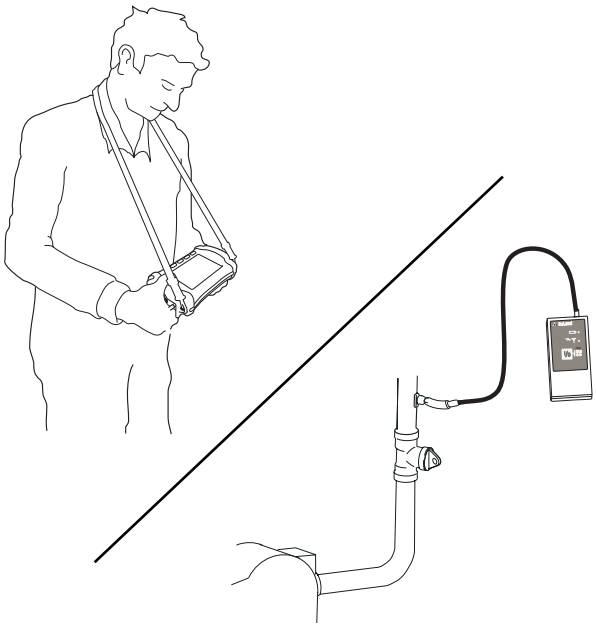


DeLaval performance tester EVR25

Product information

Read vacuum measures at a distance

The EVR25 start kit is an accessory to the DeLaval performance tester VPR100. It consists of a wireless sensor and a tranceiver module. With the module fitted inside the VPR 100 unit and the sensor connected to a measuring point it is possible to take vacuum measures via the sensor while standing elsewhere in the barn. This is useful both when testing vacuum and airflow.

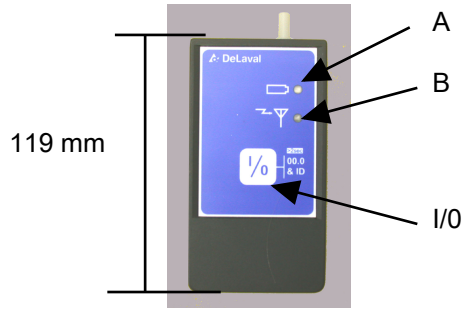
The reach in air is ~70 m, but obstacles might considerably decrease it.

When the tranceiver module is installed, Flash software Version 03A or later will automatically detect presence of the module and its international settings.

The EVR25 unit is available in two frequency bands. The 868 MHz version is suitable for use in Europe, etc. The 915 MHz version is required for operation in North and South America, Australia, New Zealand, etc.

Article numbers

	91630880	868 MHz	EVR25 start kit
	91592901	868 MHz	EVR25, sensor
	91593003	868 MHz	VPR100 com card



The wireless sensor EVR25

The sensor has only a single button and two LEDs for status indication. Detailed status information is displayed on the VPR100 sensor status screen.

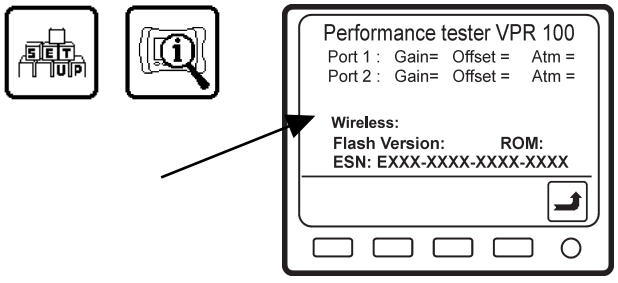
The button (I/0) is used to turn the sensor on/off and initiate various special functions by holding the button down.

The battery LED (A) normally shows the state of the batteries, but also shows special status indications in conjunction with the other LED.

The Wireless LED (B) flashes when information is being received from the VPR100. It is primarily used to show that the Sensor is within range of the VPR100 and reception is not being blocked by metal objects nearby.

Installation

Installation should be undertaken by qualified staff and is not recommended for general users



A. Check the VPR100 unit

Turn the VPR100 on, press the setup icon and then the information icon.

Check the Flash Version. It must be 03A or later.

Information about the Wireless Transceiver module is found above the flash version. The alternatives are:

"Wireless: Not fitted" - A wireless transceiver module is not installed.

