VSE 002

RS-485 module

Publication version: VVSE2/EN M/B006

User manual

Schneider Electric

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1. General

External RS-485 Module VSE 002 is used to connect VAMP protection relays to a RS-485 bus.

Additionally this module can be used with any device, which has a RS-232 or TTL serial interface, when 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.

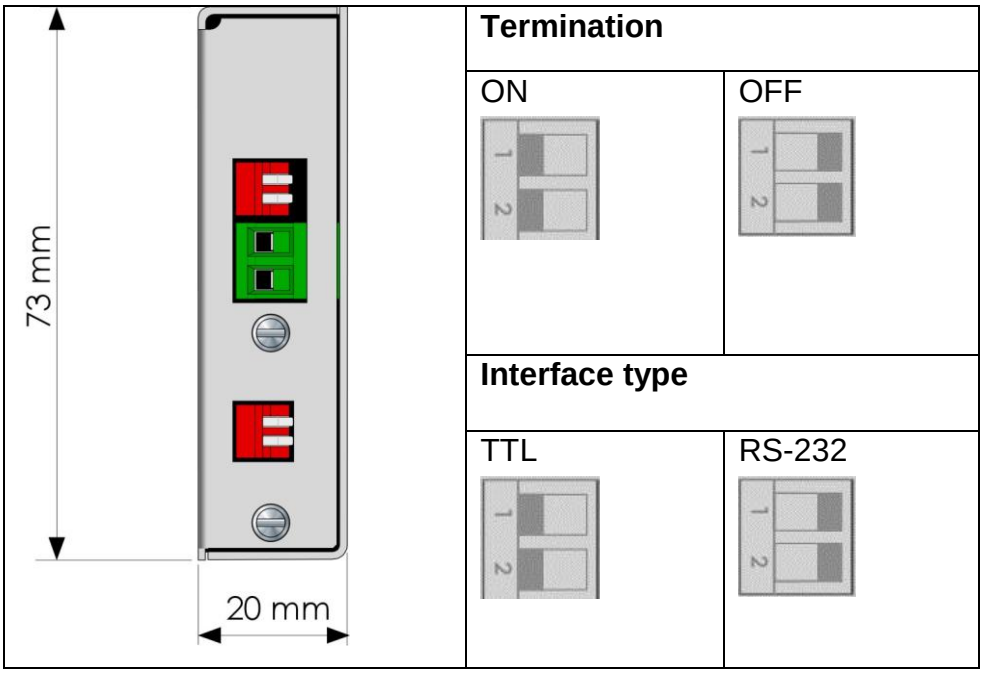

Figure 1. Dipswitch positions of VSE 002

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

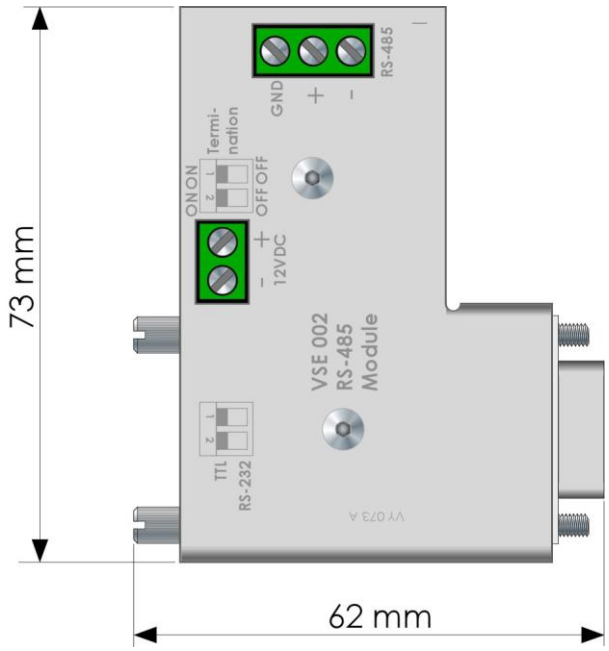

Figure 2. Component layout

6. Module mounting

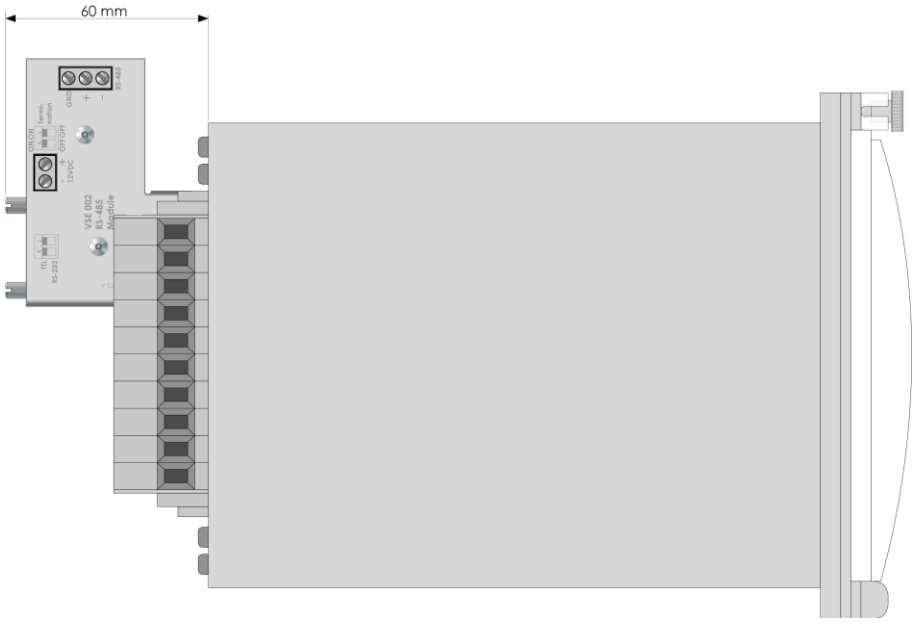

Figure 3. Mounting picture of module

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).

PC serial interface		VSE 002	
Function	**Pin number**	**Pin number**	**Function**
CD (in)	1	1	-
RXD (in)	2	2	RXD (in)
TXD (out)	3	3	TXD (out)
DTR (out)	4	4	RTS (in)
GND	5	5	-
DSR (in)	6	6	-
RTS (out)	7	7	GND
CTS (in)	8	8	-
-	9	9	+8V (in)

Figure 4. PC interface cable

8. Ordering codes

VSE 002 RS-485interfacemodule

Customers Care Center

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