

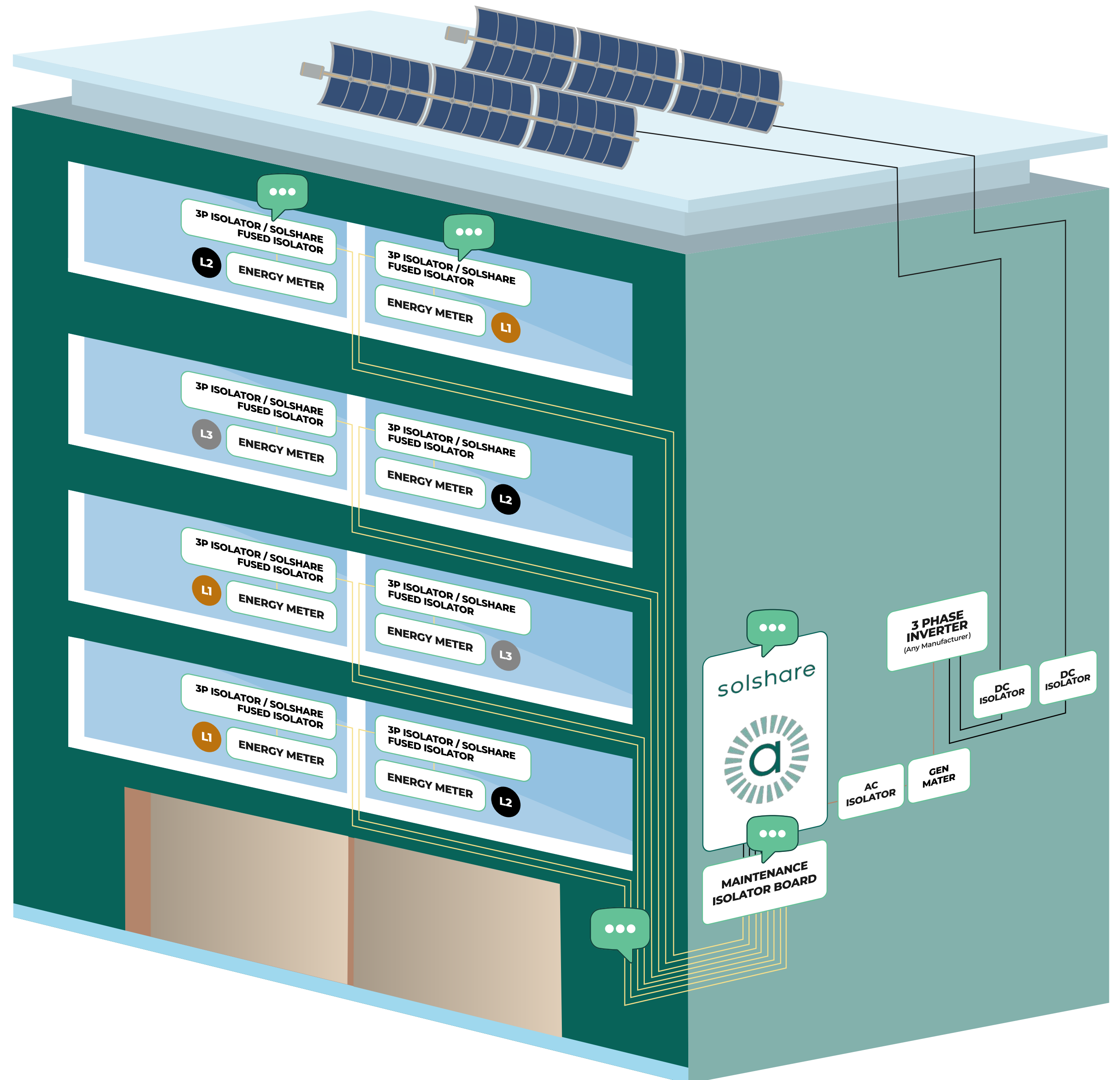


# Meter location: Riser cupboards

Design guidance: Importance of knowing flats' phase arrangements 

Example: How flat's phase arrangement affects kWp allocation

TYPICAL EXAMPLE	DNO	System size 12kWp (3-Phase inverter 4kWp per phase)
FLAT	SUPPLY PHASE	kWp Allocation
1	L1	1.33kWp (33% of phase generation)
