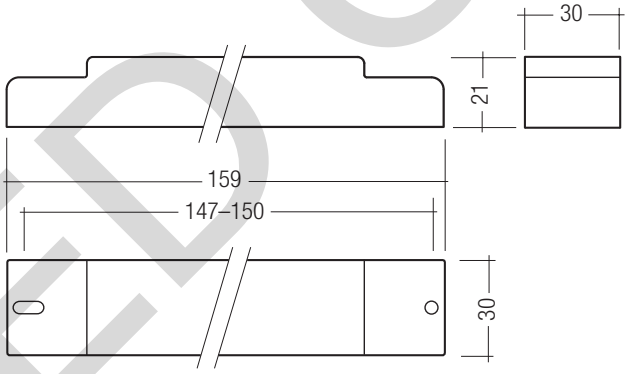
CE RoHS

basicDIM RCL DBC

Control module for combination with ambient light sensor, switch and presence sensor

Product description

- Digital control module with ambient light sensor, motion detector and switch input
- DALI Broadcast control module for controlling up to 10 DALI ballasts
- Dimming and switching and saving of the daylight set value via single switch; multiple switches can be connected in parallel
- Saving of the daylight set value lockable
- With the Link Line it is possible to connect up to 20 basicDIM RCL DBC to one system (synchronisation of motion detection)[1]
- Mode can be selected via rotary switch
- Input for a maximum of 4 basicDIM sensors
- 5-year guarantee



Technical data

Rated supply voltage	220 – 240 V
Mains frequency	50 / 60 Hz
Power	1.5 W
Operating temperature	0 ... +60 °C
Storage temperature	-25 ... +70 °C
Type of protection	IP20

Ordering data

Type	Article number	Packaging carton
basicDIM RCL DBC	**86459306**	10 pc(s).

Specific technical data

Type	Inputs			Outputs			Link Line	
	Dimming switch	Max. smartDIM sensors	Max. sensor line length	Digital control line DALI	Control output DALI (devices)	Dimming range	Voltage DC at correct mains wiring [2]	Number of combinable modules
basicDIM RCL DBC	single	4	10 m	1	10	1 – 100 %	15 V	20

[1] To ensure the functionality of the Link Line the phase and the neutral wires have to be connected as shown on the device.

[2] If reverse polarity is applied to mains, mains voltage is at the Link Line and the function of Link Line will be affected.

RoHS

ACCES-SORIES

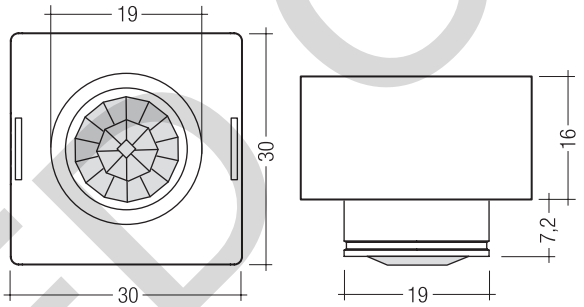
basicDIM Sensor 5DP 19f

Product description

- Optional ambient light sensor and motion detector for basicDIM RCL DBC
- Compact low-profile dimensions for luminaire installation
- With plug terminal
- 5-year guarantee

Technical data

Light measurement at the sensor head (detection)①	5 – 500 lx



Ordering data

Type	Article number	Packaging carton	Weight per pc.
basicDIM Sensor 5DP 19f	86459173	50 pc(s).	0.06 kg

① The measured value at the sensor head corresponds to approx. 10 to 1,500 lux on the surface measured.

