 300 mA / 60 V DC, 800 mA / 24 V DC
Hysteresis	1.3 x Photosensitivity

## Electrical connection

Cable length sensor	max. 100 m
Cable width sensor	min. 0.75 mm <sup>2</sup>

## Display and format

Photosensitivity	2 - 500 lux
------------------	-------------

## General data

Mounting	DIN rail
----------	----------

## Standard compliance

Protection type	IP20
Approvals	CE GOST VDE

## PRODUCT VARIANTS

	turnus 501 A	turnus 501 E	turnus 502 A	turnus 502.1
Item no.	18.18.0001.1	18.18.0006.1	18.18.0002.1	18.18.0003.1
EAN Code	4010940023249	4010940024031	4010940023256	4010940023973

## Electrical specifications

Current output	Switch contact, potential-free	Switch contact, potential-free	Changeover, potential free	Changeover, potential free
Switching capacity - resistive load	16 A / 250 V AC	16 A / 250 V AC	10 A / 250 V AC	10 A / 250 V AC
Switching capacity - inductive load cos. phi 0.6	8 A / 250 V AC	8 A / 250 V AC	8 A / 250 V AC	8 A / 250 V AC
Power consumption	5 VA	5 VA	2.5 VA	2.5 VA

## Electrical connection

Device	Captive latching screw	Captive latching screw	Captive latching screw	Captive latching screw
--------	------------------------	------------------------	------------------------	------------------------

## Operating data

Operating mode	ON/OFF - Switching delay 100 seconds	ON/OFF - Switching delay 100 seconds	ON/OFF - Switching delay 0 - 100 seconds	ON/OFF - Switching delay 0 - 100 seconds
Channels	1	1	2	2
Tamper protection	–	–	Sealable	Sealable

## Environmental conditions

Temperature (operation)	-20° C ... +55° C -30° C ... +70° C (sensor)	-20° C ... +55° C -30° C ... +70° C (sensor)	-20° C ... +55° C -30° C ... +70° C (sensor)	-20° C ... +55° C –
-------------------------	-------------------------------------------------	-------------------------------------------------	-------------------------------------------------	------------------------

## General data

Weight	75 g	75 g	285 g	285 g
--------	------	------	-------	-------

## Standard compliance

	IP65 (sensor)	IP65 (sensor)	IP65 (sensor)	–
--	---------------	---------------	---------------	---

## Scope of delivery

Sensors	Brightness sensor structure	Brightness sensor installation	Brightness sensor structure	without brightness sensor
---------	-----------------------------	--------------------------------	-----------------------------	---------------------------

## Twilight switches – turnus 771 plus, turnus 772 plus



Example representation

### PRODUCT DESCRIPTION

The turnus plus twilight switches offer maximum functionality and allow the individual control of the desired situation in residential, office, commercial and industrial buildings and on the entire outside area and also provide noticeably more energy efficiency. They precisely control according to light intensity through an external brightness sensor. The turnus is ideally suited for use in shop windows, for illuminated billboards or street lighting.

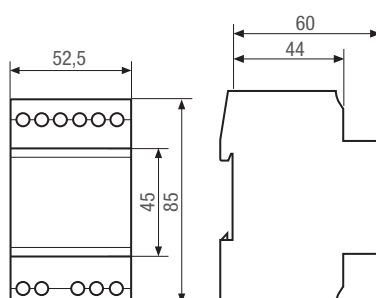
- Convenient, automatic change from summer to winter time
- Easy and quick installation
- Superior manipulation protection through sealable housing



### AREAS OF USE

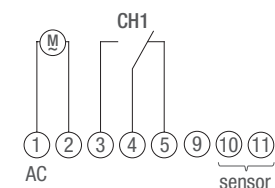
- Show window lighting
- Parking lot lighting
- Roller shutter control
- Advertising lighting
- Street lighting
- Blinds

### DIMENSIONAL DRAWINGS

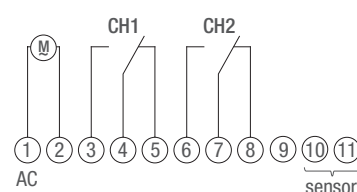


turnus 771 plus  
turnus 772 plus

### CIRCUIT DIAGRAMS



turnus 771 plus



turnus 772 plus

## TECHNICAL DATA

**Electrical Data**

Supply voltage	AC 230 V $\pm$ 10 % 50-60 Hz
Switching capacity - DC	150 mA / 220 V DC, 300 mA / 60 V DC, 800 mA / 24 V DC
Hysteresis	1.3 x Photosensitivity
Current output	Changeover, potential free
Switching capacity - resistive load	16 A / 250 V AC
Switching capacity - inductive load cos. phi 0.6	10 A / 250 V AC
Load incandescent / halogen lamp	2,600 W
Power consumption	5 VA
Switching capacity - maximum (AC1 / AC15)	3,700 W / 750 W
Load fluorescent lamps	1,000 W (compensated), 1,000 W (not compensated)
Accuracy	$\pm$ 1 seconds / day at 20° C
Power reserve	3 years

