APsystems

APstorage ELT Series

CT Installation Guide

CTs: The System's "Eyes" for Energy



Measure current flow for the PCS



Monitor energy from Grid, PV



WARNING: Incorrect CT installation = **Wrong system data & poor performance!**

The Golden Rule

The Golden Rule: Arrow Direction



Grid / PV Side

PCS Unit

CT Arrow Must Point Towards PCS

The Golden Rule

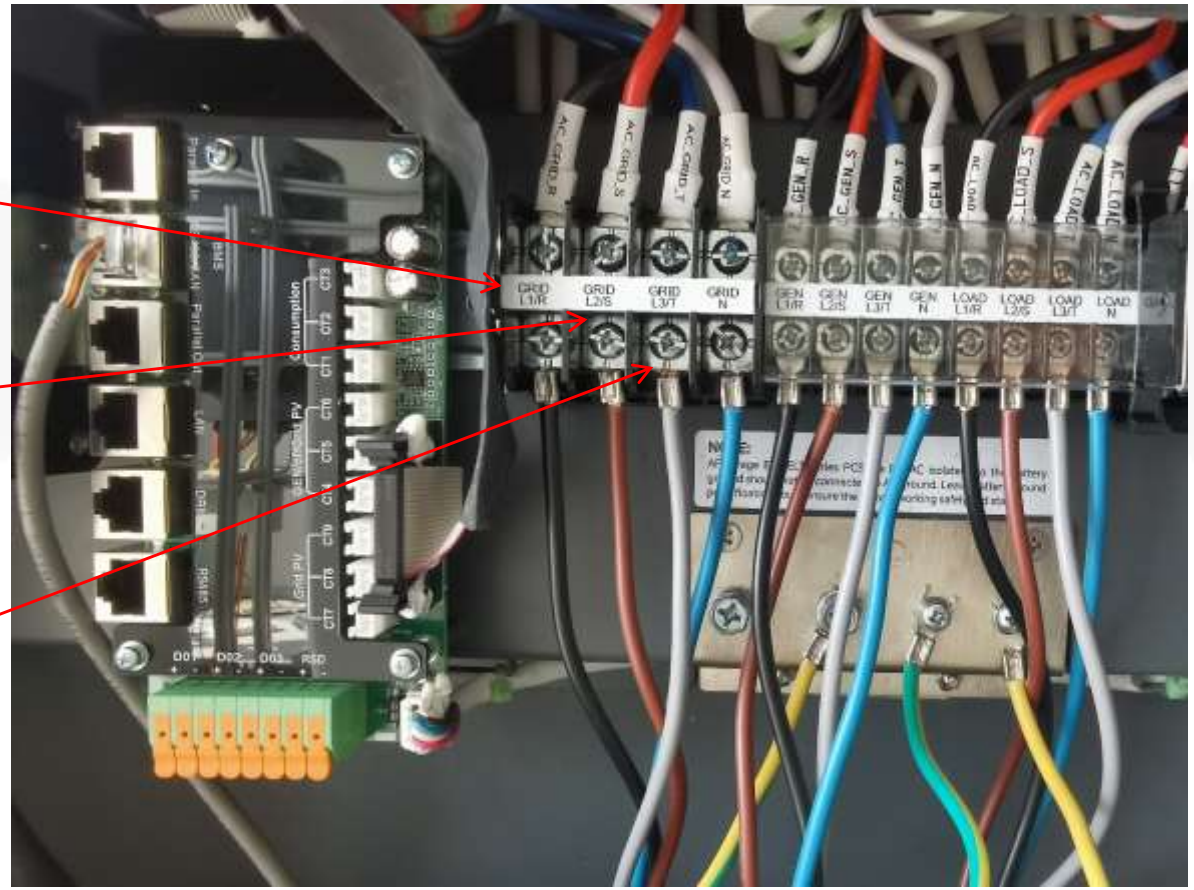
The Golden Rule: Correct Phase Matching

Which one is L1/R?

