EDGE LIT GLASS CONTROL MODULES

VMBEL1 / VMBEL2 / VMBEL4 / VMBELO

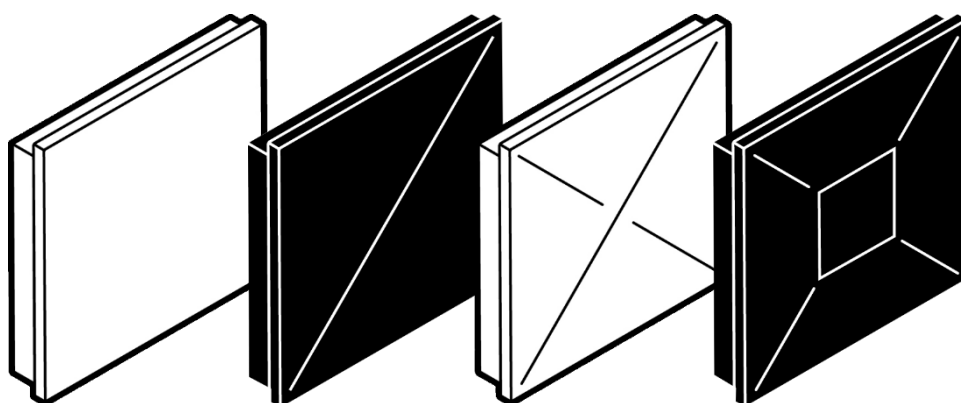# USER MANUAL

Table of Contents

1 CHARACTERISTICS

1.1 GENERAL CHARACTERISTICS

- 1, 2 or 4 **touch keys** (depending on the model)
- **dual and multi-button operation**
  - dual operation: short press activates one function, long press activates another. The duration for long press can be set at 1, 2, or 3 seconds.
    Example: short press is ON, long press for the same button is OFF.
  - multi-button operation: a new function is activated every time the button is pressed. Depending on the model, a series of 4 (VMBEL4) up to 7 (VMBEL1) functions can be set.
    Example: setting the ventilation speed with a single button. Press once to set low speed, press twice to set medium speed, press three times for high speed, press four times to turn OFF. Press again to restart the cycle.
- a built-in **temperature sensor and thermostat operation (only usable when the side LEDs are off)**
  - every glass control module can be used to measure the temperature in the room as well as for heating and cooling control. The target temperature and operating mode (frost protection, day, night or comfort) can be selected through manual operation or program steps. The thermostats of other glass control modules can be displayed and operated (max. 12 modules) on a VMBELO (with OLED screen).
    Example: a residence has a glass control module in every room, allowing for manual as well as automatic operation of both heating and cooling. An extra thermostat is no longer necessary.
- automatic operation via **program steps**
  - most functions can be performed automatically at specific times (daily, weekly, only on weekdays, only on weekends, etc.). The selected time can be fixed (specific time of day), or linked to sunrise and sunset times. *Example: automatically raise the blinds at sunrise.*
  - buttons can be (temporarily) locked so they cannot be operated
    Example: during working hours the buttons in the private area of a doctor's office are temporarily locked so patients cannot operate them inadvertently. Naturally this functionality can be activated or deactivated manually at the press of a button.
  - heating and cooling can also be automated via program steps
    Example: on weekdays the heating is set to day mode every morning between 6.30 and 8.30 am and every evening between 4 pm and 10.30 pm. Outside these hours night mode is activated automatically. On the weekends a different program is used. The temperature can be adjusted as necessary by pressing a button.
- high and low **temperature alarms** (4 in total) (only usable when the side LEDs are off)
  - when the temperature is higher or lower than a specific value, a specific action can be performed.
    Example: when the temperature exceeds 25°C the blinds are lowered automatically. Conversely, when the temperature is lower than 19°C they are raised automatically.
- the color and intensity of the RGBW leds on the sides can be configured in VelbusLink and modified by actions and program steps (for ambient lighting as well as feedback lighting)

