

VSE 002

RS-485 module

Publication version: VVSE2/EN M/B007

User manual



Table of Contents

1. General	4
2. Power supply	4
3. Module interface to the VAMP relays or master device	4
4. RS-485 interface	5
5. Module layout	6
6. Module mounting	6
7. Module connection to a PC	7
8. Port names in VAMP series	7
9. Ordering codes	8

1. General

External RS-485 Module VSE 002 is used to connect VAMP protection relay series (200, 50 and 300) or VAMP 321 to a galvanically isolated RS-485 bus.

Additionally this module can be used with a non-VAMP device, which has a RS-232 or TTL serial interface, whenever an RS-485 interface is required.

2. Power supply

The power for the module is taken from pin 9 of the D-connector or from an external power supply interface. There is a screw terminal (X1, see figure 1) for connecting an external +9 – 12Vdc power supply.

3. Module interface to the VAMP relays or master device

The physical interface to the device is a 9-pin D-connector. The signal levels may be either TTL or RS-232.

The TTL/RS-232 interface of the modules is:

Pin number	TTL mode	RS-232 mode
1	-	-
2	RXD (in)	RXD (in)
3	TXD (out)	TXD (out)
4	RTS (in)	RTS (in)
5		
6		
7	GND	GND
8		
9	+8V (in)	+8V (in)

NOTICE

The active state of the RTS signal is positive voltage (> +3V) in both TTL and RS-232 modes.

4. RS-485 interface

The RS-485 interface supports 2-wire connection. The dip switch S1 is used to switch the termination and signal biasing resistors on or off.

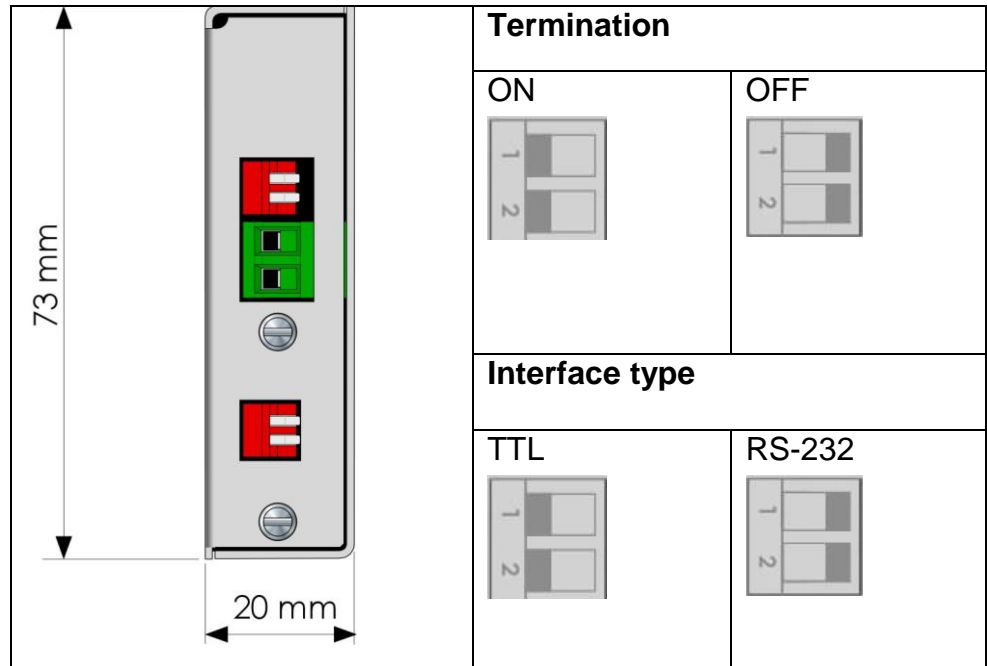


Figure 1. Dipswitch positions of VSE 002

The direction control of the RS-485 transceiver is done with the RTS signal or automatically. The automatic direction control turns the transceiver to transmit mode after detecting the falling edge of a 0-bit. The direction is kept in transmit mode for 0,5ms. This enables the use of the automatic mode with 9,6 kb/s and 19.2 kb/s speeds. When the transceiver is changed to receive mode, the RS-485 line changes state to logic 1 state due to the biasing resistors.

