

TROUBLESHOOTING GUIDE

1. Are you experiencing a **technical problem**? Follow **in sequence** the “Step-by-step guide Technical Problems” below. Also, read the “Problems when configuring and using the system” below to check if your problem is not listed.

2. Not sure on how to **configure**? Maybe you will find an answer to your question in our complete [Velbus Installation Guide Part 2: Configuration](#), in the [FAQ](#), or in the [downloads on the products' page](#). Consult these free of charge on www.velbus.eu > Support.

STEP-BY-STEP GUIDE TECHNICAL PROBLEMS

Follow the steps below **carefully** and **in sequence**.

1. MAKE SURE YOU ARE USING THE LATEST VERSION OF VELBUSLINK

You can see the version number in the window at the top of the program.



Surf to www.velbus.eu/velbuslink and download the latest version if necessary.

2. CHECK THE ICONS AND STATUSES IN VELBUSLINK

Sometimes, a technical problem seems to have occurred, but it actually is a configuration or status:

- Check the icons next to the modules in VelbusLink. You can find what they mean in the **Legend** (button below in VelbusLink).
- Also check the statuses next to the channels, in the “Type” column (e.g. forced off, suppressed...).

3. TAKE DALI RESTRICTIONS INTO ACCOUNT WHEN USING VMBDALI

The Velbus DALI gateway VMBDALI allows you to communicate with 64 individual DALI devices. However, due to DALI restrictions the communication is limited to maximum 12 individual devices simultaneously.

To interact with more than 12 individual devices simultaneously, use DALI groups or spheres. Check the DALI manuals for more information on this.

4. CHECK THE TERMINATORS (TERMINAL RESISTANCES)

A standard Velbus installation must contain **in total exactly 2 or 3 closed terminators**. Ideally, they are placed as far as possible from each other (the length of the cable between these two must be as long as possible).

Too many or too little terminators may cause all kinds of problems: difficulties when scanning syncing, problems or strange effects when using the installation...

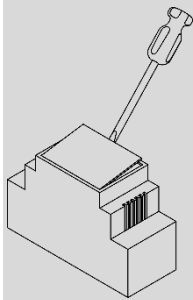
- Ideally all modules are easily accessible. In this case, check the status of the terminator (jumper or switch) for each module and configure them correctly.
- If not all modules are easily accessible, or you want to be sure by measuring, you can measure the bus resistance:
 - Disconnect the Velbus installation from the power supply
 - Measure the resistance between the H and the L conductors. The resistance must be between 40 and 120 Ω .
 - If the resistance is higher than 1 k Ω , no terminator is closed → close 2 to 3 terminators in the entire installation.
(If the resistance remains too high, check for cable interruptions, see step 13 to track them.)
 - If the resistance is circa 220 Ω , then 1 terminator is closed → close 1 to 2 extra terminators.

- If the resistance is less than 40Ω , then too many terminators are closed¹ → open terminators until the measured resistance is between 40 and 120Ω . (If the resistance remains too low, there might be a short-circuit or a defect module, see step 13 to track them.)
- This can also be used on parts of the installation, in order to systematically check the status of the terminators:
 - Disconnect that part in question from the installation by at least disconnecting conductors H and L
 - Measure the bus resistance of this part as described above (remember to disconnect from the power supply first)

Information on terminators

You can find a terminator on most Velbus modules, including the DIN-rail modules, sensors, push-button interfaces and glass control modules.

DIN-rail modules feature a terminator behind the glass front faceplate:





In some modules, the terminator is closed by placing a jumper over the 2 concerning pins.



In other modules, place the TERM switch in the ON position to close.

Display in VelbusLink:

For a module with a terminator switch, VelbusLink can read the real status of the terminator when scanning. This will be displayed next to the module as a terminator icon with yellow triangle ().

For all other modules (with jumper), VelbusLink cannot read the status of the terminator. However, you can manually place the icon next to the module (), but it will only serve as a personal prompt. It does not reflect the real status of the terminator.

5. CHECK THE PS LEDS ON ALL MODULES

Check whether the PS (power supply) LED lights continuously on all modules. If the PS LED is not lit, the module is not powered.

