VMBPIRC
Motion and twilight sensor for ceiling mounting

VMBPIRM
Mini PIR motion sensor

Manual

VELBUS®

Makes life easy
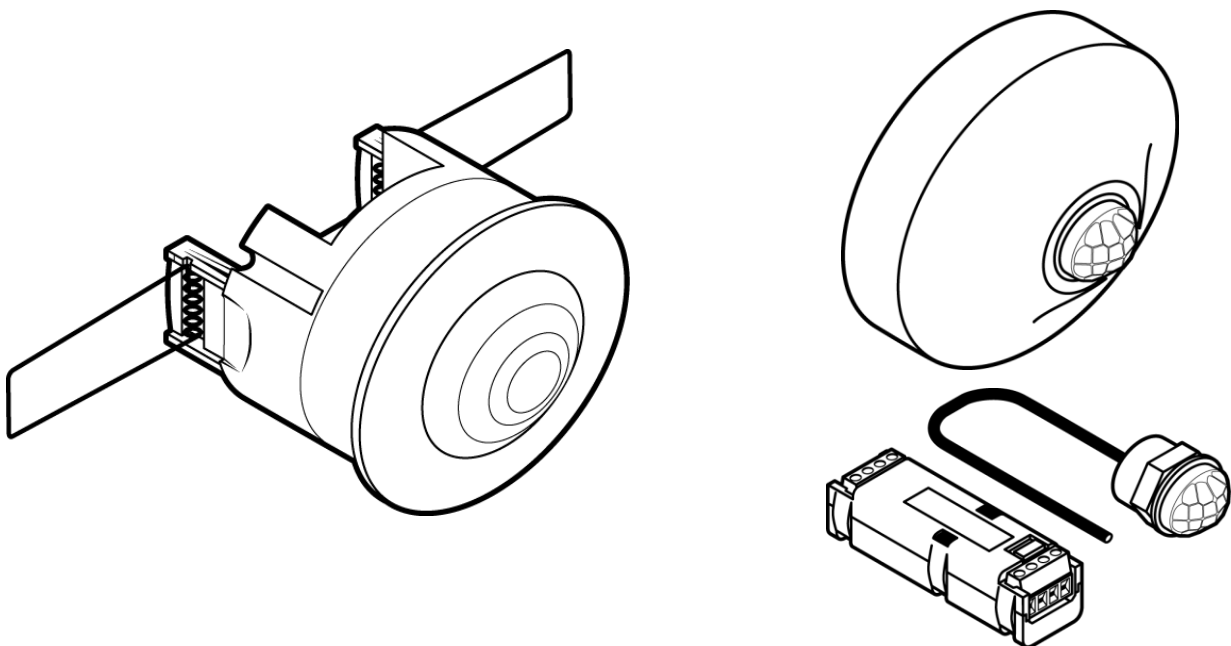
Content

1. Possibilities

1.1. Six simultaneous output channels

- ✓ **2 x twilight sensor** ("light" and "dark") with adjustable thresholds
- ✓ **2 x motion detection** with adjustable timers
- ✓ **2 x light dependent motion detection**: reaction on movement *only when it's dark enough*. With adjustable twilight thresholds.
- ✓ **Time-dependent operation:** All output channels can be programmed separately to be locked or unlocked at certain times. With built-in astronomical clock (sunrise and sunset).

⊟ 🖼 VMBPIRM		09	VMBPIRM
⊙ Dark output		CH1	Released
⊙ Light output		CH2	**Pressed**
⊙ Motion output 1		CH3	Released
⊙ Motion output 1 (LD)		CH4	Released
⊙ Motion output 2		CH5	Released
⊙ Motion output 2 (LD)		CH6	Released
⊙ Absence sensor		CH7	Released

All channels work independently.
E.g.: motion detection (light-independent) can be used as alarm, and at the same time the light-dependent operation can switch light.

1.2. Intelligent operation

External override

When a linked light is manually operated, the motion sensor can be temporarily suppressed (this option can be enabled or disabled).

E.g.: the motion sensor switches a light which can be operated by a push button as well. The option "external override" temporarily disables the sensor when the light is manually switched on. When the light is manually switched off, the sensor is enabled again and resumes its automatic operation.

