velleman®

VELBUS

Velleman Home Automation System

VMB6IN

6-Channel Input Module for VELBUS system

INDEX

Features:

- ◊ Can be used to connect push buttons, door or window contacts, movement detector relay contacts, open collector outputs ... on the VELBUS system.
- ◊ Contacts may be placed on a long distance from the module.
- ◊ Up to 6 inputs.
- ◊ Input debounce: 65ms.
- ◊ Possibility for each input to react only when they are closed for 1, 2 or 3 seconds.
- ◊ LED indication per input: slow, fast or very fast blinking and continuously ON.
- ◊ LED indication when receiving or forwarding data through VELBUS.
- ◊ 251 possible addresses (adjustable through 'ADDR' rotary switch)
- ◊ Required power voltage: 12 to 18VDC
- ◊ Consumption in standby: 30mA at 18V (10mA at 16V)
- ◊ Max. consumption (activated push button inputs): 130mA at 18V (110mA at 16VDC)
- ◊ Standard DIN-rail housing (2 modules)
- ◊ Dimensions (L x W x H): 90 x 36 x 58mm.
- ◊ Weight : 75gr.

VELBUS:

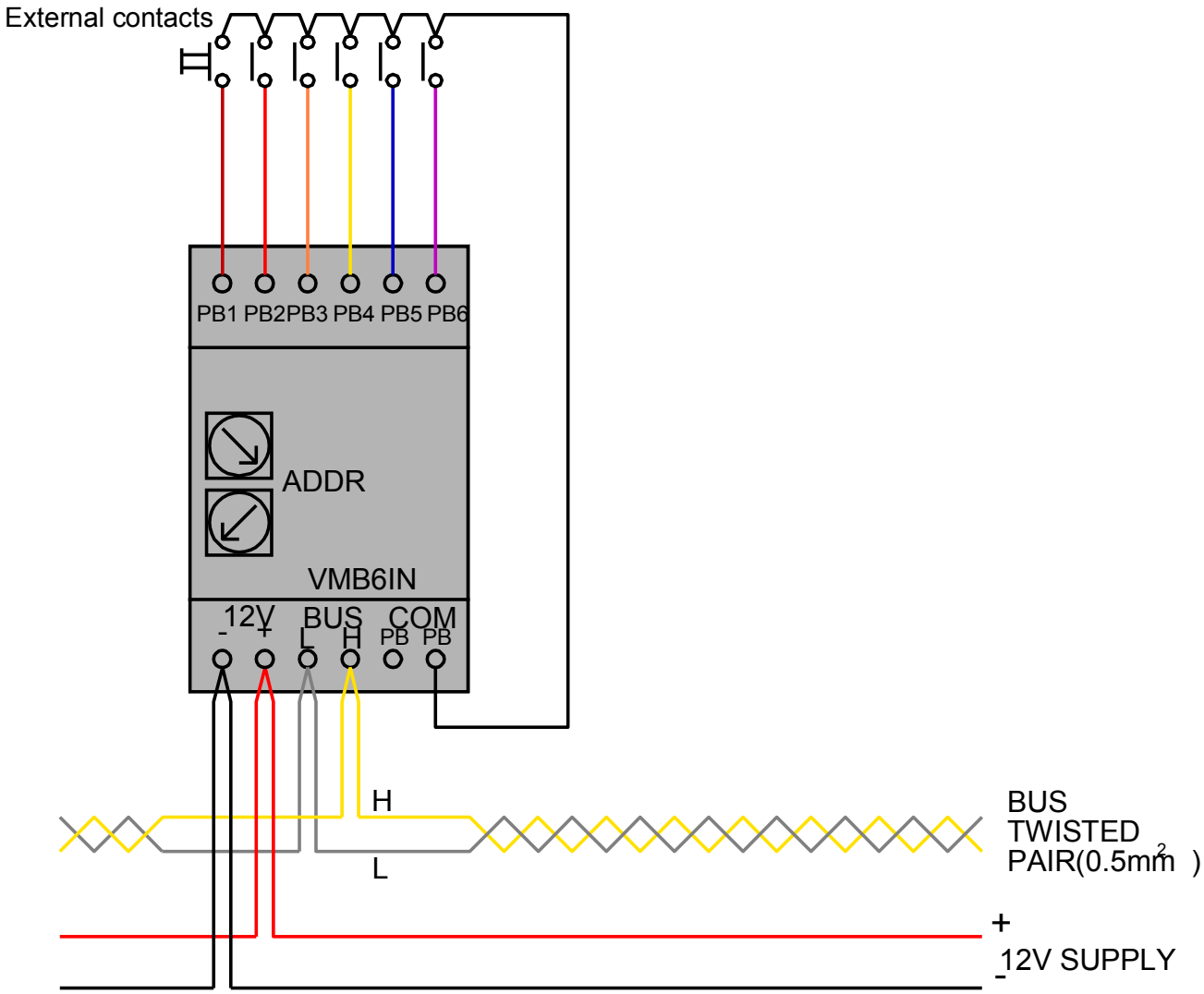
2-wire communication for VELBUS data and 2 wires for power.
Data transfer: 16,6Kbit/s.
Serial data protocol: CAN (Controller Area Network)
Short-circuit proof (towards negative and positive of power)
Bus error indication: 2 x short flash of the input indication LEDs.
Self restoring after 25 seconds in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

Possibility to assign a name (max. 15 characters) and a reaction time (65ms, 1s, 2s of 3s) which can be saved in the non-volatile memory. When closing, keeping closed (for more than 0.85s) or opening a closed contact, an instruction is being sent. Instructions will be accepted when calling up the module type, the input names and when reading from or writing to the non-volatile memory.
The module can respond with the module type, the input name or the contents from the memory.

