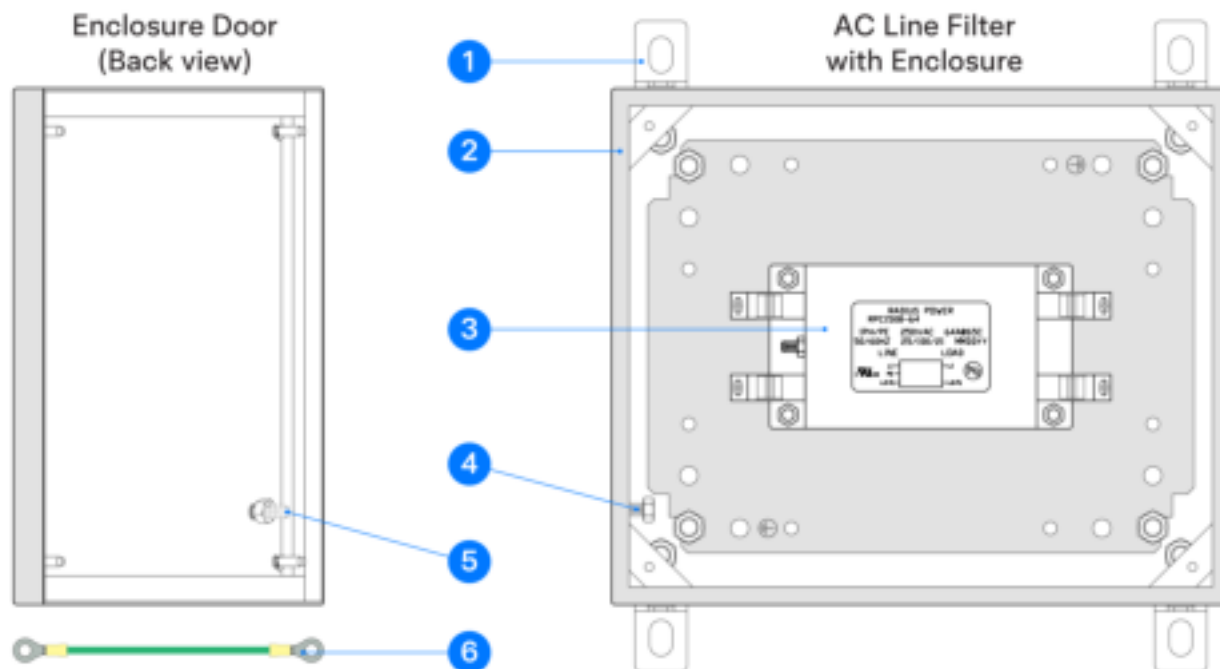




## STEP 5: INSTALL AC LINE FILTER

### AC Line Filter Overview



|   |  |
|---|--|
| 1 | Mounting feet for wall mounting (Must be field mounted to the enclosure) |
| 2 | Enclosure  |
| 3 | AC Line Filter   |
| 4 | Protective Earth terminal stud (M6) on the enclosure                     |
| 5 | Protective Earth terminal stud (M6) on the enclosure door                |
| 6 | Protective Earth jumper from enclosure to the enclosure door             |