Ignore influence of linked light

Light-dependent motion detection will continue to work when the linked light shines into the sensor. The sensor will continue to detect motion so that the light does not switch off periodically and needs a "wave" to switch it back on.

E.g.: the sensor switches on a light when it's dark (light-dependent). When the light switches on, it will shine into the sensor and "falsify" the light measurement. With a classic detector, the motion detection will not work as long as the light is switched on. However, the Velbus sensor will continue to detect motion while the light is switched on and restart the timer without switching off the light.

2. Configuration and use

> For a general explanation about installing and configuring Velbus, please consult the installation manual on www.velbus.eu.
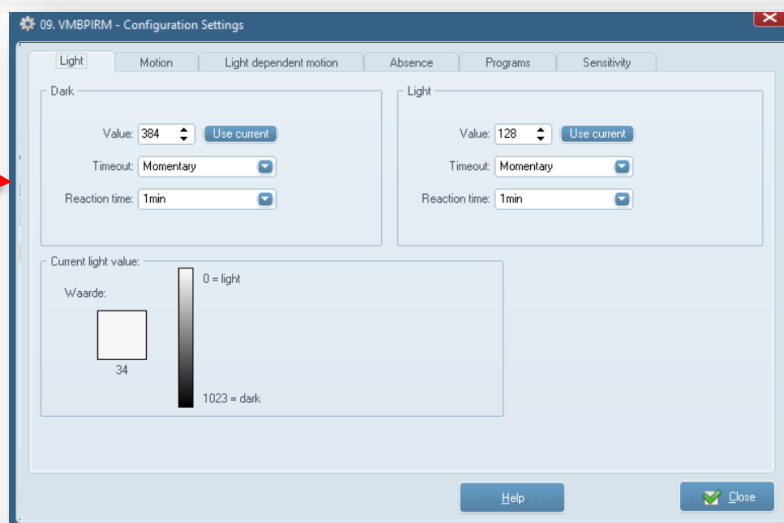
In the Velbuslink configuration software, the following configurations are available for the VMBPIRC / VMBPIRM (right click on the module > Configure).

> Always use the latest version of Velbuslink. This can be downloaded for free at www.velbus.eu > Support > Downloads. For the VMBPIRC / VMBPIRM, Velbuslink version 9.42 or higher is needed.
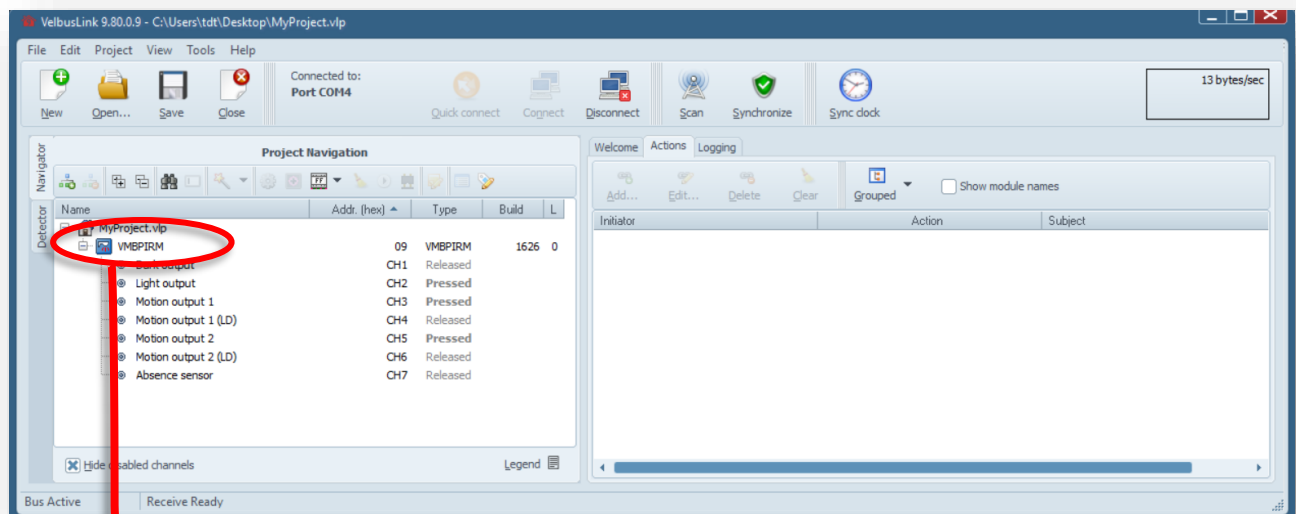
2.1.Settings of the twilight sensor