ACCES-SORIES

Accessories for basicDIM Sensor 5DP 19f

Product description

- Optional for increasing the detection range of the motion sensor for basicDIM Sensor 5DP 19f
- 5-year guarantee

Ordering data

Type	Article number	Packaging carton	Weight per pc.
smartDIM Mirror	86454640	50 pc(s).	0.002 kg

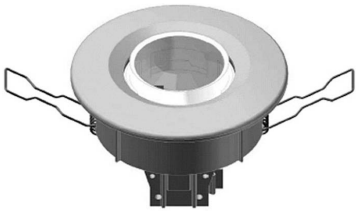
RoHS

ACCES-SORIES

basicDIM Sensor 5DP 41rc

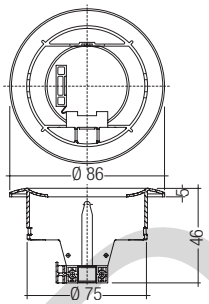
Product description

- Optional ambient light sensor and motion detector for basicDIM RCL DBC
- Ceiling installation
- 5-year guarantee



Technical data

Light measurement at the sensor head (detection)①	5 – 500 lx



Ordering data

Type	Article number	Packaging carton	Weight per pc.
basicDIM Sensor 5DP 41rc	86459115	20 pc(s).	0.06 kg

① The measured value at the sensor head corresponds to approx. 10 to 1,500 lux on the surface measured.

RoHS

ACCES-SORIES

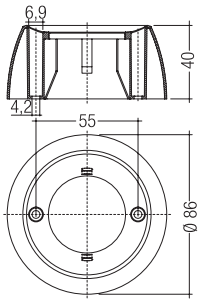
basicDIM Sensor 5DP 41rs

Product description

- Optional ambient light sensor and motion detector for basicDIM RCL DBC
- Surface mounting
- 5-year guarantee

Technical data

Light measurement at the sensor head (detection)①	5 – 500 lx



Ordering data

Type	Article number	Packaging carton	Weight per pc.
basicDIM Sensor 5DP 41rs	86459116	20 pc(s).	0.06 kg

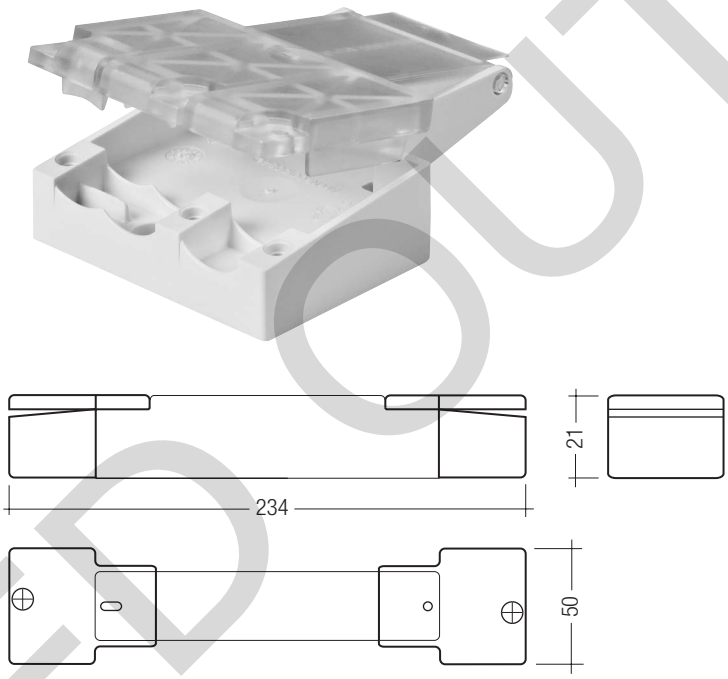
① The measured value at the sensor head corresponds to approx. 10 to 1,500 lux on the surface measured.

ACCES-SORIES

Strain-relief set

Product description

- Optional for increasing the detection range of the motion sensor for basicDIM Sensor 5DP 19f
- 5-year guarantee



Ordering data

Type	Article number	Packaging carton
Strain-relief set	**86458689**	10 pc(s).

