



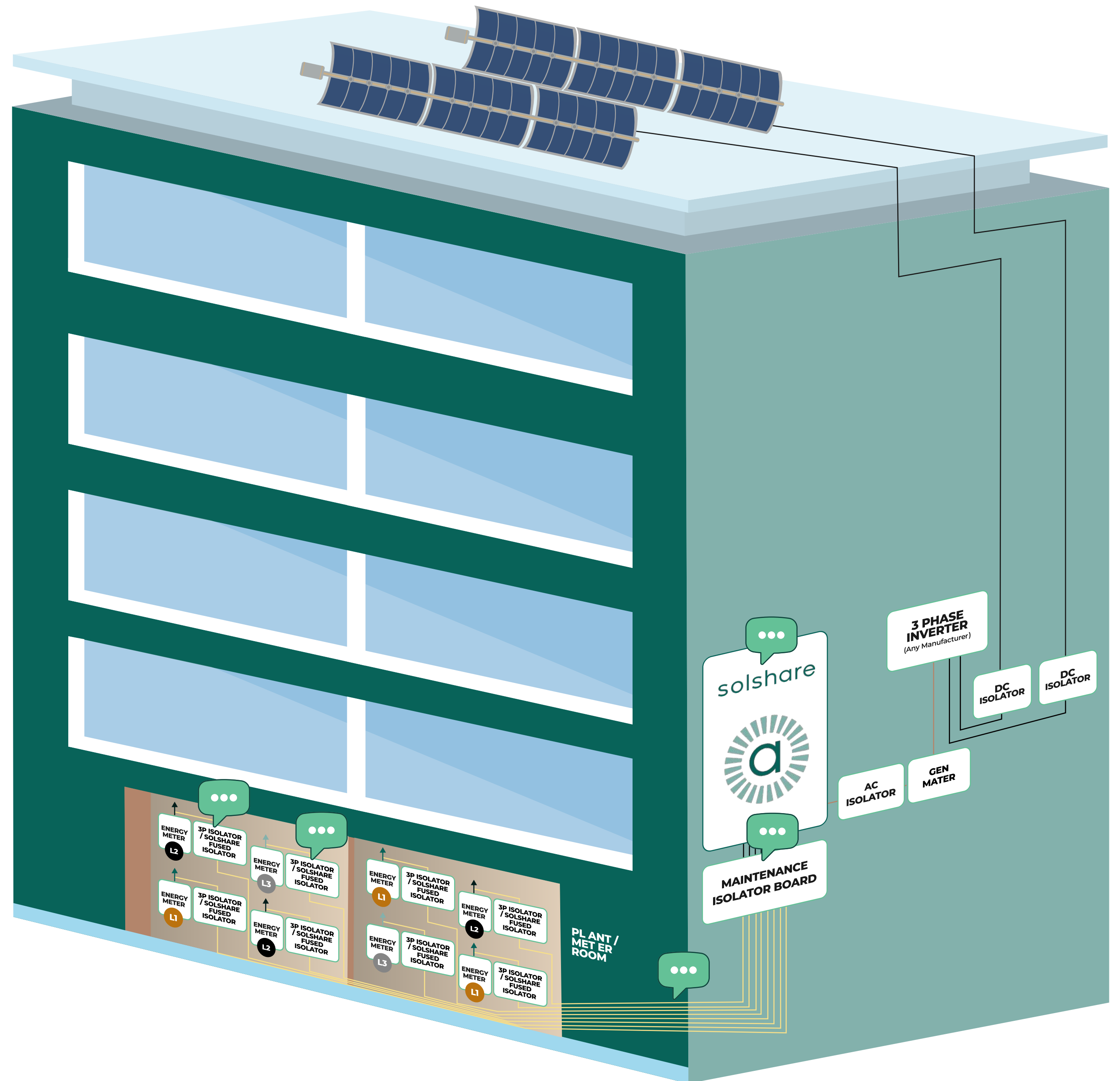
# Meters co-located

Design guidance: Importance of phase arrangements in flats



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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