

DSI-Smart PTM

Ambient light sensor and motion detector for constant lighting control



Luminaire installation box



Surface-mounted box



Ceiling installation box

**Overview:**

- DSI-SMART PTM i is an ambient light sensor, with a motion detector and infra-red input.
- It is a digital DSI control module for controlling up to 4 or 25 DSI ballasts (see table).
- With the aid of a standard switch it provides a user-friendly way of switching the lights on and off and fading them up and down.
- As an option, the DSI-SMART PTM can be combined with the DSI-SMART Controller infra-red control.
- With the DSI-SMART Programmer various device parameters can be changed to suit requirements and monitor the current values of the module.

Packaging:

Luminaire installation box: 10 pieces/box
 Surface-mounted box: single packaging or 10 single packaging/box
 Ceiling installation box: single packaging or 10 single packaging/box

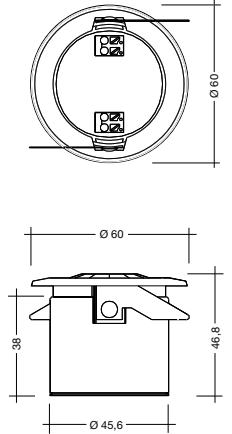
Developed in accordance with:

EN 55015
 EN 60669-2-1
 EN 61000-3-2
 EN 61000-3-3
 EN 61347-2-11
 EN 61547
 EN 62386-101

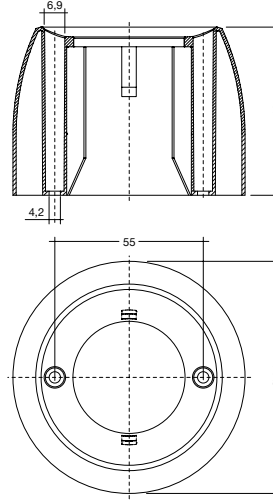
Type			DSI Smart PTM fitted in luminaire	DSI Smart PTM surface-mounted	DSI Smart PTM recessed into ceiling
Article number:			86458588	86458589	86458587
Power supply:	Voltage	V	220–240	220–240	220–240
	Frequenzy	Hz	50	50	50
	Max. load	W	1.7	1.7	3.9
	Standby load	W	1.5	1.5	1,3
Input:	Push to make switches	-	single	single	single
	max. Tasterleitungslänge	m	100	100	100
Output:	Digital DSI control signal	-	1	1	1
	Max. cable length with 1.5 mm ²	m	250	250	250
	Max. number of	PCA/TE one4all/PCD	4	4	25
Ambient conditions:	Operating temperature t_a	°C	0 ... 60	0 ... 60	0 ... 60
	Storage temperature	°C	-25 ... 60	-25 ... 60	-25 ... 60
	Type of protection		IP20	IP20	IP20

Dimensional drawings:

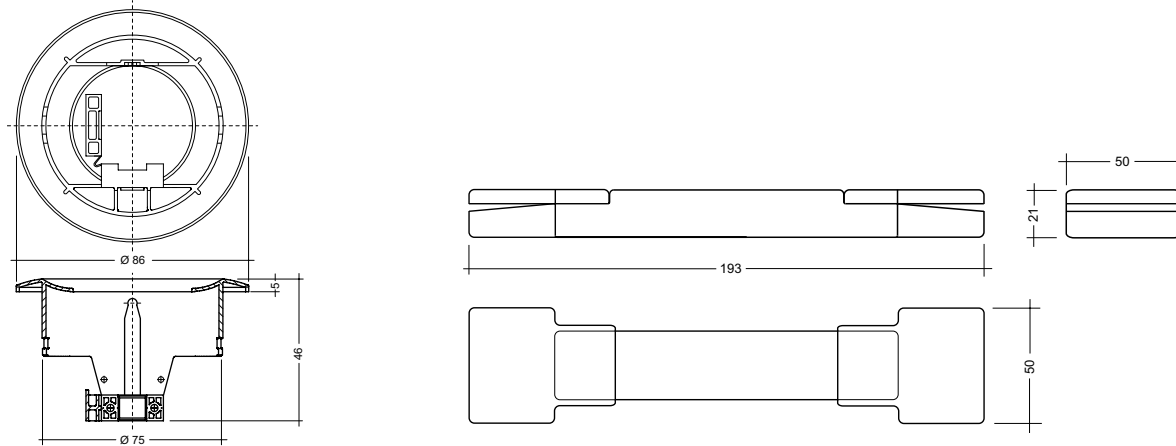
Luminaire installation box:



