VAISALA WEATHER TRANSMITTER WXT520 AND ULTRASONIC WIND SENSOR WMT52

Power Supplies	
Operation voltage	5 ... 32 VDC[1)]
Average power consumption minimum typical maximum	 0.1 mA @ 12 VDC (SDI-12) 3 mA @ 12 VDC (with default measuring) 14 mA @ 5 VDC (constant measurement of all parameters)
Heating voltage typical ranges absolute max	options: DC, AC, full-wave rectified AC 12 VDC ± 20 %, 1.1 A max 24 VDC ± 20 %, 0.6 A max 68 $V_{peak-to-peak}$ ± 20 % (AC), 0.6 A_{rms} max 34 V_p ± 20 % (f/w rect. AC), 0.6 A_{rms} max 32 VDC 84 $V_{peak-to-peak}$ (AC) 42 V_{peak} (f/w rect. AC)

1) Below 5.3 V the measurement performance for high wind speeds may be degraded.

CAUTION To avoid exceeding the maximum ratings in any condition, the voltages must be checked with no load at the power supply output.

Electrical Connections

Wiring Using the Screw Terminals

WARNING Make sure that you connect only de-energized wires.

1. Loosen the three screws at the bottom of the WXT520/WMT52.
2. Pull out the WXT520/WMT52 bottom part.
3. Install the cable gland(s) in the bottom part. The cable glands are included in the bushing and grounding accessories (order code 222109).
4. Insert the power supply wires and signal wires through the cable gland(s).
5. Connect the wires according to Table 1.
6. Replace the bottom part and tighten the three screws. Do not overtighten.

Table 1 Screw Terminal Pin-outs for WXT520 / WMT52

Screw Terminal Pin	RS-232	SDI-12	RS-485	RS-422
1 RX–			Data–	Data in (RX–)
2 RX+			Data+	Data in (RX+)
3 TX–	Data out (TxD)	Data in/out (Tx)	Data–	Data out (TX–)
4 TX+			Data+	Data out (TX+)
5 RXD	Data in (RxD)	Data in/out (Rx)		
6 SGND	GND for data	GND for data		
17 HTG-	GND for Vh+	GND for Vh+	GND for Vh+	GND for Vh+
18 HTG+	Vh+ (heating)	Vh+ (heating)	Vh+ (heating)	Vh+ (heating)
19 VIN-	GND for Vin+	GND for Vin+	GND for Vin+	GND for Vin+
20 VIN+	Vin+ (operating)	Vin+ (operating)	Vin+ (operating)	Vin+ (operating)

Wiring Using the 8-pin M12 Connector

External Wiring

If the WXT520/WMT52 is provided with an optional 8-pin M12 connector, the connector is located on the bottom of the transmitter. The pins of the 8-pin M12 connector as seen from outside the transmitter are illustrated in the following figure.

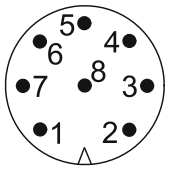

Figure 1 Pins of the 8-pin M12 Connector

The pin connections for the 8-pin M12 connector and the wire colors of the respective M12 cable (optional, 2/10 m) are listed in Table 2.

Table 2 M12 Pin-outs for WXT520 / WMT52

		/----------Default wiring----------\			RS-422 wiring
Wire Color	**M12 Pin#**	**RS-232**	**SDI-12**	**RS-485**	**RS-422**
Blue	7	Data out (TxD)	Data in/out (Tx)	Data–	Data in (RX–)
Gray	5			Data+	Data in (RX+)
White	1	Data in (RxD)	Data in/out (Rx)		Data out (TX–)
Green	3	GND for data	GND for data		Data out (TX+)
Pink	6	GND for Vh+	GND for Vh+	GND for Vh+	GND for Vh+
Yellow	4	Vh+ (heating)	Vh+ (heating)	Vh+ (heating)	Vh+ (heating)
Red	8	GND for Vin+	GND for Vin+	GND for Vin+	GND for Vin+
Brown	2	Vin+ (operating)	Vin+ (operating)	Vin+ (operating)	Vin+ (operating)

The signal names Data in (RxD) and Data out (TxD) in the table describe the direction of data flow as seen from the WXT520/WMT52. The terms "Default wiring" and "RS-422 wiring" refer to the two internal wiring options, see the diagrams below.

Internal Wiring

The 8-pin M12 connector is optional and hence may not be readily installed. For retrofitting, make the wiring between the connector and the screw terminal block according to one of the following pictures.

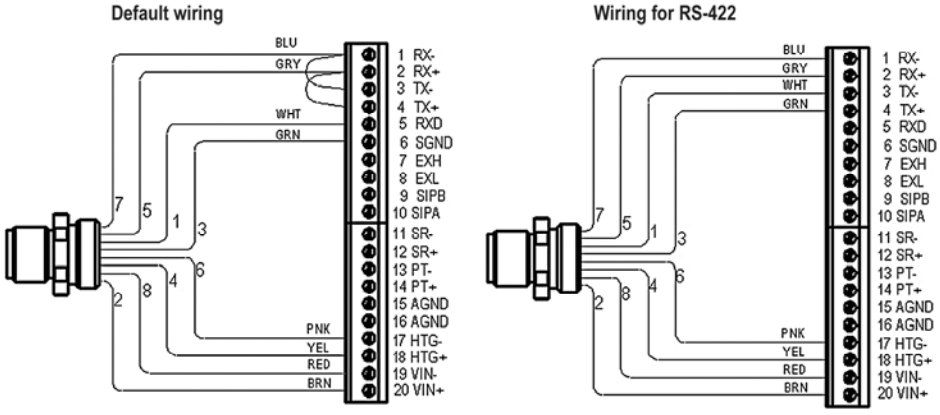

Figure 2 Internal Wiring