Grid L1/R

Grid L2/S

Grid L3/T



CT & Port Overview

Where to Place and Plug In Your CTs

CT Number	Measures…	Clamp On…	Plug Into…
CT1	Grid Power	Grid Cable L1/R	CT1 Port
CT2	Grid Power	Grid Cable L2/S	CT2 Port
CT3	Grid Power	Grid Cable L3/T	CT3 Port
CT7	PV Production	PV Cable L1/R	CT7 Port
CT8	PV Production	PV Cable L2/S	CT8 Port
CT9	PV Production	PV Cable L3/T	CT9 Port

Install Grid CTs – Step 1: Identify

1. **Identify** the **Grid** cables (L1/R, L2/S, L3/T)

*Tip: Use standard wire colors if available (e.g., **Black → L1/R, Brown → L2/S**, Grey → L3/T).*

CT1 Port
CT2 Port
CT3 Port



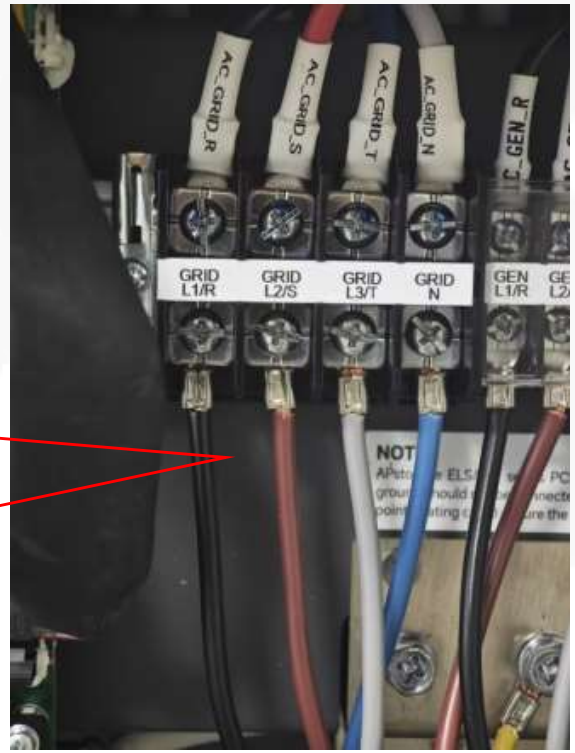


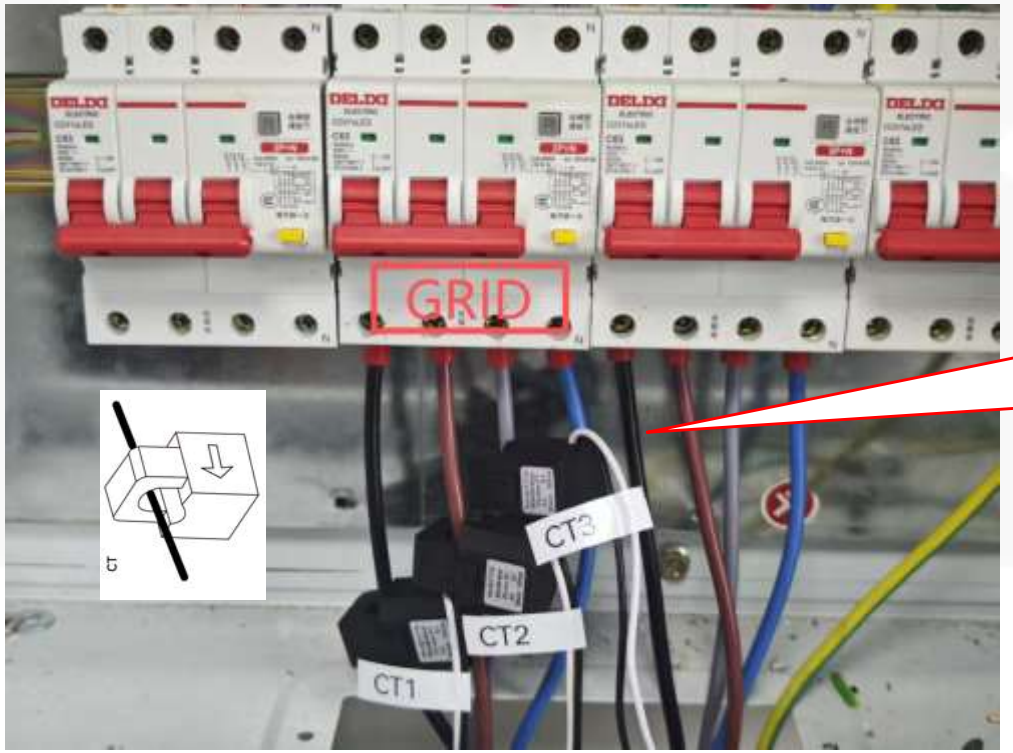
CT1: Grid L1/R
CT2: Grid L2/S
CT3: Grid L3/T