1.2 SPECIFIC CHARACTERISTICS OF THE VMBELO

- the following can be displayed on the OLED screen of the VMBELO:
  - up to 8 pages of 4 push buttons. A name and/or icon can be displayed for each
  - a clock page with date and time, both of which can be adjusted
  - for every connected glass control module (max. 12) a thermostat page with the current temperature, mode (day, night, frost protection, ...), target temperature and other information on heating and cooling. Every thermostat can also be operated (set to day/night/comfort/frost protection; temporarily raise or lower the temperature, ...)
  - consumption of connected pulse counters (total, day total and, for kWh counters, current consumption). (For more details please consult the documentation of the VMB7IN 7-channel input module)
  - readouts of connected analog sensors (VMBMETEO, and VMB4AN sensors)
- the OLED screen has a screensaver to save energy and prevent damage to the screen. In screensaver mode the screen can either be dimmed or completely turned off, with a configurable delay
- the OLED screen can also be used for the configuration of various settings concerning the clock and the thermostat (cfr. "The VMBELO configuration menu" p. 9).

2 HOW TO...?

2.1.1 How do I configure my glass control modules?

Like the other Velbus modules, the glass control modules are configured in the Windows program VelbusLink[1]. On the VMBELO some settings can also be accessed using the built-in OLED screen (cfr. "The VMBELO configuration menu" p. 9).

2.1.2 How do I change the color and intensity of the ambient and feedback lighting?

The default values for the RGBW side-LEDs are defined using VelbusLink[1]. In VelbusLink, actions can also be defined to change the color, intensity and behavior of the side LEDs at the press of a button, automatically using program steps, or depending on the state of other Velbus channels.

2.1.3 How do I operate the thermostat?

See "Operating the thermostats on the VMBELO" on p. 8.

2.1.4 How do I add a page with push buttons to a VMBELO?

Per 8 push buttons (2 pages of 4 push buttons each) an address must be assigned to the VMBELO. This is done in the VelbusLink[1] software. A maximum of 4 addresses for push buttons can be assigned per VMBELO (so a total of 32 push buttons). For more details on addressing in Velbus please consult the Velbus Installation Guide[1].

2.1.5 How do I edit the date and time on my VMBELO?

To edit the date and time, enter the configuration screen by long pressing (> 5 sec.) the diagonal line at the bottom left or bottom right of the module, and navigate to the clock settings by short pressing the same lines. (See also the detailed instructions in "The VMBELO configuration menu" on p. 9.)

2.1.6 How do I display the kWh counter (or another pulse counter) on my OLED screen?

- connect your kWh pulse counter with a VMB7IN module

- In VelbusLink[1] open the configuration settings of the VMB7IN, go to "counters" tab, select the input channel, press "edit" and select the appropriate resolution of your counter (depending on the specifications of the pulse counter)

- open the configuration settings of the VMBELO in VelbusLink, go to the "counters" tab, click on "add" and select the counter from the list

As soon as the changes have been saved to the modules (synchronise) a counter page will be made available on your OLED screen. This page displays the name of the counter, the current consumption (for kWh counters), the day total and the total consumption since the counting started.

To edit the name of the counter, change the name of the corresponding VMB7IN channel using VelbusLink[1].

2.1.7 How do I display VMBMETEO values or analog sensors on my OLED screen?

In VelbusLink[1], go to the tab "Analog sensors" of the VMBELO configuration settings. All analog sensors on the bus will be listed there, and you can choose whether to show or hide them on the OLED screen.

2.1.8 How do I change the labels and icons for my buttons on the OLED screen of my VMBELO?

In VelbusLink[1], go to the Tab Touch Panel > General. You can edit the bitmap there.

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[1] For a general explanation on VelbusLink, cfr. "Part 2: Programming" of the Velbus Installation Guide (free download on www.velbus.eu).

