Connecting a DB9 to the Vaisala Met-Packs; W 510 and 520

>These instructions are for RS 232 only<

Consult the User Guide for other communications standards

Attaching a DB 9 serial connector to the cable supplied with both models of the instrument is essentially the same; however there can be a difference with the cable supplied resulting in a difference of the wiring colors used for the power input. (DC 3-32 volts) The most important point is to ensure that the wiring to the DB9 results in the proper connections at the round M12 met-pack connector. Refer to the drawings with this document or check the documentation that came with the instrument.

Only 5 wires from the cable will be used. Three for communications connected to the DB9, and two for DC power input to the met-pack. Simply cut the unused wires even with the end of the cable outer insulation. Use care in soldering the connections at the DB9 so excess solder does not create a short. Using small shirk tube over each connection point is advised.

It may be necessary to slightly enlarge where the cable exits the DB9 shell to accommodate the power leads exiting the shell. Alternately the cable cover can be carefully slit above and outside the connector shell and the power wire leads can be routed from the cable insulation cover and outside of the DB9 shell.

Solder and shirk wrap suitable lengths of 20-24 gauge wire as needed, to the two correct wires from the cable for the DC power input. Use Red wire for the positive and Black wire for the negative, to avoid any confusion in making power connections later. Finish by routing the power leads from the cable or DB9 connector. The end can be terminated to match your power connection needs. Add wire ties and shrink tubing as pictured to seal and reinforce the connections.

**NOTE:** The power input leads **DO NOT** connect to the red and black wires in the supplied cable!

*For the 510 model (typically with an Orange cable) the negative is either a bare wire or a clear insulated wire and the positive is the wire with brown insulation.*

*For the 520 (typically a Black cable) the negative is Red, while the positive is a wire with brown insulation.*

The pin out for the cable should be confirmed by performing a continuity check with a voltage meter. Be sure the power input is on pins 2 and 8 of the round M12 connector to either model of the met-pack with the positive voltage on pin 2 of the M12 (see drawing attached)
Vaisala WXT 510 & 520
RS-232 and Power
cable connections

Connections at DB 9
From Vaisala Cable:
Female DB9 as viewed from
the solder connection side:
Blue - Pin 2
White - Pin 3
Green - Pin 5
Insure proper pin #
Solder and Shrink wrap

DC Power:
Solder, shrink wrap
and route from
cable at DB connector
attach 22 ga wire,
Red-Pos & Black-Neg

Input power
3-32 VDC
Terminate as needed

Power input
positive
Power input
negative

RS-232
Communication Connections:
Three wires from cable
Blue, White and Green
to DB9
Cut other wires - Not used

Compeled
cable with
DB9 and
power leads
routed
outside of
connector

Red and black
power leads from
power source;
solder to cable
power leads

Positive and negative power input from cable
see text for wire colors, they may differ between
cables or Vaisala model.

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Round M12 connector viewed looking at the cable

*This will be opposite viewing the connector on the bottom of the Met-Pack

**Vaisala WTX 510/520**
**M12-Cable pin out**

Pin out
Pin 8: operating voltage negative
Pin 2: operating voltage positive
Pin 7: Data out
Pin 1: Data in
Pin 3: Data Ground
NOTE - for RS232 only

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