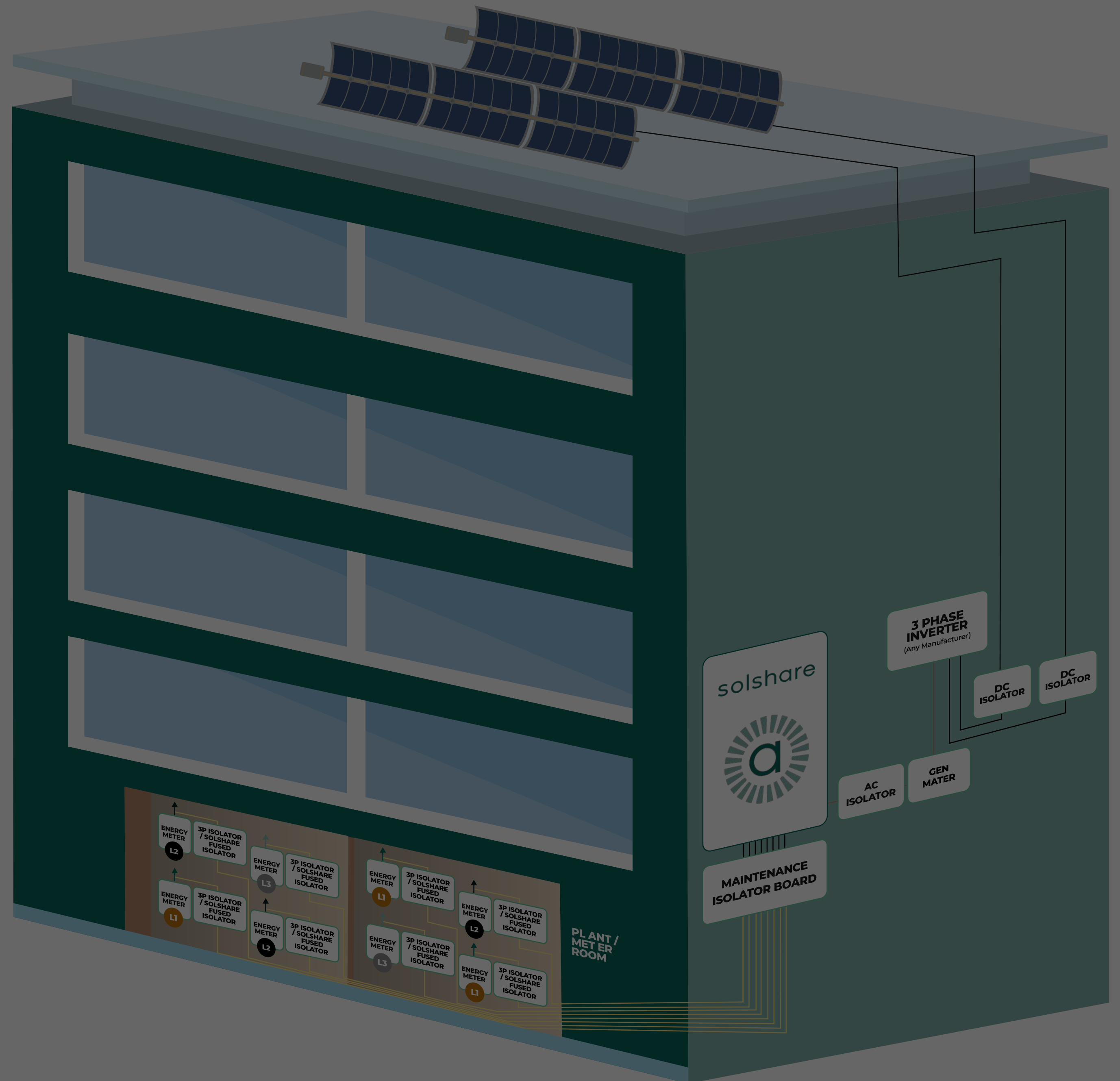


When energy meters are co-located, the SolShare supply cable can be connected using either a 3-pole isolator or a SolShare fused isolator.