2.1.9   See also

- the Velbus Installation Guide, Part 1 and Part 2 (free download at www.velbus.eu)

- www.velbus.eu > support

3 OPERATING THE VMBEL1, VMBEL2 AND VMBEL4

The VMBEL1 has 1 touch zone, the VMBEL2 has 3 touch zones (2 buttons, and the diagonal line for cleaning mode) and the VMBEL4 has 5 touch zones (4 buttons, and the cross for cleaning mode). The touch zones are shown in grey below.

VMBEL1   VMBEL2   VMBEL4
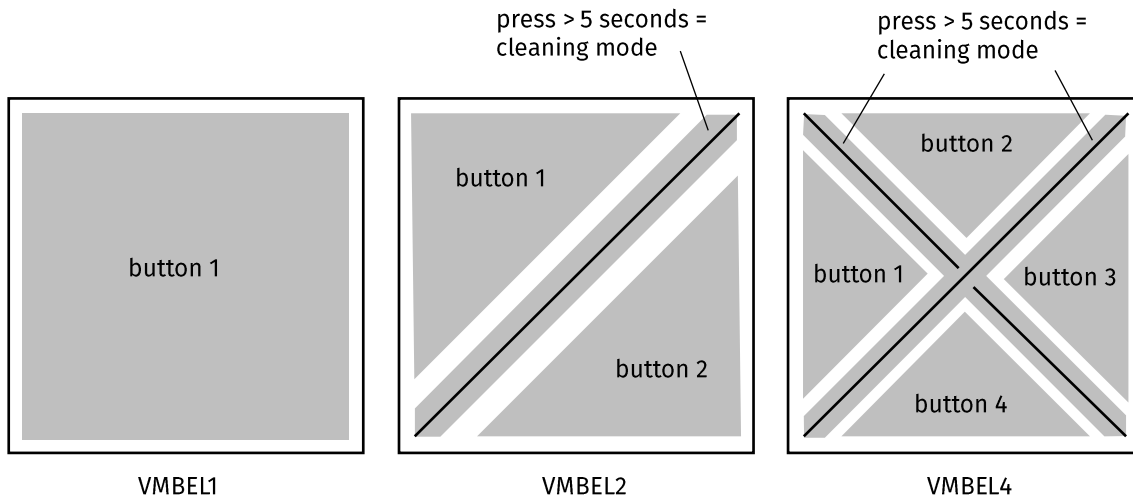
3.1 BUTTONS

Each button zone can be configured to respond to a short press and/or a long press (different functions can be assigned to short and long press), or multi-button mode (consecutive presses on the same button activate different functions, eg. different speeds of a ventilation system).

The reaction time of the buttons can be set to immediate, 1, 2 or 3s. If the reaction time is different from immediate, than the button will only react after being pushed long enough. In this way accidental pushes can be avoided (eg. for an "all off" function).

The mode and reaction time of the buttons, as well as other settings of the VMBEL modules, are configured using VelbusLink[2].

3.2 CLEANING MODE

When the diagonal lines on the VMBEL2 and VMBEL4 modules are pressed longer than 5 seconds, cleaning mode will be activated on the module during 15 seconds. (The VMBEL1 does not have a cleaning mode). During cleaning mode, the side LEDs will switch on and off in a circular pattern. After 15 seconds the module will automatically return to normal mode.

