Manuals+ — User Manuals Simplified.
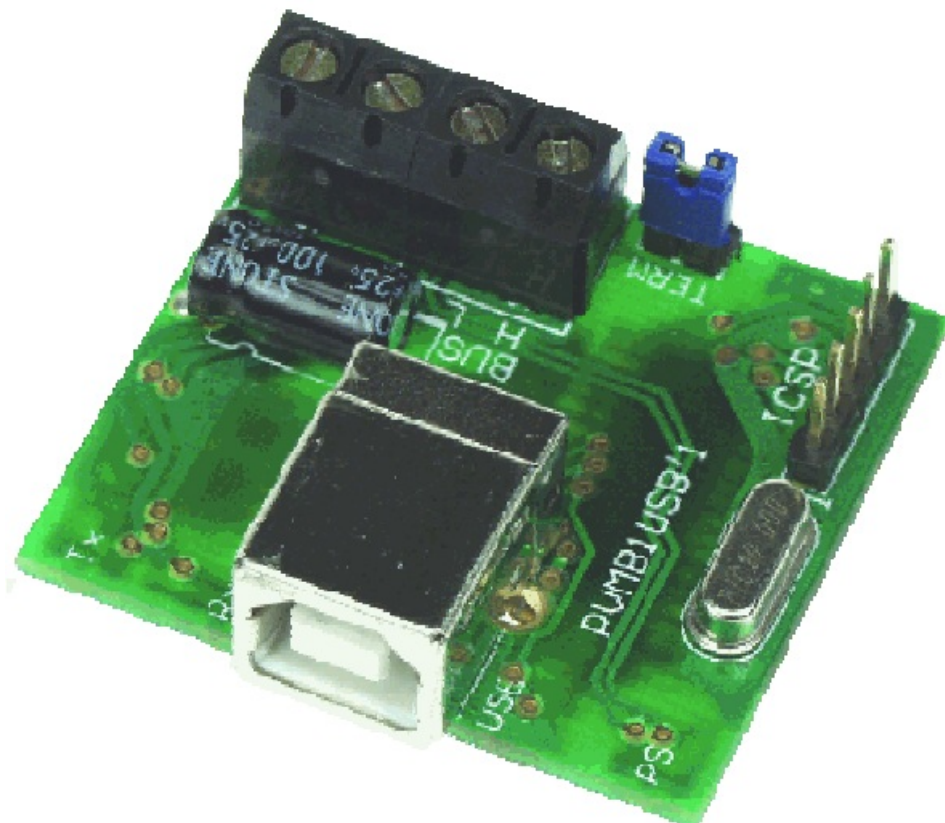
velleman VMB1USB USB Computer Interface Module Installation Guide

velleman VMB1USB USB Computer Interface Module

- Allows interfacing of the VELBUS system to a PC

- Galvanic separation between the computer and the VELBUS system
- **LED indication for:**
    - power supply
    - USB communication status
    - VELBUS data transmission and reception
- Required power supply: 12 … 18VDC
- Consumption: 13mA
- USB port consumption : 35mA
- USB V2.0 compatible (full speed 12Mb/s)
- Uses Microsoft Windows 'usbser.sys' driver
- Driver (.inf) available for Microsoft Windows Vista, Windows XP™ and Windows2000™
- Dimensions : 43 x 40 x 18mm

* Windows XP and Windows2000 are registered trademarks of MICROSOFT CORP.

