

Solshare Isolation Box Wiring

Installation Guidance

v. B2

For Solshare installations in Australia, an isolation box is required between the Solshare outputs and the Tenancy Main Switches (Solar Supply). This box will be constructed using 40A, 240VAC coil (or appropriately sized) contactors that will be provided as part of the installation kit.

This document serves as a guide only to help installers understand the standard installation procedure for the isolation box. The actual installation process may vary depending on the existing electrical infrastructure and local electrical safety standards.

- It is the responsibility of the electrician to ensure their installation meets the local electrical safety standard.
- Always follow local electrical codes and standards for solar power installations.
- Use appropriate personal protective equipment (PPE) when performing electrical work.



WARNING: Adhere to all handling and safety instructions during installation, testing, and inspection. Failure to do so may result in injury, loss of life, and damage to the equipment.

Equipment and Materials Needed:

1. 40A NO (Normally Open) Contactors.
2. 9mm Din-rail Spacers.
3. 1A MCB.
4. Neutral cables.
5. Cables for connections between contactors and MCBs.
6. Necessary tools for wiring (screwdrivers, wire strippers, torque screwdriver, bootlaces, etc).
7. Suitable Enclosure (Configurable as required per total number of connections). ***It is the responsibility of the installer to source an appropriately sized enclosure to fit the isolation component.***

Installation Steps:

1. Preparation:

- Ensure the system is de-energised before beginning the installation.
- Verify that all necessary tools and components are available.
- Ensure you have the correct number of contactors and MCBs required for the job.
Note: Each output connection from the Solshare must be connected to its own contactor.

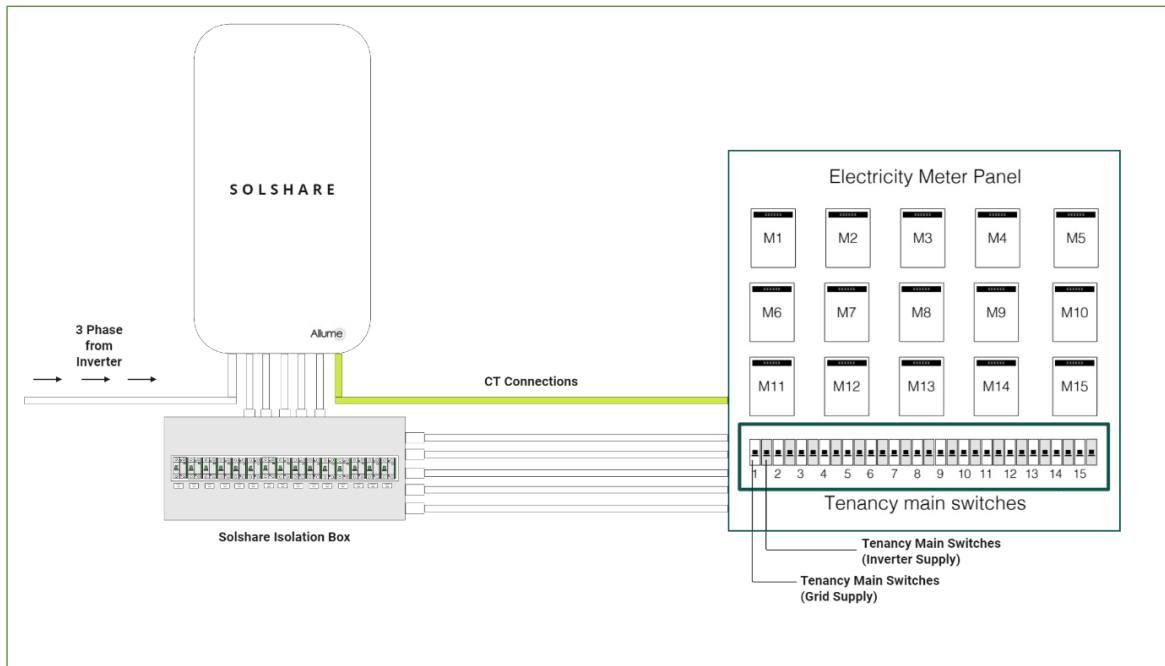


Figure 1. Solshare Installation Setup

2. Mounting the Isolation Box:

- Secure the SolShare isolation box near the SolShare outputs in a location that is both accessible for maintenance and safe from environmental factors such as direct sunlight and rain.
- Maintain appropriate clearances for the isolation box for ease of maintenance.