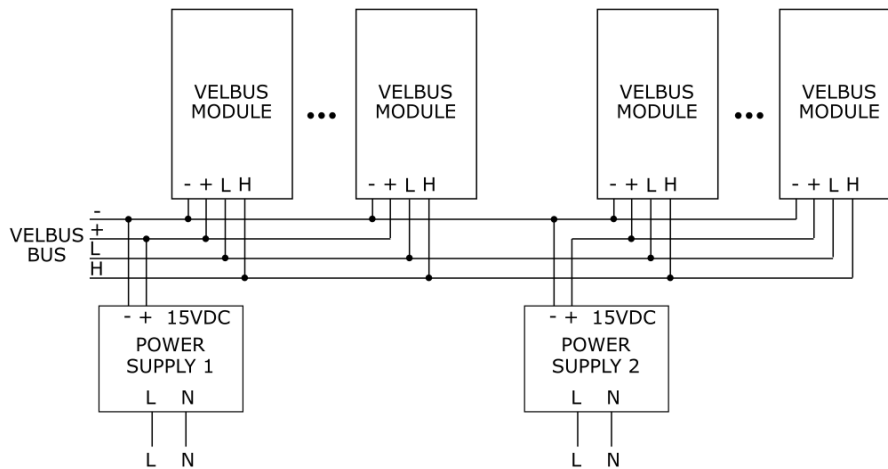
6. MAKE SURE THE POWER SUPPLY IS SUFFICIENT

Use the consumption calculator in VelbusLink (in the **Tools** menu) to calculate the consumption needed to power all modules in all circumstances. Check if power supply is sufficient.

¹ According to the formula for resistance in parallel, i.e. $1/R = 1/R_1 + 1/R_2 + \dots$, where R_1, R_2 , etc. is 220Ω

7. (WHEN USING MULTIPLE POWER SUPPLIES) MAKE SURE ALL POWER SUPPLIES ARE CONNECTED CORRECTLY

When using multiple power supplies, interconnect the negative poles and distribute the positive poles over the modules. Do not interconnect the positive poles.



8. MEASURE THE VOLTAGE ON THE MODULES

Close as many relays as possible and measure the voltage on every module (especially on the modules placed the farthest of the power supply). The minimum voltage must be 12 V.

If the power supply voltage on a module is too low, the channel LEDs will flash 3x intermittently. If the voltage is too high, the LEDs will flash 4x.

9. CHECK THE STATUS LEDS ON THE MODULES

For modules with **status LEDs** (including most DIN-rail modules): check if these do not report an **error message** (flashes).

- continuous flashes: a timer is running (no problem or error)
- intermittent flashes: error message
 - 2 flashes: communication error. Proceed with the next step.
 - 3 flashes:
 - for most modules: power supply voltage too low (see step 6)
 - for VMBDMI(-R) dimmers: non-dimmable load (see step 8)
 - 4 flashes:
 - for most modules: power supply voltage too high
 - for VMBDMI(-R) dimmers: temperature alarm (but still functioning)
 - 5 flashes: switched off due to temperature protection

10. CHECK THE RX AND TX LEDS

In normal working mode, these will occasionally flash briefly (Rx when the module is receiving a packet, Tx when sending a packet). Activate a relay or push-button: the Rx LED must flash briefly on all modules in the installation. If not, proceed with the following step.

Only when syncing (reading or writing) will the Rx and Tx LEDs flash for a longer time. Outside of this, the LEDs flashing for a longer time is not normal. If so, proceed with the following step.

11. RESTART THE SYSTEM

Briefly disconnect the power supply (or supplies) and reconnect them after 10s. Check if the problem has been solved. If not, proceed with the following step.

12. SOLVE CABLING PROBLEMS

If all points above are met and you are still encountering problems, there might be a cabling problem.

Most common cabling faults are: reversing of conductors H and L in 1 or more modules, and faulty contacts.

