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EC1 Oxygen Monitor

ELEMENTAL MACHINES EC1 Oxygen Monitor User Guide

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ELEMENTAL MACHINES EC1 Oxygen Monitor

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Package Contents

- Element-C
- Power Supply
- Connection Cable 1 (may come attached to the Element-C or attached to the asset)
- Mounting Plate

The connection cable will be dependent on the type of output your CDI meter is equipped to output. Default output is Flow Rate. A pressure sensing option is also available from CDI. The connection cable provided by Elemental Machines will be different for this variation. Your order with Elemental Machines will have specified which configuration was ordered.

Safety Information
Review and abide by the safety information found in the Element-C and CDI user manuals. Ensure compliance with your company's safety best practices, which may include de-energizing equipment before working with electrical connections. Tidy the connection cable to prevent tripping hazards.

Installation Instructions

Receiving the Shipment

1. If this is your first time setting up the Elemental Machines system, you will receive an email for your dashboard account verification. Save this email for when the devices arrive.
2. When devices are shipped, they will be added to your Elemental Insights™ Dashboard with default names. When you first log in, you will see all your devices with a 'disconnected' status.
3. When devices arrive, carefully remove the contents from the packaging. If any of the contents look damaged, please send a picture to **help@elementalmachines.com**.
4. Confirm the Element-Cs in your package are labeled with the assets to which they are to connect. If the labels do not match the intended assets for connection, please contact **help@elementalmachines.com**.

   Element-C Initial Power-up
5. Plug the Element-C in using the provided power supply.
6. Complete Wi-Fi Connection following instructions in the provided 771-00010 Wi-Fi Connection Guide -Gateway GW2/3, Element-C/D.

   - 771-00010 is included with your Element-C as a printed copy. Digital versions of this are available in the Support section of the Elemental Insights™ Dashboard.

     Attaching Connection Cable to the CDI Asset

     Note: These instructions assume that the CDI Flow Meter is powered by an external power source, and not the Element-C. If you intend to power the CDI Flow Meter with the Element-C, please reach out at **help@elementalmachines.com**.
7. Unplug the CDI Flow Meter from power.
8. Unscrew the four screws on the top cover, circled below in Figure 1, of the CDI meter. Remove the cover.

Figure 1 Unscrew the four screws (circled) on the cover of the CDI meter

9. Locate the cable glands on the side of the flow meter, as shown in Figure 2. Use a screwdriver to unscrew either cable gland. Route the Connection Cable through the cable gland.
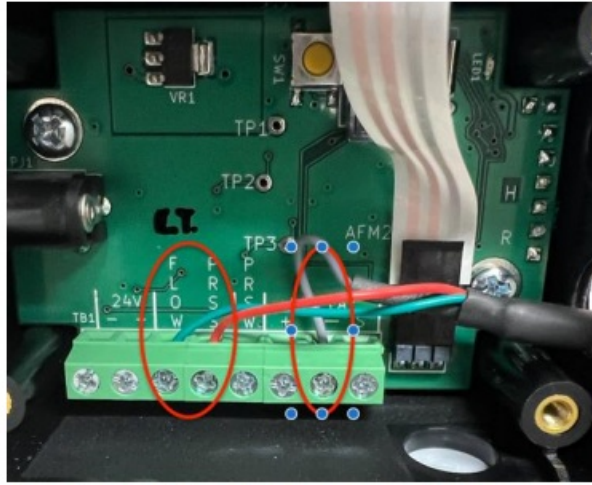
Figure 2 Cable glands on the side of the meter

10. Gently release the display board (shown in Figure 3a) from flow meter housing. A screwdriver may be useful. Be careful not the damage the ribbon cable that connects the display board to the output board underneath, shown Figure 3b.

Figure 3a (left): Display board. Figure 3b (right): Output board located underneath the display board

11. Based on which configuration of the CDI meter you have, wire the connection cable to the flow meter in accordance with either Step 11a or 11b:

- For flow meters that measure Flow only, slightly unscrew the screws for the mA (-) and display (-) slots on the output board, circled in Figure 4.
    1. Insert the RED WIRE from the Connection Cable into the mA (-) slot, circled in Figure 4. Tighten the screw to ensure that the wire is secure.
    2. Insert the BLACK WIRE from the Connection Cable into the display (-) slot, circled in Figure 4. Tighten the screw to ensure that the wire is secure.
        - Do not remove the blue jumper that connects the mA (+) and display (+) slots.

Figure 5 Insertion of wiring into CDI flow meter with Flow and Pressure outputs

12. Replace the display board in the meter housing.

13. Replace the cover on the flow meter. Screw in the four screws in the corners.

    Attaching Connection Cable to Element

    Note: The connection cable may be pre-attached to the Element-C. If so, skip this section and proceed to Step 15.

14. Based on which configuration of the CDI meter you have, wire the connection cable to the flow meter in accordance to either 14a or 14b:

    - For flow meters that measure Flow only, slightly loosen the screws on top of Slots 1 and 2 on the green terminal block on the Element-C, and connect the Connection Cable to the Element-C as shown in Figure 6.
        1. Insert the RED WIRE into Slot 1. Tighten the screw and ensure the wire is secure.
        2. Insert the BLACK WIRE into Slot 2. Tighten the screw and ensure the wire is secure.

Figure 6 Wiring into the Element-C for flow measurements only

    - For flow meters that measure Flow and Pressure, slightly loosen the screws on top of Slots 1 through 4 on the green terminal block on the Element-C, and connect the Connection Cable to the Element-C as shown in Figure 7 .
        1. Insert the GREEN wire into Slot 1. Tighten the screw and ensure the wire is secure.
        2. Insert the WHITE wire into Slot 2. Tighten the screw and ensure the wire is secure.
        3. Insert the RED wire into Slot 3. Tighten the screw and ensure the wire is secure.
        4. Insert the BLACK wire into Slot 4. Tighten the screw and ensure the wire is secure.

Figure 7 Wiring into the Element-C for flow and pressure measurements

Positioning the Element-C

15. Determine where the Element-C should be placed to allow for power access and a tidy connection cable.

16. Securely position the Element-C in the chosen location. The Element-C has magnets which make it easily mountable to magnetic surfaces.

    - **Note:** If applicable, an adhesive metal mounting plate available from EM may be used.

    Finalization

17. Power on the CDI Flow Meters and the Element-C.

18. Confirm that the values from the asset appear on the Elemental Insights Dashboard™.

19. If the dashboard does not display any value, check the cable connection. Contact **help@elementalmachines.com** if the problem persists.

20. If using the Elemental Machines Alerting and Monitoring application, set up appropriate alerts on the Elemental Insights™ Dashboard.

21. Contact the third-party vendor for next steps regarding communication to the external platform (if applicable).

772-00064 rev 01 Element-C, EC1 CDI 5200 Series Flow Meter Installation Guide Copyright © 2024 Elemental Machines **help@elementalmachines.com**

FAQs

Q: What should I do if I encounter difficulties during installation?
A: If you encounter any difficulties during installation, please contact our support team at **help@elementalmachines.com** for assistance.

Documents / Resources

ELEMENTAL MACHINES EC1 Oxygen Monitor [pdf] User Guide
EC1, CDI 5200-05S, CDI 5200-07C, CDI 5200-07S, CDI-5200-10C, CDI-5200-10S, CDI-5200-12C, CDI-5200-12S, CDI-5200-15C, CDI-5200-15S, CDI-5200-25M, CDI-5200-40M, EC1 Oxygen Monitor, EC1, Oxygen Monitor, Monitor

References

- **User Manual**