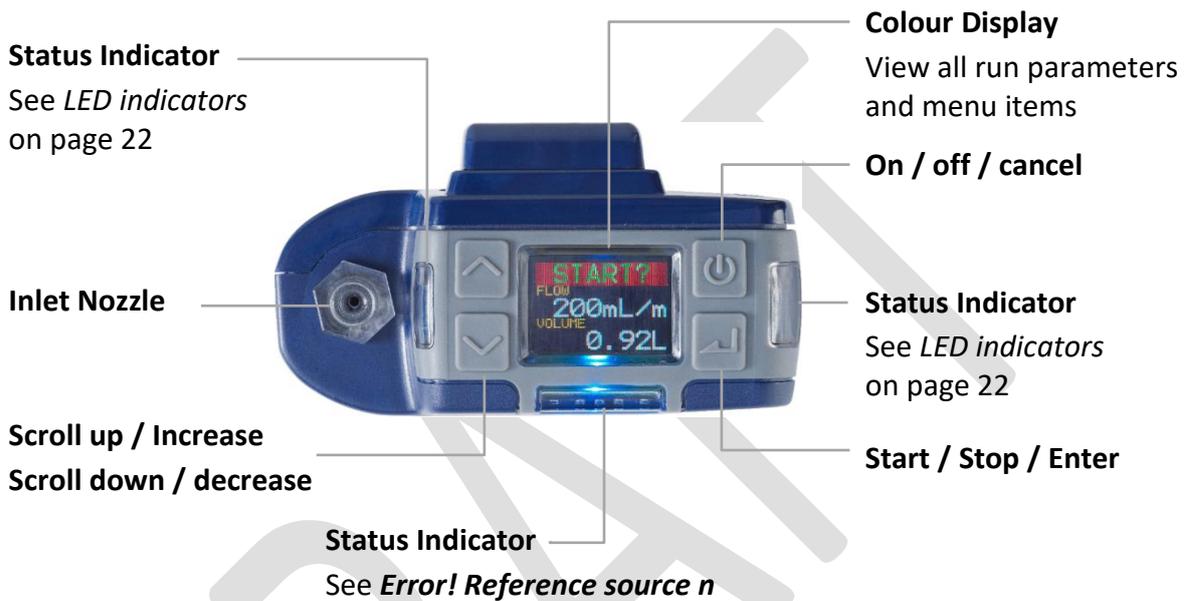## Safety ⚠️

For important safety information relating to Intrinsic Safety, please refer to the VAPex User Manual (HB4089) available for download at www.casellasolutions.com.

Controls

Status Indicator
See *LED indicators* on page 22

Inlet Nozzle

Scroll up / Increase
Scroll down / decrease

Status Indicator
See *Error! Reference source n*

Colour Display
View all run parameters and menu items

On / off / cancel

Status Indicator
See *LED indicators* on page 22

Start / Stop / Enter

Turn the Pump On/Off

To turn on the pump:

On the top of the pump, press 🔵.

The sequence on the right is displayed:

This is followed by the three alternating dashboard screens, showing data from the last run. Notice that the screen header is prompting you to start a sampling run.

To turn off the pump:

On the top of the pump, press and hold ⏻ until the countdown has finished and the screen goes blank.

> **Note:** You can't turn off the pump during a sampling run or when a programme timer is set.

Setup before Starting a Run

Depending on your sampling requirements you may want to perform one or more of the following setup procedures before starting a sampling run.

To access the menu items described below:

1. Ensure the pump is turned on, and then press ⌄ to display the menu.

2. Press ⌄ or ⌃ to highlight the menu item you want to alter, and then press ↵.

Set the Flow Rate
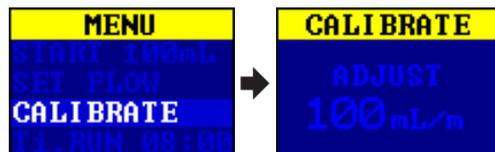
1. Navigate to **SET FLOW**, and then press ↵.

2. Press ⌄ or ⌃ to change the flow rate, and then press the enter key.

Calibrate the Pump

Always calibrate the pump at the sampling flow rate for greatest accuracy.

> **Note:** If using a sorbent tube with a small pore size or if operating at a high flow rate, which results in a high back pressure, it may take the pump a little longer to stabilise when adjusting the calibrated value.

1. Attach a sampling head or flow tube or another flow-measuring device to the pump's inlet nozzle.

2. Navigate to **CALIBRATE**.

3. Press ⏎ to start the test.

4. Press ⏷ or ⏶ to change the pump speed until the meter flow rate and the pump flow rate match.

5. Press ⏎ to stop the test.

Start/stop a Sampling Run

Ensure your pump is calibrated and set to the correct flow rate.

To start a sampling run:

1. Turn on the pump.

2. Press ⏎ and the screen on the right is displayed.

3. Press ⏷ or ⏶ to select **NEW RUN** or **RESUME**.

4. Press ⏎ for 3 seconds.

The following screens should be visible.

To stop or pause a sampling run:

- Press ⏎ for 3 seconds.

Lock and Unlock the pump

Partial Lock

Partial Lock mode is denoted by a half open padlock icon and can be set in **Run** or **Stop** modes. While partially locked, the wearer may stop and start the sampling pump but has no access to the menu or other functions.

To partially lock and unlock the pump:

- Press and hold ⌃, and then press ↵ 3 times in quick succession. The partial lock icon will be displayed.

  Note: If you try to remove a partial lock when the pump is running you will need to apply the above procedure twice, which applies and then removes a full lock.

Full Lock

The full lock can only be set when the pump is running and is denoted by a closed padlock icon. While fully locked, the keypad is fully de-activated. The wearer cannot stop or disturb the pump by any key presses.

To fully lock the pump:

- Press and hold ⌃, and then press ↵ 6 times in quick succession. The full lock icon will be displayed.

To unlock the pump:

- Press and hold ⌃, and then press ↵ 3 times in quick succession.

Errors

If the pump cannot maintain the target flow rate within 5% for more than 20 seconds (due to a kinked tube or inlet blockage) then it will automatically stop sampling and show the Blocked Retry message.

After one minute the pump will attempt to re-start. If the pump has not been able to re-start after the specified number of retry attempts, the pump will terminate the current sampling run and display an error message.