**Electrical connection**

Cable length sensor	max. 100 m
Cable width sensor	min. 0.75 mm <sup>2</sup>
Device	Latching screw with wire protection max. 4 mm <sup>2</sup>

**Operating data**

Operating mode	IN/OUT - Switching delay 0 - 100 seconds
Tamper protection	Sealable
Hand switch	Fix ON/Fix OFF/AUTO
Programs	Weekly program Free weekday block formation
Memory spaces	50

**Display and format**

Photosensitivity	2 - 500 lux
Shortest switching time	ON/OFF 1 minute
Summer/winter time	Automatic summer/winter time change
Status display	Switching state display

**General data**

Mounting	DIN rail
----------	----------

**Standard compliance**

Protection type	IP20 IP65 (sensor)
Approval mark	CE GOST

## SCOPE OF DELIVERY

► **Sensors**

Item no. 07.02.0001.1  
EAN Code 4010940002671



## PRODUCT VARIANTS

	<b>turnus 771 plus</b>	<b>turnus 772 plus</b>
Item no.	18.22.0001.1	18.22.0002.1
EAN Code	4010940040420	4010940040437

**Operating data**

Channels	1	2
----------	---	---

**Operating conditions**

Temperature (operation)	-10° C ... +55° C, -30° C ... +70° C (sensor)	-10° C ... +55° C, -30° C ... +70° C (sensor)
-------------------------	-----------------------------------------------	-----------------------------------------------

**General data**

Weight	250 g	285 g
--------	-------	-------

## Twilight switches – turnus 200

ITEM NR. 18.17.0001.1 / EAN CODE 4010940018986



### PRODUCT DESCRIPTION

The turnus 200 twilight switch offers maximum functionality and allows the individual control of the desired situation in residential, office, commercial and industrial buildings and on the entire outside area and also provides noticeably more energy efficiency. It precisely controls according to light intensity through its integrated light sensor. The turnus is ideally suited for use in shop windows, for illuminated billboards or street lighting. The turnus is characterised by simple and flexible installation through surface mounting and simple design.

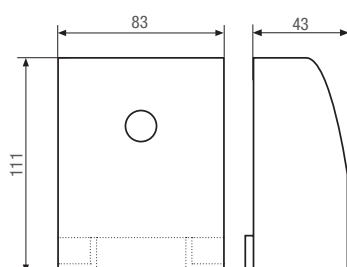
- Flexible adaptation through individual setting of the ON/OFF delay time



### AREAS OF USE

- Show window lighting
- Parking lot lighting
- Roller shutter control
- Advertising lighting
- Street lighting

### DIMENSIONAL DRAWINGS



### CIRCUIT DIAGRAM



220-240 V~  
 50-60 Hz  
 μ — 10 (2) A / 250 V~





---

**TECHNICAL DATA****Electrical Data**

Supply voltage	AC 220-240 V 50-60 Hz
Current output	Switch contact, not potential-free
Switching capacity - resistive load	10 A / 250 V AC
Switching capacity - inductive load cos. phi 0.6	2 A / 250 V AC
Load incandescent / halogen lamp	1,200 W
Power consumption	6 VA
Hysteresis	1.3 x Photosensitivity

**Electrical connection**

Device	Captive latching screw
--------	------------------------

**Operating data**

Operating mode	IN/OUT - Switching delay 20 - 120 seconds
Channels	1

**Display and format**

Photosensitivity	2 - 2,000 lux
------------------	---------------

**Operating conditions**

Temperature (operation)	-35° C ... +60° C
-------------------------	-------------------

**General data**

Weight	175 g
Light sensor	Integrated
Mounting	Construction

**Standard compliance**

Protection type	IP54
Approval mark	CE

## Twilight switches – Accessories

### Sensor LF-structure



Item no.	07.02.0001.1	07.02.0004.1 *
EAN Code	4010940002671	4010940027643

#### Display and format

Photosensitivity	2 - 500 lux	500 - 10,000 lux
------------------	-------------	------------------

