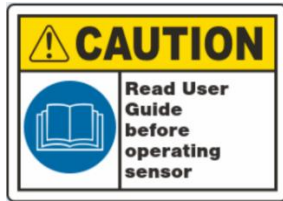


ON-SITE CALIBRATION GUIDE: MES1001 MARPOL



NOTICE

For details on how to install and operate the MES1001 MARPOL, please refer to Installation Guide (doc. no. 101407-MAN and User Guide (doc. no. 101450-MAN).

-Please go to Danfoss IXA website for latest versions available: www.danfoss-ixa.com

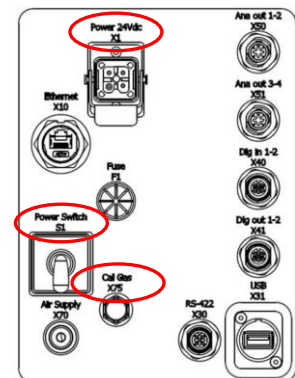
Calibration to be done using the On-site Gas Calibration Kit and Calibration Gas, only supplied by Danfoss IXA:
930090-001-A; On-Site Gas Calibration Kit

930091-001-A; NO Span Gas Cylinder

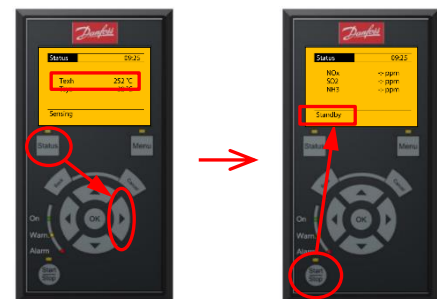
Please calibrate the analyzer by following below procedure

Total duration: Max. 10 minutes.

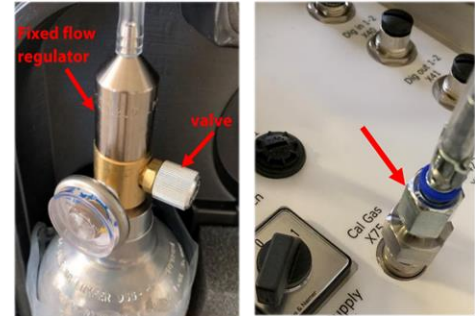
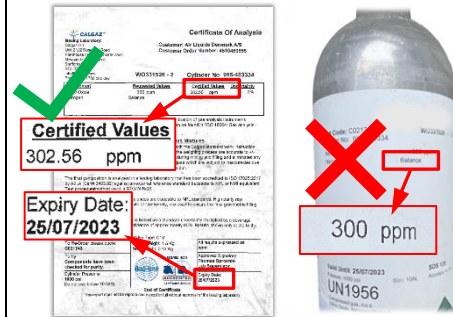
- 1) Check that analyzer is installed correctly and turned ON for >30 minutes:
 - a) Mounted on flange with gasket installed
 - b) Compressed air is connected
 - c) No active alarms/warnings on Local Control Panel (LCP)
 - d) Air filter is installed and in good working condition
 - e) Interface cable(s) are connected
 - f) 24 VDC power supply is connected [X1] and switch [S1] is ON (1)



- 2) Stop engine and ensure that it cannot start during calibration process.
 - If the calibration is interfered, the process must be re-started
- 3) Exhaust gas temp. should be below 200°C
 - Press "Status" and cycle through using <> to see actual T_{exh}
- 4) Stop measurements with "Start/Stop" button on control panel.
 - Analyzer to be in Standby mode before proceeding



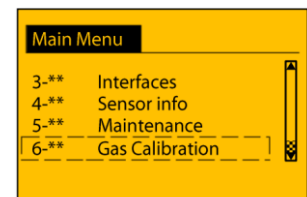
- 5) Connect certified calibration gas to “Cal Gas” connection [X75].
 - a) Note the gas concentration from specific gas cylinder certificate (Range: 263-329 ppm) and check that it has not expired.
NB: Do not use the concentration marked on the cylinder itself – Only use certificate value!
 - b) Ensure that valve on regulator is closed
 - c) Connect regulator on calibration gas cylinder
 - d) Connect tube to analyzer [X75] – Ensure connection is clean and in good working order



NOTICE

Concentration of NO calibration gas – 300 ppm (Tolerance range: 263-329 ppm) – is required for valid calibration of the MES1001 MARPOL . This differs from the NO / NOx operational ranges of 1500ppm/2000 ppm, and is required due to specific sampling technique used during calibration.

- 6) Follow gas calibration wizard on Local Control Panel:
 - a) Press “Menu” button and select “Gas Calibration” menu
 - b) Enter certificate gas concentration value using ΔV on Local Control Panel
 - c) Open valve on regulator
 - d) Confirm selected gas and concentration



- 7) Gas calibration progress can be followed on Local Control Panel
- 8) When prompted to disconnect gas:
 - a) Close valve on regulator
 - b) Disconnect tube from analyzer
 - c) Analyzer is now ready for normal operation
 - d) Pack cylinders and equipment in carrying case, and store in a cool place – If one or more cylinders are empty; depressurize and dispose of, as described in User Guide.



You have now successfully calibrated your MES 1001 MARPOL