VMBPIRO(W/B)
Outside motion, twilight
and temperature sensor

Manual

VELBUS®

Makes life easy
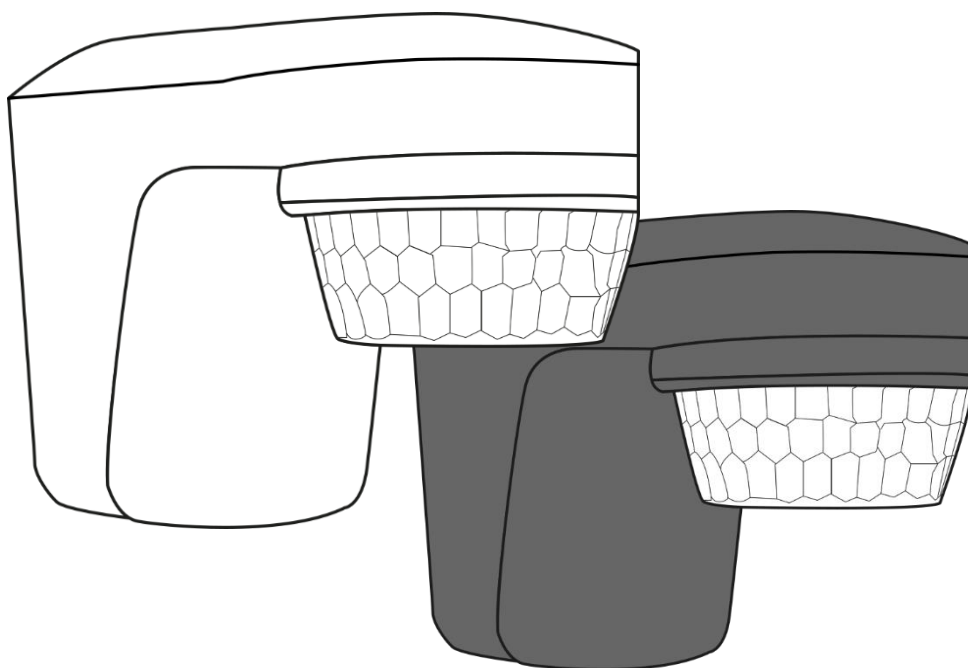
Content

1. Possibilities

1.1.　Eight simultaneous output channels + outside temperature

- ✓ **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.
- ✓ **High temperature alarm**
- ✓ **Low temperature alarm**
- ✓ **Outdoor temperature:** for use with Home Center or view on Velbus glass touch panels with OLED display
- ✓ **Time-dependent operation:** All output channels can be programmed separately to operate at certain times. With built-in astronomical clock (sunrise and sunset).

⊟ 📷 VMBPIRO		11	VMBPIRO	1626	0
◉	Dark output	CH1	Released		
◉	Light output	CH2	Pressed		
◉	Motion output 1	CH3	Pressed		
◉	Motion output 1 (LD)	CH4	Released		
◉	Motion output 2	CH5	Pressed		
◉	Motion output 2 (LD)	CH6	Released		
◉	Low alarm	CH7	Released		
◉	High alarm	CH8	Released		
🌡	Outdoor temp.	CH10	22,9 °C		