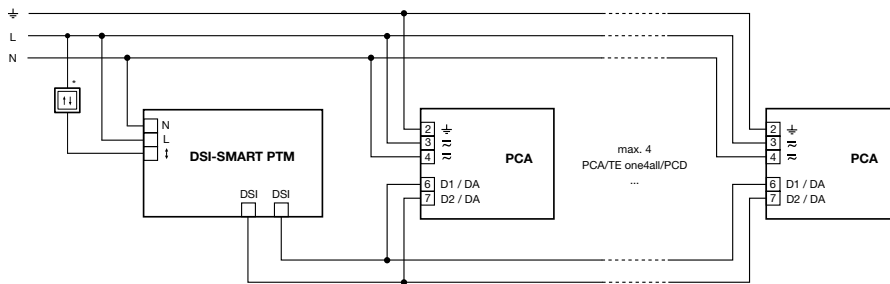
Surface-mounted box:



Ceiling installation box:

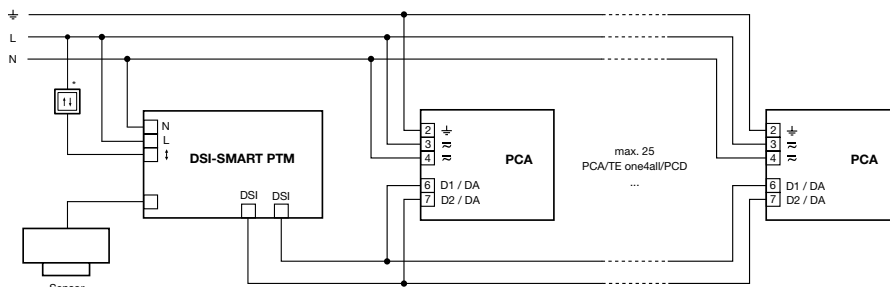


Wiring diagram for DSI-SMART PTM (luminaire installation and surface-mounted boxes)



* must be the same phase as for L

Wiring diagram for DSI-SMART PTM (ceiling installation box)



* must be the same phase as for L

Switch:

DSI-SMART PTM has an input terminal for an external switch. Any number of switches can be connected in parallel to the terminal.

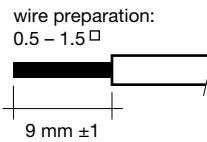
Short press (> 50–600 ms):	ON/OFF
Long press (> 600 ms):	Dim up/down A change in the light value deactivates lighting regulation only temporarily. As soon as the luminaire has been automatically switched on again (motion detection) or manually switched off and on again, regulation is activated again.
2 x short press:	The overwritten setpoint light value is stored (luminaire acknowledges by flashing twice)

Installation:

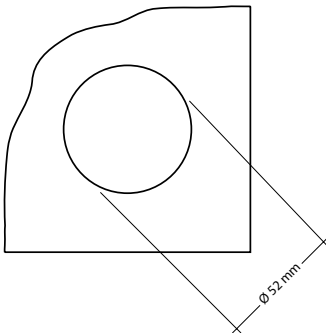
- DSI is not SELV. The installation instructions for low voltage therefore apply.
- The maximum cable length between the external switch and DSI-SMART PTM is 100 m.
- The cable between the ceiling sensor and the base module must not be extended.

Cable types and cable cross-sections:

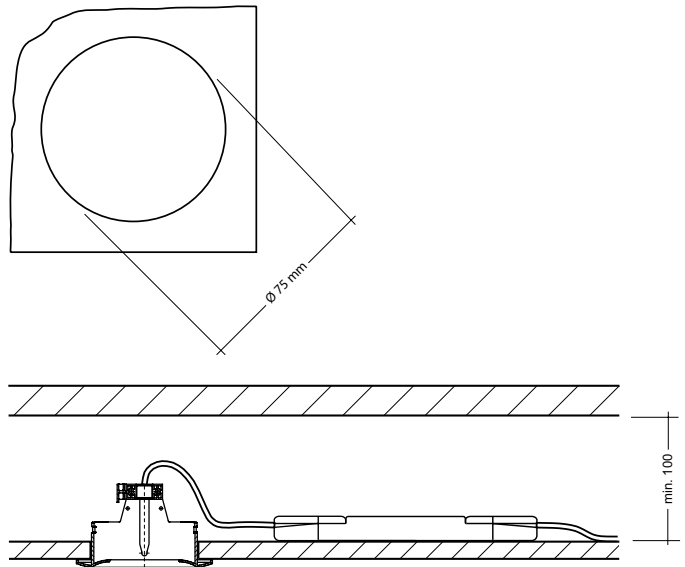
Solid wire with a cable cross-section of 0.5 mm² to 1.5 mm².

**Installation:**

Luminaire installation box:

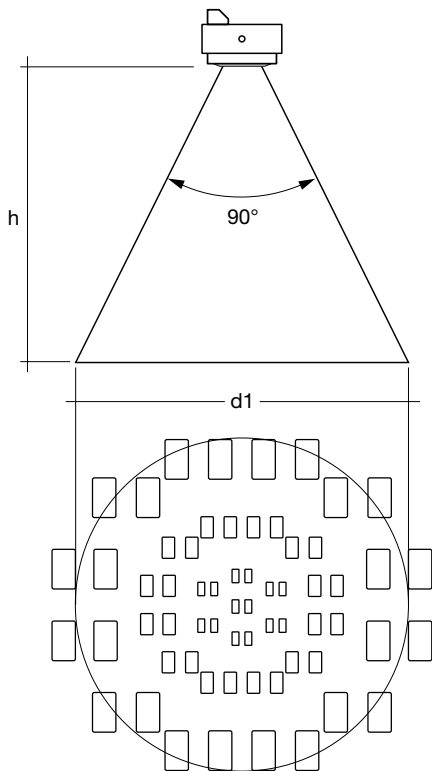


Ceiling installation box:



Motion detector:

Motion detection



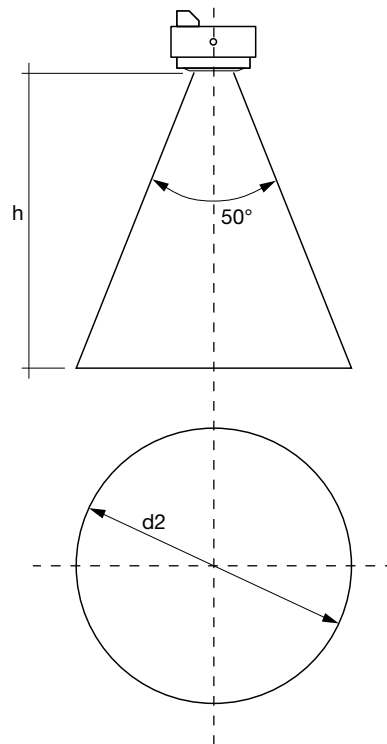
h * m	d1 m	d2 m
1.7	3.4	1.6
2.0	4.0	1.9
2.3	4.6	2.2
2.5	5.0	2.3
2.7	5.4	2.5
3.0	6.0	2.8
3.5	7.0	3.3
4.0	8.0	3.7

* The recommended maximum room height is 4 m.

Calculation of the diameter:
 $d = 2 \times \tan(0,5 \times \alpha) \times h$

Ambient light control:

Light level recognition area



The following operating modes can be set for the motion detector via the DSI-Smart Programmer:

Active	The light is switched on or off automatically depending on whether or not there is a person in the room.
Off Only	The motion detector only switches the connected lighting off. The luminaires are switched on manually via the connected external switch or infra-red control.
Never Off	If it has not detected any movement the sensor dims to the "second light value" parameter and remains at this value
Inactive	The motion sensor is deactivated. The light must be switched on or off manually.

Switch-off delay:

This is the time after which the lighting is switched off if no movement is detected. It can be set via the "time delay" parameter.

Second light value:

On the DSI-Smart PTM you can set whether the light is to be switched off after the switch-off delay or dimmed to the second light value. The light value and the dwell time (how long the value is held) can be set via the "when vacant" and "sec. level" parameters.