⚠️ **Caution: the twilight sensor is developed for use in the twilight zone and at complete darkness, not during the day.**

Settings of output channel CH1 "Dark output"
Pressed when it's darker than the threshold "dark"
Released when it's lighter than threshold "light"

Press "Use current" to use current measured light value as threshold (twilight border)

Settings of output channel CH2 "Light output"
Analogous to "dark output"

Threshold "dark"

- Momentary = output channel "follows" the light measurement. Dark: channel closed, light: channel open.
- 1s-10h = timer. Channel is closed during the set time and opens when the timer has ended.
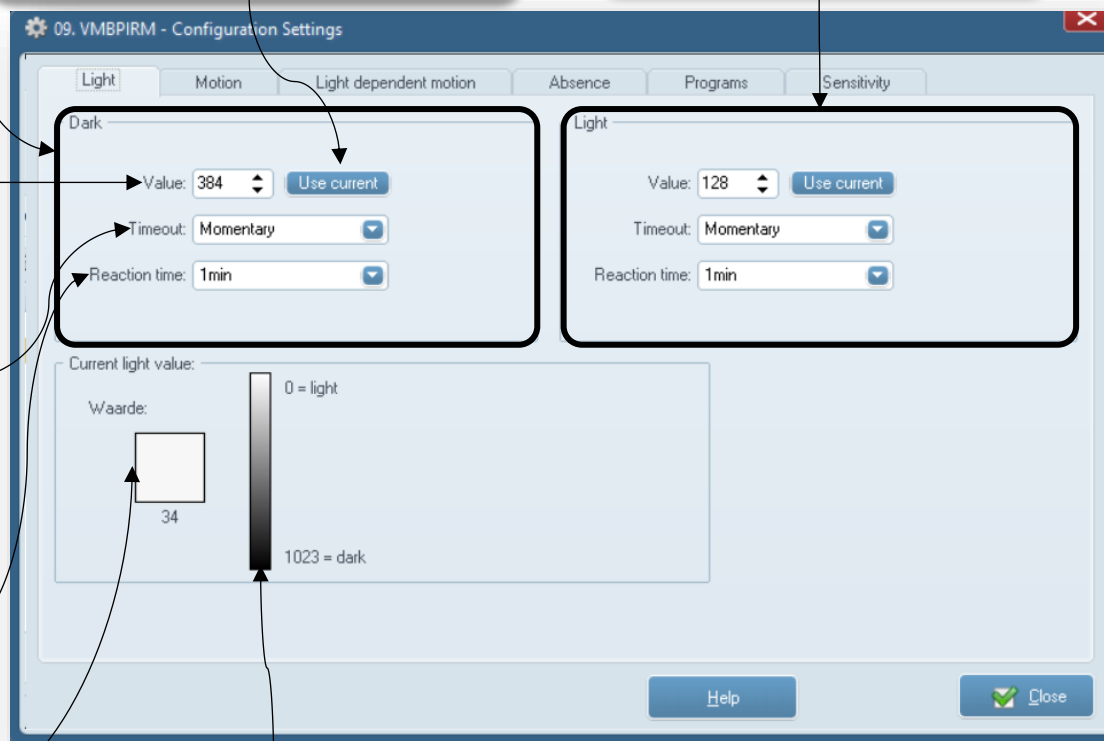
The measured light value has to exceed the dark/light threshold during this time before the channel closes (to avoid unwanted operations by other light sources)

