SENSOR CALIBRATION

Light sensors should be calibrated with respect to height and reflections!

| Open Save Setup | Disconnect Read All Write Changes | |
|------------------|--|-----|
| >>> | → Search (1) Info → Links RF Range | |
| 🛯 🔦 😙 🍸 🏞 Q 🖫 | | |
| ∽ 🖉 P8 LR W | | |
| V V Kegulator | Inputs | |
| V = Light sensor | New Edit Delete | |
| 🛛 🗸 📫 Movement | | |
| | Setup - P8 LR W (ID:992B58) | × |
| | Device | |
| | Name Regulator | |
| | | |
| | State and control Setup Movement sensor Light sensor Light regulator | |
| | Measurement of illuminance | - 1 |
| | Multiplier measured value 3 1.000 x Def. | |
| | Multiplier measured value 2 0.065 x Def. | |
| | Monitored area No influence by regulators ~ | |
| | | |

Go to Settings – select the Light sensor tab

1) Multiplier measured value 3

- this value makes a first step of calibration regarding the height of the sensor
- process must be done **during the day** with daylight!
- turn **OFF** the luminaires (if there is a *Direct* link going from the sensor to the receiver go to *State and control* tab, press *M-Control* button and press *Off* button)

| Light regulator Light regulator Uptr regulator Mode Auto Actual mode Dimmer Light sensor 11.2 k Wanted light value 00 % Output 1 00 % Output 2 100 % Output 2 100 % Control Kegulator controlled by motion sensor Fable S Regulator controlled by motion sensor Enabled Offset Enabled | Name Regulator tate and control Tx light volue | r Light sensor Light regulator Movement sensor Inactive | | | |
|---|--|---|-------------------|---------------|---|
| Note Auto Actual mode Dimmer Light regulator Light regulator Light sensor 11.2 k Wanted light value 100 % Output 1 100 % Dimm timer 7 s Normal timer - s Regulation control Auto Mode Dimmer Mode Dimmer Auto Normal Mode Dimmer Normal timer - s Regulation control Auto Mode Dimmer Normal timer - s Regulation control Auto Mode Dimmer Normal timer - s Offer Light regulator | Light regulator | Little light | | | |
| Made Auto Actual mode Dimmer Light sensor 11.2 k Wanted light value 100 % Output 1 100 % Output 2 100 % Dimm timer 7 s Regulator controlled by motion sensor Fabile Low timer - s Regulator controlled by motion sensor Enable Offset Enabled | | Light regulator | Regulator - Light | tregulator | |
| Node Regulator controlled by motion sensor Light sensor 11.2 k Wanted light value 100 % Dutput 1 100 % Dutput 2 100 % Dimm timer 7 s Vormal timer - s Low timer - s Regulator controlled by motion sensor Enable Yourge timer - s Node Dimmer Mode Dimmer Mode Dimmer Mode Dimmer Normal Normal Normal timer - s Controlled by motion sensor Enabled Off O low Normal O change | Actual mode | Dimmer | | , | |
| garded light value 100 % varled light value 100 % <td>iaht sensor</td> <td>11.2 lx</td> <td>Mode</td> <td></td> <td>Regulator controlled by motion sensor</td> | iaht sensor | 11.2 lx | Mode | | Regulator controlled by motion sensor |
| utput 1 100 % utput 2 100 % mm tmer 7 s mm tmer - s suffer 4 s - s suffe | anted light value | 100 % | | V Dimmer | Enable Disable |
| triput 2 100 % mm timer 7 s armal timer - 5 armal timer - 5 agulator controlled by motion sensor Enabled Freet Enabled Auto Normal Normal Normal Normal Normal timer No change ✓ 4 | utput 1 | 100 % | 🖌 F | Auto 🗸 Normal | 2nd output offset |
| mm timer 7 s ormal timer - s ow timer - s egulator controlled by motion sensor Enabled Frset Enabled Off O limmer O Mormal Immer No change Off O limmer Immer No change Immer No change | utput 2 | 100 % | (× | Off Jow | |
| armal timer - s wr timer - s gulator controlled by motion sensor Enabled Frset Enabled Auto Normal Mode Normal timer No change Immutiner No change Immutiner Normal timer Normal timer | imm timer | 7 s | | | |
| ow timer - s Mode Auto mode timers egulator controlled by motion sensor Enabled No change Dimm timer No change Normal Normal timer No change Auto mode timers Normal timer Normal timer<td>ormal timer</td><td>- s</td><td>Regulation c</td><td>ontrol</td><td></td> | ormal timer | - s | Regulation c | ontrol | |
| gulator controlled by motion sensor Enabled No change Dimmer Dimm timer No change Set Enabled Auto Normal Normal timer No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change Low times No change | w timer | - s | Mode | | Auto mode timers |
| ffset Enabled OAuto ONormal Normal timer No change V | egulator controlled by motion sensor | Enabled | No cha | nge 🔿 Dimmer | Dimm timer No change 🗸 < |
| | ffset | Enabled | () Auto | O Normal | Normal timer No change $ \smallsetminus < < \sim $ |
| anual control | anual control | M-Control | O off | O Low | Low timer No change v < |

