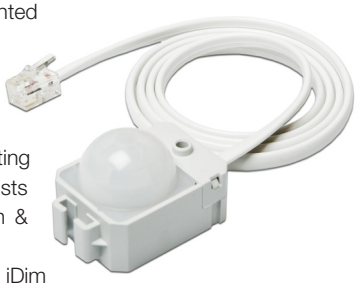
Helvar

F13 149 1A 06/12

Minisensor3 User guide

freedom in lighting

Introduction



The Helvar Minisensor3 is a two channel luminaire-mounted component containing three integrated sensors:

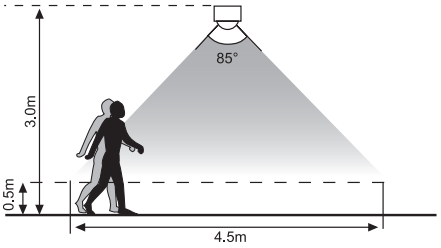
- Presence detector (PIR)
- Constant light sensor
- Infrared (IR) receiver.

The two separate channels (1 & 2) enable scene setting & lighting control. The constant light sensor only adjusts the output from channel A, where presence detection & infrared control affect both channels.

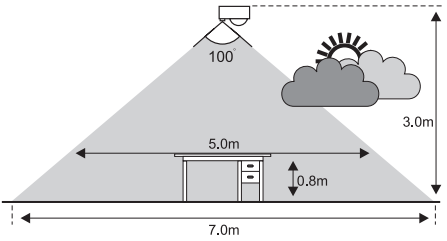
The Minisensor3 is only compatible with Helvar iDim components (FL/CFL ballasts and LED drivers). iDim Solo is used as the DALI power supply (note: SW1/2 switch control inputs are not used when connected to Minisensor3

Reception areas

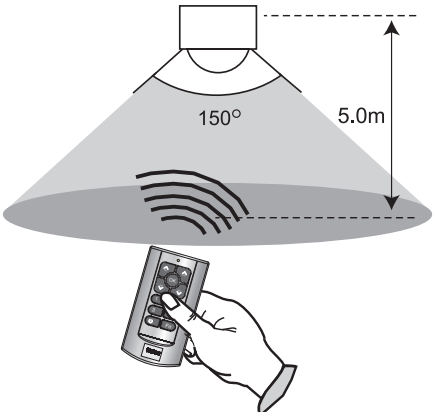
Presence detector (PIR)



Constant light sensor



Infrared (IR) control



Out-of-box operation

Upon first application of power the Minisensor3 operates according to the programmed memory of the IDim ballast. If the ballast has no program then the IR buttons , and (On/Off) will be active. Channel control is also active. This allows the control of channels A&B (please see section IR-control for more information). To program default scenes 1-4 and to activate further features, please see the Initial configuration section for more information.

Use the Helvar iDim infrared remote control for configuration.

Initial configuration (default settings)

Select the operating modes by pressing the below mentioned button combination for about 10 seconds. The product confirms the succesful programming by flashing the lamps

⏻ + **1**
Presence detector (PIR) delay times 15min/20s, PIR on 100%, Power on 100%

⏻ + **2**
PIR 15min/20s, Manual On Auto Off, Power on 100%

⏻ + **3**
PIR 15min/20s, PIR on 100%, Constant light *****), Power on 100%

⏻ + **4**
PIR 15min/20s, Manual On Auto Off, Constant light *****), Power on 100%

*****) Dim the lights to desired constant light level before selecting the operating mode

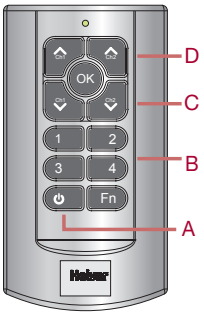
Default values for operating modes

Scene 1	100%	PIR LOW delay	15 min
Scene 2	75%	PIR OFF delay	20 sec
Scene 3	50%	PIR Exit delay	15 min
Scene 4	25%	Power ON level	100%
PIR ON light level	100%	Fade time	1.0 sec
PIR LOW light level	1%		
PIR OFF light level	0%		

Notes:

- Only the light level of channel A will vary in order to try to keep the stored overall constant light level.
- Constant light will not switch lighting on or off.
- The stored constant light level is not affected by the PIR.
- The stored constant light level is not affected by switching the lights off.
- Manual ON, Automatic OFF feature = PIR will not switch the lights on when movement is detected, but will switch them off if no movement is detected.
- Regardless of other light level commands (e.g. changes in the constant light level), an enabled PIR will switch the lights to the PIR OFF scene if no movement is detected within its programmed delay time.

Infrared (IR) control



A ⏻ (ON/OFF) key.
Toggles the lighting between 100% and OFF.

B **1**, **2**, **3** or **4** key.
Recall of stored scene or preset level for the selected key.

C ⌃ ⌃ keys. Single push.
- Switches channel 1 / 2 on to minimum(if lights were off).
- Steps up channel 1 / 2 by one step (if lights were on).

Press & hold.
- Dims up channel 1 / 2 from minimum (if lights were off).
- Dims up channel 1 / 2 from last level (if lights were on).