Contents

CONNECTION EXAMPLE

L H

VMB1USB

H
BUS
L
+
12V
−

-12V+   BUS
TWISTED
PAIR
(0.5mm^2)
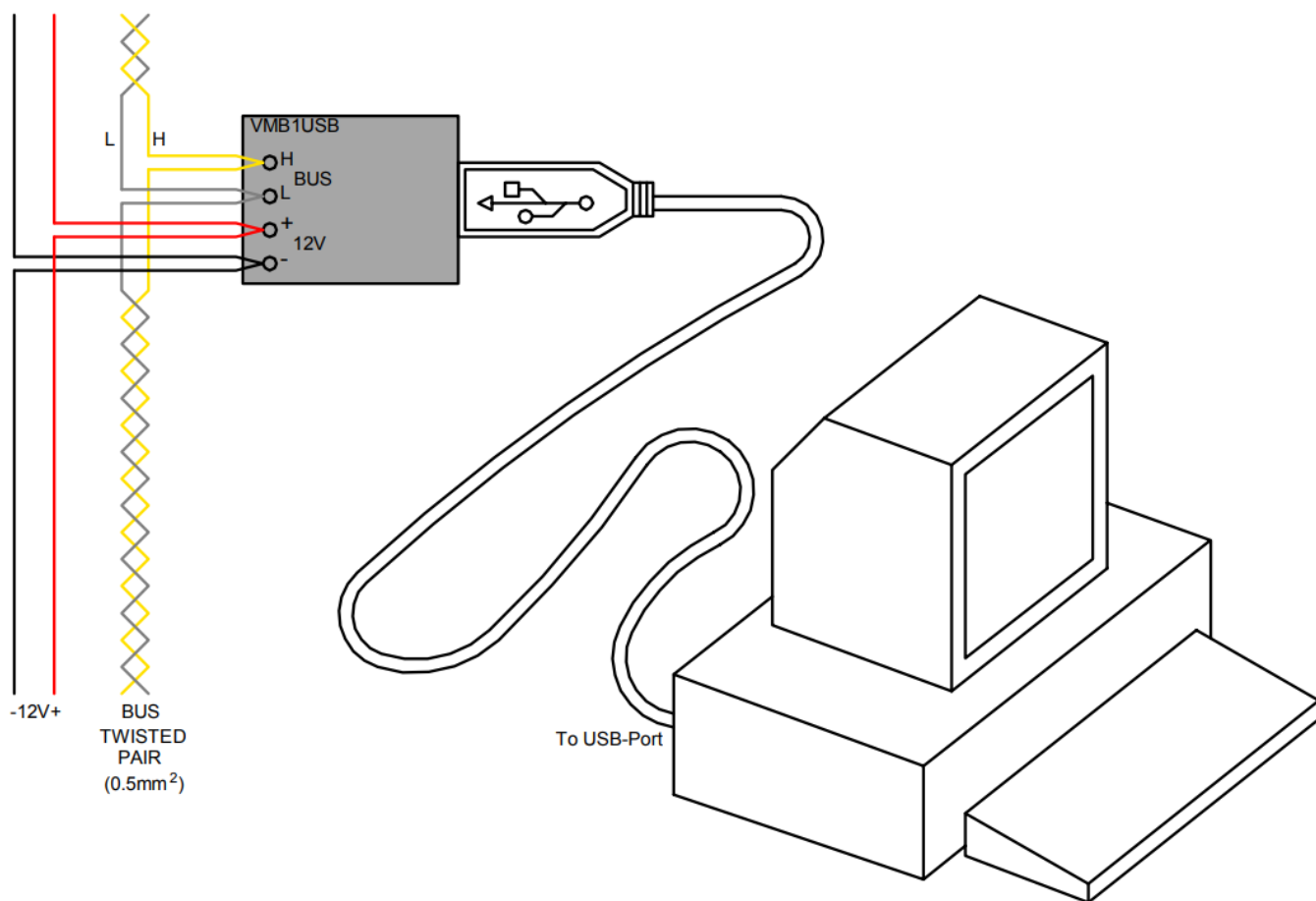
To USB-Port