Manual-off delay:

If the system is switched off manually via the switch or remote control the motion sensor is deactivated. At the end of this delay if motion has not been detected the motion sensor is activated again. If the sensor detects motion during the "Manual Off" delay, the time will be reset to the start.

The following operating modes can be set for lighting control via the DSI-Smart Programmer:

Active	Constant light control is active.
Inactive	Constant light control is deactivated. The lighting is switched on at 100%.

The value is set with the "light-level" parameter. If the value is set to "max" then lighting control is deactivated. For all other values lighting control is active.

Setpoint adjustment:

- DSI-SMART Controller: Pressing the Set button stores the current light value as a new setpoint.
- DSI-SMART Programmer: Via the "light-level" parameter
- External switch: Briefly pressing the switch twice stores the current light value as a new setpoint.

Bright-out:

If the nominal illuminance (e.g. 500 lux) is exceeded for 10 minutes by more than 150 % (e.g. 750 lux), the lighting is switched off even if motion is detected. The lighting is switched on again when the measured light value falls below the setpoint.

This function can be deactivated via the DSI-SMART Programmer.

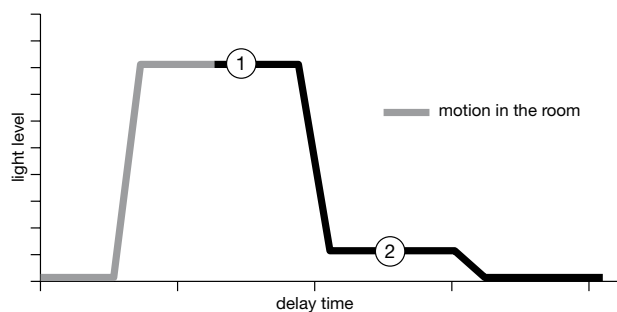
User-definable parameters:

DSI-SMART PTM have the following user-definable parameters:
The values shown in bold are the factory default settings.

Parameter	Range Factory setting	Description
light-level	1-100/max/man 70	Light level in steps from 1 to 100. The "max" option lets you set the units at maximum output. (DSI 255) "man" indicates whether the control value has been overwritten with the SET functions of the SMART controller.
time delay	30 s-60 min/con 20	Delay before switching off after the last detection of movement. The options are as follows: 30 seconds, 1, 2, 3, 5, 10, 15, 20, 30, 45 and 60 minutes, and "con" (continuous)
when vacant	off low (1 m-cont)	The "off" setting causes the luminaire to switch off at the end of the switch-off delay. The "low" setting causes the luminaire to fade to the "sec. Level" parameter and switch off only at the end of the "second" delay set. The options are as follows: off, 1, 2, 3, 5, 10, 15, 20, 30, 45 and 60 minutes, and continuous ("never OFF" function)
sec. level	1-100 1	Second light value to which the system fades at the end of the switch-off delay. (In connection with the "when vacant" parameter")
P.I.R	active inactive off only	The "active" setting switches the light on or off automatically depending on whether or not there is someone in the room. With the "inactive" setting the DSI-SMART, in combination with "time delay continuous", can be used only for controlling the light level. In the "off only" setting the light has to be switched on manually (switch, remote control) but is switched off by the motion sensor.
bright-out	yes No	The "yes" setting switches the light off as soon as the light value exceeds 150% of the control value for more than 10 minutes. If the actual value falls below 100% the light is switched on again. In the "no" setting the luminaires remain at the minimum light value.
Power up	on off	In the "on" setting the luminaire switches on after a power outage. In the "off" setting the luminaire does not switch on after a power outage. After 15 seconds the motion sensor is active again.
hold overwrite	on off	In the "off" setting the DSI-SMART is reset to automatic mode when the control value is overwritten with the SMART controller or with the switch after an on/off cycle initiated by a movement interruption (end of delay time). If "on" is selected the luminaire switches on again with the overwritten value (manual light value) unless the overwritten value was an OFF command, in which case DSI-SMART returns to automatic mode so people do not enter a dark room.

