



TELEDYNE INSTRUMENTS

Advanced Pollution Instrumentation

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Service Note

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ZERO/SPAN VALVES RETROFIT IN API CO ANALYZER M300 INSTRUCTIONS

SCOPE:

The following instructions provide the necessary information on how to retrofit ZERO/SPAN valves option into API M300 CO analyzer.

TOOLS REQUIRED:

1. Philips head screwdriver.
2. A pair of adjustable wrenches.
3. API zero/span valves M300 retrofit kit with the CO scrubber (API part numbers 01942 and 01037).

PROCEDURE:

1. Turn the power off.
2. Remove the screws holding the cover and take the cover off.
3. Disconnect the 1/8" tubing between "SAMPLE" inlet bulkhead fitting and the sample filter (to avoid leaking use two wrenches to disconnect the fitting).
4. Mount "Z/S--SAMPLE/CAL VLV" valve into the analyzer (use drawing 00300 step 4 for reference). NOTE: Make sure the black wiring is positioned towards the pump (or the center of the analyzer) and the labels on the valves are positioned towards the left side.
5. Mount the "SHUT OFF" valve into the analyzer (use drawing 00300 step 5 for reference).
6. Mount the CO scrubber into the analyzer (use drawing 00300 step 6 for reference).
7. Find the gray cable with the 3-pin connector covered with the heat shrink. The connector has two wires (black and clear). Remove the heat shrink and connect the CO scrubber heater (3-pin connector with two red wires) to the gray cable.
8. Install "VENT/SPAN" and "PRESSURE SPAN" stainless steel bulkhead fittings into rear panel and "AIR IZS" brass bulkhead fitting into the rear panel of the analyzer (use drawing 00300 step 8 for reference).
9. Connect 1/8" tubing between sample filter, rear panel bulkhead fittings, "Z/S - SAMPLE/CAL VLV" and "SHUT OFF" assemblies (use drawing 00300 steps 9.1 ... 9.8 for reference). CAUTION: Make sure you do not overtighten the fittings.

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10. Connect the power cables to the valve assemblies. Green and white cable with the "SAM/CAL" label to "Z/S - SAMPLE/CAL VLV" (use drawing 00300 step 4 for reference). Green and yellow with the "S/O + Z/S" label to "SHUT OFF" valve (use drawing 00300 step 5 for reference).
11. Leak check the analyzer.
12. Put the cover back on.
13. Turn the power on.
14. If you have the analyzer with the non-AMX software, you need to activate the IZS option manually. To accomplish this, press SETUP-IZSC-IZS-OFF, that will change the OFF button to ON.
15. Check all the test parameters.
16. Check the sample flow in both "SPAN CALIBRATION" and "ZERO CALIBRATION" modes.
17. Recalibrate the analyzer.
18. After 15-20 minutes, check if CO scrubber is warm. If not, troubleshoot the problem with the heater. Note: There is no test function or watch for the CO scrubber temperature. Thus there is no way, but manual check, to tell if the heater is ON.

If you have any problems or questions following the above procedure, please call the Customer Service Dept.