Standards
EN 61547
EN 61347-1
EN 61347-2-11
EN 55015

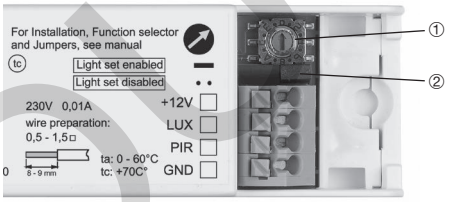
Glow-wire test
according to EN 61347-1 passed.

DALI standard
The basicDIM RCL DBC is designed to control control gear with DALI standard IEC 60929 (DALI V0) and IEC 62386 (DALI V1).

basicDIM RCL DBC
If one or more basicDIM sensors are connected to the basicDIM RCL DBC control module up to 10 DALI units (PCA/TEL/PHD...) can be automatically switched via the control lines and regulated via ambient light.
The light value to be regulated can be set to any value by means of a standard external mains voltage push to make switch (see wiring instructions on the next page).
basicDIM RCL DBC has an internal memory that stores the last dimmer value in the event of a power outage. If, for example, a system is on standby it will continue to be on standby when power returns after an outage.

Rotary switch BASIC DIM RCL DBC

	Motion detection		Light regulation	
Pos.	Mode	Delay time	Mode	Light Level Set
0	on	20 min	on	manual mode
1	on	20 min	on	automatic mode
2	on	30 min	on	manual mode
3	on	40 min	on	manual mode
4	on	adaptive	on	manual mode
5	on / never off (= 10 %)	20 min	on	manual mode
6	on	adaptive	off	–
7	on	20 min	off	–
8	only off	10 min	on	manual mode
9	only off	20 min	on	manual mode
A	only off	30 min	on	manual mode
B	only off / never off (= 10 %)	20 min	on	manual mode
C	only off	20 min	off	–
D	off	–	on	manual mode
E	off	–	on	automatic mode
F	test mode (15 s delay time)			



① Rotary switch operation mode
② Activation / Deactivation set point saving (ambient light regulation) via switch

Delay time
The disconnection delay time for the motion detector can be set by means of a rotary switch. The option of switching between a fixed delay time and an adaptive delay time opens up application-specific usage. An adaptive delay time (between 4 minutes and 20 minutes) offers optimum energy consumption. “Adaptive” means that the delay time is automatically adjusted according to the frequency with which presence in the room is detected.

At the end of the delay, the basicDIM RCL DBC starts dimming the luminaires down to 1 %. The luminaires are then switched off. Dimming down to 1 % takes one minute.

Adaptive delay time
The adaptive delay time function calculates the optimum delay time. This may be between 4 and 20 minutes. The delay time depends on the frequency of motion detection. For infrequent detection the delay time is 4 minutes. The time is lengthened step by step, the more time the sensor is passed.

After the luminaires have been switched off by the motion detector the time is reset and starts again at 4 minutes.

only off
This function means the motion detector can be used more efficiently. If the “only off” function is set the motion detector only switches the connected luminaires off. The luminaires are switched on manually via the connected external switch.

never OFF
After 20 minutes the lighting is dimmed to 10 % with a fade time of 1 minute. The luminaires are not switched off but remain at a basic brightness of 10 %.

Bright-Out and Bright-In
If the nominal illuminance (e.g. 500 lux) is exceeded for 10 minutes by more than 150 % (e.g. 750 lux), the luminaires are switched off even if motion is detected.

The lighting is then only switched on in response to detected motion if the current illuminance does not exceed the value stored in the sensor.

Light level set

Automatic mode
Every time the light value is changed with a long press a new setpoint light value is automatically updated and stored.

Short press (> 50 – 600 ms)	ON / OFF
Long press (> 600 ms)	Setpoint light value is permanently changed

Manual mode
A change in the light value deactivates lighting regulation until manual confirmation (2x short press) on the connected switch.

Short press (> 50 – 600 ms)	ON / OFF
Long press (> 600 ms)	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.
2x short press	The overwritten setpoint light value is stored (luminaire acknowledges by flashing twice), lockable (see operation instruction)

Jumper settings basicDIM RCL DBC
The set point saving can be locked or unlocked via a switch.