- measure a lux level under the sensor using illuminance meter
- at the same time press **C** button to get the current lux level readed by sensor in the *State and control* tab
- **divide** these two values

| ate and control Setup Movement sens | or Light sensor Light regulator | |
|---------------------------------------|--|------------|
| Tx light value | Movement sensor Activated Little light | - |
| Light regulator | Light regulator | |
| Mode | Auto | |
| Actual mode 2 | Dimmer | |
| Light sensor | 20.6 lx | |
| Wanted light value | 100 % | |
| Output 1 | 100 % | |
| Output 2 | 100 % | |
| Dimm timer | 25 s | |
| Normal timer | - s | |
| Low timer | - s | |
| Regulator controlled by motion sensor | Enabled | |
| Offset | Enabled | , 1 |
| | | / |
| Manual control | M-Control | |

example:

Txm = 500 lx (lux level readed by illuminance meter under the sensor)

Txs = 329 lx (lux level readed by sensor in State and control tab)

Multiplier measured value 3 = Txm/Txs = 500/329 = 1,52

| Name Regulator | | | |
|----------------------|--|----------------------|--------------|
| ate and control Setu | Movement sensor Light se | nsor Light regulator | |
| | | | |
| Measurement of illun | inance Multiplier measured value 3 | 1.523 x | Def. |
| Measurement of illun | inance Multiplier measured value 3 Multiplier measured value 2 | 1.523 x 0.065 x | Def. Def. |

- use slider to set the multiplier (the right/left arrows on the keyboard can be used for finer changes)
- Write Changes!



2) Correction value when the output is 100%

- this value makes a second step of calibration regarding the reflections going to the sensor
- process must be done during the night with ideally no daylight!
- turn **ON** the luminaires to **100%** (if there is a *Direct* link going from the sensor to the receiver go to *State and control* tab, press *M-Control* button, right click on *Dimmer* button, choose *Dimm 100%*)

| 11 2 by Inactive | | Mode | Regulator controlled by motion sensor | | |
|---|--|---|---------------------------------------|--|---|
| 11.2 IX | Little light | | ✓ Dimm | Dimm 100% | Enable X Disable |
| Aode Actual mode ight sensor | Light regulator Auto Dimmer 11.2 bx | ✓ Auto ✗ Off | ✓ Nc | Dimm 90% Dimm 80% Dimm 70% | it offset Enable X Disable |
| Wanted light value Dutput 1 Dutput 2 Dimm timer Sormal timer Low timer | 100 % 100 % 7 s - s - s | Regulation control Mode No change Auto |) Dimme) Norma | Dimm 60% Dimm 50% Dimm 40% Dimm 30% Dimm 20% | e timers m timer No change \checkmark < al timer No change \checkmark < |
| Regulator controlled by motion sensor Offset | Enabled Enabled | Off | OLow | Dimm 10% Dimm 0% | w timer No change V < |

- measure a lux level under the sensor using illuminance meter
- at the same time press **2** button to get the current lux level readed by sensor in the *State and control* tab
- **substract** these two values

example:

Txm = 500 lx (lux level readed by illuminance meter under the sensor)