While the cleaning mode is active, the buttons will be locked so the module can be safely cleaned without inadvertently activating the functions (eg. switching the lights).
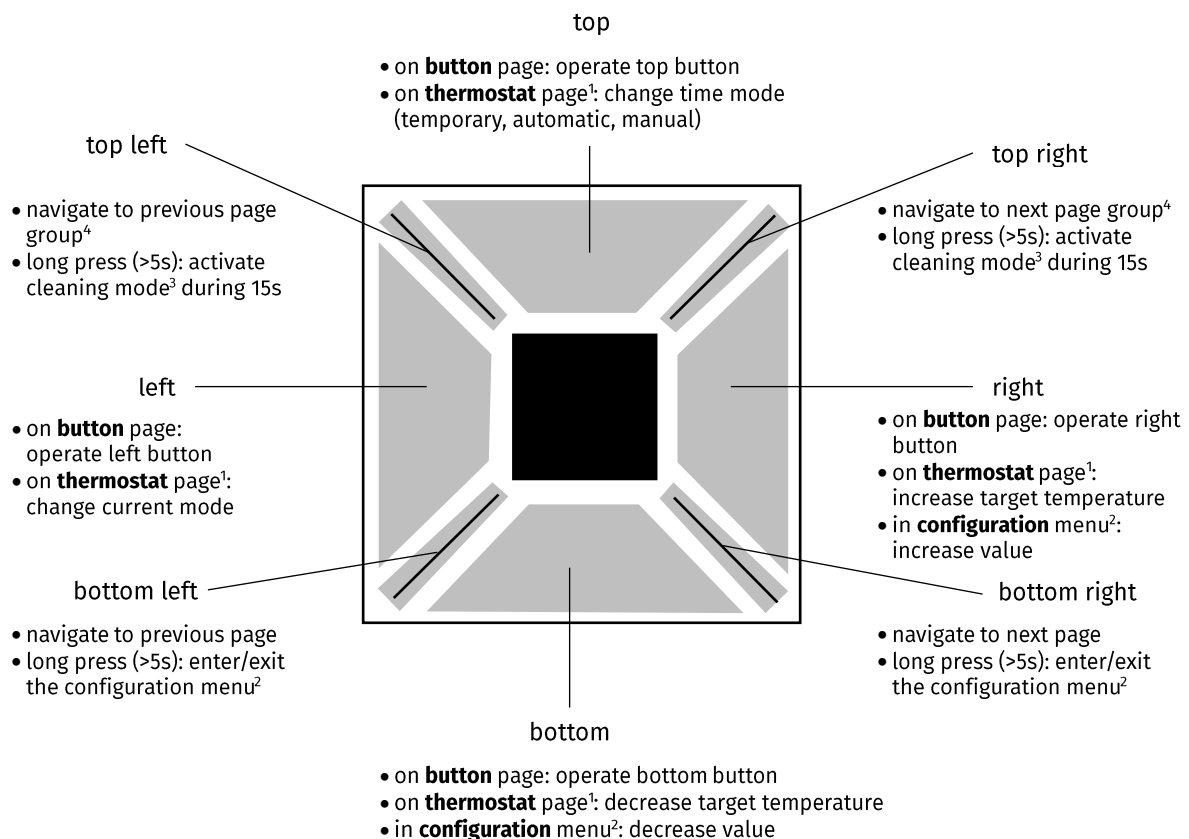
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[2] For a general explanation on VelbusLink, cfr. "Part 2: Programming" of the Velbus Installation Guide (free download on www.velbus.eu).

4 OPERATING THE VMBELO

4.1 OVERVIEW AND GENERAL USE

Every VMBELO Edge Lit glass control module with OLED screen features 8 touch-sensitive zones: 4 buttons (left, top, right and bottom), and 4 diagonal lines (see diagram below).

Up to 8 pages of 4 buttons (functions) each can be configured on the VMBELO, as well as pages for thermostats, pulse counters, analog sensors and a clock. All button pages can detect the difference between short and long press (eg. for dimming, or controlling blinds). Different functions can be assigned to short and long press, and also multi-button mode is available for all buttons (consecutive presses on the same button activate different functions, eg. different speeds of a ventilation system).

top
- on **button** page: operate top button
- on **thermostat** page[1]: change time mode (temporary, automatic, manual)

top left
- navigate to previous page group[4]
- long press (>5s): activate cleaning mode[3] during 15s

top right
- navigate to next page group[4]
- long press (>5s): activate cleaning mode[3] during 15s

left
- on **button** page: operate left button
- on **thermostat** page[1]: change current mode

right
- on **button** page: operate right button
- on **thermostat** page[1]: increase target temperature
- in **configuration** menu[2]: increase value

bottom left
- navigate to previous page
- long press (>5s): enter/exit the configuration menu[2]

bottom right
- navigate to next page
- long press (>5s): enter/exit the configuration menu[2]

bottom
- on **button** page: operate bottom button
- on **thermostat** page[1]: decrease target temperature
- in **configuration** menu[2]: decrease value

(1) For more information on thermostats, see "Operating the thermostats on the VMBELO" p.8.