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

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 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 outside (light-dependent). When the light switches on, it will possibly 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.
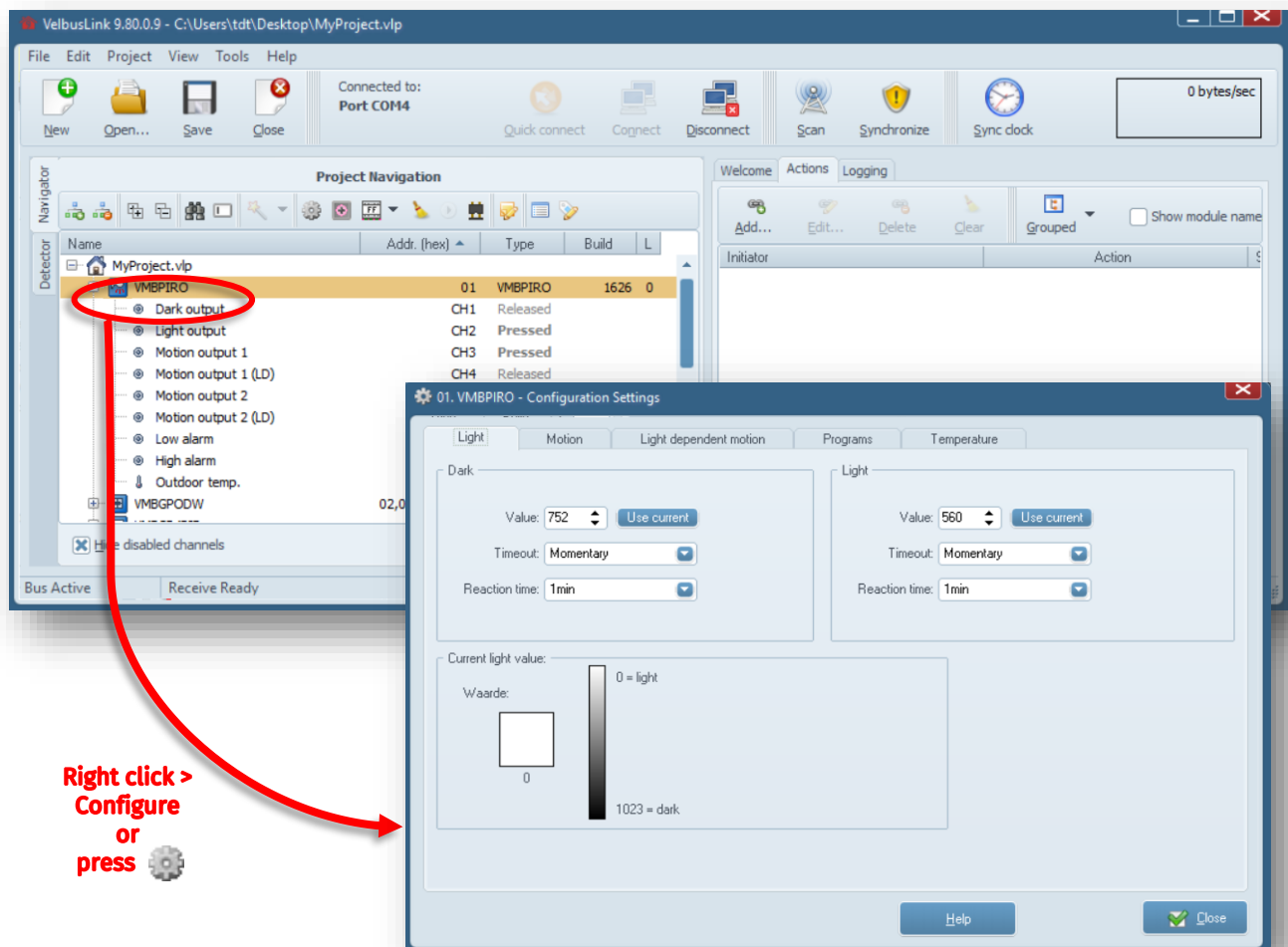
2. Configuration and use

> **ℹ** For a general explanation about installing and configuring Velbus, please consult the installation manual on www.velbus.eu.

> **⚠** Always use the latest version of Velbuslink. This can be downloaded for free at www.velbus.eu > Support > Downloads.

**Right click >
Configure
or
press** ⚙

2.1. Settings of the twilight sensor

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

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

Settings of output channel CH2 "Light output"
- **Pressed** when it's lighter outside than the threshold "light"
- **Released** when it's darker outside than threshold "dark"

Threshold "dark"

Timeout
- **Momentary** = output channel "follows" the light measurement. Dark outside: channel closed, light outside: channel open.
- **1s-10h** = timer. Channel is closed during the set time and opens when timer has ended.

Reaction time
The measured light value has to exceed the dark/light threshold during this time before the channel closes (to avoid unwanted operations by car lights, flashlights, …)