### Mounting Location

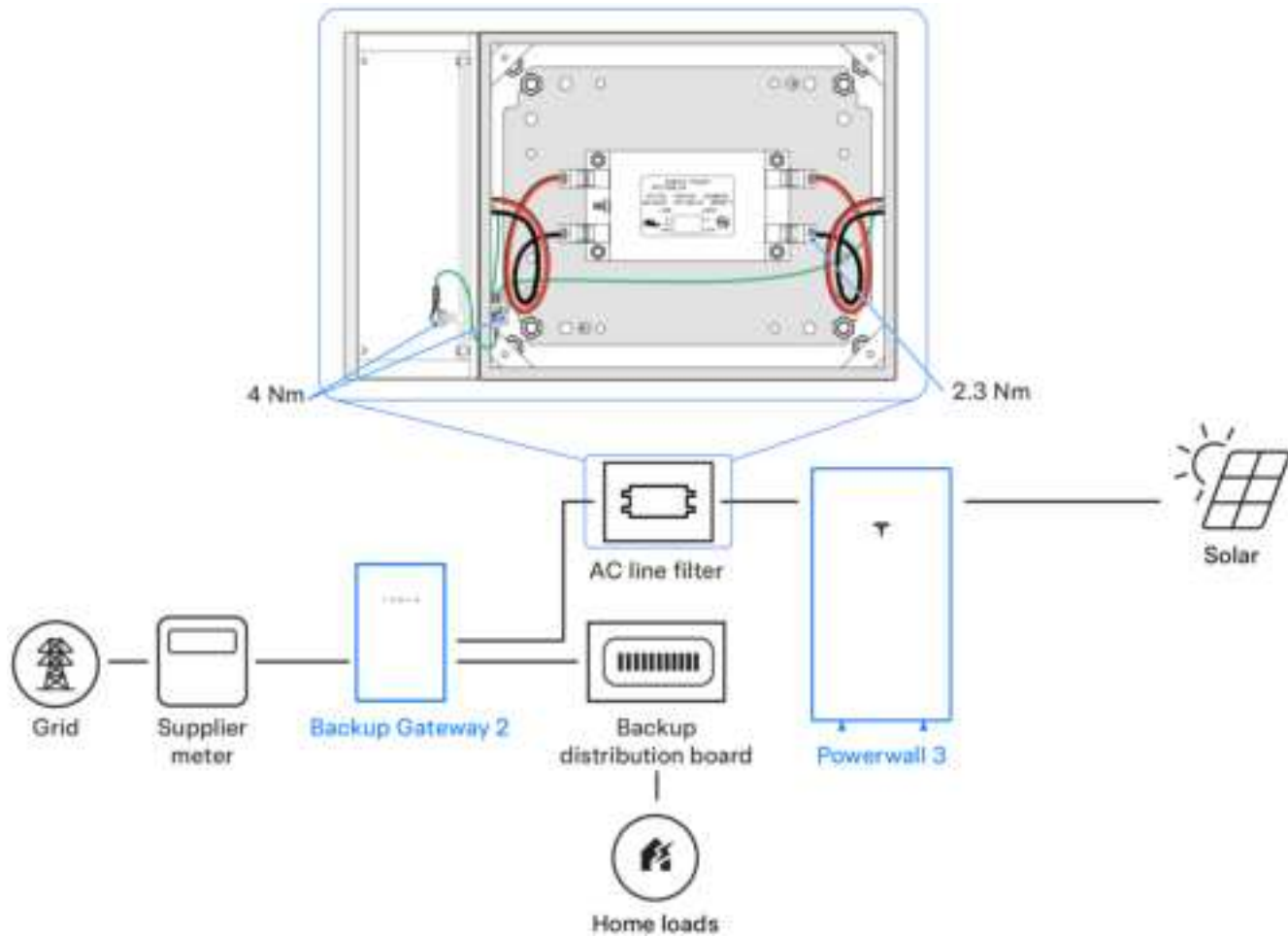
The AC Line Filter enclosure is IP65-rated and can be mounted on a wall in any orientation, indoors or outdoors. The AC Line Filter must be installed on the Powerwall 3 AC circuit; between the Powerwall 3 breaker (i.e., mounted on the DIN rail inside the Backup Gateway 2) and the Powerwall 3 unit.



## STEP 5: INSTALL AC LINE FILTER

Figure 24. System Diagram with AC Line Filter

See [Appendix C: System Wiring Diagrams on page 126](#) for the detailed wiring diagram.