(2) For more information on the configuration menu, see "The VMBELO configuration menu" p. 9.

(3) During cleaning mode a spraybottle icon appears and the side LEDs will switch on and off in a circular pattern. The buttons are locked so the glass panel can be safely cleaned without operating the buttons. After 15 seconds the module will automatically return to normal mode.

(4) "Top left" and "top right" jump to the beginning of the previous/next page group. The page groups are: button pages, pulse counter pages (if activated), thermostats (if activated), analog sensors (if activated), clock page (if activated).

4.2   OPERATING THE THERMOSTATS ON THE VMBELO

4.2.1   Overview of the VMBELO thermostat screen

Time mode (auto/temporary/manual)
no symbol = no active program
🕐1/2/3 auto = program 1/2/3 active
manual = manual mode
⌛1h0' = temporary mode (remaining time)

Current mode

Cooling
- ✍ standby
- ✍ position 1
- ✍ position 2
- ✍ position 3

Heating
- ❄ anti-frost
- ☾ night
- ☀ day
- ☀⁺ comfort

🕐1 auto

Living

☀ **20.5°** ⊕

🔥   ⊖   21.5°

→ **room**

→ **increase target temperature**

→ **measured temperature**

→ **target temperature**

← (decrease target temperature)

decrease target temperature

System active
- 🔥 heating active
- 🌬 cooling active

4.2.2   Operating the thermostat on the VMBELO

🕐1/2/3
man.
⌛1h0'

❄ ☀⁺ ☀ ☾
✍ ✍ ✍ ✍

🕐1 auto
Living
☀ 20.5° ⊕
🔥   ⊖   21.5°

increase target
temperature

decrease target
temperature
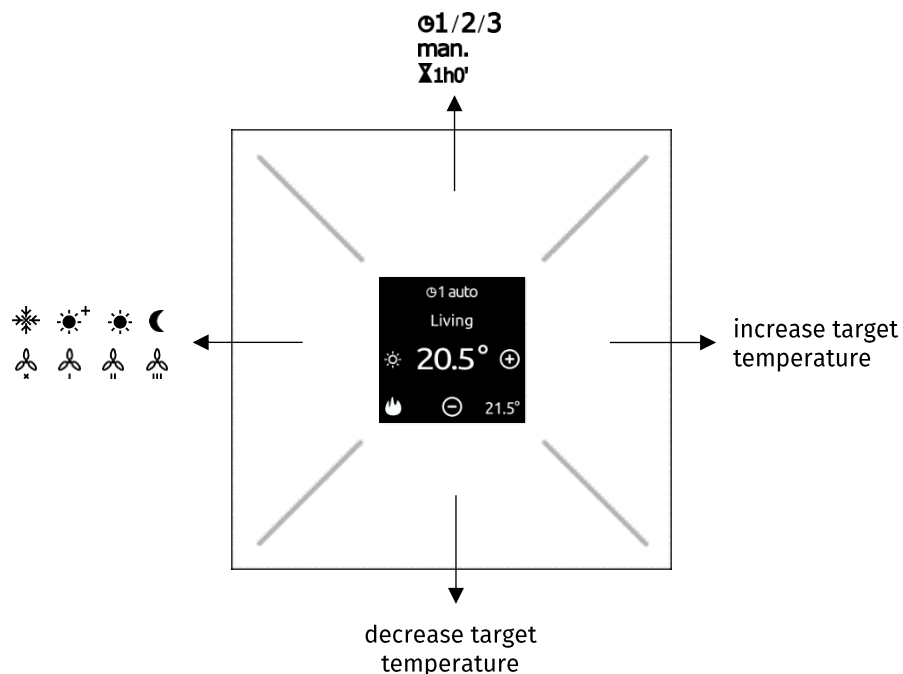
- pressing the left button changes the mode of the thermostat (day/night/comfort/anti-frost in heating mode, or mode I/II/III/standby in airco mode)