Current light value
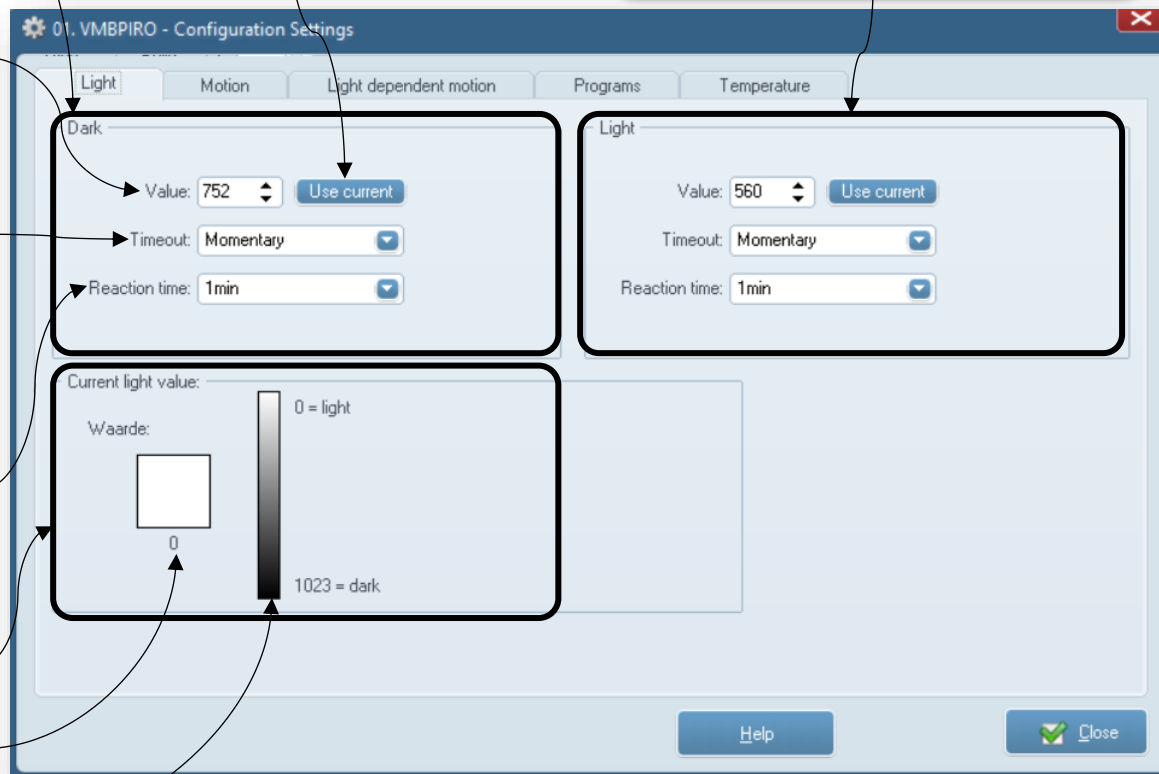
Currently measured light value

Legend for the light value

01. VMBPIRO - Configuration Settings

| Light | Motion | Light dependent motion | Programs | Temperature |

Dark
Value: 752
Use current
Timeout: Momentary
Reaction time: 1min

Light
Value: 560
Use current
Timeout: Momentary
Reaction time: 1min

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

Help   Close

The twilight sensor is developed for use in the twilight range and during complete darkness, not during the day.
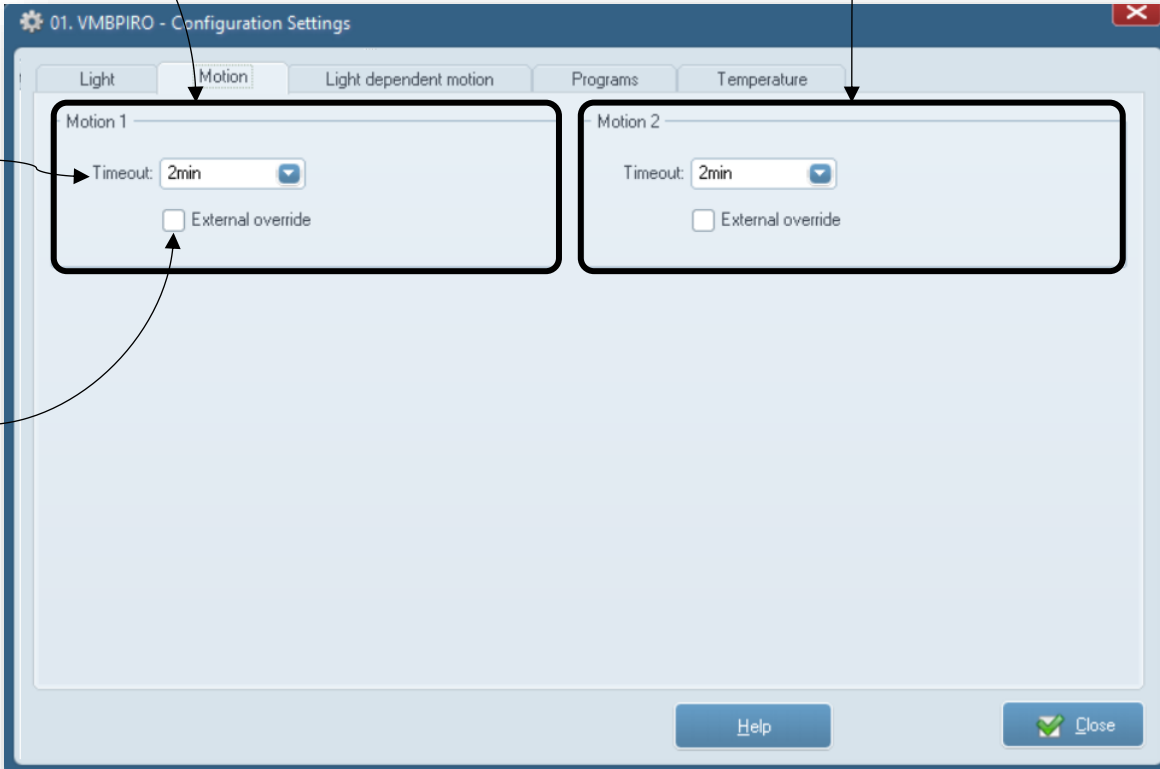
2.2. Settings of the motion sensor