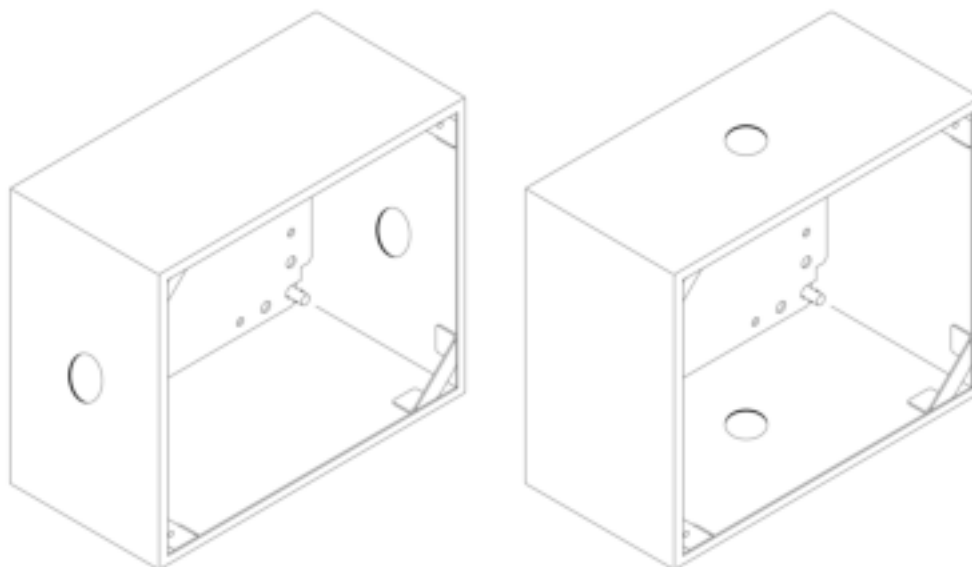
### Mount the Enclosure

1. Using a metal hole saw, drill out cable access holes from the enclosure. The hole can be drilled on any side of the enclosure and the size can be either M20, M25, M32, or M40 depending on the knockout you punch out on the Powerwall 3.



## STEP 5: INSTALL AC LINE FILTER

Figure 25. Enclosure with Cable Access Hole Options

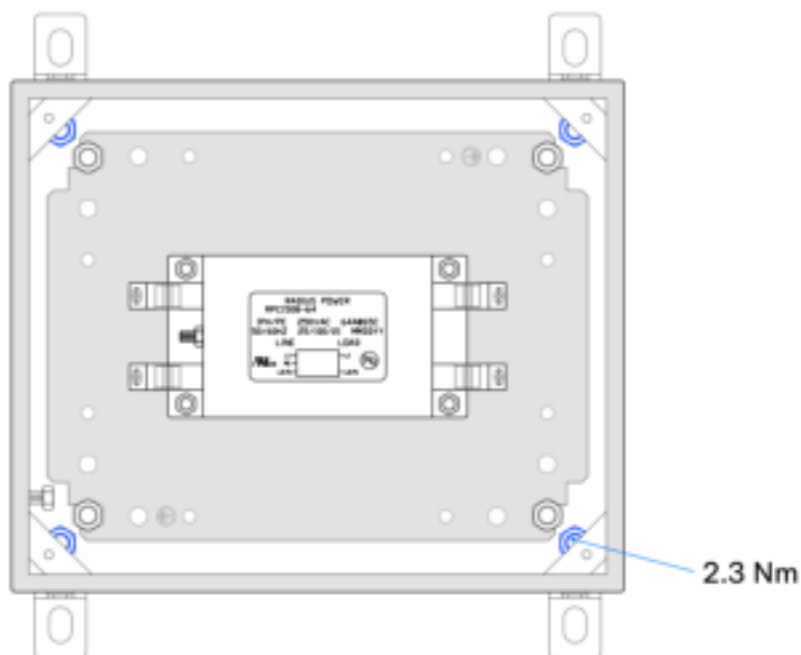


2. Refer to the mounting feet assembly instructions document provided in the AC Line Filter box and mount the mounting feet to the enclosure.



**NOTE:** The mounting feet hardware must be assembled in the order prescribed in the document and torqued to 2.3 Nm to ensure a watertight seal.

