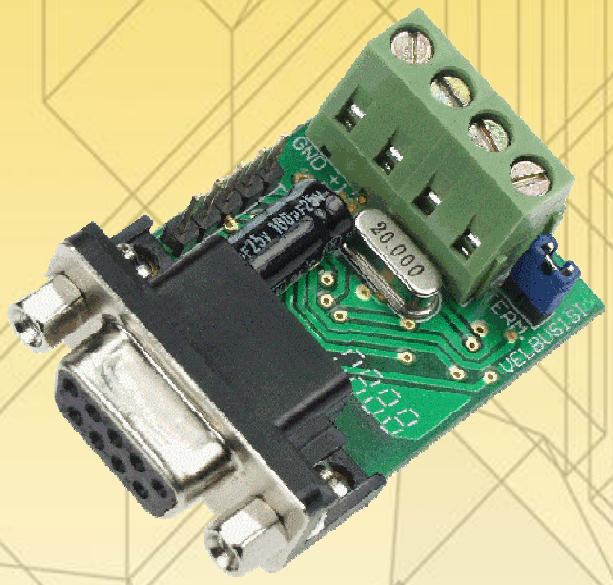
velleman®

VELBUS

Velleman Home Automation System



VMB1RS

Serial Interface for VELBUS system

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Features:

◊ Can be used to control the VELBUS system through a computer.
◊ VELBUS message processing on the computer.
◊ Full duplex RS232C communication with PC.
◊ Galvanic separation between the computer and the VELBUS system.
◊ LED indication for:
- Power voltage.
- Data reception and forwarding to the computer.
- Data reception and forwarding through VELBUS.

◊ Required mains voltage: 12V ... 18VDC
◊ Consumption: 17mA.
◊ Dimensions (L x B x H): 43 x 40 x 18mm.

Velbus*:*

2-wire communication for the VELBUS data and 2 wires for power.
Data transfer: 16,6Kbit/s.
Serial data protocol: CAN (Controller Area Network)
Short-circuit proof (towards negative or positive of power)
Self restoring after 25 seconds in case of a bus error.

RS232C:

Baud rate: 38400
Data bits: 8
Parity: none
Stop bits: 1
RTS: high
DTR: low
Reception buffer for 6 commands.
Report when reception buffer is full and free for reception.
Bus fault and 'bus active' status report

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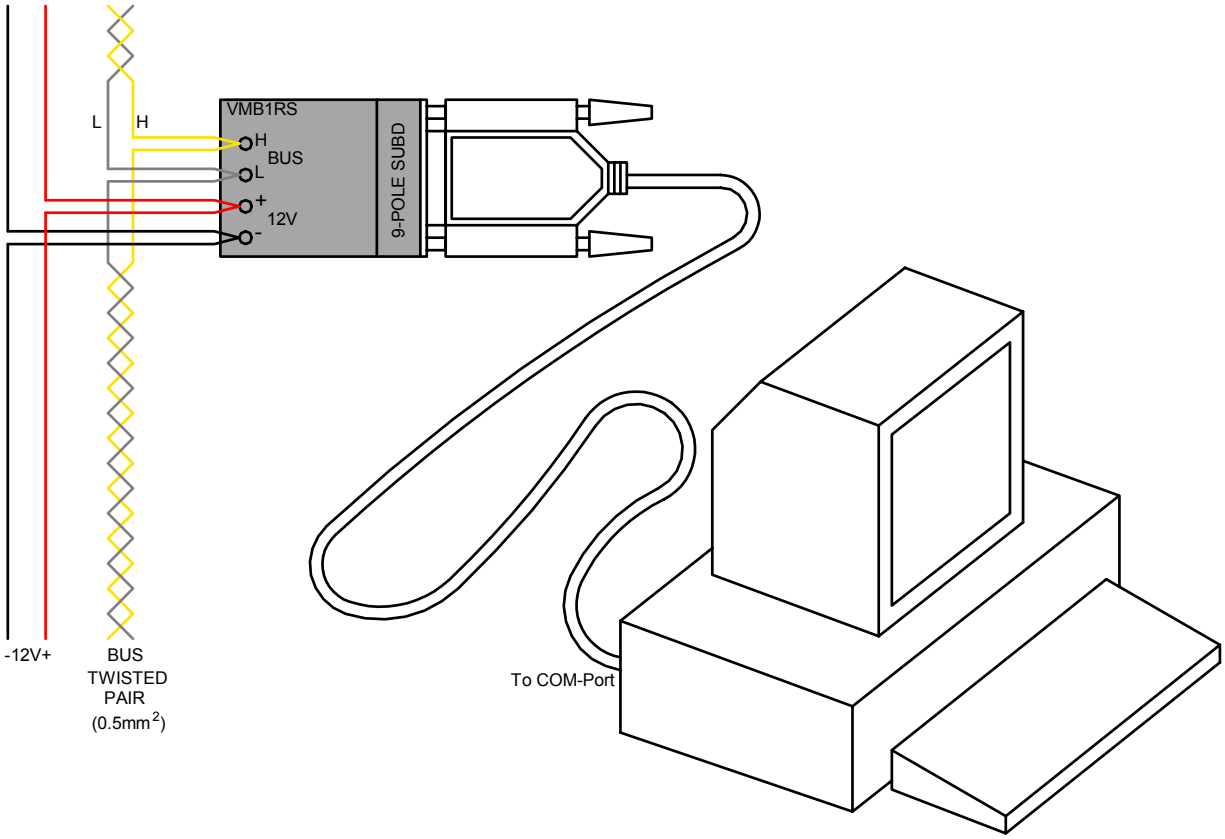
CONNECTION