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

(phase)

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### Typical designer's objective:

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

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

### Example scenario:

In this case, a building has 8 flats supplied as follows:

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

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

The EPC in this example has a set target for each flat, which in this case is 1.3 kWp.

L1: 3 flats x 1.3 kWp/flat = 3.9 kWp total

L2: 3 flats x 1.3 kWp/flat = 3.9 kWp total

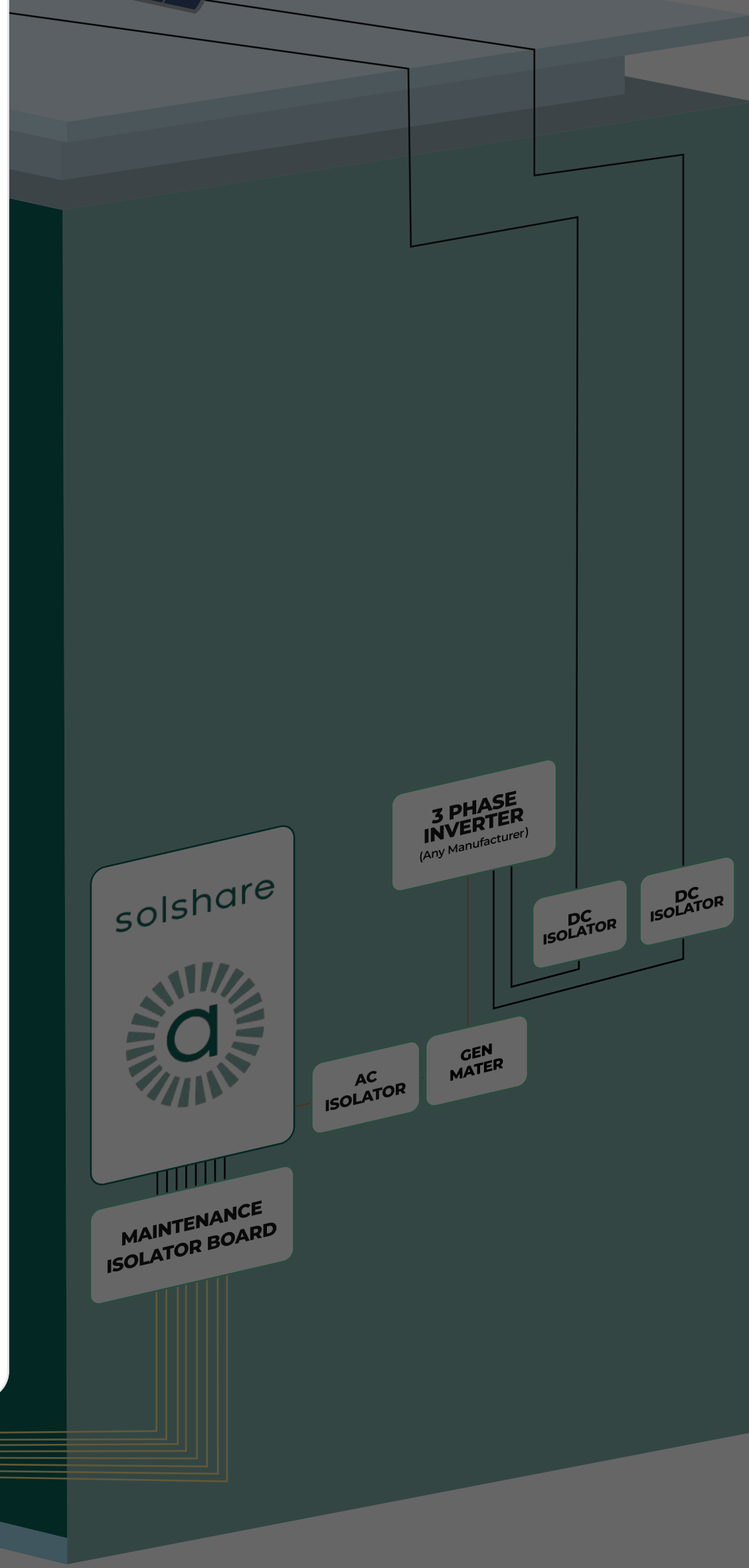
L3: 2 flats x 1.3 kWp/flat = 2.6 kWp total