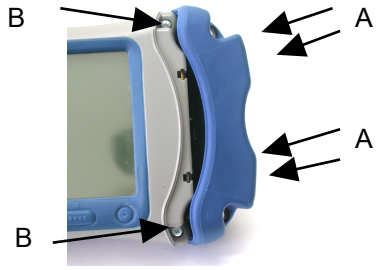
"Wireless: Europe... (868MHz)" - A 868 MHz module is fitted.

"Wireless: Nth/Sth America, Aust.... (915MHz)" - A 915 MHz module is fitted.

"Wireless: -INVALID-" -An unrecognized or faulty module is fitted.

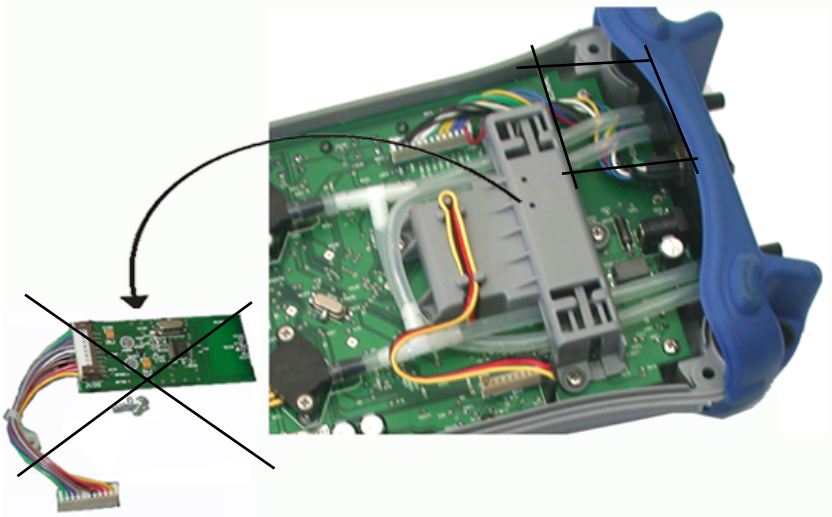
B. Open the VPR100 unit

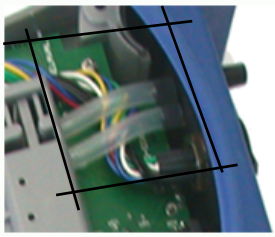
- Remove three screws and slide away the end cap.
- Remove the screws in the display section.



- Remove the four screws (A) on the short side with the connection ports. Gently pull the front edge of the end cap away from the display section.
- Remove screws (B).

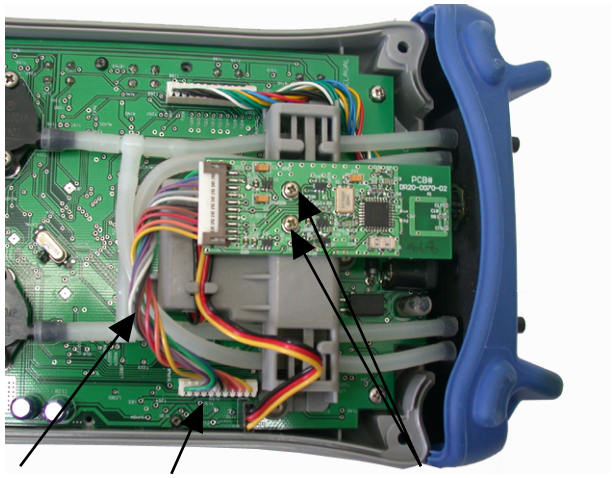
- Pull apart the rear and front of the display section, gently.





- Make sure that the wires are below the tubes. If not, remove the tubing and refit them above the cables.

- If a card is already mounted, it should be removed from the grey valve.