- For each module, check if the +, -, H and L conductors are correctly connected and make sure they are not inverted.
- For each module, lightly pull the connected conductors to make sure they will not come loose.
- Tighten the screws at the interconnection rails (VMBRAIL) and at the connected modules.
- Also, look for possible cable breaks. Sometimes, conductors may be broken inside the isolation, which is very hard to detect.

13. ISOLATE THE PROBLEM

If you are still encountering problems, try and isolate the problem in a systematic manner.

- Deactivate as many parts of the bus as possible by disconnecting the "+" conductors.
- Reconfigure the terminators so as the active part will contain a total of 2 or 3 closed terminators, as far as possible from each other.
- Scan this active part of the installation.
 - If VelbusLink has scanned this part correctly, activate the next part of the installation. Change the position of the terminators again so as the entire active part will contain a total of 2 or 3 closed terminators, as far as possible from each other.
 - Continue until the problem occurs. This will give a good indication where the problem lies (namely in the last connected part). Remember the terminators!

14. DO A "FULL WRITE"

If all points above are met and you are still encountering problems, do a "full write":

- open the Sync window
- uncheck "Modify only"
- check the modules you want to write to.

Keep in mind that most of the actions are memorized in the output modules. If a button or sensor does not execute the correct action, you will have to write to the relay, dimmer or blind modules in question.

Caution: a full write will take some time to execute (1 to 2 minutes per module for most modules, up to 15 minutes or more for a control panel with OLED display).

- press "Write".

15. EXECUTE THE FIRMWARE UPDATES

Only if all of the above points are met:

- Open in VelbusLink > Tools the Firmware Update tool.
- Execute the suggested firmware updates. Make sure the bus works correctly prior to executing the firmware updates (see all steps above).

If a firmware update fails, try again.

16. CONTACT VELLEMAN FOR TECHNICAL SUPPORT

If you followed all steps above correctly and you still encounter problems, we will gladly help you:

- Are you a professional customer and are buying at Velleman directly? Please ask your question through our Customer Care platform (customercare.velleman.eu), or contact the Velleman Customer Service (info@velleman.eu or +32 (0)9 384 36 11).
- Are you a professional customer and are buying through wholesale? Please contact your point of sale. If they cannot help you, please contact the Velleman Customer Service (info@velleman.eu or +32 (0)9 384 36 11).
- Are you a private person? Don't hesitate to go to the Velbus forum (forum.velbus.eu). Specialists and users will be glad to help each other. You can also get help at your point of sale or installer. If necessary, refer to our [list with point of sale and installers on velbus.eu](#).

PROBLEMS WHEN CONFIGURING AND USING THE SYSTEM

1. CONNECTION PROBLEMS

Are you encountering problems when connecting, or are you receiving communication error messages? Check the following:

- Connection via USB:
 - Long USB cables might cause bad connections. Try using a shorter cable (max. 1,5 m). Try a new cable.
 - Interrupt the connection, close VelbusLink, use a different USB port on your PC if possible, restart VelbusLink and reconnect.
 - Carefully check if the USB configuration module is correctly connected to the installation.
 - Interrupt the connection, restart the installation (see step 11 “Restart the system”), and retry.
- Connection via the VMBSIG Signum:
 - Check if the LEDs on the VMBSIG module are signalling an error message.
 - Surf to the IP address of the Signum. If you are not getting any login page or dashboard, there might be a network problem, the Signum has not (correctly) started or encounters a problem.

2. A MODULE DOES NOT REACT AS DESIRED

- Check the icons and statuses in VelbusLink (see step 2 of the “Step-by-step guide Technical Problems”)
- Make sure all modifications have been written to the modules. The Sync shield should be green. Execute all synchronisations as suggested by VelbusLink.
- Restart the module. Right-click on the module and select **Restart module**. If residual configuration or statuses remain in the modules, restart.
- Restart the entire installation (see step 11 of the “Step-by-step guide Technical Problems”)
- Follow the results of the executed actions in VelbusLink. The channel status (“Pressed”, “Unpressed”, “Suppressed”...) reveals what is happening. Is the push-button pressed? Does the relay switch? Is the sensor activated? Follow this live in VelbusLink.
- Do a “full write” (see step 14 of the “Step-by-step guide Technical Problems”), or Sync > Read and check which actions and configurations are actually present in the modules.
- It might be a firmware bug, and new firmware is available. Do a firmware update (see step 15 of the “Step-by-step guide Technical Problems”)
- If all points above are met and you are still encountering problems, follow the “Step-by-step guide Technical Problems” above.