Currently measured light value

Legend of light values

09. VMBPIRM - Configuration Settings

Light | Motion | Light dependent motion | Absence | Programs | Sensitivity

Dark
Value: 384 Use current
Timeout: Momentary
Reaction time: 1min

Light
Value: 128 Use current
Timeout: Momentary
Reaction time: 1min

Current light value:
Waarde:
34
0 = light
1023 = dark

Help   Close

2.2. Settings of the motion sensor

**Settings of output channel CH3
"Motion Output 1"**
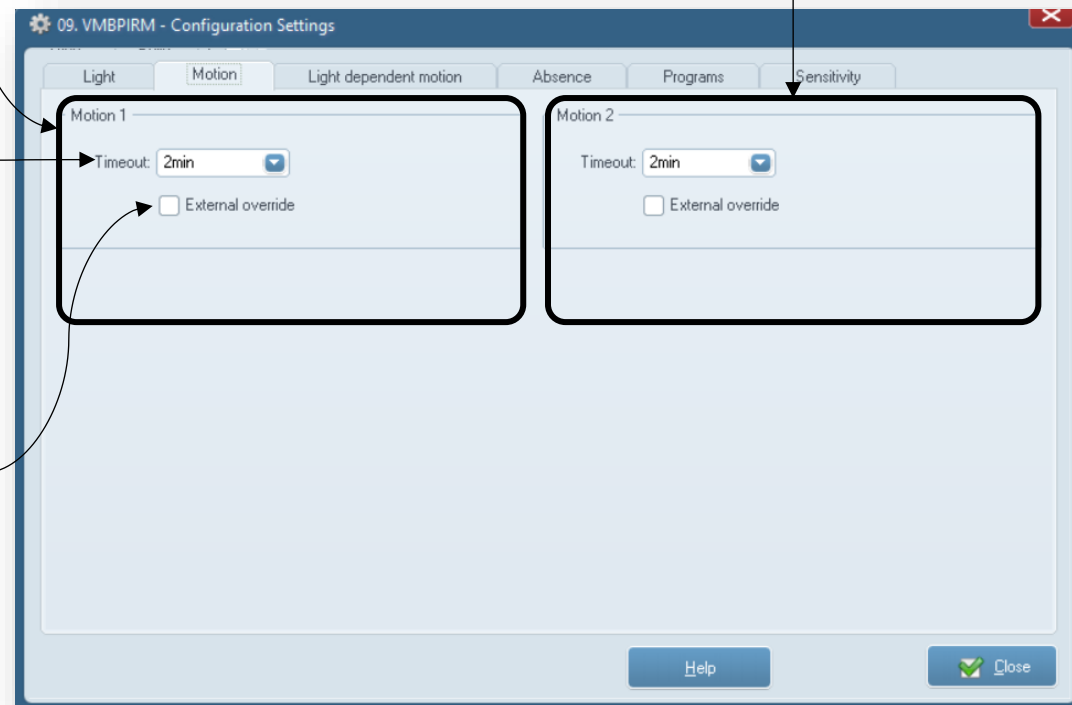Motion detection (independent of light)

**Settings of output channel CH5
"Motion Output 2"**
Analogous to "Motion 1"

- Momentary = output channel "follows" the motion detection. (Motion = on, no motion = off).
- 1s-10h = timer. Channel is closed during the set time and opens when timer has ended.

When checked: when a linked light is manually switched on (e.g. with a push button) the motion detection will be suppressed. When the light is manually switched off again, the motion detection will be reactivated.

09. VMBPIRM - Configuration Settings

| Light | Motion | Light dependent motion | Absence | Programs | Sensitivity |

Motion 1
Timeout: 2min
☐ External override

Motion 2
Timeout: 2min
☐ External override

Help   Close

2.3. Settings of the light-dependent motion detection

Settings of output channel CH4 "Motion output 1 (LD)"
Pressed when it's darker than the threshold <u>and</u> motion has been detected.