Twist the cable

Connect

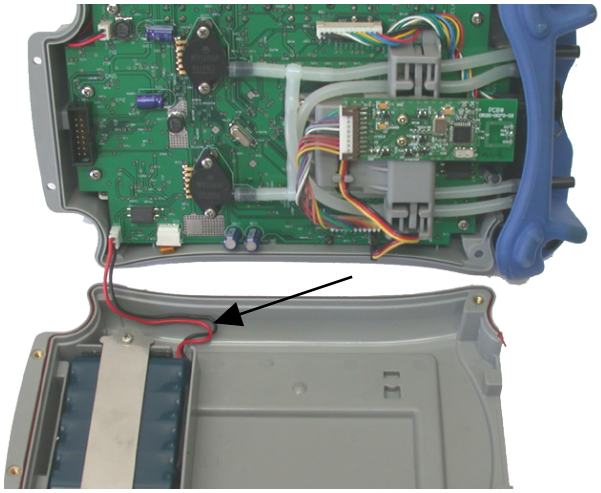
Use the screws supplied

C. Fit the wireless transceiver module

- Fit the transceiver module with *gentle pressure* to the grey valve using the screws supplied.

Note! only use the screws supplied or the valve may not operate.

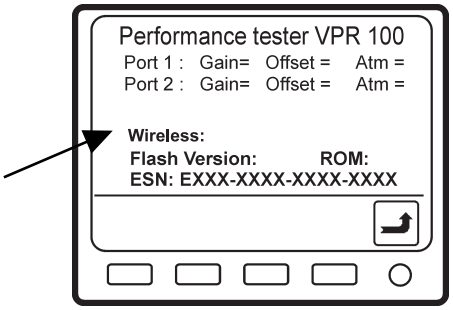
- Twist the cable before plugging it into the connector.



D. Reassamble the VPR 100

- Use the reverse procedure "B".

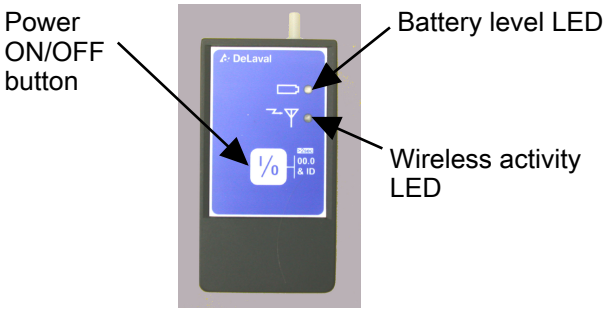
*Ensure that the battery lead is folded into the groove alongside the battery pack **not** across the pack!*



Turn on the VPR100 (you may need to use the charger if you unplugged the battery lead) and check that software can detect the module as described in procedure "A".

Operation

Make sure fresh batteries are installed. It requires two ‘AA’ cells which can be normal 1.5V Alkaline or 1.2V NiCd/NiMH rechargables. **Do not** use 3V Lithium cells or mix different types in the same sensor.



Turning the sensor On and Off.

Press the I/0 button to turn the unit on. The battery LED will give a long blink on startup (Green for 868MHz European units, Orange for 915MHz Nth/Sth American, Australian and NZ units), after which it should give a short blink every 2 seconds if the battery level is good.

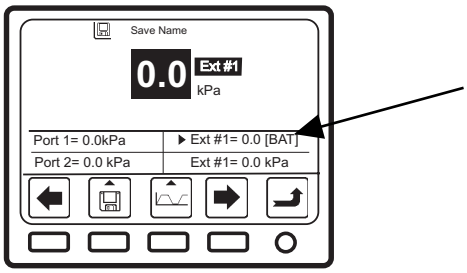
Press the I/0 button again to turn the sensor off.

To conserve battery life, the sensor will go off automatically if it has not received any communications from the VPR100 for 10 minutes.

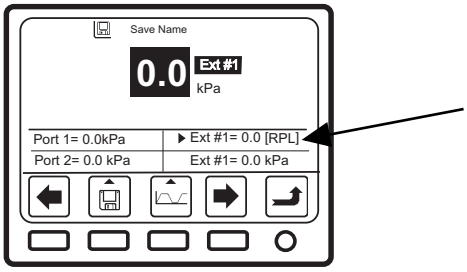
Battery Level Indication

The sensor's battery level is displayed on both the Sensor's Battery Level LED and the VPR100.