For connection between the modules, use twisted pair cable (ex. EIB 2x2x0.8mm2, UTP 8x0.51mm - 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 to a COM port of the computer. You may use a Velleman serial cable, type CW014.



Remark:
The serial computer connection is electrically separated from the Velbus® and the 12V power cable through an optical link.

Termination

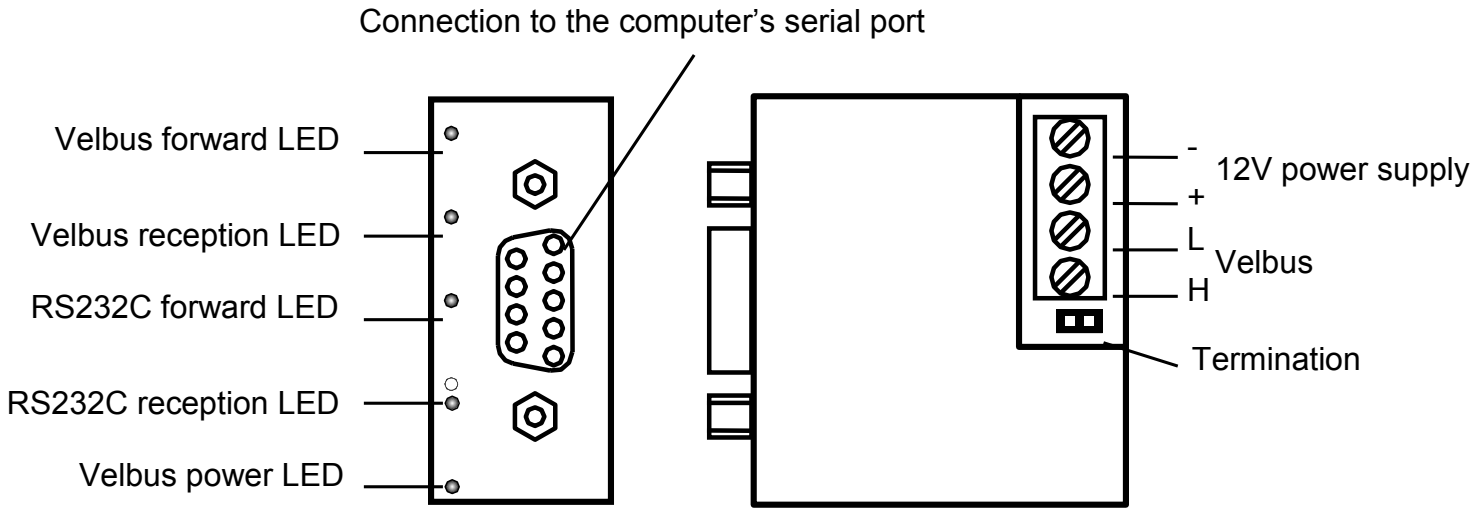
If the module is connected at the start or end of a cable on the VELBUS, place the 'TERM' jumper.

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.

USE

Connect the module to the VELBUS system and the computer (see Connexion).
Run a computer programme allowing you to communicate with the VELBUS system. You can also write a programme of your own.
When powering the module, a 'Bus active' and 'Reception ready' message will be sent to the computer.
All messages appearing on the VELBUS system will also be sent serially to the computer.
Valid commands generated by the computer will be sent to the module via the COM port.
These commands are placed on the VELBUS system through the serial interface module.
When an excessive amount of commands have been sent in one time, the reception buffer will be filled. This will be reported to the computer. The computer programme must interrupt the forwarding and wait for a 'Reception ready' message to be able to offer new commands.
If the commands can not be placed correctly on the VELBUS, a bus error will occur and will be forwarded tot the computer. The serial interface module will auto-restart after 25 seconds and erase the reception buffer.



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Velleman Home Automation System

Velleman® is a major distributor of electronic products and components and has its own R & D department. Velleman® is market leader in electronic kits with offices all over the world.

In-house training & demonstration facility.