2	L2	1.33kWp (33% of phase generation)
3	L3	2kWp (50% of phase generation)
4	L1	1.33kWp (33% off phase total)
5	L2	1.33kWp (33% of phase 1 total amount)
6	L3	2kWp (50% of phase total)
7	L1	1.33kWp (33% off phase total)
8	L2	1.33kWp (33% of phase 1 total amount)





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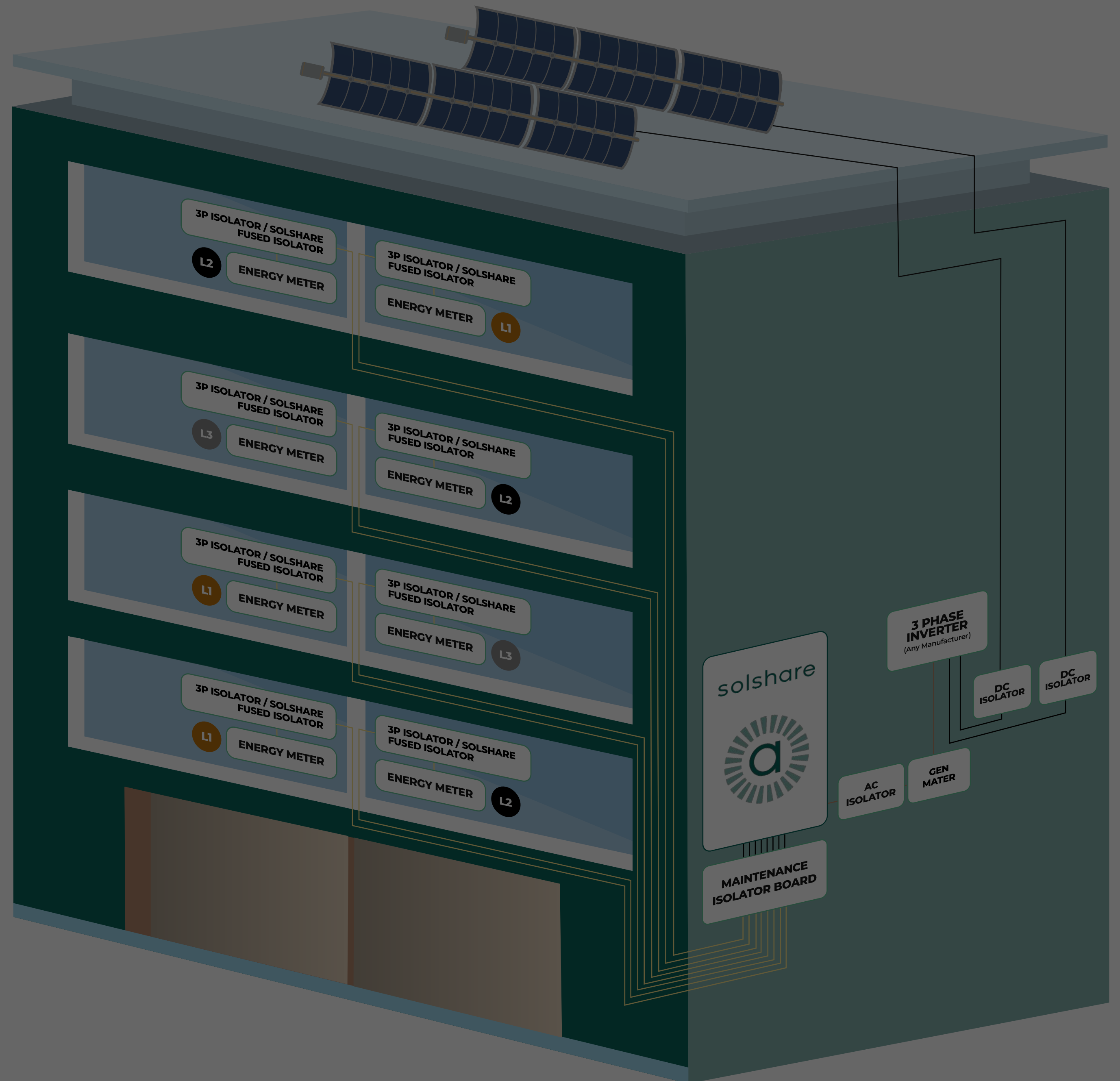