Set point saving free


Set point saving locked

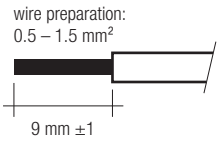
Installation

The detection zone can be extended by connecting further basicDIM sensors.

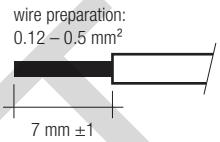
- Up to 4 basicDIM sensors can be connected in parallel.
  This does not reduce the number of controllable DALI units.
- max. cable length 10 m to the last sensor
- basicDIM RCL DBC cannot be operated without sensor
- DALI is not SELV. The installation instructions for mains voltage therefore apply.
- Link Line is not SELV. If reverse polarity is applied to mains, mains voltage is at the Link Line and the function of Link Line will be affected.
- The maximum cable length (250 m) of the DALI control signal and the Link Line (for a cable cross-section of 1,5 mm²) must not be exceeded.
- Any number of push to make switches may be connected in parallel to the inputs T.
- Do not connect standard switches to the input T.

Cable types and cable cross-sections

basicDIM RCL DBC:
Solid wire with a cable cross-section of 0.5 mm² to 1.5 mm².



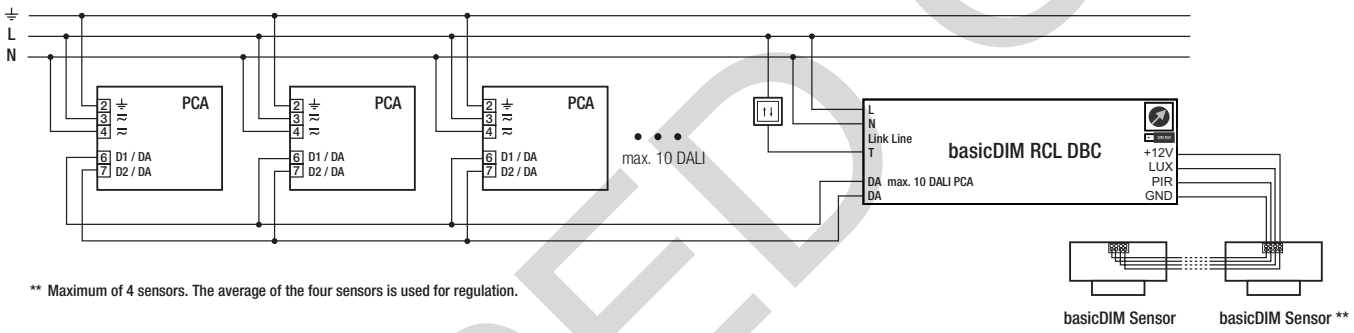
basicDIM Sensor:
Solid wire with a cable cross-section of 0.12 mm² to 0.5 mm².