Settings of output channel CH6 "Motion output 2 (LD)"
Analogous to "Light dependent motion 1"
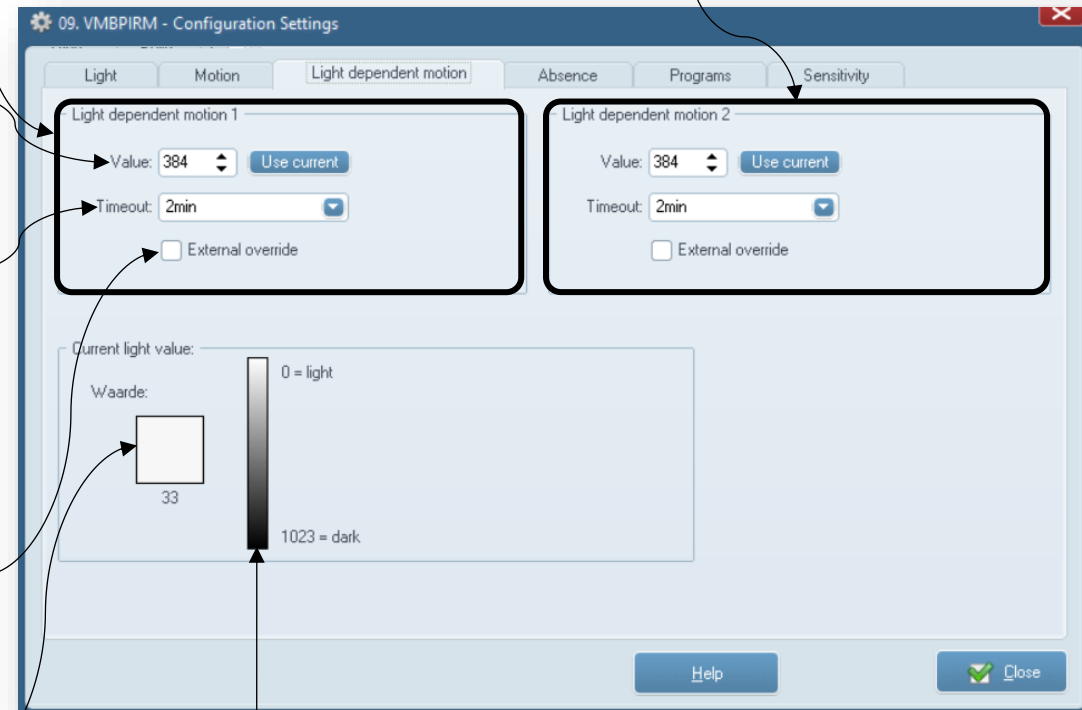
Threshold (twilight limit)

- Momentary = output channel "follows" the motion detection. (Motion = on, no motion = off).
- 1s-10h = timer. Channel is closed during the set time and reopens when timer has ended.

When checked: when a linked light is manually switched on (e.g. with a push button) the motion detection will be suppressed. When the light is manually switched off again, the motion detection will be reactivated.

Currently measured light

Legend light value

## 2.4. Settings of the absence detection

Output channel "absence" is pressed when during this configured time no motion is detected.

Momentary (default):
When absence is detected, the output channel is pressed until motion is detected. At that time, the output channel is released until absence is detected again.
Pulse (1 second):
Every time absence is detected, a pulse is sent. The rest of the time the channel stays open.
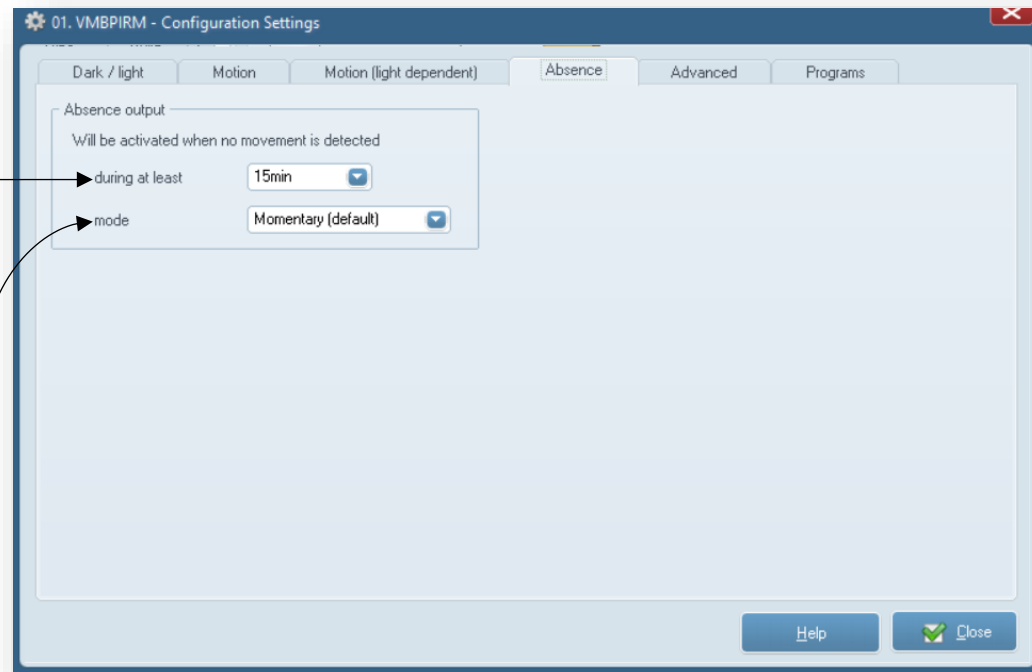
2.5. Timers