- the bottom and right buttons decrease resp. increase the current target temperature. How long this adjustment remains in effect depends on the setting "automatic/temporary/manual" (see next item)

- the top button enables the user to choose between:

    o **no active program:** no program steps are executed, no symbol is displayed

    o **automatic operation** (standard): the program steps are executed. A clock icon appears displaying the number of the active program (1, 2 or 3), followed by the word "auto". For more details on programs, please consult "Part 2: Programming" of the Velbus Installation Guide (free download on www.velbus.eu).

    o **temporary operation**: manual adjustments to temperature and mode (using the bottom, right and left buttons) remain in effect during the specified duration (1 hour by default), after which the automatic operation is restored. If program steps are active, after the temporary mode the thermostat will revert to the state that has to be active according to the program steps. If no program steps are active, the thermostat will return to the state that was active before the temporary mode.
    An hourglass icon is displayed, next to the remaining time. The total and remaining duration of the temporary mode can be modified in the configuration menu (cfr. p. 9).
    E.g. if you want to turn up the heating by one degree for one hour: Press top to activate the thermostat's temporary mode, then right to raise the temperature.

    o **manual operation**: the program steps are no longer executed. The message "manual" is displayed at the top of the OLED screen. Adjustments to temperature and mode (using the bottom, left and right buttons) remain in effect until they are adjusted manually again, or until temporary or automatic operation is restored (using the top button or a program step). **Use manual operation carefully: for instance, if the thermostat is set to comfort mode in manual operation then the heating will remain in comfort mode until you yourself change this manually.**

4.3 THE VMBELO CONFIGURATION MENU

The VMBELO is configured using the Windows program VelbusLink[3], but the most important settings for daily use can also be accessed via its OLED screen. (Note that access to the menu can be disabled in VelbusLink, eg. for use in schools, public spaces, etc. If the menu is not accessible, please check the configuration of the VMBELO in Velbuslink.)

To access the configuration menu, h**old the "bottom left" or "bottom right" button for at least 5s.** To return to normal operation, once again hold "bottom left" or "bottom right" for at least 5s, or wait for 15s.

When the configuration menu is opened from a thermostat page, first a few items concerning thermostats will be displayed. From any other page (buttons, counters, clock), only the time, date and active program settings will be displayed. See the diagram below for an overview of the menu items and how to access them.

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[3] For a general explanation on VelbusLink, cfr. "Part 2: Programming" of the Velbus Installation Guide (free download on www.velbus.eu).

4.3.1 Overview of the VMBELO configuration menu

Button page	**Counter page**	**Tempe-rature page**	**Analog sensor page**	**Clock page**	**Ther-mostat page**

bottom left/ bottom right
long press (> 5s)

Remaining duration of the thermostat temporary mode
(*only when temporary mode was active when entering the configuration menu*)

bottom left
bottom right

Heating / cooling mode

bottom left

if heating selected — if cooling selected — bottom right

Heating presets (target temperatures) — **Cooling presets (target temperatures)**

bottom left

bottom left/
bottom right
long press (> 5s)

bottom right

Total duration of thermostat temporary mode

bottom left
bottom right

Set clock (hour:minutes) — **Set clock (hour:minutes)**

bottom left
bottom right

Set date (day/month/year) — **Set date (day/month/year)**

bottom left
bottom right

Set active program (none, program 1, 2, 3) — **Set active program (none, program 1, 2, 3)**

increase value

previous (short press)
exit (>5s)

next (short press)
exit (>5s)

decrease value

In the configuration menu use "bottom" and "right" (short press) to edit the values, and "bottom left" and "bottom right" (short press) to navigate.

Hold "bottom left" or "bottom right" for at least 5s or wait 15s to leave the configuration menu.