Link Line

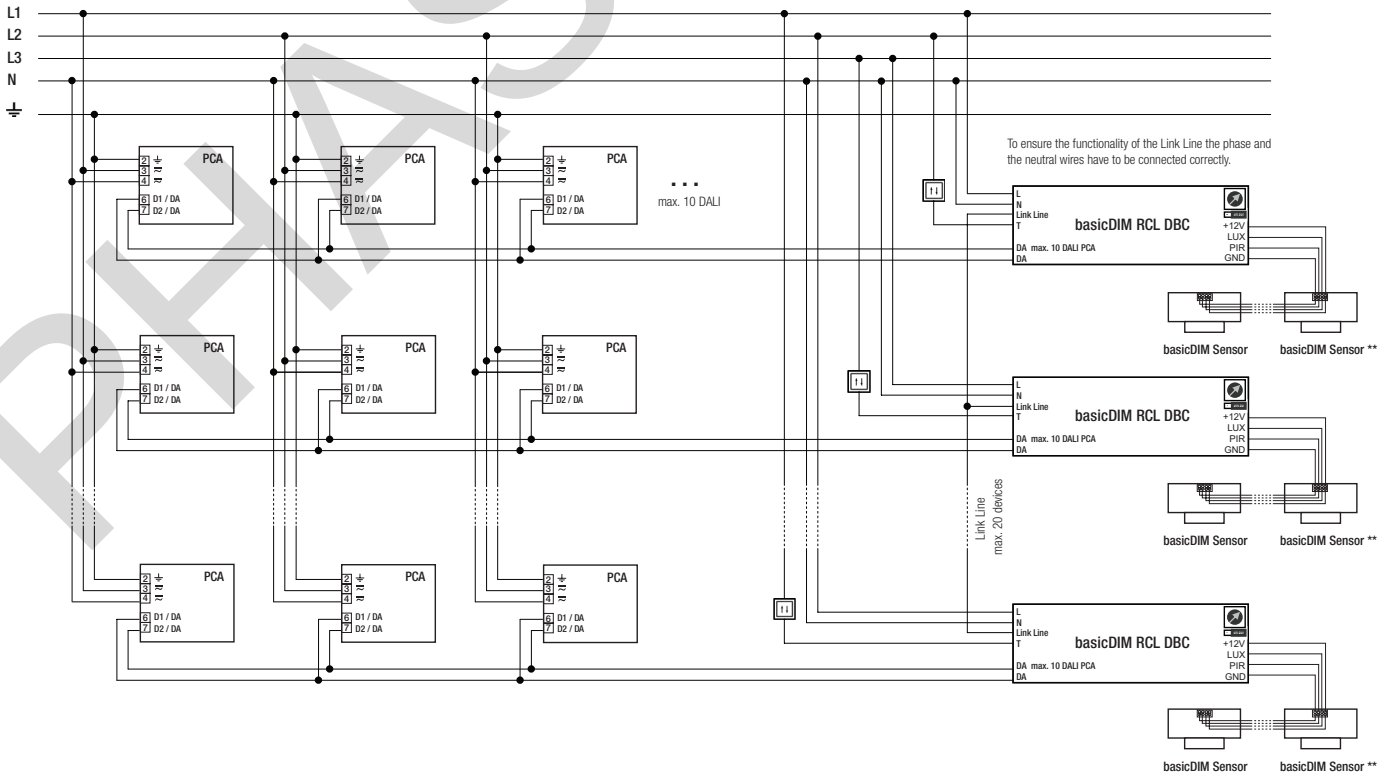
With the Link Line it is possible to connect up to 20 basicDIM RCL DBC to one system.
Link Line is used for synchronisation of the motion detection. The motion signal will be relayed to all connected basicDIM RCL DBC!
The ambient light control will be conducted independently of each basicDIM RCL DBC.
To guarantee the Link Line function, it is necessary to connect the mains voltage as it is shown in the label.

A) with a basicDIM RCL DBC



** Maximum of 4 sensors. The average of the four sensors is used for regulation.

B) with several basicDIM RCL DBC synchronisized via Link Line



** Maximum of 4 sensors. The average of the four sensors is used for regulation.

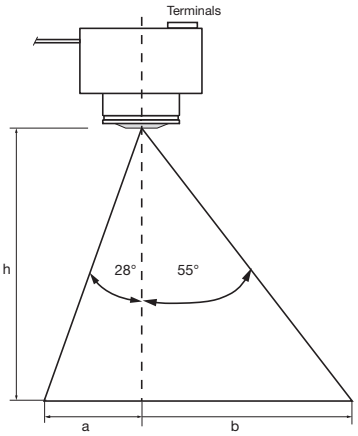
basicDIM Sensor 5DP 19f
Luminaire installation sensor/lighting controller/motion detector

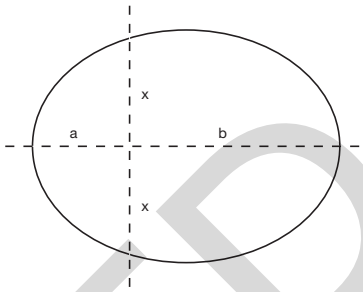
The compact basicDIM Sensor 5DP 19f contains a PIR (passive infra-red) motion detector and a light sensor for constant light regulation. The terminal technology selected offers simple wiring to a further basicDIM sensor to increase the detection zone of the motion detector.