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

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

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

External override
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.

2.3. Settings of the light-dependent motion detection

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

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

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

Threshold (twilight limit)

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

External override
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.

Current light value

Currently measured light value

Legend for the light value

01. VMBPIRO - Configuration Settings

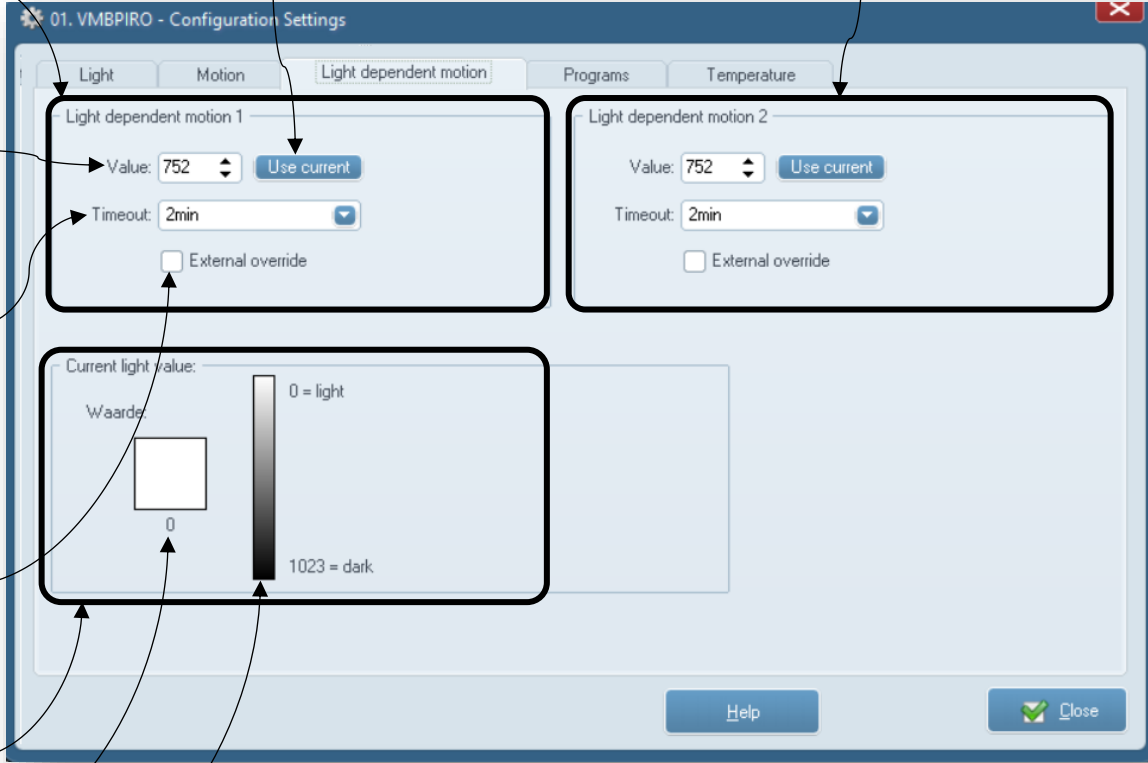Light | Motion | Light dependent motion | Programs | Temperature