5. Module layout

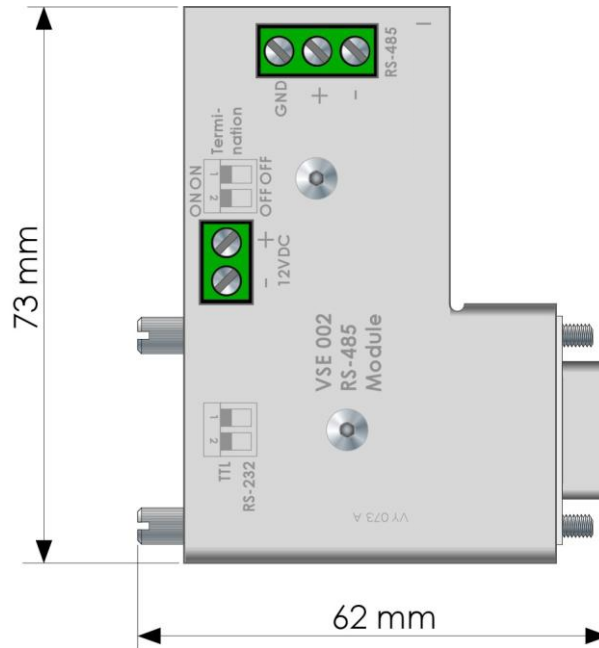


Figure 2. Component layout

6. Module mounting

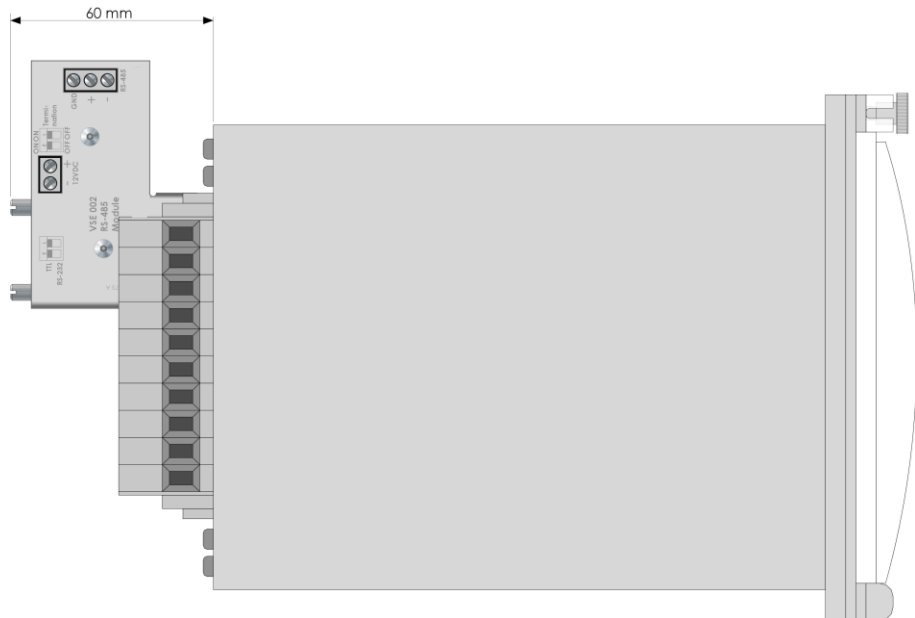


Figure 3. Mounting picture of module

7. Module connection to a PC

The module can be used with a PC, the required cable is described in figure 4. When used with a PC an external power supply is needed (e.g. type Phoenix Contact 100 – 240 AC/10-15 DC/2, Order-No. 29 83 75 6).

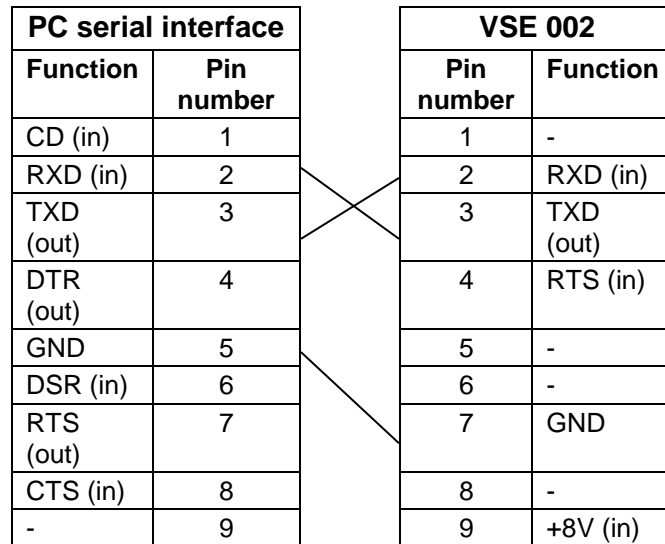


Figure 4. PC interface cable

8. Port names in VAMP series

Every single serial communication port of a certain VAMP device has a different name in VAMPSET in order to be distinguished from the others. The following table shows the VAMPSET names of the ports of different VAMP devices to which VSE001 will be connected to.

Series / Model	Port name (VAMPSET)
50	Remote
200	Remote
300	COM 1 (for slot 6) / COM 3 (for slot 9)
V321	COM 1 (for slot 10)* COM 1 (for slot 6)* COM 3 (for slot 9)

*Communication card on slot 6 and 10 are not available for the same device.

9. Ordering codes

VSE 002 RS-485interfacemodule



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