With the aid of the smartDIM MIRROR, available as an accessory, the "monitored" zone can be focused or extended in a certain direction.

Light regulation

Precise light measurement via photo diodes.



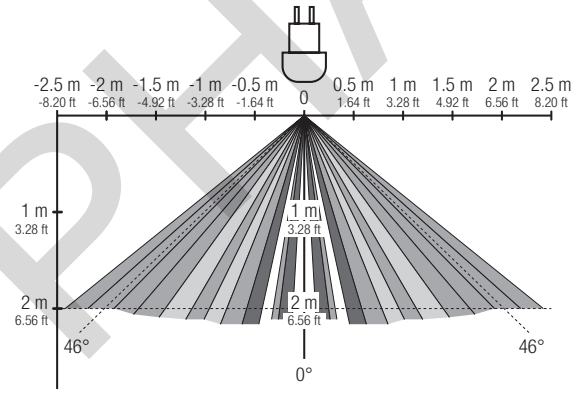


h	a	b	x
1.70 m	0.90 m	2.43 m	1.7 m
1.90 m	1.01 m	2.71 m	1.9 m
2.10 m	1.12 m	3.00 m	2.1 m
2.30 m	1.20 m	3.28 m	2.3 m
2.50 m	1.33 m	3.57 m	2.5 m
3.00 m	1.60 m	4.28 m	3.0 m
3.50 m	1.86 m	5.00 m	3.5 m
4.00 m	2.13 m	5.71 m	4.0 m
5.00 m	2.66 m	7.14 m	5.0 m