When energy meters are located in riser cupboards, the SolShare supply cable can be connected using either a 3-pole isolator or a SolShare fused isolator.

Click through the **speech bubbles** to learn more about each method.

(3 phase inverter 4kWp per phase)

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8	L2	1.33kWp (33% of phase 1 total amount)

### Typical designer's objective:

Each flat requires 1.3 kWp of solar capacity to achieve an EPC rating of B for the project.

When designing a SolShare system for a building with multiple flats, it is crucial to consider how the flats are connected to the electrical grid. This configuration is typically determined by the Distribution Network Operator (DNO) and is referred to as the phase of the supply.

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To ensure the solar system meets the Energy Performance Certificate (EPC) targets for each flat, it is necessary to calculate the total solar power generation capacity (kWp) required for each phase.

### Example scenario

In this example, the building has 8 flats, supplied as follows:

- L1: 3 flats
- L2: 3 flats
- L3: 2 flats

### EPC target calculation

Each flat requires 1.3 kWp of solar:

L1: 3 flats × 1.3 kWp = 3.9 kWp total

L2: 3 flats × 1.3 kWp = 3.9 kWp total

L3: 2 flats × 1.3 kWp = 2.6 kWp total

### System capacity

A 12 kWp solar system (using a 3-phase inverter) can generate approximately 4 kWp per phase.

### Outcome

Since the estimated generation per phase (4 kWp) exceeds the required generation per phase (L1: 3.9 kWp, L2: 3.9 kWp, L3: 2.6 kWp), the 12 kWp solar system provides sufficient output to meet the EPC targets for all flats in the building.





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8	L2	1.33kWp (33% of phase 1 total amount)

## SolShare fused isolator

The SolShare supply cable can be installed into a new sub-main board equipped with a Miniature Circuit Breaker (MCB).

The MCB should be rated to handle the total single-phase output of the selected inverter.

This board will also include a 100 A double-pole isolator and a fused isolator, allowing you to insert a fuse of your choice (e.g., 63 A, 80 A, or 100 A). This provides protection for the flat's main supply cable, particularly if it is longer than 3 meters.

