HACH®

DOC273.53.90671

EZ7100 Series – TOC

Additional information

02/2019, Edition 1

Table of Contents

1.   Gas – Liquid separator (GLS)

The tubing connected to the GLS vessel should be inserted a couple of centimetre below to top and the connections should also be airtight to make sure that no CO_2 escapes.
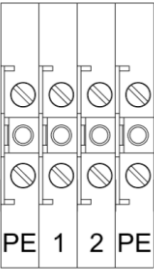
Make sure that there is always water in the GLS, fill up till the overflow connection.

During the zero-calibration of the NDIR detector, clean air is flushed through the detector to the GLS. This airflow to the GLS cannot be too high, regulate the flow using the needle valve. When the flow to the GLS is too high, the air will push the water out of the GLS, prevention the water lock function.

When the vent valve connected to the top of the GLS is not opened appropriately during the zero-calibration of the detector or during the draining of the oxidation vessel, incorrect movement of water or air may occur.

2.   Connections

The additional connections (e.g. external sample valves) are made on terminal X8. Connect the wires to the terminal as indicated in the table below. The contacts indicated in the INPUT/OUTPUT column, are linked with the control of the contact in the analyzer software.

Terminal X8				
	Terminal N°	Connection	Name	OUTPUT
X8	X8 – 1	+ 24 VDC	ZERO CARB	-
	X8 – 2	- GND		

The analyser and the zerocarbfilter both need pressurized air.

Make sure that the membrane air dryer flow is counter-current orientated compared to the CO_2 flow to the infrared detector.

3.   Measurements

Before starting up the analyser, wait at least 15 minutes to allow the detector to warm up before starting the measurements.

The background values should be for a 5% NDIR detector between 400-500, for a 1% NDIR detector between 200-300.

Raw detector values can never exceed 50000 gas ppm or 10000 gas ppm for respectively the 5% and 1% detector range. Values above this are not registered and will affect the

analyser results. Regulate the carrierflow to make sure measurements stay well below 50000. To regulate the carrierflow go to F4- MFC set AO. Change the value between 0-10. Increase the value to lower the sensor signal (diluting the CO_2).

The initial flushing is set for at least 3 minutes. Don't shorten it, because the NDIR detector is still busy with zeroing. If the next step is started too early, at the beginning of the measurement already CO_2 has escaped and that will not be measured.

Make sure that the UV lamp is not turned on when cold sample is going into the vessel. This will shorten the lifespan of the UV lamp drastically.

4.   Graph
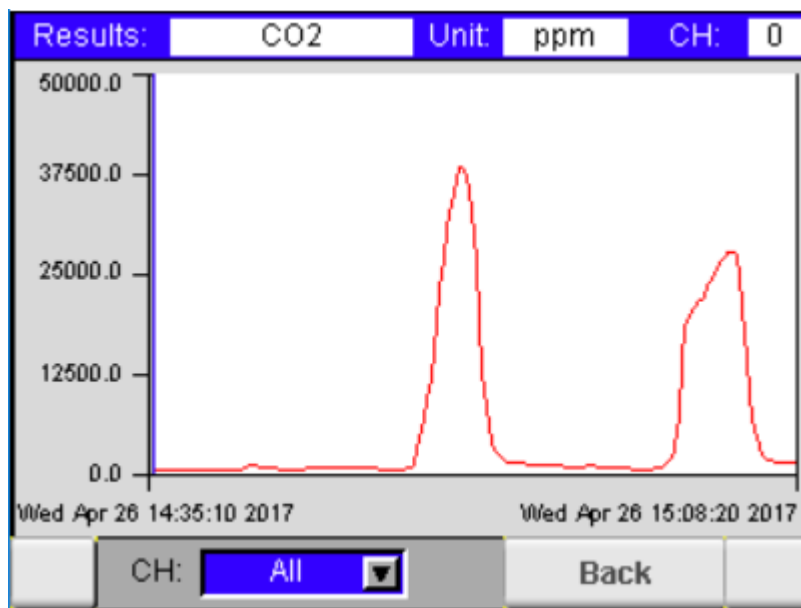
The ideal graph should be a peak shape. When it is not the case make sure that at the end of the algorithm the graph is back to his starting point.

Especially for components that are not easily converted to CO_2, it is important to verify that the signal is back to the baseline before the end of the algorithm. If not, the remaining CO_2 is not measured and leads to incorrect results.