Light dependent motion 1
Value: 752 Use current
Timeout: 2min
☐ External override

Light dependent motion 2
Value: 752 Use current
Timeout: 2min
☐ External override

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

Help   Close

Only when the threshold (twilight limit) is exceeded during **at least two minutes**, the light dependent motion detection will react.
In that way, unwanted operation by car lights, flashlights, etc. is avoided. The twilight sensor is developed for use in the twilight range and during complete darkness, not during the day.

2.4. Settings of the temperature sensor

Calibration
The set value (-8°C to +7,5°C) will be added to the measured temperature.
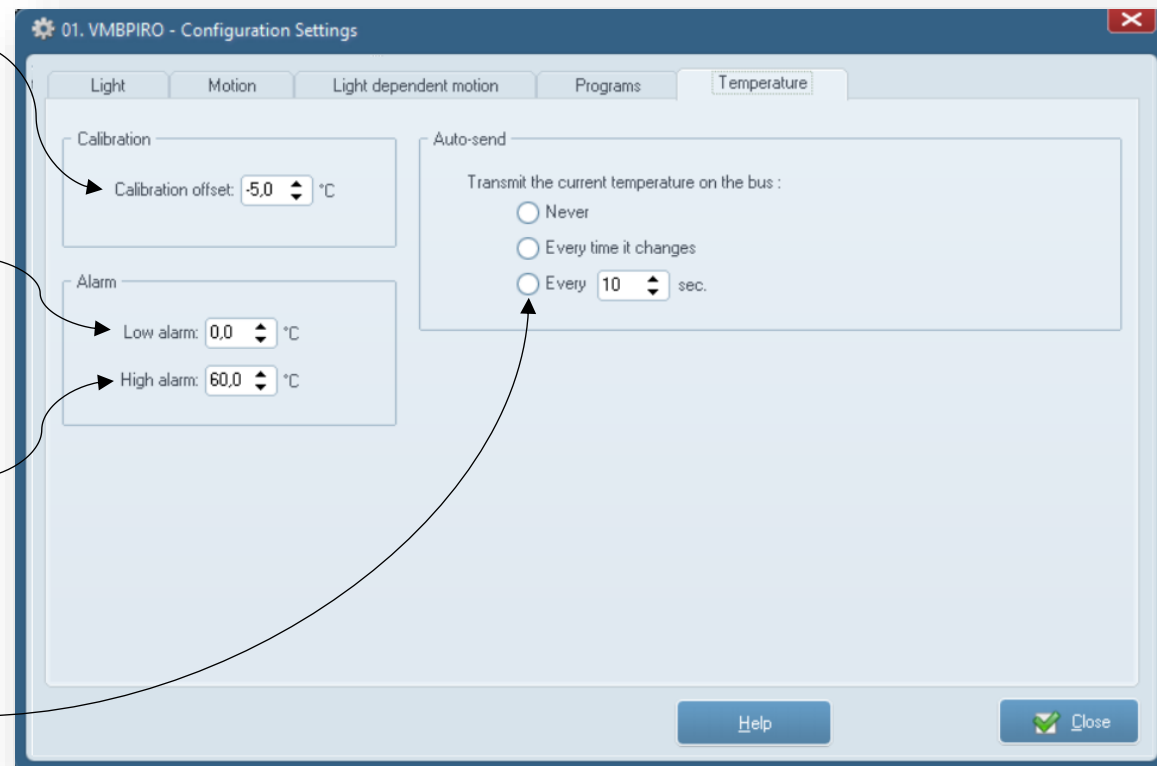
Low alarm
Output channel "Low alarm" will be closed as long as the measured value is lower than the value in this field.

High alarm
Output channel "High alarm" will be closed as long as the measured value is higher than the value in this field.

Auto-send
Determines whether, and how often, the measured value is put on the Velbus data bus.
Only important when using the Home Center server.