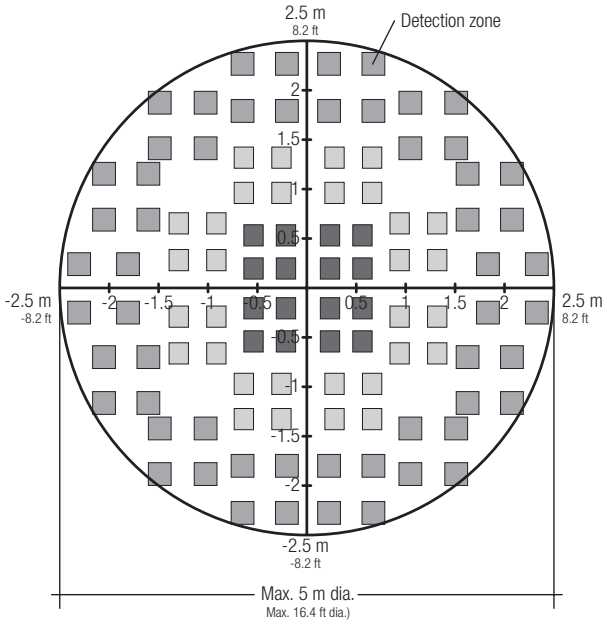
1 m = 1,094 yd

Presence detection

Detection area: 46°
Scope: 2.5 m presence detection
5 m motion detection



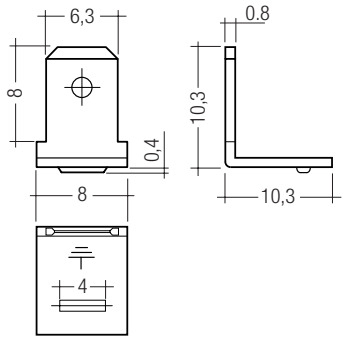
Detection range at 2 m distance



Installation instructions

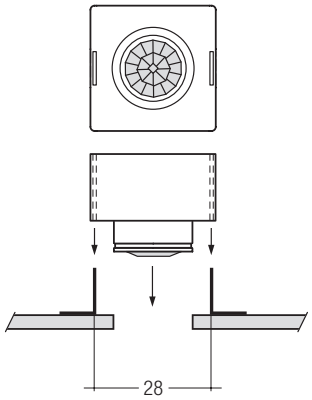
Simple and straight forward installation using a purpose built mounting clamp. These mounting clamps can be inserted into the slots in the sensor housing. The mounting clamps are available in 2 different versions (suitable for screw fix or spot welding).
Mounting clamps are not delivered with the product.

The mounting clamp can be found on www.vogt.ch by searching for “38421sbae.80“.

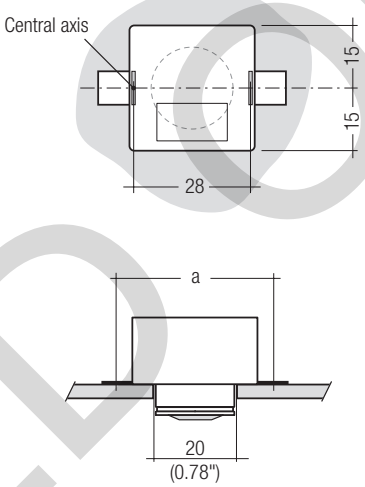


example for weldable mounting clamps

Applying the mounting clamps to the sensor:



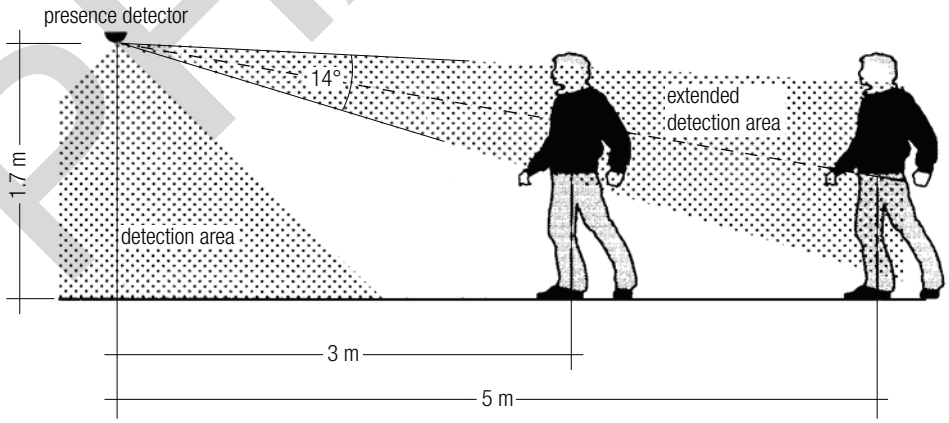
With long mounting clamps the sensor can be adjusted up or down so the sensor edge is flush with the surface of the luminaire.



Dimension a is dependent on the type of bracket used.

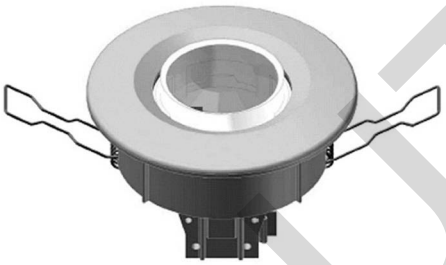
basicDIM Sensor 5DP 19f Zubehör: smartDIM MIRROR

The clip on smartDIM MIRROR allows the detection area of the PIR sensor to be focused and extended up to 5 m.
The mirror will shield one side of the sensor detection zone and therefore reduce sensitivity in that plane.