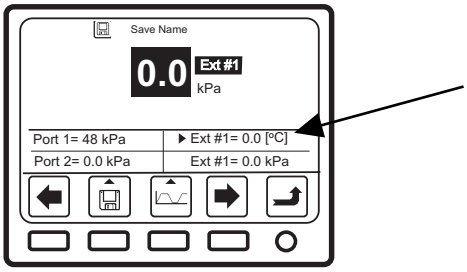
Batteries Good:
The Battery Level LED will blink Green each 2 seconds and readings on the VPR100 will be shown normally with the units (kPa or inHg) visible.



Batteries Low:
The Battery Level LED will change to Orange and blink faster (1 sec) to warn the user to change the batteries. The units next to the vacuum reading on the VPR will change to [BAT].



Replace Batteries:
When the battery level is too low for use the LED will blink Red twice per second. No reading will be displayed on the VPR100 and the units will change to [RPL]. The batteries must be replaced before the sensor can be used again.



Low Temperature Indication

The sensor includes temperature measurement to check if it is too cold for accurate vacuum reading. The VPR100 shows the condition by replacing the units (kPa or inHg) next to the reading in Vacuum or Airflow Mode, with [°C]. There is no indication on the Sensor itself. If [°C] appears on the VPR100 the sensor should be warmed until the normal units return. The actual temperature value is displayed in the Info window of Setup – Sensor.

Zero Adjustment

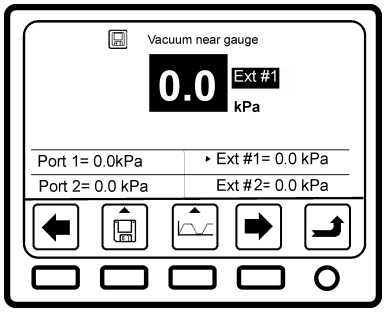
If there is no vacuum on the port when the sensor is turned on it will automatically adjust its zero level to suit the atmospheric pressure at the time. If there was a small vacuum on the port when the unit was turned on, the atmospheric pressure has changed or the Sensor's temperature has changed significantly it may show a small pressure offset. Remove the tube from the port, press and hold the Button for more than 2 seconds (until the Battery LED shows orange) and the zero will be reset.

Reading the Software Version

The software version number in the Sensor can be checked without using the VPR100.

1. With the Sensor turned off press and hold the I/0 Button.

2. The Battery LED will first blink showing identifying the frequency of the unit (see above) then both LEDs will flash the number of times equal to the software version then go off, i.e. flashing 4 times means the software is version 04.



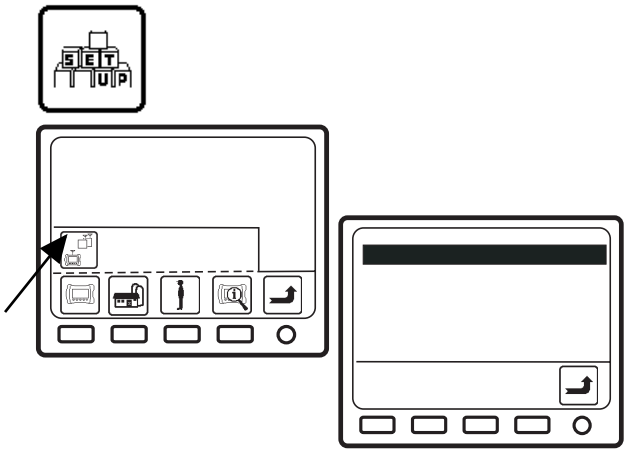
Registering the Sensor on the VPR100

Before the Sensor can be used it must be ‘registered’ on the VPR100. Registration is only done once when a new sensor is being used for the first time. Up to 9 sensors can be registered, but at this point only the first two are used. Readings from the first two sensors in the list are shown as “Ext 1” and “Ext 2” in Airflow and Vacuum Modes.

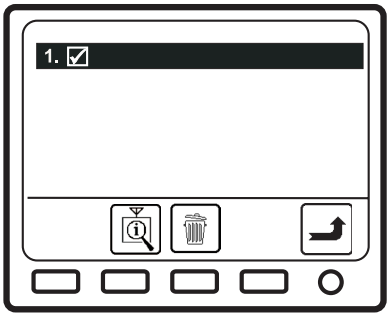
Registering

Turn on the VPR100 and select Setup.