### Key advantages:

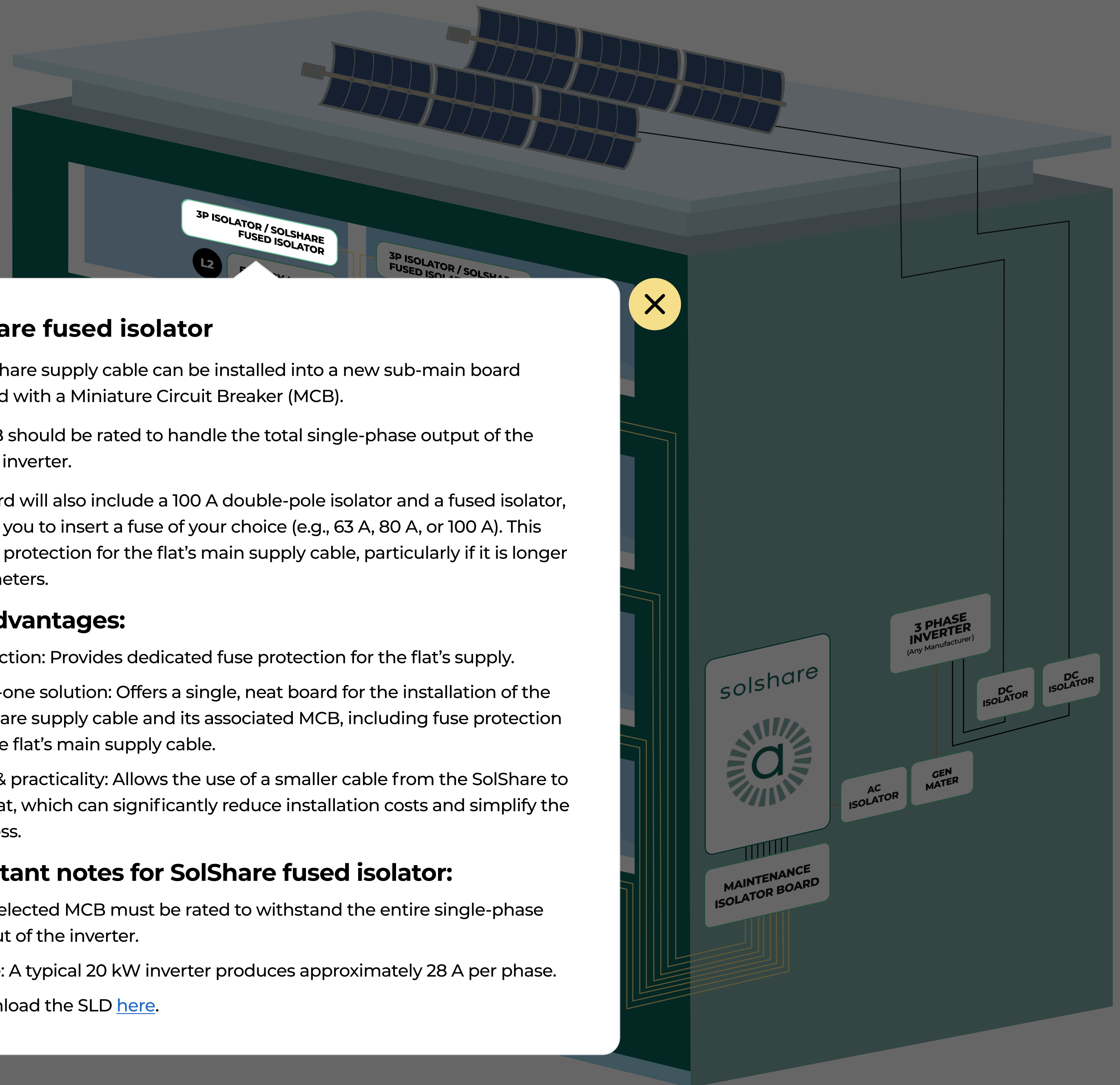
- Protection: Provides dedicated fuse protection for the flat's supply.
- All-in-one solution: Offers a single, neat board for the installation of the SolShare supply cable and its associated MCB, including fuse protection for the flat's main supply cable.
- Cost & practicality: Allows the use of a smaller cable from the SolShare to the flat, which can significantly reduce installation costs and simplify the process.

### Important notes for SolShare fused isolator:

- The selected MCB must be rated to withstand the entire single-phase output of the inverter.

Example: A typical 20 kW inverter produces approximately 28 A per phase.

- Download the SLD [here](#).