### System capacity:

A 12 kWp solar system (using a 3-phase inverter) can provide 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 system is sufficient 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 Sub-Board

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:

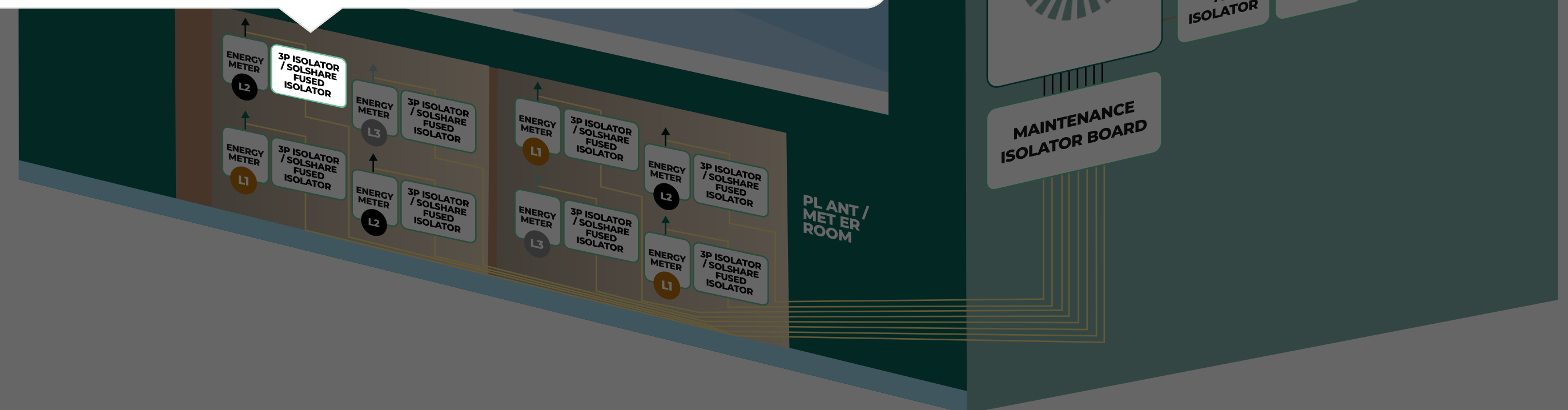
- Protection: Provides dedicated fuse protection for the flat's supply.
- All-in-one solution: Offers a single, neat board for the installation of the SolShare supply cable and its associated MCB, including fuse protection for the flat's main supply cable.
- Cost & practicality: Allows the use of a smaller 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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8	L2	1.33kWp (33% of phase 1 total amount)

## 3-Pole Isolator

A 3-pole isolator can be used to connect the SolShare's live conductor to a flat's live conductors on the customer side of the meter. By bridging two of the poles, a direct connection is created between the SolShare and the flat's electrical system.

This design provides a single isolation point for both the flat and the SolShare, simplifying maintenance and servicing.

This setup commonly replaces the existing 2-pole isolator in the flat or can simply be added behind it.