> ℹ Timers (program steps) make time dependent operation possible. The twilight, motion and light dependent motion detection can be locked and unlocked at specific times, independent of each other.
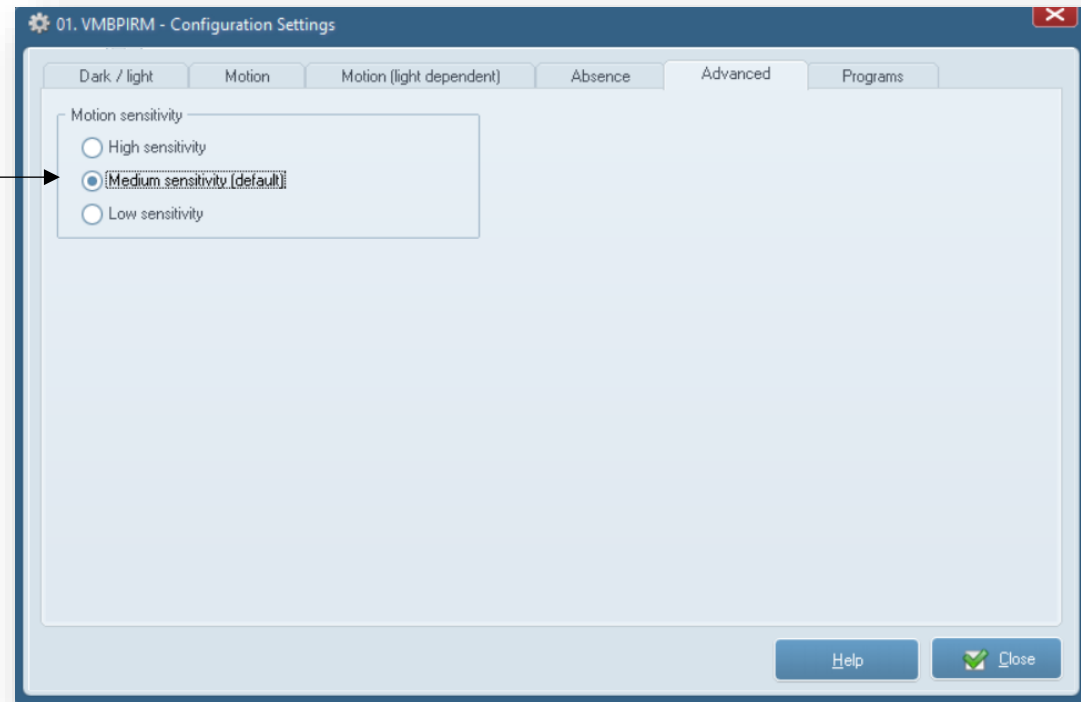>
> Programs are configured in the same way as with other Velbus modules. Please consult the general instructions on www.velbus.eu.