3. THE IMAGE ON THE OLED DISPLAY OF THE GLASS CONTROL MODULE LOOKS STRANGE

Do a “full write” to the concerning module (see step 14 of the “Step-by-step guide Technical Problems”).


4. PROGRAM STEPS ARE NOT EXECUTED OR EXECUTED AT THE WRONG TIME


- If program steps are **not** executed, the configuration of the active program of the module might be faulty:
 - Open the configuration window of the module and open the **Programs**
 - Check the settings **Active program**. The program steps will not be executed if the “No program” settings are selected. Select the correct program (generally “Program 1”). Make sure to be connected to the installation. (Also see the general information on program steps in the “Velbus Installation Guide Part 2: Configuration”.)
- If program steps are executed **at the wrong time**, the configuration of the clock of the concerning module might be faulty:
 - To check the time of the module, right-click on the module and select **Request Time** in the context menu.
 - If the time is not correct, reset the time by pressing **Sync clock** on top of the VelbusLink.
 - If the time is correct, the problem has another cause. Carefully check the configuration.

5. THE TIME SETTING IS FAULTY (AFTER A POWER FAILURE OR AFTER THE SUMMER/WINTER TIME SWITCH)



- Summer/winter time switch:
 - If there is a VMBSIG Signum IoT Gateway (or Home Center) in the installation, then summer and winter time will switch automatically.
 - If not, these must be switched manually. Do so on one of the modules featuring a display or by using the clock synchronisation function of Velbuslink.
- Power failure:
 - If there is a VMBSIG Signum IoT Gateway in the installation (or Home Center, or VMBLCDWB configured as main clock), then date and time will be automatically correct at restart.
 - If not, time must be modified manually. Do so on one of the modules with a display or by using the clock synchronisation function of Velbuslink.

6. VELBUSLINK CANNOT FIND ALL MODULES WHEN SCANNING

Wait one minute after the start of a scan. If modules are missing or there is a red cross  next to the module, the module could not be found. Check the following:

- is the module correctly connected to the bus?
- did you open the correct VelbusLink project?
- did you replace a module? If you are using the **Replace module** wizard in VelbusLink (in menu **Tools**), it will have deleted the old module automatically. If you are not using the wizard, then the old module must be deleted manually (select them and press the Delete key on your PC)
- if the points above are covered and there are modules missing or you see red crosses  after a scan, follow the “Step-by-step guide Technical Problems” above.

7. THE MODULES' ADDRESSES ARE MODIFIED

Sometimes it seems that the addresses have been modified in VelbusLink where the hexadecimal seems to be modified into a decimal or vice-versa. The displayed address can be modified in the **Display** menu, or with the  ▼ or  ▼ button. Modifying the display (HEX <-> DEC) will not alter the installation or the modules, only the display in VelbusLink is different.

8. AN INPUT MODULE DOES NOT RESPOND (ANYMORE)

- check if the push-button or the input channel is not configured with a delay. Hold the button pressed for more than three seconds and check if the action is executed. A delay on the buttons will be displayed in VelbusLink with an icon.
- The channel may also be locked. To unlock, right-click on the channel and select **Operate**. You can unlock the channel in the **Operate** dialogue. If the channel is still locked, temporarily configure a push-button which will unlock the channel (configure an “unlocking” action between these two). By pressing this button, the locked channel will unlock. Subsequently, you can delete the “unlocking” action.
- Exceptionally, the problem may have been caused by a static discharge. Disconnect the installation from the power supply, wait 5 seconds and reconnect the power.

9. THE RELAYS SWITCHES OFF ON ITS OWN

The main cause is insufficient power voltage. See steps 6 and 7 above in the “Step-by-step guide Technical Problems”.