D ⌄ ⌄ keys. Single push.
- Steps down channel A / B by one step (if lights were on).

Press & hold.
- Dims down channel A / B from last level (if lights were on).

If constant light has been selected and programmed the Minisensor3 will dim the lights to the programmed constant light level.

Modify and store scenes (channel 1 & 2)

- Press & hold ⌃ or ⌄ to raise or lower the light level of channel A to the desired level.
-
- Press & hold ⌃ or ⌄ to raise or lower the light level of channel B to the desired level.
-
- Press & hold (for 10 seconds) the desired remote control scene button (**1**, **2**, **3** or **4**) where you would like the scene to be stored.
- The operation is confirmed by flashing the lamps.
- Repeat the above for other scenes. (buttons **1**, **2**, **3** or **4**)

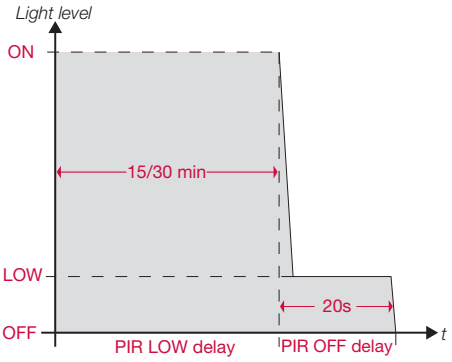
Notes:

- Scene is a combination of light levels of channel A and B that can be recalled by the press of a button.
- Storing scenes on buttons **1**, **2**, **3** or **4** will replace any previously stored light levels.

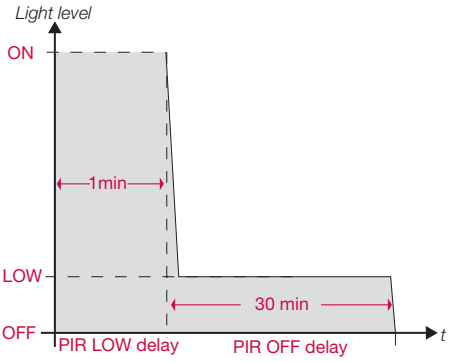
Optional functions programming

Select the operating modes by pressing the below mentioned button combination for about 10seconds. The product confirms the succesful programming by flashing the lamps.

Presence detector (PIR)



Standard PIR delay funtionality



Corridor/storage room functionality

Set PIR ON scene

Select the overall desired light level: -See Infrared (IR) control section.

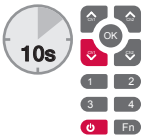
- Press & hold ⏻ for 10 seconds.
- The operation is confirmed by flashing the lamps.

Set PIR LOW scene

Select the overall desired light level: -See Infrared (IR) control section.

- Simultaneously press & hold ⏻ & ⌃ for 10 seconds.
- The operation is confirmed by flashing the lamps.

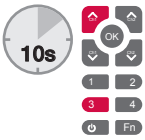
Set PIR OFF scene



Select the overall desired light level: -See Infrared (IR) control section.

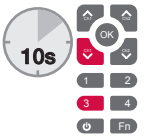
- Simultaneously press & hold ⏻ & ⌄ for 10 seconds.
- The operation is confirmed by flashing the lamps.

PIR delay time setting



Standard PIR delay functionality with 30min delay to PIR LOW scene and 20s delay to PIR OFF scene.

- Simultaneously press & hold **3** & ⌃ for 10 seconds.
- The operation is confirmed by flashing the lamps.



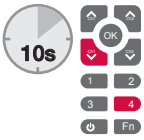
Corridor / storage room functionality with 1min delay to PIR LOW scene and 30min delay to PIR OFF scene.

- Simultaneously press & hold **3** & ⌄ for 10 seconds.
- The operation is confirmed by flashing the lamps.

Notes:

- Regardless of other light level commands (e.g. changes in the constant light level), an enabled PIR will switch the lights to the PIR OFF scene if no movement is detected within its programmed delay time.
- PIR scenes can be any combination of light levels of channels 1 & 2.
- If you manually turn lights off you might have to manually switch them on, PIR will not switch lights on until PIR LOW delay (PIR Exit delay)

Last level function



- Simultaneously press & hold **4** & for 10 seconds.
- The operation is confirmed by flashing the lamps.

- If last level function is enabled, the lights will turn on to the level they were at before mains interruption (failure or mains switch). Lights that were off will remain off
- Last level function is deactivated by carrying out Initial configuration.

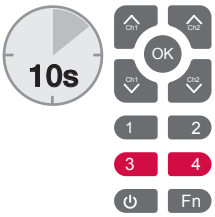
Test mode

This mode should only be used to test the functionality during installation. In Test mode PIR delay times are 10 times faster and the constant light response time is 10 times quicker than in normal operation and should only be used for demonstration or test purposes.