Product Overview
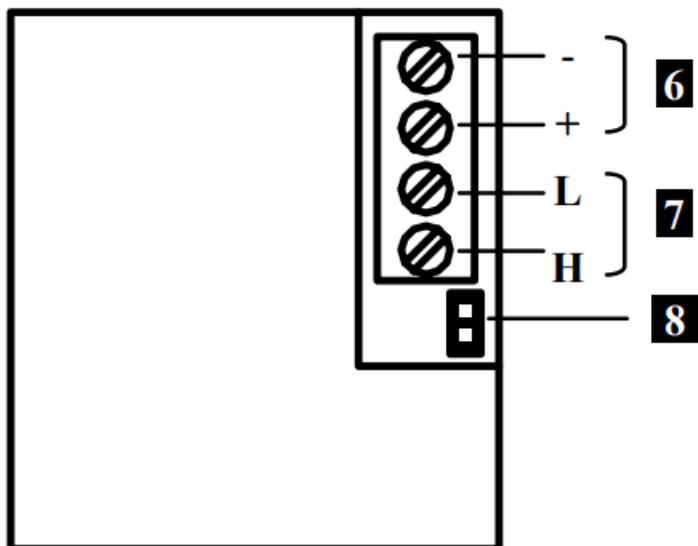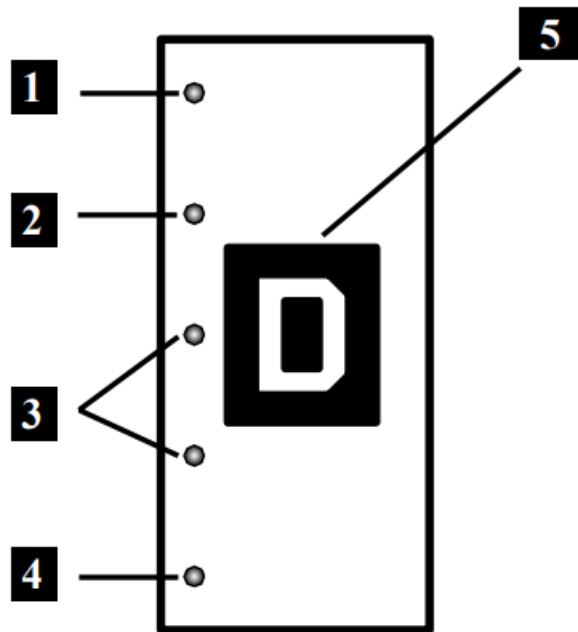
1. Velbus TX (transmit) LED
2. Velbus RX (receive) LED
3. USB status LEDs
4. Velbus power LED
5. Connection to the USB port of the computer
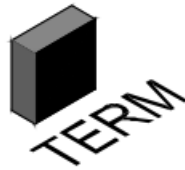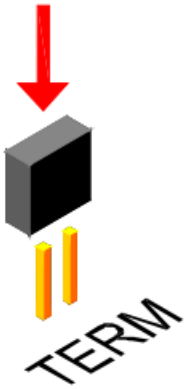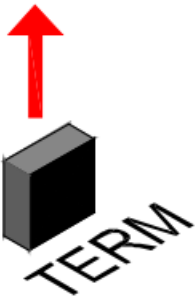6. 12V power supply
7. Velbus
8. Termination

TERMINATION

If the module is connected at the start or end of a cable on the VELBUS, place the 'TERM' jumper.

Remove the jumper in all other cases.

If different cable wiring topologies (tree, star, loop, …) are used, place a jumper on the end module of the longest cable only, NOT on each end point.

CONNECTION

For connection between the modules, use twisted pair cable (ex. EIB 2x2x0.8mm2, UTP 8×0.51mm – CAT5 or other). Use minimum 0.5mm² cable. For long wiring (>50m) or if a lot of modules (> 10) are connected to one wire, use 1mm² cable. Connect the 12- 18Vdc (mind the polarity) and connect the bus wires (mind the polarity).

Connect the module with a USB port on the computer. You can us one of the following Velleman USB cable types: CW076, CW077, CW078, CW090A, CW090B or CW090C.

Remark:
The USB computer connection is galvanically separated from the VELBUS and the 12V power cable via an optical link.
If the module is connected as the final device on the VELBUS, place the 'TERM' jumper. Remove the jumper in all other cases.

USE

Connect the module to the VELBUS system and the computer (see connection diagram).
At the first connection of the module with a computer without the driver, the upper USB status LED will blink. The computer operating system detects new hardware and will ask to localize and to install the driver (.inf file).
This file can be downloaded from **www.velleman.be/download/files/**
After the installation of the driver, both LEDs will alternately blink as an indication that communication is established.

In case of a different LED status, the interface will be in one of following situations:

- Both LEDs are turned off when the USB cable is not connected.
- Both LEDs turn on when the USB cable is connected but the interface module is not powered.
- Only the upper LED turns on when the interface is powered but not reset.
- Only the lower LED turns on when the interface is powered and reset but has no attributed address.
- The LEDs blink very rapidly at too high USB power consumption.

Software to use with this interface or information to develop your own software can be downloaded from **www.velleman.be/download/files/** At power-on, the module will send a 'Bus active'- and a 'Reception ready'-message to the computer.
All messages appearing onto the VELBUS system will also be forwarded to the computer.
Valid commands generated by the computer are forwarded to the module via the USB port.
These commands are placed onto the VELBUS system by the USB interface module.
When too many commands are sent simultaneously, the reception buffer will overflow. This will be reported to the computer. The computer program must break off the communication and wait for the 'reception ready' message before sending new commands.
If the commands are incorrectly placed onto the VELBUS, a bus error will occur and will also be forwarded to the computer. The USB interface module will auto-restart after 25 seconds and erase the reception buffer.

Customer Support

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www.velleman-kit.com
www.velbus.be

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Documents / Resources

	velleman VMB1USB USB Computer Interface Module [pdf] Installation Guide VMB1USB USB Computer Interface Module, VMB1USB, USB Computer Interface Module, Computer Interface Module, Interface Module

References

- **Velleman â€" Wholesaler and developer of electronics**
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