### Key advantages:

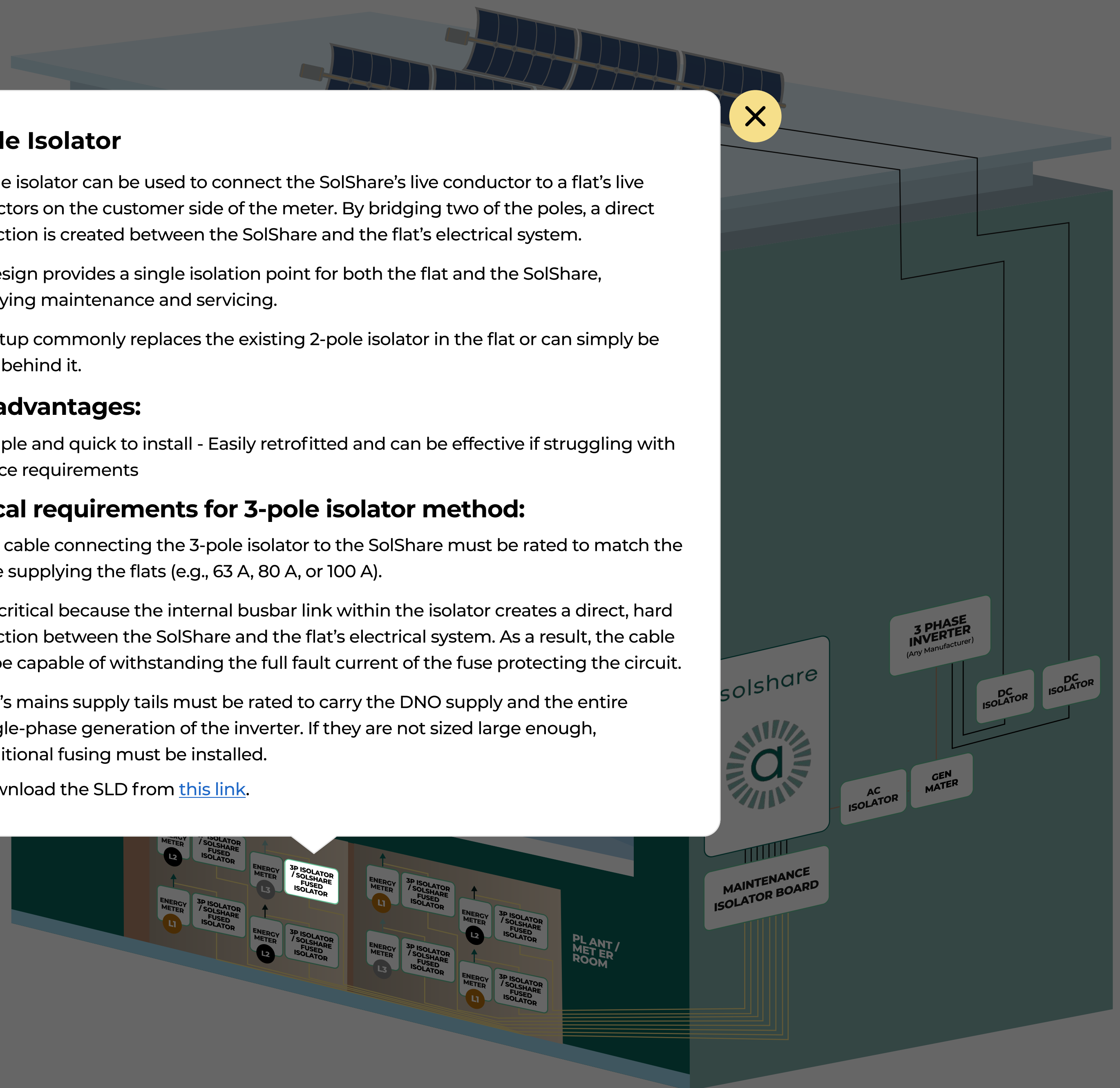
- Simple and quick to install - Easily retrofitted and can be effective if struggling with space requirements

### Critical requirements for 3-pole isolator method:

- The cable connecting the 3-pole isolator to the SolShare must be rated to match the fuse supplying the flats (e.g., 63 A, 80 A, or 100 A).

This is critical because the internal busbar link within the isolator creates a direct, hard connection between the SolShare and the flat's electrical system. As a result, the cable must be capable of withstanding the full fault current of the fuse protecting the circuit.

- Flat's mains supply tails must be rated to carry the DNO supply and the entire single-phase generation of the inverter. If they are not sized large enough, additional fusing must be installed.
- Download the SLD from [this link](#).