CONNECTION

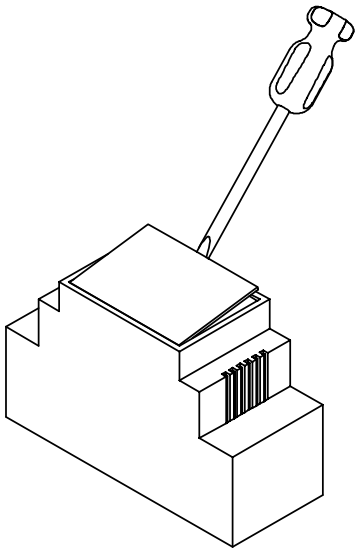
For connection between the modules, use twisted pair cable (ex. EIB 2x2x0.8mm2, UTP 8x0.51mm - CAT5 or other). Use minimum 0.5mm² cable. For long wiring (>50m) or if a lot of modules (> 10) are connected to one wire, use 1mm² cable. Connect the 12-18Vdc (mind the polarity) and connect the bus wires (mind the polarity).

Make sure the contacts to be connected are not live and are not connected to the mains.
These contacts may be placed on a long distance from the module.
Connect the contacts between the PB and the COM input.

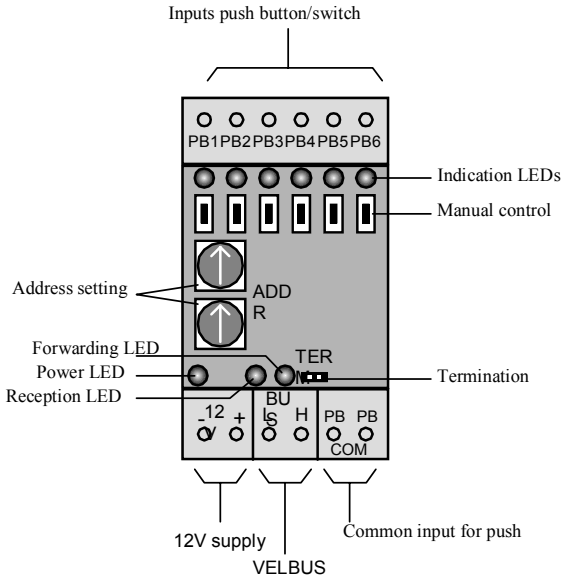


USE

Remove the lid from the input module using a small screwdriver to modify the configuration.



Replace the lid



Addressing:

Enter a unique address (from '00' to 'FE' except for 'F0', 'F1', 'F2', 'F3' and 'FF') for each module through the 'ADDR' rotating toggle switches. These addresses can be used to learn the reaction time per push button.
In case of a modification of the addresses, all LEDs parallel to the push buttons will be turned out.

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.

Reaction time:

The push buttons have a default short reaction time (65ms). There is possibility to maintain the input contacts closed for 1, 2 or 3 seconds until they are considered as being closed.
Follow this procedure:

- Memorize the address of the module.
- Make sure the inputs are open (disconnect if necessary)
- Set the 'ADDR' rotary switches on 'F0' for a short reaction time (65ms) and press (min. 3 seconds) any manual control push button you would like to assign this reaction time to.
- Set the 'ADDR' rotary switches on 'F1' for a reaction time of 1 second and press (min. 3 seconds) any manual control push button you would like to assign this reaction time to.
- Set the 'ADDR' rotary switches on 'F2' for a reaction time of 2 seconds and press (min. 3 seconds) any manual control push button you would like to assign this reaction time to.
- Set the 'ADDR' rotary switches on 'F3' for a reaction time of 3 seconds and press (min. 3 seconds) any manual control push button you would like to assign this reaction time to.
  In this mode the input indication LEDs will turn on in different ways to indicate the chosen reaction time:
  - Very fast blinking: 65ms
  - Fast blinking: 1s
  - Slow blinking: 2s
  - Continuous: 3s
- These reaction times are saved into the module (even in case of a power failure).
- Set the address of the module back to its original value.

Operation:

When closing, maintaining closed (>0.85s) or opening a closed push button, an instruction is being sent through the VELBUS. These messages identify which push button is closed, maintained closed or opened. Other modules (relay modules, blind control modules, dimmers ...) connected to the VELBUS can react to this and return an instruction to the input module, which in turn will turn off, turn on or blink the indication LEDs.
The way a specific push button controls a specific module is described in the learning mode of the module in question. Make sure the inputs are opened (disconnect if necessary) when activating a learning mode. Use the manual control of the input module to assign a specific input in the learning mode.

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Velleman Home Automation System

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In-house training & demonstration facility.