#### Operating conditions

Temperature (operation)	-30° C ... +70° C	-30° C ... +70° C
(sensor)	(sensor)	(sensor)

#### Standard compliance

Protection type	IP65 (sensor)	IP65 (sensor)
-----------------	---------------	---------------

### Sensor LF-installation



Item no.	07.02.0003.1
EAN Code	4010940016630

#### Display and format

Photosensitivity	2 - 500 lux
------------------	-------------

#### Operating conditions

Temperature (operation)	-30° C ... +70° C (sensor)
-------------------------	----------------------------

#### Standard compliance

Protection type	IP65 (sensor)
-----------------	---------------

### Cap LF



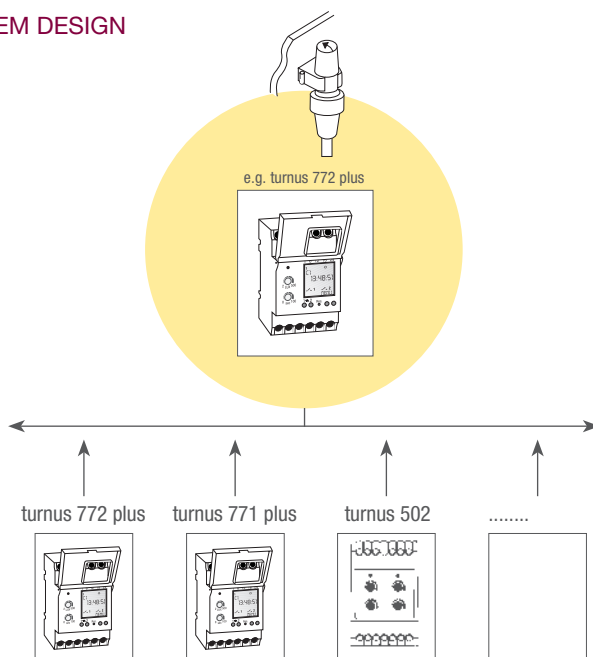
Item no.	07.02.0003.2
EAN Code	4010940029166

#### Display and format

Photosensitivity	500 - 10,000 lux
------------------	------------------

\* Phase out

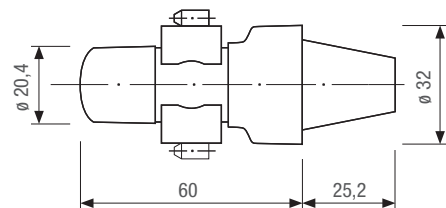
### SYSTEM DESIGN



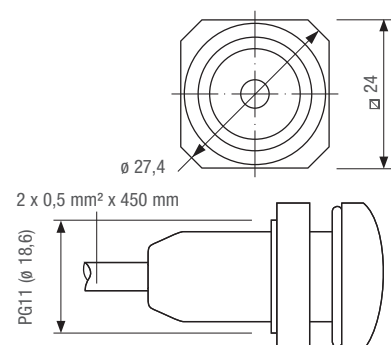
- Pilot unit could be:
- turnus 502
  - turnus 771 plus
  - turnus 772 plus

10 units at maximum are operated as a system with a brightness sensor. Each of the units – with brightness sensor – can also be applied individually.

### DIMENSIONAL DRAWINGS



Sensor LF-structure



Sensor LF-installation

## Twilight and staircase lighting time switches – Accessories

### Wall installation kit 1 TE

ITEM NO. 18.01.0004.2  
EAN CODE 4010940002657

for:

- ▶ turnus 501
- ▶ trealux 210
- ▶ trealux 410
- ▶ trealux 510



### Wall installation kit 2-3 TE

ITEM NO. 03.53.0083.2  
EAN CODE 4010940021719

for:

- ▶ turnus 502
- ▶ turnus 771 plus
- ▶ turnus 772 plus



### Installation frame up to 6 TE

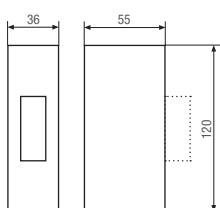
ITEM NO. 03.59.0047.2  
EAN CODE 4010940021726

for:

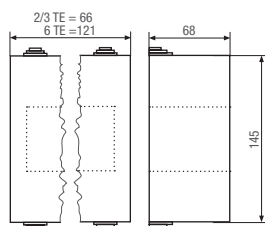
- ▶ turnus
- ▶ trealux



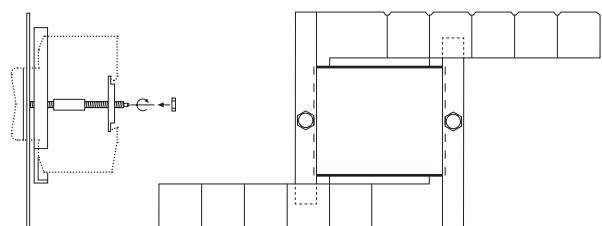
### DIMENSIONAL DRAWINGS



Wall installation kit 1 TE



Wall installation kit 2, 3, 6 TE



Installation frame 1-6 TE

## Staircase lighting time switches: The optimal solution for selective light control in the staircase

### ADVANCED TECHNOLOGY, SIMPLE OPERATION

#### trealux product line

Lighting can be used selectively through individual light control with the programmable staircase time switches of the trealux family.

The automatic staircase time switches of the trealux product line are suitable for installation by clicking on the DIN rail. The products offer advanced solutions for lighting control in staircases, basements, bathrooms or entrance areas and are ideally suited for modern light sources such as energy-saving bulbs and various ballasts. The trealux 510 product variant has a

service function: The trealux is switched on for one hour by pressing the service button (longer than 2 seconds). Pressing the button again for more than 2 seconds switches the time switch back to automatic mode. All staircase lighting time switches from Grässlin are resettable.



*The electronic models of staircase time switches are characterised by their low noise emission.*

## Staircase lighting time switches

### ► Staircase lighting time switches

Selection guide	38
<b>trealux 210</b>	40
<b>trealux 410</b>	40
<b>trealux 510</b>	40





# Staircase lighting time switches – Selection guide

trealux 210



Switching capacity AC	2,300 W
Switching capacity EVG	500 VA
Switching capacity SG	1,000 VA
Switching capacity LED	750 W
Glow lamp load	Max. 50 button x 1 mA
Operating mode	1 x resettable
Service function	–
Advance warning	–

trealux 410		trealux 510	
			
3,600 W		3,600 W	
1,000 VA		1,000 VA	
1,500 VA		1,500 VA	
1,200 W		1,200 W	
Max. 150 button x 1 mA		Max. 150 button x 1 mA	
3 x resettable		3 x resettable	
–		1 hour	
–		●	
40		40	

# Staircase lighting time switches – trealux

## trealux 210



## trealux 410



## trealux 510



### PRODUCT DESCRIPTION

The trealux staircase time switches offer maximum functionality and allow the individual control of the desired situation in residential, office, commercial and industrial buildings and on the entire outside area and also provide noticeably more power efficiency. The trealux enable universal and easy installation with automatic detection of the type of wiring. Thus, they are ideally suited for use with modern light sources such as energy-saving bulbs and various ballasts.

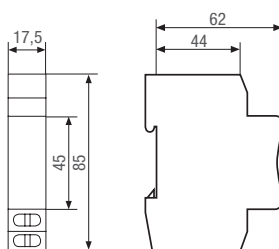
- Immediate extension of the power-on time through reactivation
- Universal installation through automatic recognition of the wiring type (3 or 4 wire)
- Easy installation through wiring from below