01. VMBPIRO - Configuration Settings

| Light | Motion | Light dependent motion | Programs | Temperature |

Calibration
Calibration offset: -5,0 °C

Alarm
Low alarm: 0,0 °C
High alarm: 60,0 °C

Auto-send
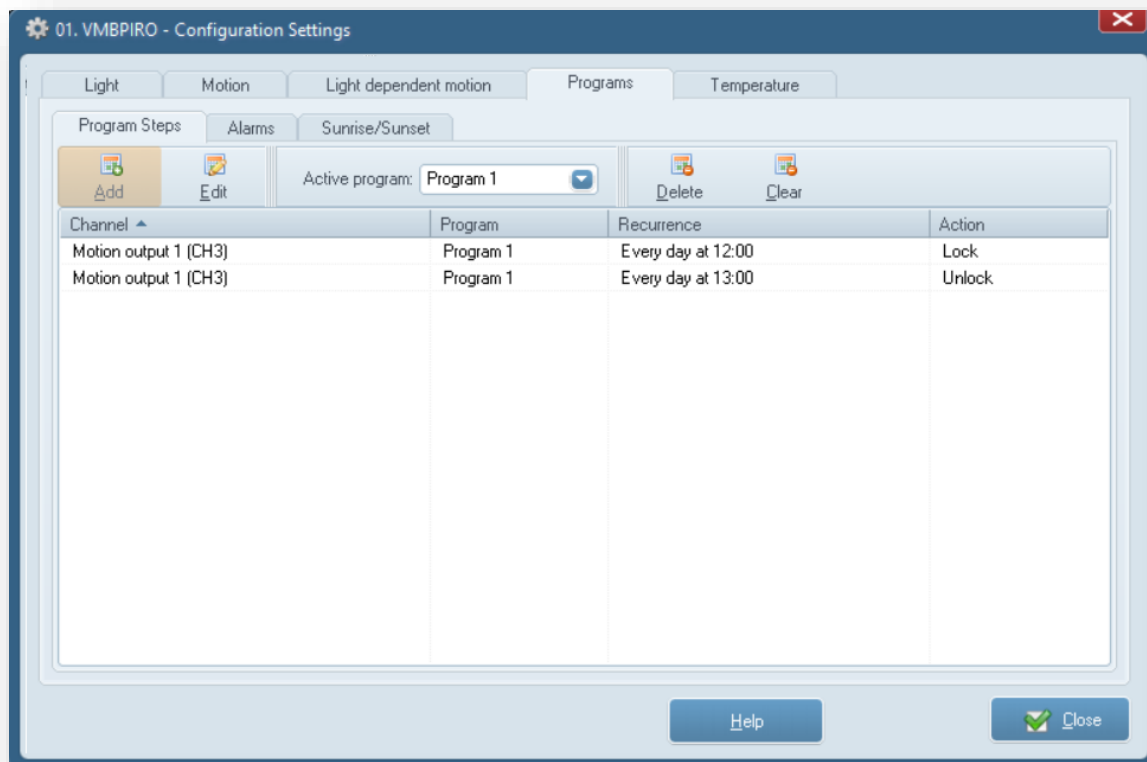Transmit the current temperature on the bus :
○ Never
○ Every time it changes
○ Every 10 sec.

Help   Close

2.5. Disables channels temporarily

Program steps enable time dependent operation. The twilight, motion and light-dependent motion sensor can be locked and unlocked at specific times, independent of each other.
In print screen above the output channel "Motion output 1" is locked (inactive) every day between 12:00 and 13:00.

> **Programs are configured in the same way as with other Velbus modules.**
>
> **Please consult the general instructions on www.velbus.eu > support.**