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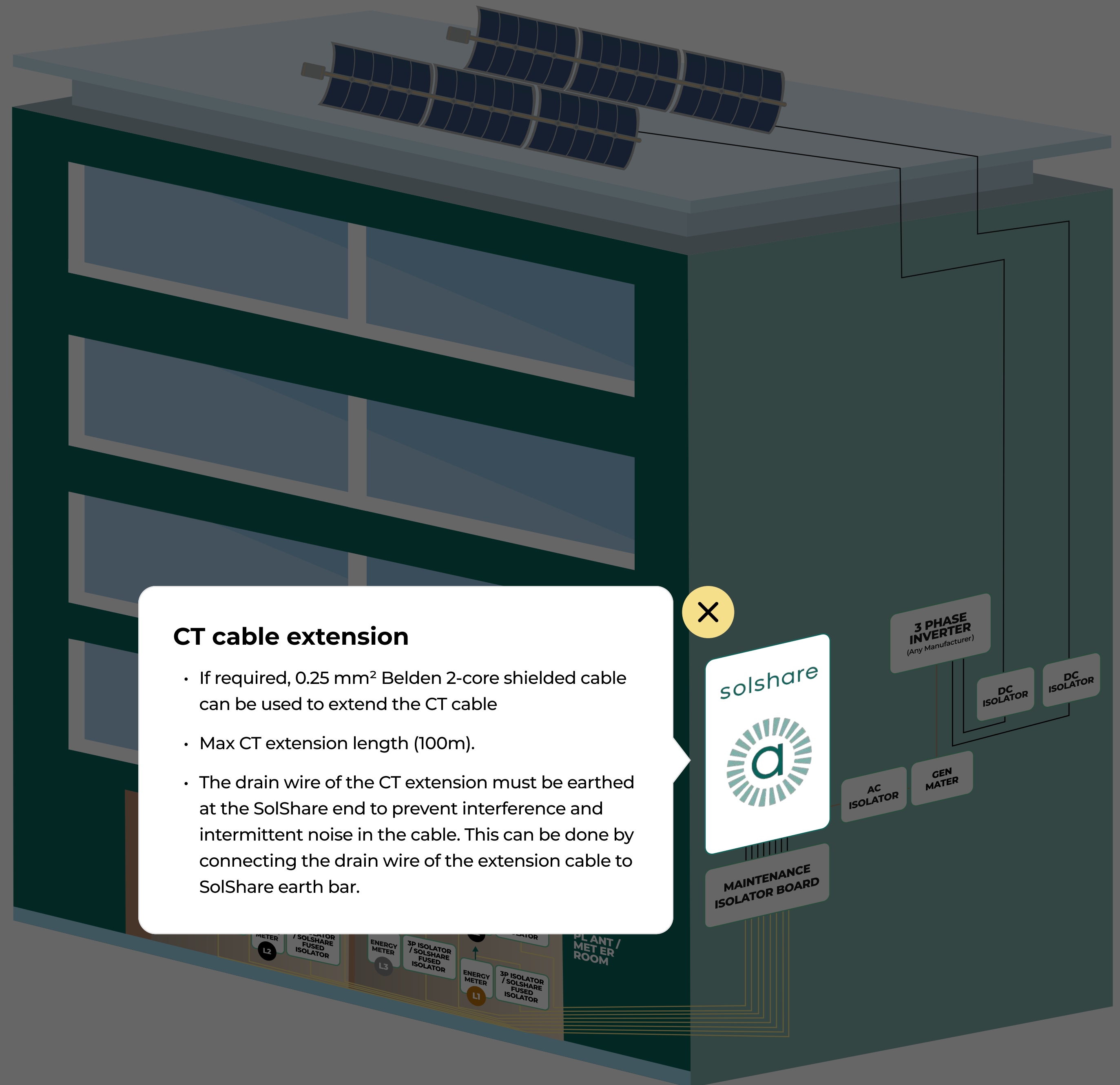


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