Parameter	Description
1	light - level time - delay
2	sec. level when recent

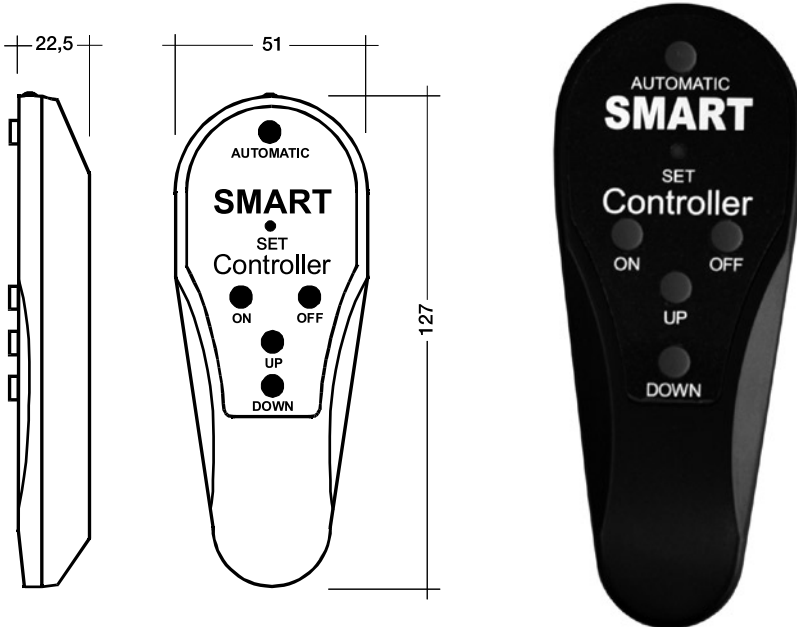
see
parameterlist



Accessories for DSI-SMART PTM

DSI-SMART Controller:
Infrared remote control.

Article number: 86451922
Power supply: 2 x LR03/AAA/1,5 V standard or rechargeable batteries



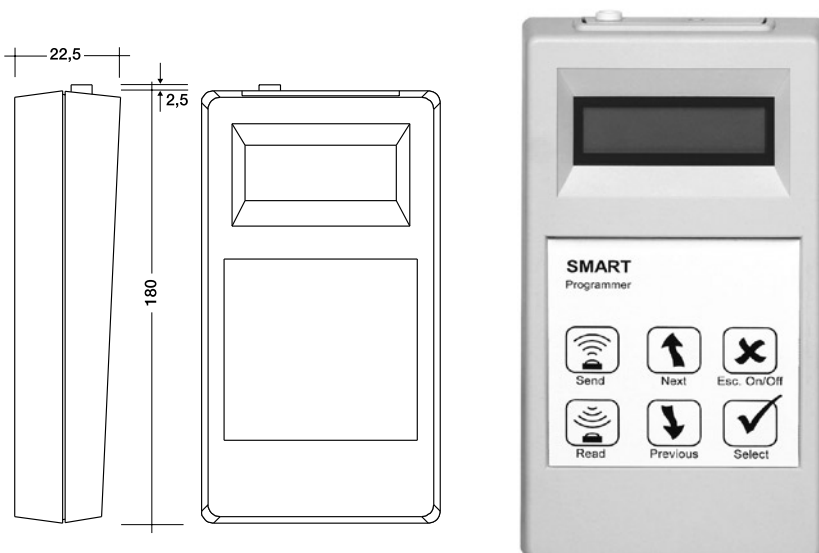
The IR smartController is used for operating a DSI-SMART PTM luminaire group. The remote control offers the following functions:

- Switching the lighting on and off
- Fading the lighting up and down
- Activating lighting regulation (Automatic)
- Setting the setpoint for lighting regulation

Fading up or down temporarily deactivates lighting regulation and the set dimming value is retained.

DSI-Smart-Programmer:
Infrared programming unit

Article number: 86447355
Power supply: 4 x LR6/AA/1,5V standard or rechargeable batteries



The optional DSI-SMART Programmer enables parameter settings to be made on the sensor. It also enables current values to be controlled and the stored parameters of the sensor to be read. DSI-SMART PTM has a more extensive parameter list than DSI-SMART. To set these new parameters DSI-SMART-Programmer Version 2.00 or higher is needed.

For more information on programming the parameters please refer to the operating instructions for the DSI-SMART Programmer.