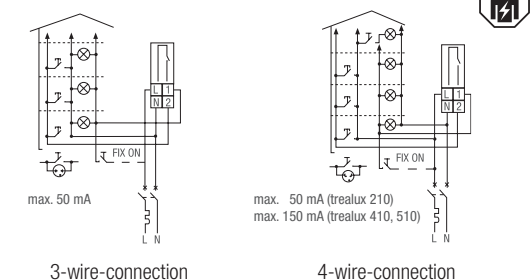
### AREAS OF USE

- Ventilation
- Staircases
- Basement
- Entrance areas
- Toilets

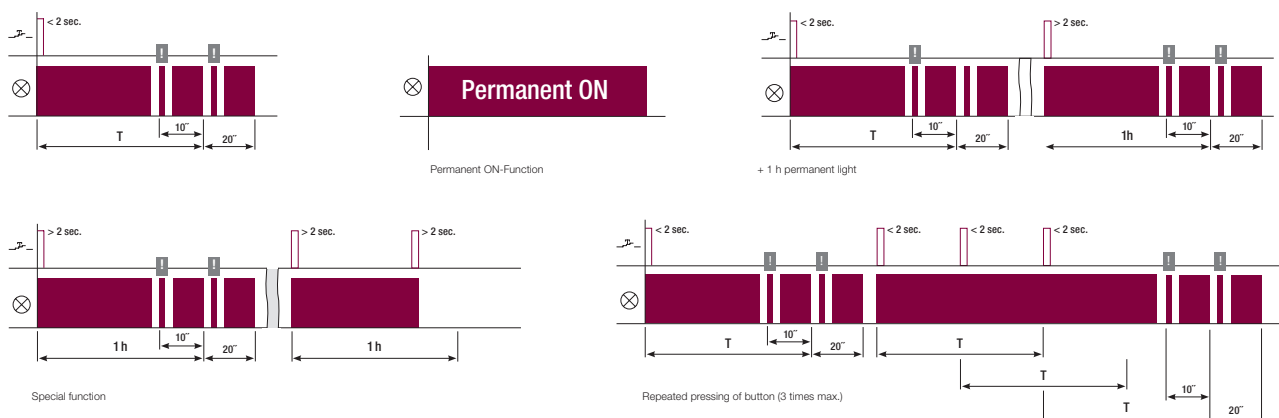
### DIMENSIONAL DRAWINGS



### CIRCUIT DIAGRAMS



### SWITCHING BEHAVIOUR



## TECHNICAL DATA

## Electrical specifications

Current output	Switch Contact
Switching capacity - resistive load	16 A / 250 V AC
Switching capacity - inductive load cos. phi 0.6	10 A / 250 V AC
Power consumption	0.5 W

## Electrical connection

Device	Latching screw with wire protection max. 4 mm <sup>2</sup> Captive latching screw
--------	--------------------------------------------------------------------------------------

## Communication type

Wired	3- or 4-wire (automatic detection)
-------	------------------------------------

## Operating data

Operating mode	Immediately resettable
Hand switch	Fix ON

## Operating conditions

Temperature (operation)	-10° C ... +55° C
-------------------------	-------------------

## General data

Mounting	DIN rail
----------	----------

## Standard compliance

Protection type	IP20
Protection class	II, after appropriate mounting
Approvals	CE GOST VDE

## REPLACEMENT PART / ACCESSORY

## ► Wall installation kit 1 TE

Item no. 18.01.0004.2  
EAN Code 4010940002657

for:

- turnus 501
- trealux 210
- trealux 410
- trealux 510

## ► Installation frame to 6 TE

Item no. 03.59.0047.2  
EAN Code 4010940021726

for:

- turnus
- trealux

*For detailed information about these products, see page 35.*

## PRODUCT VARIANTS

	treallux 210	treallux 410	treallux 510
Item no.	18.13.0009.1	18.13.0018.1	18.13.0016.1
EAN Code	4010940024789	4010940042097	4010940039127

## Electrical specifications

Supply voltage	AC 230 V ± 10 % 50 Hz	AC 230 V ± 10 % 50-60 Hz	AC 230 V ± 10 % 50-60 Hz
Load incandescent / halogen lamp	2,300 VA	3,600 VA	3,600 VA
Load fluorescent lamps	20 x 58 W (parallel compensated)	3,600 VA (dual switching)	3,600 VA (dual switching)
	40 x 58 W (series compensated)	3,600 VA (series compensated)	3,600 VA (series compensated)
	20 x 2 x 58 W (dual switching)	3,600 VA (parallel compensated)	3,600 VA (parallel compensated)
Load LED lamp	750 W	1,200 W	1,200 W
EVG	500 VA	1000 VA	1000 VA
VVG	1000 W	1500 VA	1500 VA
CFL (EVG)	15 x 7 W	34 x 7 W	34 x 7 W
	12 x 11 W	27 x 11 W	27 x 11 W
	11 x 15 W	24 x 15 W	24 x 15 W
	10 x 20 W	22 x 23 W	22 x 23 W
Glow lamp load	max. 50 button x 1 mA (3-wire)		
	max. 50 button x 1 mA (4-wire)	max. 150 button x 1 mA (4-wire)	max. 150 button x 1 mA (4-wire)

## Operating data

Operating mode	1 x resettable	3 x resettable	3 x resettable
----------------	----------------	----------------	----------------

## Display and format

Time setting	30 seconds - 20 minutes	—	1 hour (service function)
Status display	—	—	Advance warning

## GRÄSSLIN Services



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<http://www.graesslin.de/qrc/catalog/glossary/1/de/>



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<http://www.graesslin.de/qrc/catalog/tendertext/1/de/>



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### Layout

team:orange GmbH, web and advertising agency  
[www.teamorange.de](http://www.teamorange.de)

### Printing

C. Maurer GmbH & Co. KG

### Edition

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