- **Enable:** Simultaneously press & hold **4** & for 10s.
  (The operation is confirmed by flashing the lamps **twice**.)
- **Disable:** Simultaneously press & hold **4** & for 10s.
  (The operation is confirmed by flashing the lamps)
- Test mode is returned to normal mode by turning power off and on again; you can use e.g. Switch Control to reset the Minisensor3 (both channels at the same time)
- Test mode is also returned to normal mode automatically after a delay of 10 min
- Test mode is also returned to normal mode by pressing preset buttons for 10 sec (⏻ + **1**, ⏻ + **2**, ⏻ + **3** or ⏻ + **4**) This will also change the functionality to selected mode.

Reset mode

To reset to factory default settings:



- Always point the remote control directly at the Minisensor3 to be configured.

- Point at the Minisensor3 to be resetted and press **3** & **4** for 10 seconds or until lights flash.

Recommendations

- First choose the basic mode by ⏻ + **1-4**.
- Then choose any additional functionality: Delay time, PIR levels and power on to last level.
- Ensure that the Minisensor3 is located out of view of direct light to ensure correct operation of the constant light sensor and IR.
- Position the Minisensor3 in a area of combined natural + artificial light for best operation of the constant light feature
- If multiple sensors are installed, care should be taken to ensure the sensing areas of the minisensors do not cross and interfere with each other.
- Only connect the Minisensor3 to the iDim Solo with RJ -connector of a Helvar IDim ballast.

Technical specifications

Constant light sensor
Reception area: 100°
Measuring range: 100-1500 lux

IR-receiver
Frequency 36kHz

Presence detector
Detection area 4.5 m
(mounting height 3.0m)

Electric data
Internal communication with Helvar IDim electronic ballast

Operation conditions
Ambient temperature range 0°C to 50°C
Storage temperature range -10°C to 70°C
Relative humidity 90% max. non-condensing

Conformity & Standards
Safety: Only valid if sensor is mounted in the same fitting as the ballasts
Safety: EN61347-2-11,EN61347-1,
IP rating 21
Electric strength 1.5kV

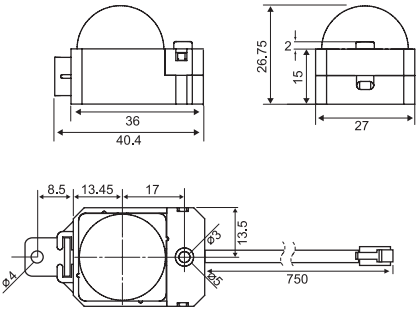
Finishing:
Thermoplastic

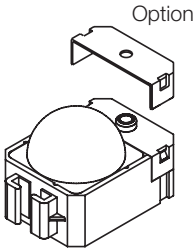
Protection:
Single insulation

Wire length:
Max. from Minisensor3 to furthest ballast 15m

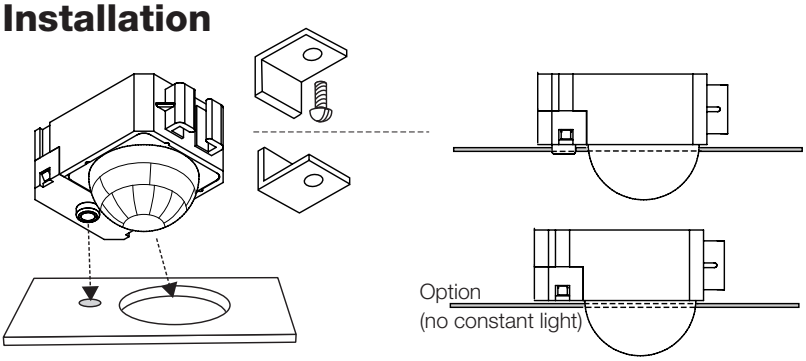
Note:
- The Minisensor3 is not designed for installation outside of a luminaire

Dimensions



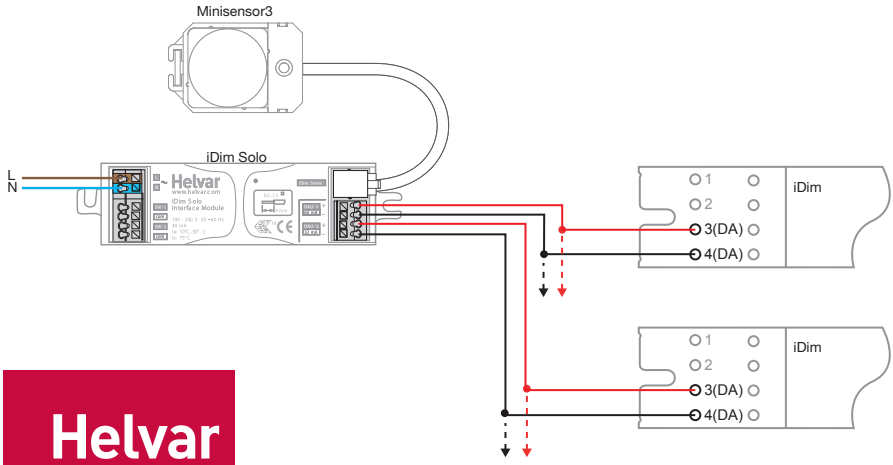


Installation



Connection

Up to 10 ballasts per channel.



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