In example below the output channel "Motion 1" is locked (inactive) every Saturday and Sunday between 7:00 and 23:00.
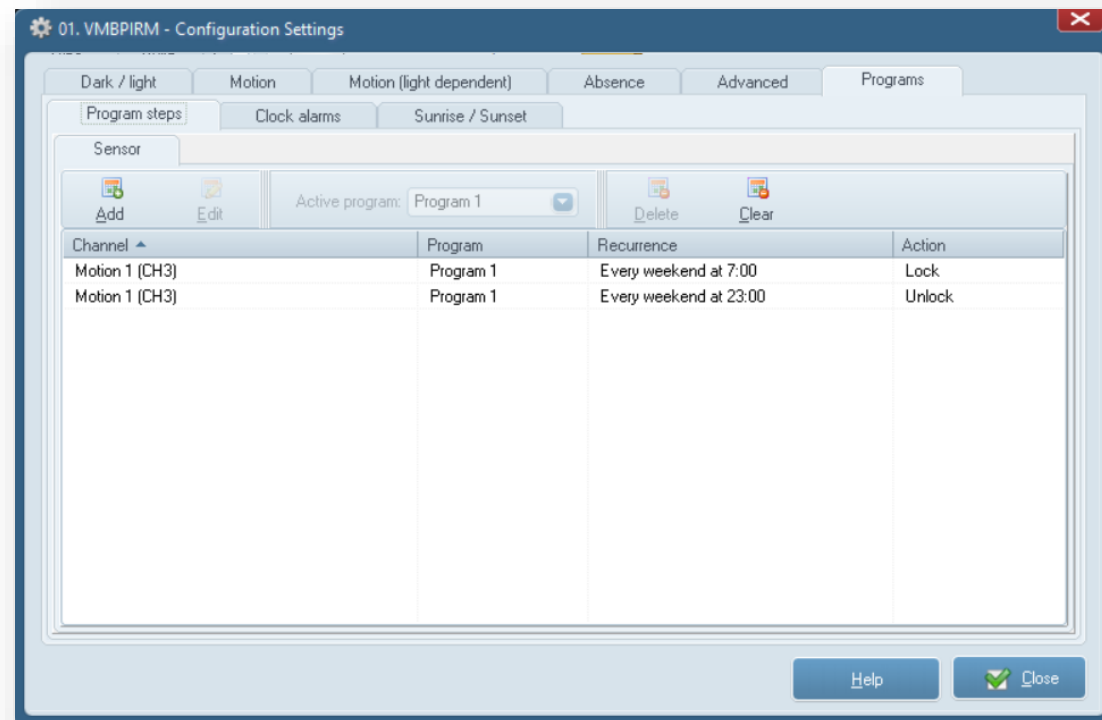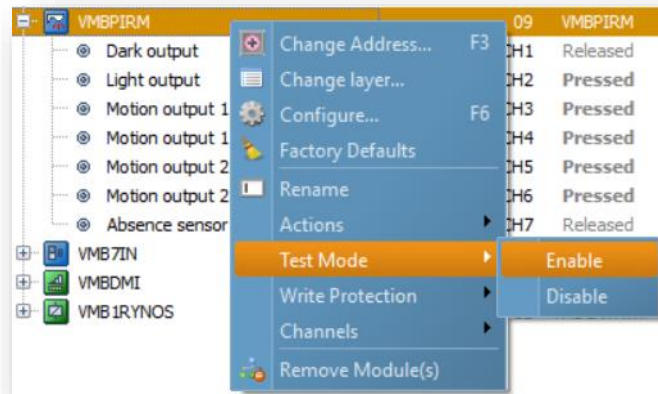
2.6. Configuration of the sensitivity

Puts the motion sensor in high, medium, or low sensitivity.

3. Test mode

The sensor can be put in "test mode" by right-clicking on the module in Velbuslink and enabling "Test mode (PIR)". In "test mode" darkness is simulated and all reaction times and timeouts are disabled (set to 0 or Momentary) to ensure that the sensor reacts immediately to every motion. "Test mode" can be deactivated by selecting "Test Mode (PIR)" > "Disable", and stops automatically after 30 minutes, to avoid that the sensor stays unwanted in "test mode". **When using automatic detection in Velbuslink, it's recommended to put the module in "test mode".**

4. Remarks

4.1. Configuration of timers

Default operation: put the "timeout" of the sensor channel on 1 second, and use the action "15. Restartable timer" to close an output channel (e.g. a relay) during a certain period. (External override will not work in this case).

With external override: use the "timeout" of the sensor channel to configure the timer, and link the output channel with action "1. Momentary".