

PIR motion detector and light sensor for the I-connection in glass design

The LCN-GBL is an indoor PIR motion detector with integrated light sensor in the LCN-GT series design. Optionally a humidity sensor LCN-EFS can be inserted.

The PIR motion detector works on the passive infrared principal. The changes in human body heat radiation are detected.

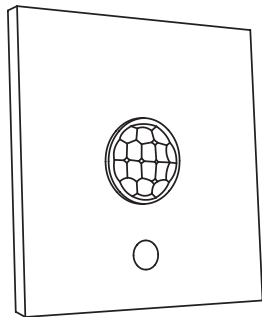
The integrated light sensor covers a very large measuring range of 5 decades (1-100.000Lx). The measured value can be used for light dependant control or for a constant light regulation.

Included in delivery

LCN-GBL, mounting plate, 2 screws (3,2x25)
& I-connecting cable.

Connection

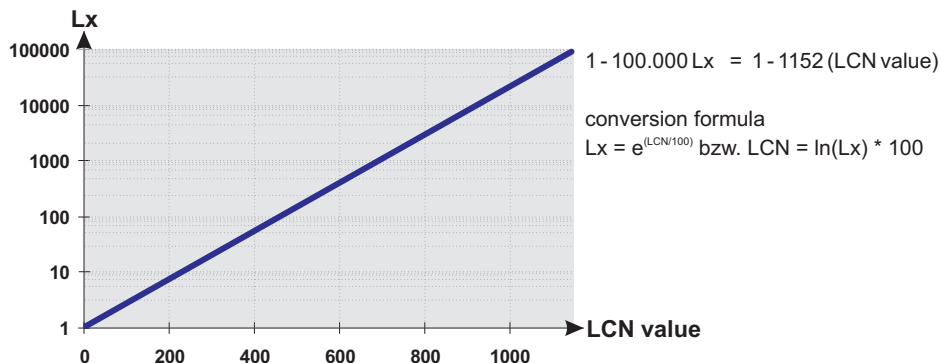
The LCN-GBL is suitable for connecting to the I-ports from LCN-UPx, -SH, -SHS, -LD and -HU Serial number 120C05 (Dec. 2008) or later. The connecting cable to the LCN module can be optionally extended up to 50 m with an LCN-IV - see "TDi connection from periphery" on our homepage ([www.LCN.de / downloads](http://www.LCN.de/downloads)).



How the light sensor functions:

After connecting, the LCN-GBL will be detected automatically and its measured value transferred into the second controller variable (R2-Var) of the module. You can control the value in the status window of the LCN-PRO. The configuration of the light value is carried out in regulator 2 and/or with the 4 thresholds - see also page 4. For the last mentioned, the R2-Var must be copied into the T-Var. The measured light values will be logarithmised, to make it better for presenting the large value range.

Relation between Lux values and LCN numerical values:



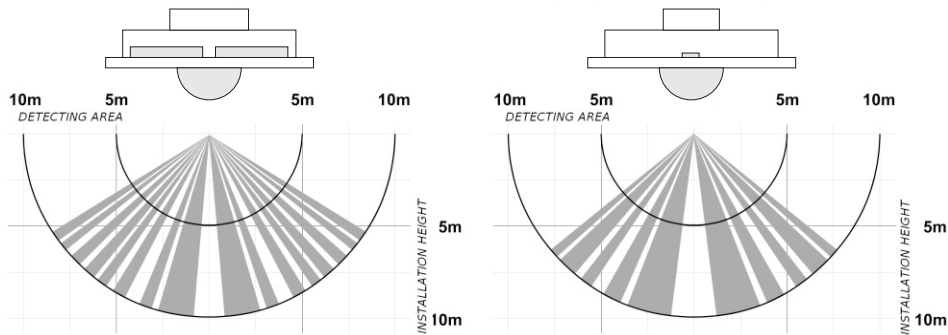
How the PIR motion detector functions:

When an object is detected, the connected module sends out a long command (standard: key B4). The long command will only be sent once, even when the movement lasts a very long time.

5 seconds after the movement has ended the LCN-GBL triggers off the release command. If the movement lasts longer, the release command will come approx. 8 seconds after the last movement.

Detecting range:

When needed four LCN-GBL's can work on one module: for this every LCN-GBL must be coded, so every PIR motion detector works on its own key. Here you have to separate the marked circuit paths (see table and illustration on page 4).



Letting the PIR motion detector work on other keys

Through separating the circuit path, the light sensor will be deactivated. Then there is only one light sensor per module active!

The key B4 is reserved with the integrated motion detector. As a result the fourth threshold cannot be used.

Additionally a binary sensor LCN-B3I can be connected to the same LCN module.