3. Wiring the 240V AC 40A NO Contactors and 1A MCB for control coil:

- Install the 240V AC 40A NO contactors on the din rail within the enclosure. The enclosure should be selected based on the total number of contactors to be utilized.
 - The isolation equipment (240V AC 40A NO Contactors) shall be installed with a 1A MCB beside it to act as protection for the coils and as a means of isolating the SolShare output connection.
 - Refer to Fig 2. Below for more information.

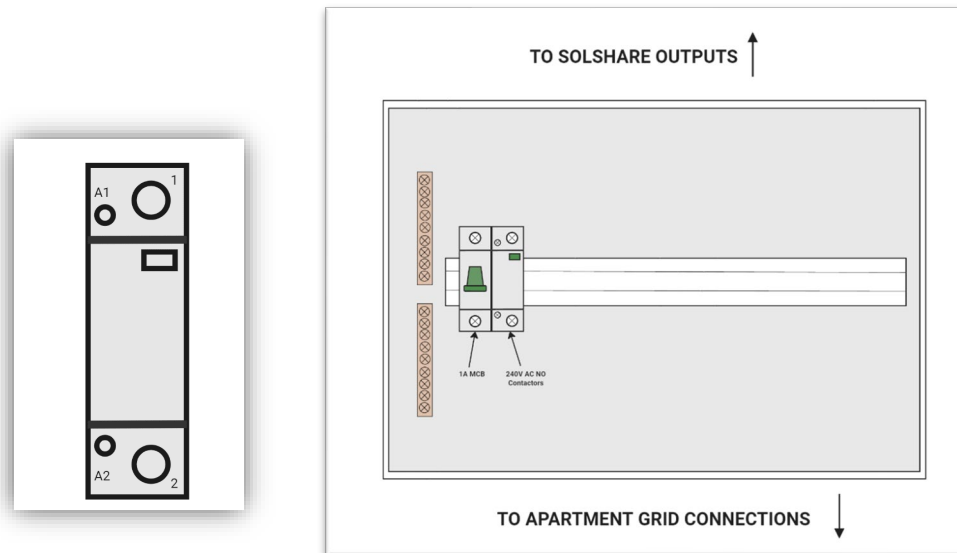


Figure 2. Contactor and MCB arrangement

- Connect the contactor's control coil terminal, labelled A1, to the contactor's grid input terminal, labelled "2," by utilizing the 1A MCB provided as part of the installation kit, as shown in *Figure 3*.
- Connect the coil's (A2) neutral connection to the neutral bar in the isolation box using appropriately sized cables, as shown in *Figure 3*, and ensure the neutral bar in the enclosure is linked back to the main neutral bar at the MSB that has the MEN link.