basicDIM Sensor 5DP 41rs / basicDIM Sensor 5DP 41rc
Ambient light sensor and PIR sensor

basicDIM Sensor 5DP 41rs



basicDIM Sensor 5DP 41rc

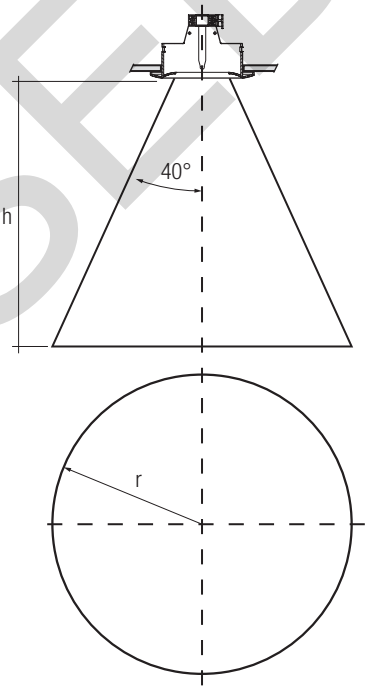
Ceiling mounted / Surface mounted sensor measuring ambient light level and movement detection. Different settings can be chosen via the basicDIM RCL DBC sensor module.

Light regulation

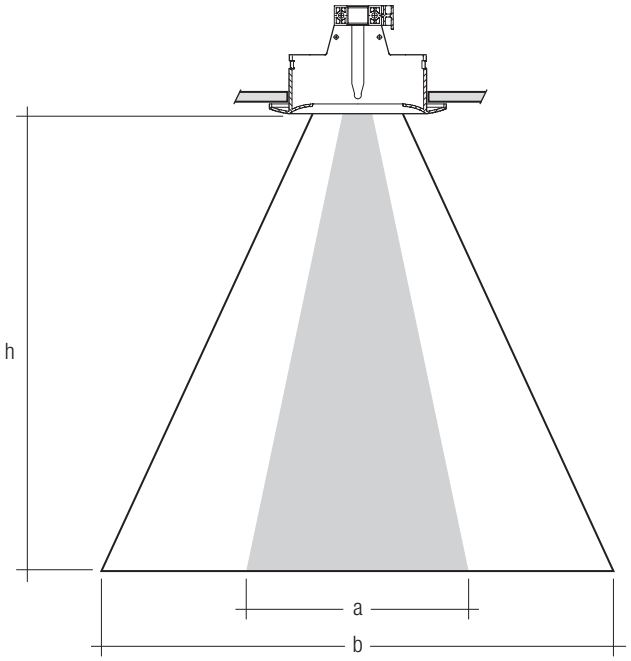
Precise light measurement via photo diodes.

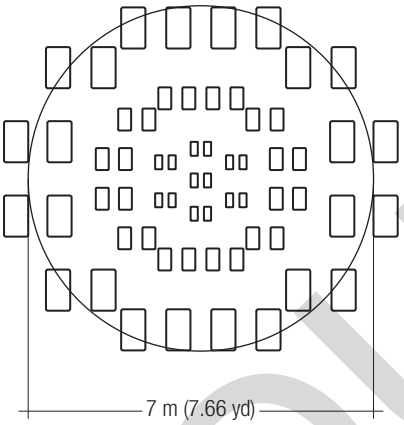
h	r
1.7 m	1.4 m
1.9 m	1.6 m
2.1 m	1.8 m
2.3 m	1.9 m
2.5 m	2.1 m
2.7 m	2.3 m
3.0 m	2.5 m
3.5 m	2.9 m
4.0 m	3.4 m
5.0 m	4.2 m

1 m = 1,094 yd



Presence detection





Coverage pattern at 2.7 m (2.95 yd) mounting height.

a ... presence detection area
b ... movement detection area

h	a	b
2.5 m	4.0 m	6.0 m
2.7 m	3.0 m	7.0 m
3.0 m	2.0 m	7.5 m
3.5 m	–	8.0 m
4.0 m	–	10.0 m
5.0 m	–	12.5 m

1 m = 1.094 yd