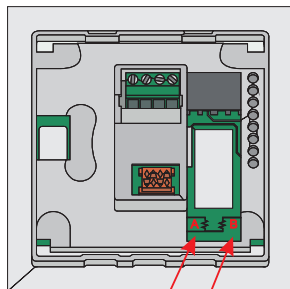
The LCN-BT4H/-BU4L (4-way binary sensors) cannot always be used on the same module.

(check the key mapping first!)

thumb rule: maximum 4 LCN-GBL's on the I-connection are allowed!

A	B	key	light
1	1	B4	R2-Var
0	1	B5	deactivated
1	0	B6	deactivated
0	0	B7	deactivated

(0=separated circuit paths)



separable circuit paths

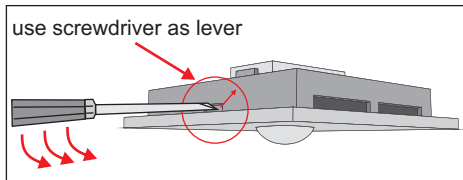
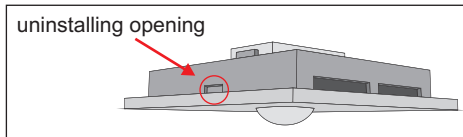
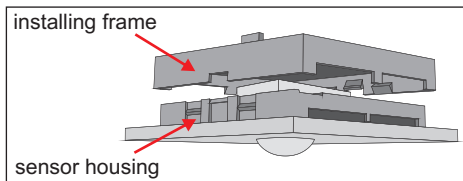
installing/Uninstalling

The LCN-GBL is delivered in a housing, which can be installed on a light outlet box (35 mm, e.g.: Spelsberg type HW 040). An additional screw fitting is possible and often useful.

when installing on ceilings: Check for a safe fixing in every case, to avoid an injury caused by a fallen off glass plate!

After screwing the installing frame on to the wall and plugging in the I-connection, the sensor housing from the LCN-GBL is simply snapped on to the installing frame.

To uninstall the sensor, a screwdriver is placed into one of the both (opposite from one another) uninstalling openings and with a light lever movement, the sensor housing removed from the installing frame.



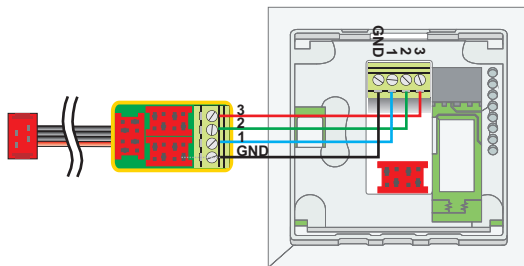
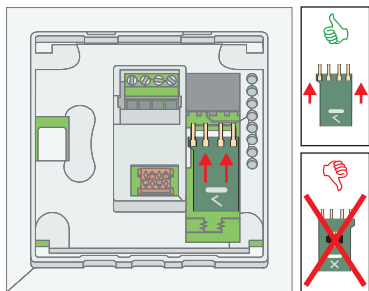
Installing the optional humidity sensor LCN-EFS

An optional humidity sensor LCN-EFS is available to be subsequently built into the LCN-GBL. The use of the built in humidity sensor LCN-EFS is only possible with modules using firmware 160A... (Oct. 2012) or later. To do this, the jumper bridge must first be removed before inserting. A maximum of one further LCN-EFS may only be operated on one module.

For later installation, please open the service cover on the LCN-GBL and stick the LCN-EFS humidity sensor in. For a correct installation, the tick sign on the circuit board must be visible.

Notes for connecting the LCN-EFS:

scheme extending the I-connection:



Technical data of the humidity sensor LCN-EFS**Air humidity**

triggering:	1%
accuracy at 20-80% air humidity:	±4%
outside the given areas:	±6%

Dew point

resolution:	0,1°C
accuracy at 20-80% air humidity and 10-40°C environmental temperature:	±2°C

Note: For usage of the LCN-EFS, LCN modules with serial number 160A... or after are required.

Technical data**connection**

power supply:	not needed (over I-connection)
power consumption:	<0,1W
LCN connection:	I-connection jack and screw terminals, max. 0,5mm ²

motion detector

sensor:	PIR passive infrared sensor
range/opening angle:	10m (lobar)/110°
debouncing time:	5 seconds

light sensor

measurement spectrum:	450-650nm 1-100.000Lx
measuring range:	±15% over the total measurement range
accuracy:	1% from the Lux measured value
resolution:	

installation

operating temperature:	-10°C bis +60°C
air humidity:	max. 80% rel., non condensing
environmental conditions:	For use in stationary Installation accord. to VDE632, VDE637
protection art:	IP 20 60mm x 60mm x 30mm (B x L x D) - constr. height: 18mm

Technical information and images are non binding. Changes are reserved.

Technical hotline: +49 5066 998844 or www.LCN.de