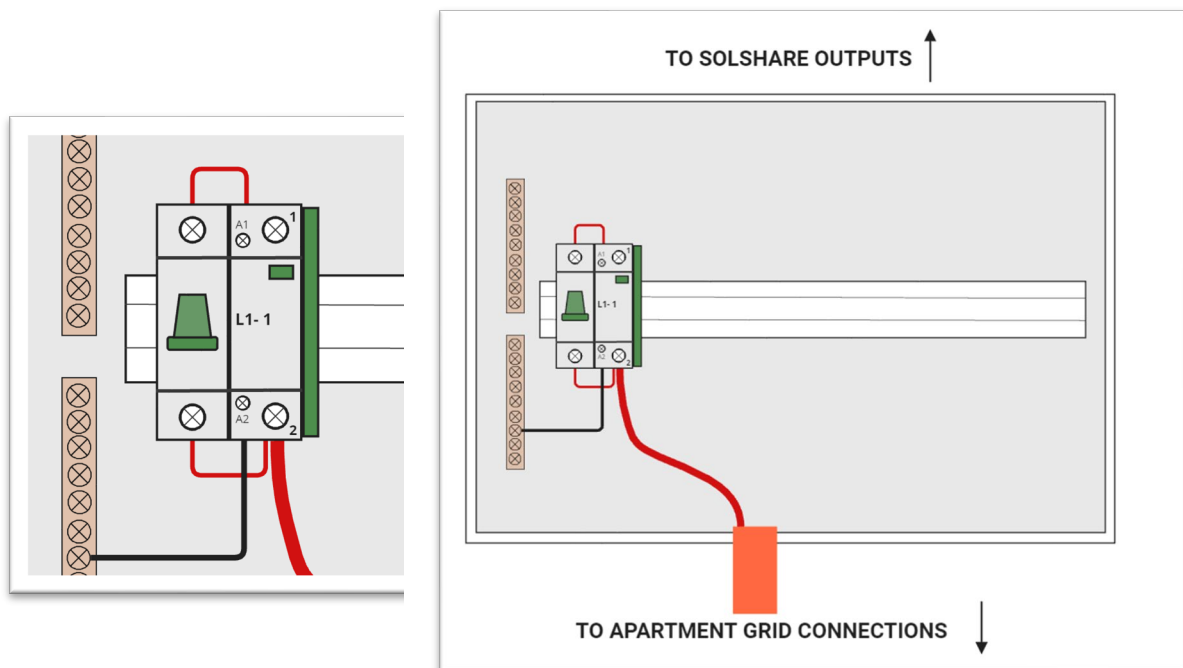


Figure 3. Contactor Coil Wiring

- The A1 and A2 connections will act as the controls for engaging the contactors, so ensure the cables are terminated correctly into the terminals.
- Wire the contactors and connect one for each SolShare output, as shown in *Figure 4*.
- For demonstration purposes, this document shows an installation with only the isolation equipment for a Solshare with 6 (six) output connections.

- Install the 9mm Din-rail spacers in between contactors to aid heat dissipation, as shown in *Figure 4*.

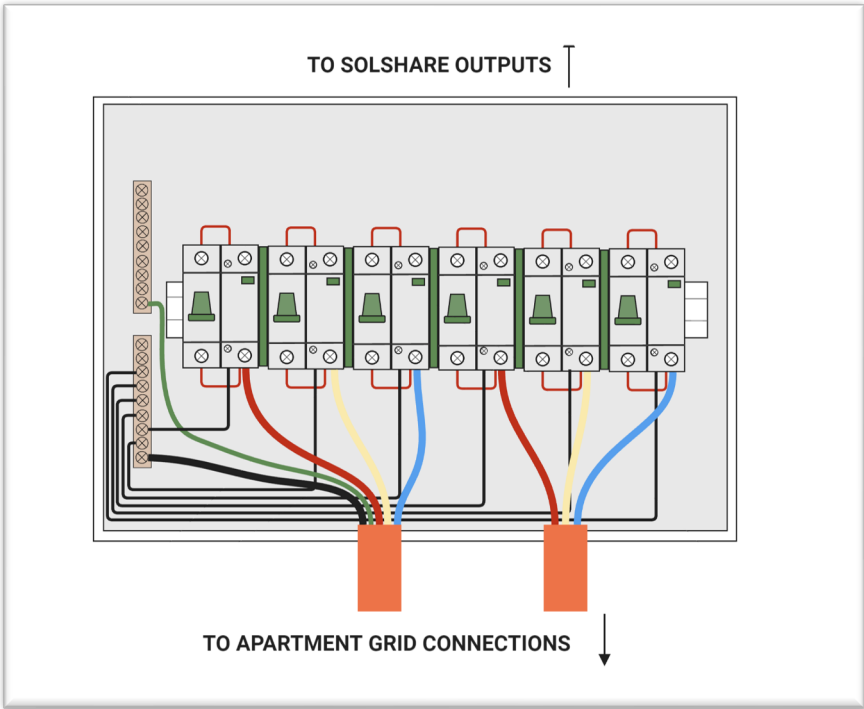


Figure 4. Isolation Box Internal wiring

5. Connecting SolShare Outputs:

- For each SolShare output (i.e. L1-1, L2-1, L3-1, L2-5, L3-5), connect the cables to the contactor terminals labelled "1" of the respective contactors as shown in *Figure 5*.