Figure 26. Enclosure with Mounting Feet Installed

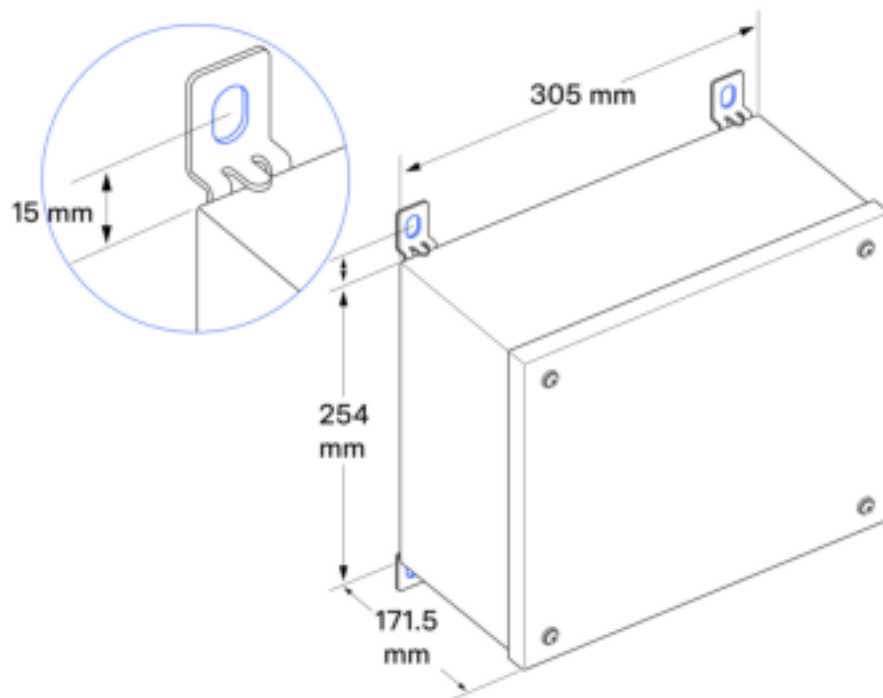


3. Using a drill and level, mount the enclosure to a wall.



## STEP 5: INSTALL AC LINE FILTER

Figure 27. Enclosure Dimensions and Mounting Holes

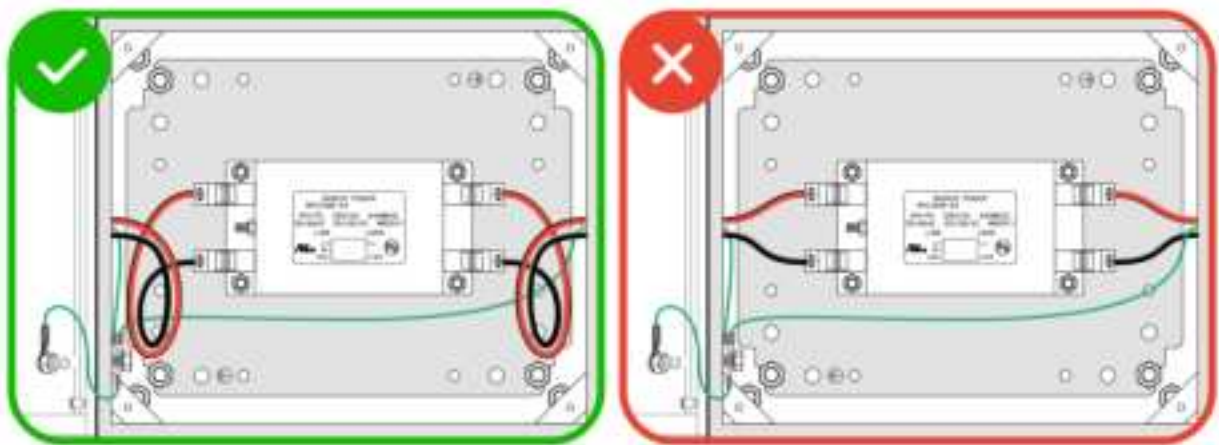


### Make AC Power Connections

**WARNING:** Before making the AC power connections, ensure that the AC circuit breaker of the main service disconnect is OFF and secured against reconnection.

1. (Conduit installations only) Run conduit as needed and attach the conduit fitting to the AC Line Filter enclosure.
2. Run the AC Line, Neutral, and the Protective Earth conductors from the Backup Gateway 2 and Powerwall 3 through the conduit or cable gland into the AC Line Filter enclosure.
3. Create a water drip loop inside the AC Line Filter enclosure with extra wiring.

**NOTE:** The water drip loop is to prevent water from entering the wiring terminals if water enters into the enclosure through the cable glands.





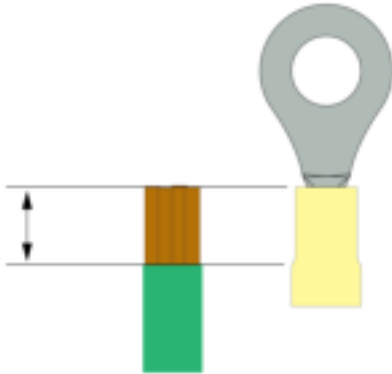
## STEP 5: INSTALL AC LINE FILTER

4. Clear out any debris that may be present in the enclosure.
5. Connect the Protective Earth conductor to the enclosure:



**CAUTION:** Do not connect bare wires. Use M6 ring terminals.

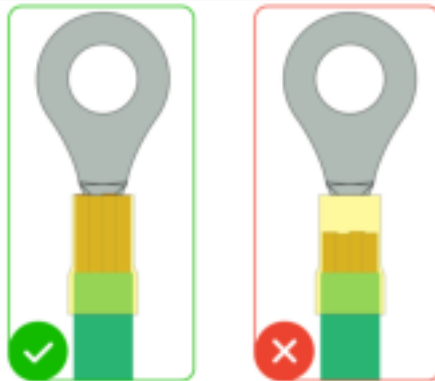
- a. Strip the conductor insulation to a length recommended by the ring terminal manufacturer.