Touch Sensor setup and an empty screen with a black line will occur.



Press and hold the button



Turn the Sensor unit on, then press the I/0 button and hold it, until the Battery LED shows Orange.

The VPR100 should beep and the sensor name will appear on the black line with its type and ESN (=Electronic Serial Number). A tick should be shown in the box on the left-hand side. On the sensor the wireless LED should blink Red showing the sensor is communicating with the VPR100.

The sensor information icon appears. It will be shown only when the sensor is turned on. Press it and a pop-up window shows status information about the sensor such as battery voltage, software version, sensor temperature, etc.

Press the Info icon again to remove the window. It will also automatically clear after a few seconds.

The delete icon also appears. Use it to

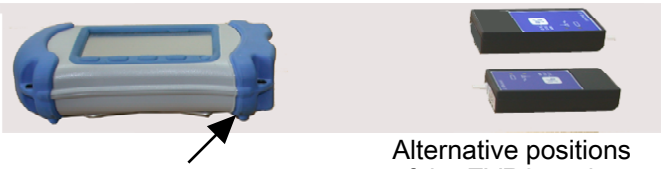
delete the registration of a sensor.

Exit the sensor setup screen and the sensor will be saved into VPR100 memory.

RF Sensitivity and orientation

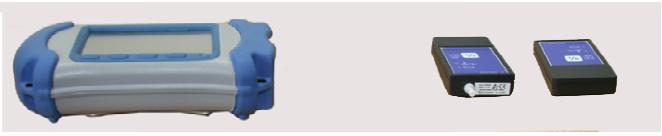
When measuring, the distance between the VPR100 unit and the EVR sensor can be up to 70 m. However, this range will drop e.g. when going through walls.

To achieve the best measuring conditions always try to place the VPR100 unit with its short side with the connection ports towards the short side of the EVR unit. The best range will be obtained when both units are in the same plane and pointing end to end.



Connection short side

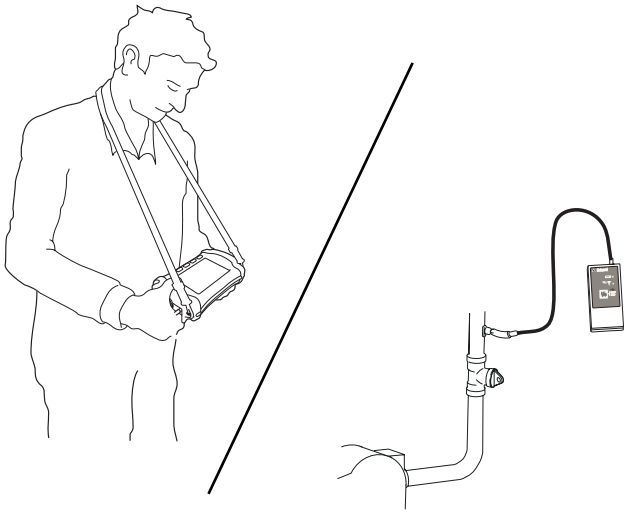
Alternative positions of the EVR25 unit



With the units still in same plane but with a short side pointing towards a long side, the range will still be good.

The range will fall when the units are not in the same plane. E.g. If one unit is standing and the other is lying.

Operation



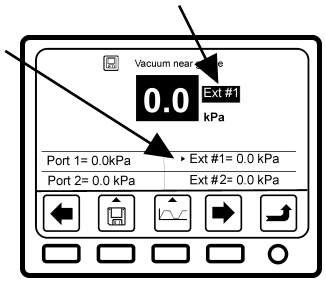
To use the wireless sensor EVR25

Connect the sensor to the measuring point.

Note! The sensor must always be placed above the measuring point!

Start the VPR100 unit and go to the working display.

Turn the sensor on. Make sure that the battery led is blinking green and the wireless LED is blinking red, showing that the sensor is communicating with the VPR100 unit.



Perform a measurement from the VPR100 unit as described in the Instruction book for VPR100; Chapter Operation. Select external port 1 to use the first registered sensor and extenal port 2 to use the second registered sensor.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.