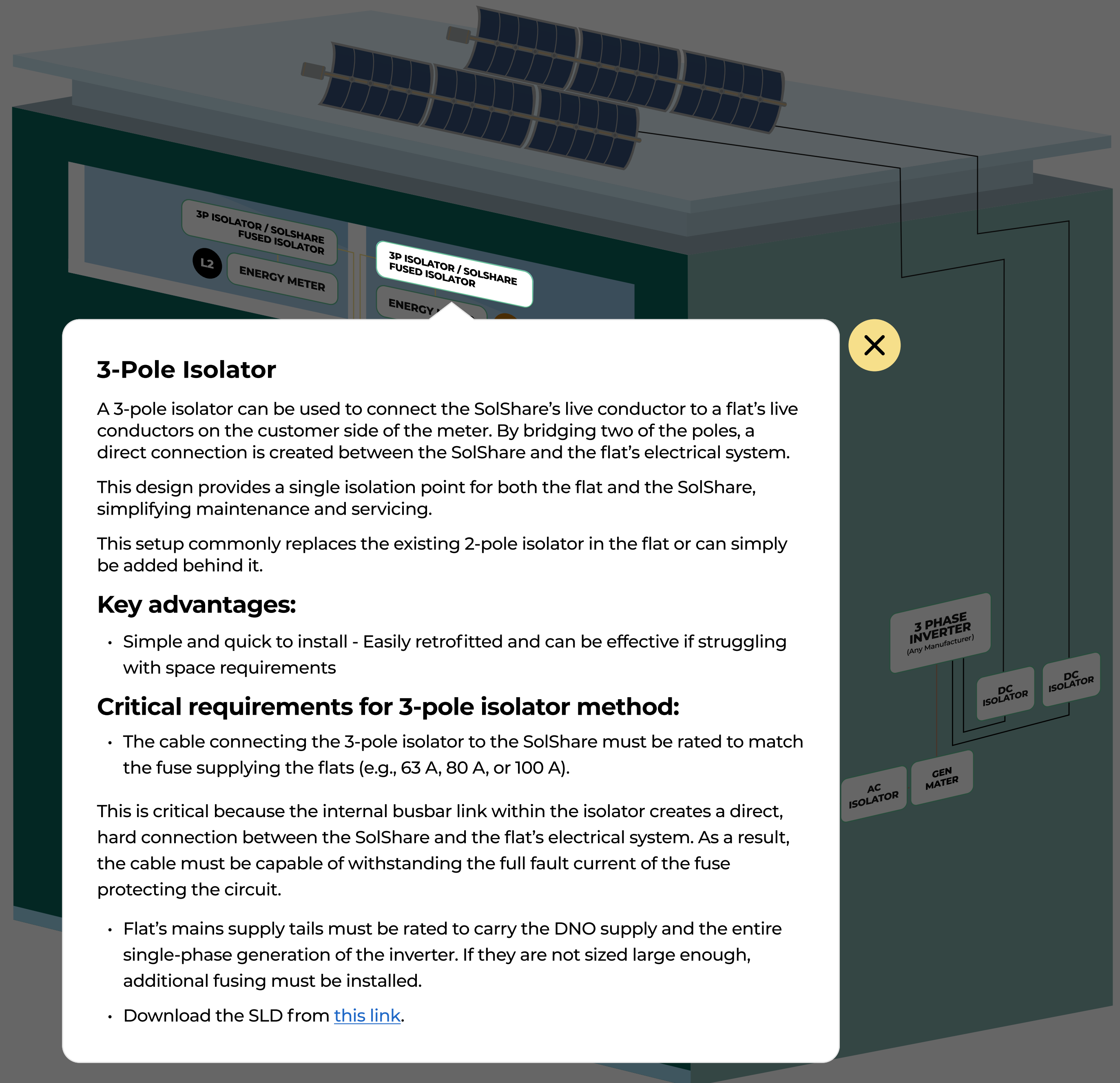


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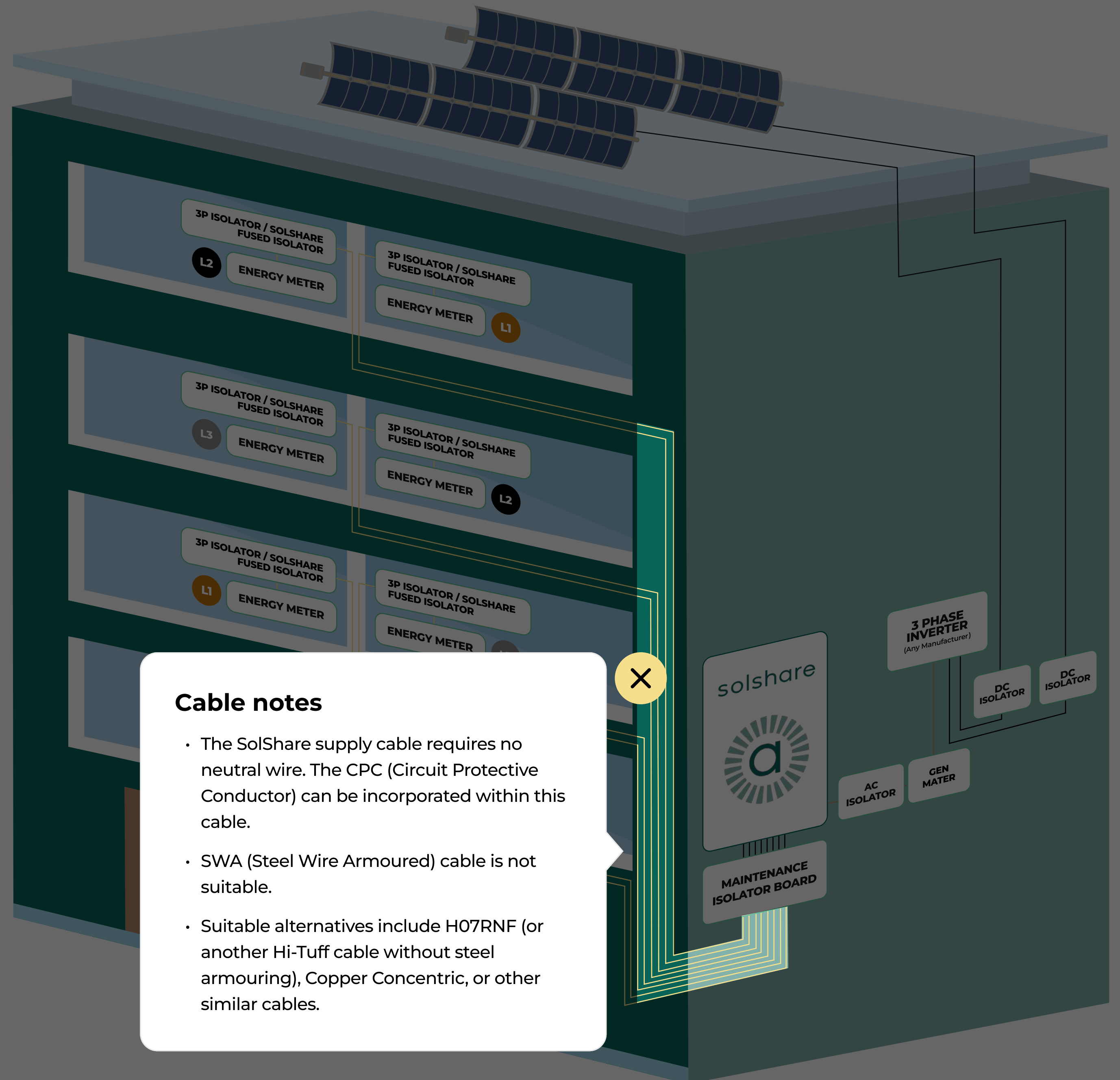


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8	L2	1.33kWp (33% of phase 1 total amount)



## Cable notes

- The SolShare supply cable requires no neutral wire. The CPC (Circuit Protective Conductor) can be incorporated within this cable.
- SWA (Steel Wire Armoured) cable is not suitable.
- Suitable alternatives include H07RNF (or another Hi-Tuff cable without steel armouring), Copper Concentric, or other similar cables.