- b. Using a crimping tool, crimp the ring terminal onto the end of the conductor.



**NOTE:** Ensure the ends of the copper strands are visible at the bottom of the ring terminal, indicating the conductor is making strong contact with the ring terminal.



- c. Insert the ring terminal onto the Protective Earth stud; using a 7/16 in (10 mm) socket wrench (see [Required Tools on page 37](#)), tighten the fastener to 4 Nm.
6. Similarly, repeat [Step 5 on page 68](#) to connect the Protective Earth conductor from Powerwall 3 to the enclosure, and then from enclosure to the enclosure door.



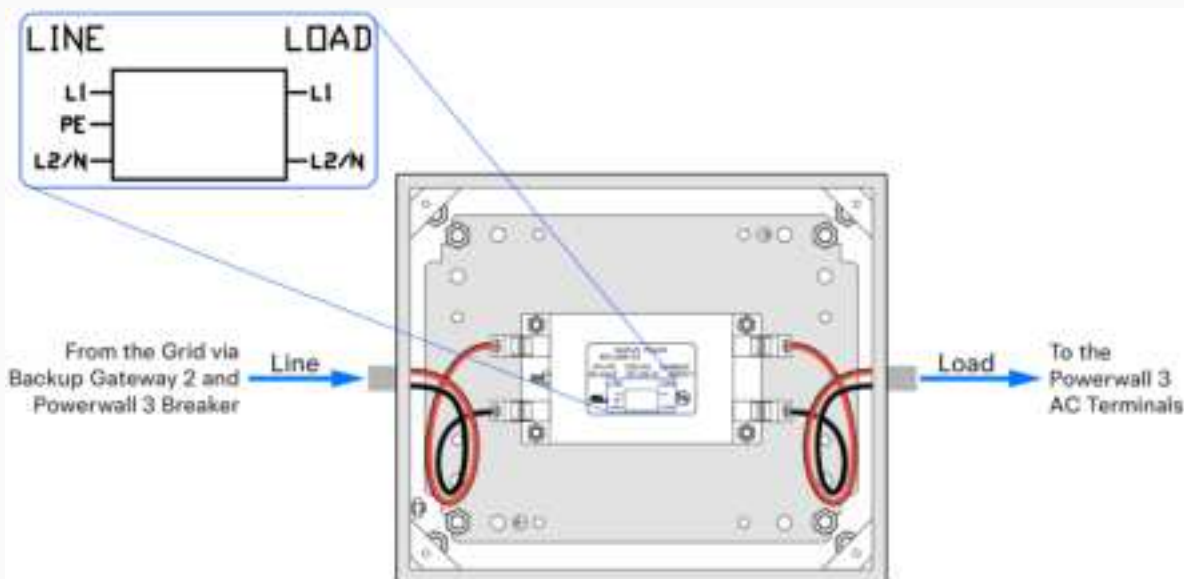
## STEP 5: INSTALL AC LINE FILTER

7. For the AC Line and Neutral conductors:



**NOTE:** The AC Line Filter has **Line** and **Load** terminals. Ensure to:

- Connect the AC Line and Neutral conductors from the Grid via Backup Gateway 2 and Powerwall 3 breaker to the AC Line Filter's **Line** terminals.
- Connect the AC Line and Neutral conductors from the Powerwall 3 AC terminals to the AC Line Filter's **Load** terminals.



**NOTE:** See [Appendix C: System Wiring Diagrams on page 126](#) for the detailed wiring diagrams.

- Strip the conductor insulation up to 17 mm.
- Insert the conductor as far as possible into the terminal; using a Pozidriv #2 screwdriver or bit (see [Required Tools on page 37](#)), tighten the screw to 2.3 Nm.
- Perform a pull test to ensure the conductor is fully seated in the terminal. Push the conductor back in after the pull test.
- After connecting the conductors, gather them and secure them with a cable tie.

8. Install the enclosure door and tighten the door screws.



## STEP 5: INSTALL AC LINE FILTER

Figure 28. Enclosure with Door Installed