Txs = 400 lx (lux level readed by sensor in State and control tab)

Correction value = Txm-Txs = 500-400 = 100

- go to Monitored Area in Light sensor tab and select Illumination influenced by controller #1
- press Data generation button
- mostly the luminaires use ballasts with logaritmic curve shape, so then select *Exponential (for DALI with mode 0;55-254)* and enter the calculated Correction value

| Setup - P8 LR W (ID:992B58) | Setup - P8 LR W (ID:992858) × |
|---|---|
| Device Name Regulator | Device Name Regulator |
| State and control Setup Movement sensor Light sensor Light sensor Light sensor Measurement of illuminance Multipler measured value 3 1.523 x Def. Multipler measured value 2 0.065 x Def. The illumination values of space, separating on the controller amps Output(%) meas.[tax: ref.[tax] deta[tax] 0 1 10.0% 0 3.0210 300 300.0% 9.0040 9.0040 4 4.0% 0 15.550 15.550 15.50 15.50 15.50 15.50 | State and control Setup Movement sensor Light sensor Light regulator Messurement of illuminance Multiplier measured value 3 1.523 × Def. Data generation The illumination values Select generator type (curve shape) Output[%] meas Quepential Def. Def. Def. Def. Def. Def. Def. Def. |
| 5 50.0 % 0 26.840 200 6 60.0 % 0 46.340 150 7 70.0 % 0 80.000 150 8 80.0 % 0 138.10 138.10 9 90.0 % 0 238.50 206 10 100 % 0 411.80 411.70 | 5 50.0 % 0 C Parametric accounting on the index Click 6 60.0 % 0 7 70.0 % 0 8 80.0 % 0 9 90.0 % 0 10 0 % 0% 00 % 0 0% 00 % 0 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% 00 % 0% 0% |
| Data generation Multiplier measured value 1 1.000 x Def. Setup □ Tx state ☑ Repeat □ ACK | Data generation Multiplier measured value 1 1.000 x Def. Setup Tx state Repeat ACK |

Write Changes!

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- 3) <u>Multiplier measured value 2</u> (mostly this step is not necessary!)
 - this value makes a additional step of calibration
 - if there is a sharp side light going to the sensor from the window you can try to change this value little bit (however it is always about searching of the appropriate setting)

| vice Nar ate and | me Regulat | tor | | | |
|------------------------|---------------|-------------|------------|---------------|--|
| Nar ite and | me Regulat | tor | | | |
| ate and | | | | | |
| | control Se | etup Move | ment sens | sor Light se | nsor Light regulator |
| Moacur | rement of ill | luminance | | | |
| measu | rement of m | Multin | lier measu | red value 3 | 1 523 x |
| | | manap | lier meusu | red value 5 | I.Sz5 X Der. |
| | | Multip | lier measu | red value 2 | 0.065 x Def. |
| | | | Mor | nitored area | Illumination influenced by controller #1 ~ |
| The i | llumination | values of s | oace, depe | nding on the | controlled lamps |
| 0 | Dutput[%] | meas.[lux | ref.[lux] | delta[lux] | |
| 1 1 | LO.0 % | 0 | 3.0210 | 3.0210 | 400 🖛 Measured |
| 2 2 | 20.0 % | 0 | 5.2170 | 5.2170 | 350 🔶 Reference |
| 3 3 | 30.0 % | 0 | 9.0040 | 9.0040 | 300 |
| 4 4 | 10.0 % | 0 | 15.550 | 15.550 | 250 |
| 5 5 | 50.0 % | 0 | 26.840 | 26.840 | 200 |
| 6 6 | 50.0 % | 0 | 46.340 | 46.340 | 150 |
| 7 7 | 70.0 % | 0 | 80.000 | 80.000 | 100 |
| 8 8 | 30.0 % | 0 | 138.10 | 138.10 | 50 |
| 9 9 | 90.0 % | 0 | 238.50 | 238.50 | |
| 10 1 | LOO % | 0 | 411.80 | 411.70 | 0% 20% 40% 60% 80% 100% |
| | Data gene | eration | Mul | tiplier measu | red value 1 1.000 x |
| | Dutu gen | eradon | | | Dei. |

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