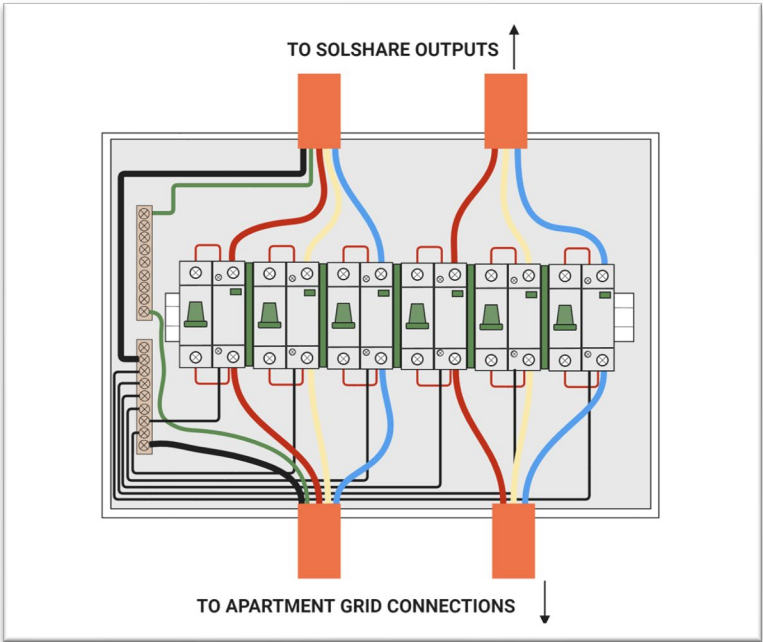


Figure 5. Full Isolation Box Internal wiring

- After completing the wiring, verify that the polarity and phases are correctly aligned according to the Single-Line Diagram and project system requirements.
- Once the wiring is completed, turn OFF all MCBs to isolate SolShare and label the contactor/ MCB for ease of identification.

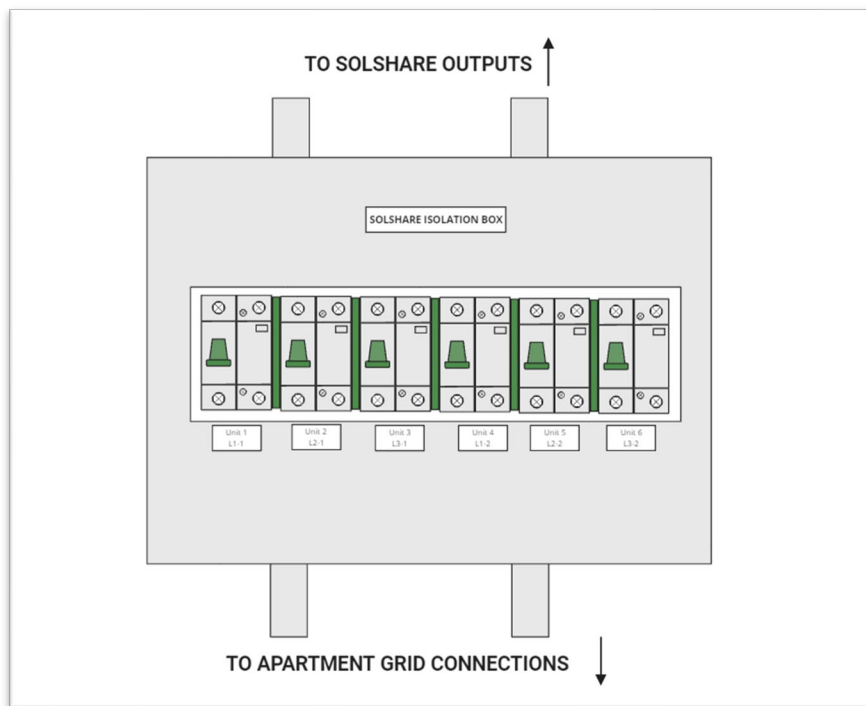


Figure 6. Isolation Box

6. Testing the Installation:

- Once all connections are made, conduct a thorough check to ensure all wires are securely connected and properly insulated to prevent any potential electrical hazards.
- Carry out a phase-to-phase and phase-to-neutral check on all connections to ensure the wiring has been completed in the right sequence.
- Temporarily power the system to test the functionality of each contactor and the integrity of the entire isolation box setup. The indicator on the contactors should turn red once energized.

7. Final Setup and Commissioning:

- After the installation setup has been verified, turn off the system to finalize any remaining setup.
- Secure all covers and protection on the isolation box.
- Continue with SolShare commissioning as detailed in the commissioning guide. Refer to the *SolShare Commissioning App Guide* available in the [Resource Library](#) for instructions on how to commission a SolShare.