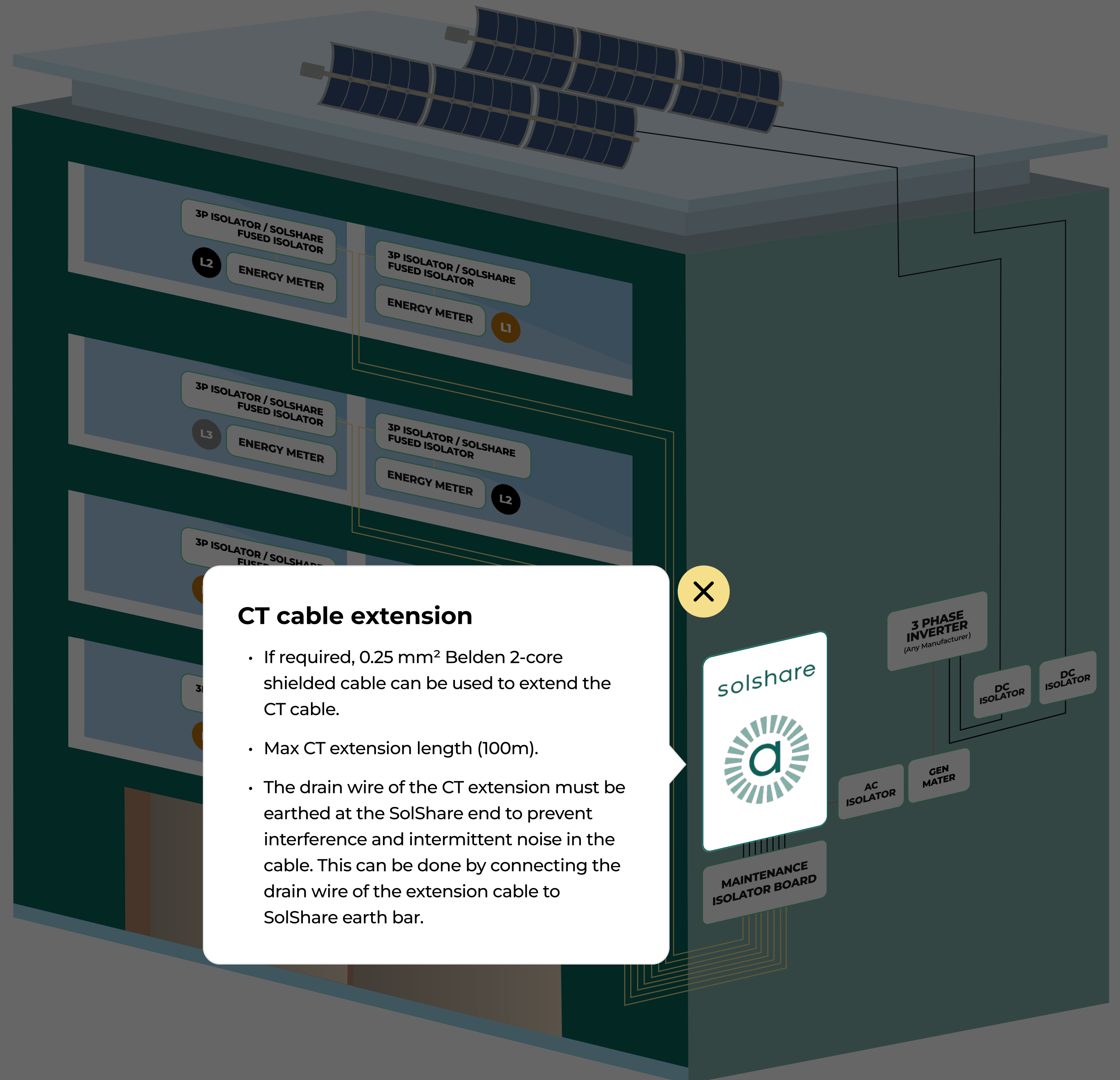


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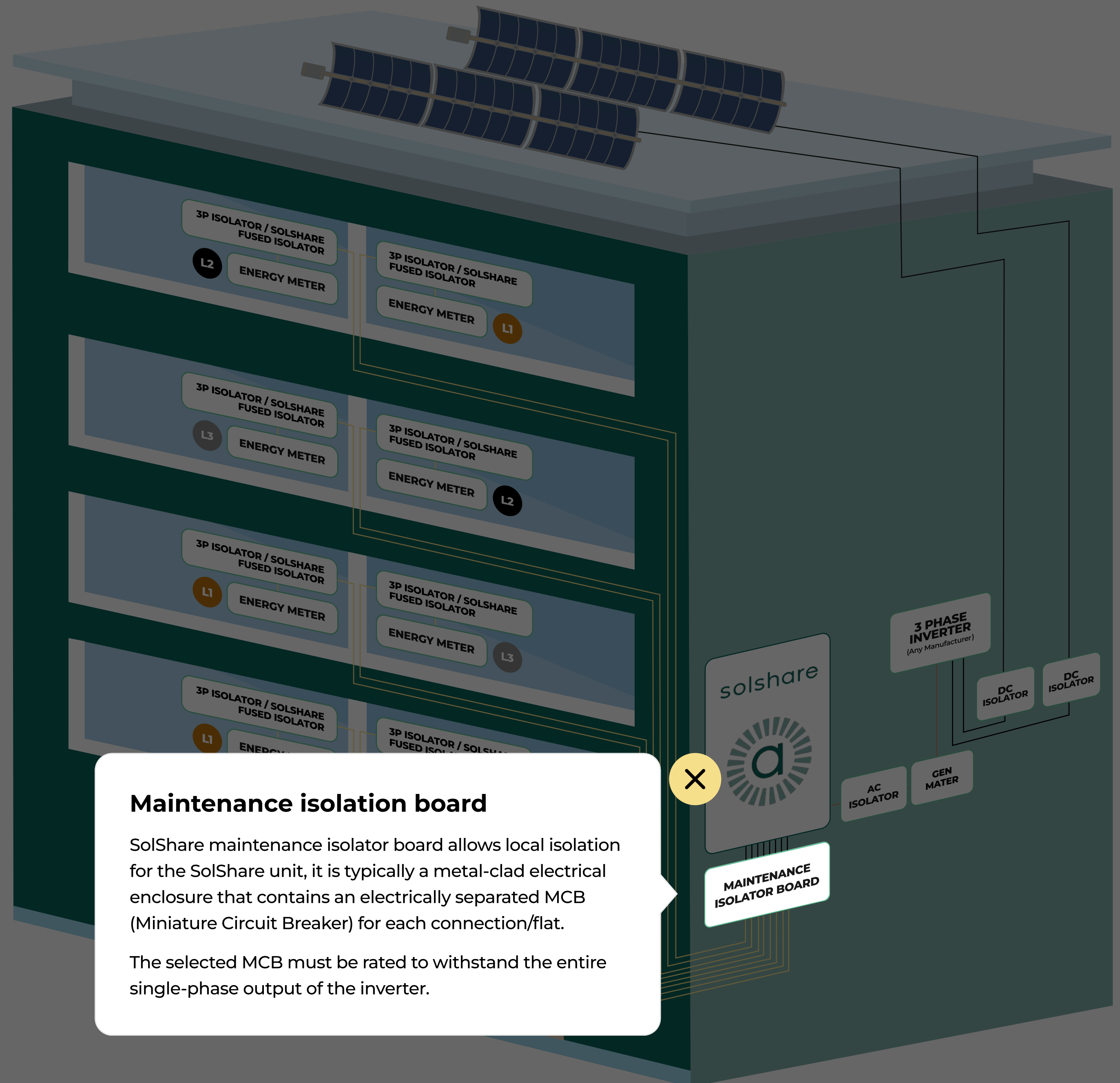


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**Maintenance isolation board**

SolShare maintenance isolator board allows local isolation for the SolShare unit, it is typically a metal-clad electrical enclosure that contains an electrically separated MCB (Miniature Circuit Breaker) for each connection/flat.

The selected MCB must be rated to withstand the entire single-phase output of the inverter.