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 to ensure that the sensor reacts immediately to motion. "Test mode" can be deactivated by choosing "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".**
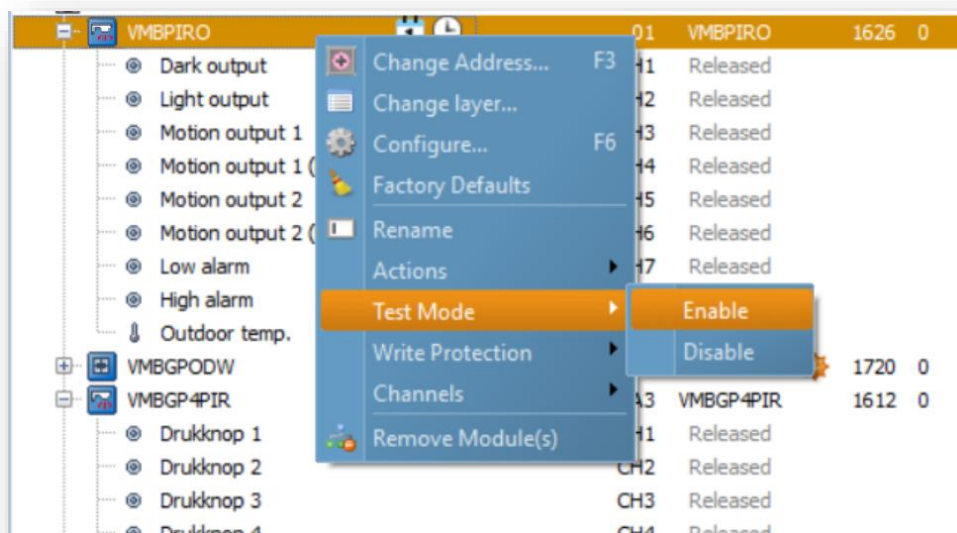
4. Remarks

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 this way.

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

## 4.2.   Hardware factory setting

Do **not** remove the "Velbus" sticker on the sensor head. The setting wheels which are located under the sticker **always have to be in factory setting**.
The settings of the VMBPIRO(W/B) only can be changed via Velbuslink, the Velbus configuration software.

4.3. Show outdoor temperature on VMBGPOD (glass touch panel with display)

The outdoor temperature can be shown on a Velbus VMBGPOD(W/B) glass touch panel with OLED display.

- Select the VMBGPOD(W/B) in Velbuslink and click ⚙.
- In the configuration screen, choose tab "Temperature" > "Remote"
- Select the temperature sensor by clicking on it
- Click "Show"
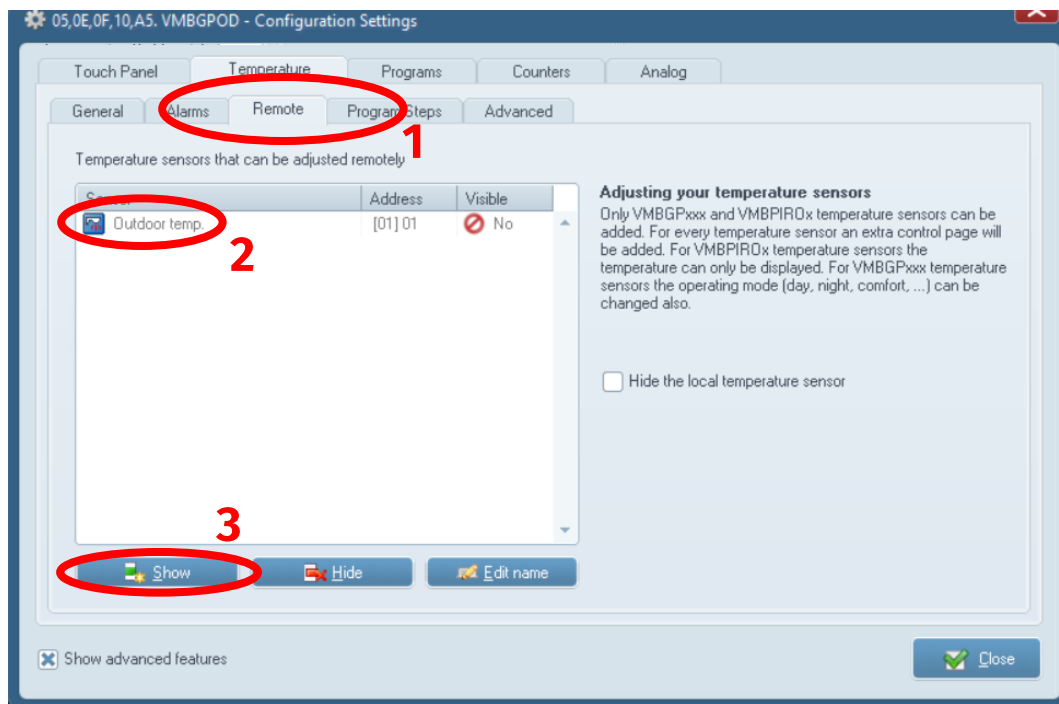
A new page is now added to the VMBGPOD(W/B) glass touch panel, showing the outdoor temperature.
To make this page visible, the check box "display temperatures" in the tab "temperature" > "general" has to be checked (see image below).