Install Grid CTs – Step 2: Clamp

2. **Clamp CT1, CT2, CT3** onto each cable
3. **Check** the arrow points **TOWARDS the PCS**

CT1: Grid L1/R
CT2: Grid L2/S
CT3: Grid L3/T



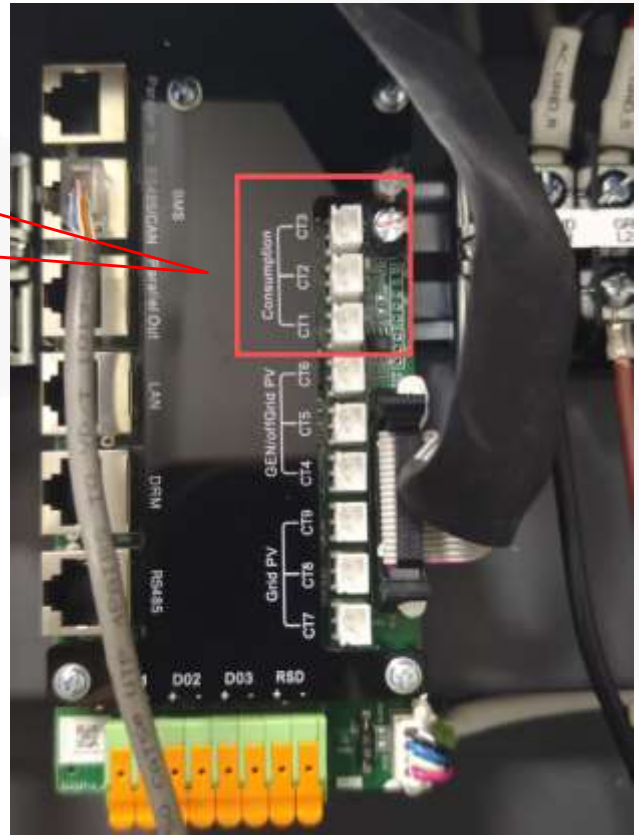


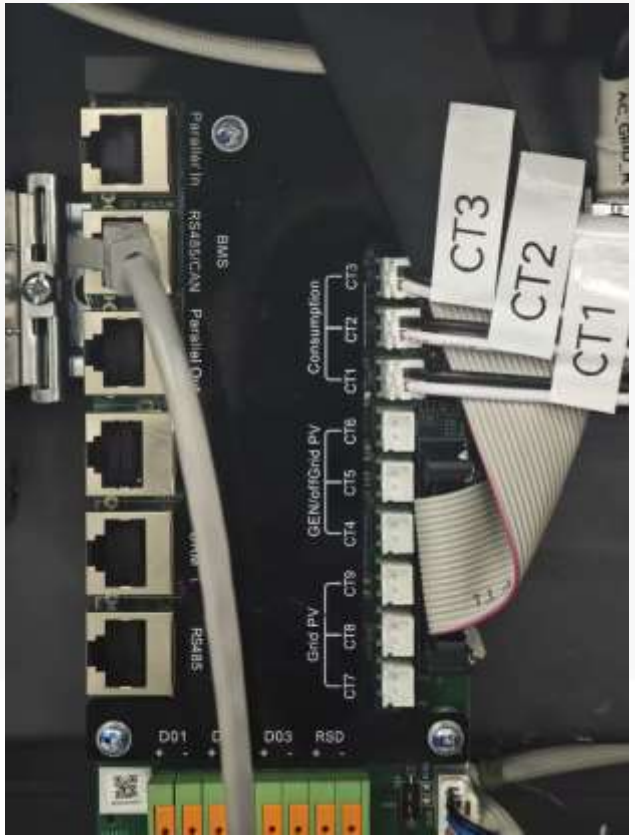
Arrow to PCS

Install Grid CTs - Step 3: Connect

4. **Connect the wires** to the matching terminals (CT1, CT2, CT3) on the PCS

CT1 Port
CT2 Port
CT3 Port



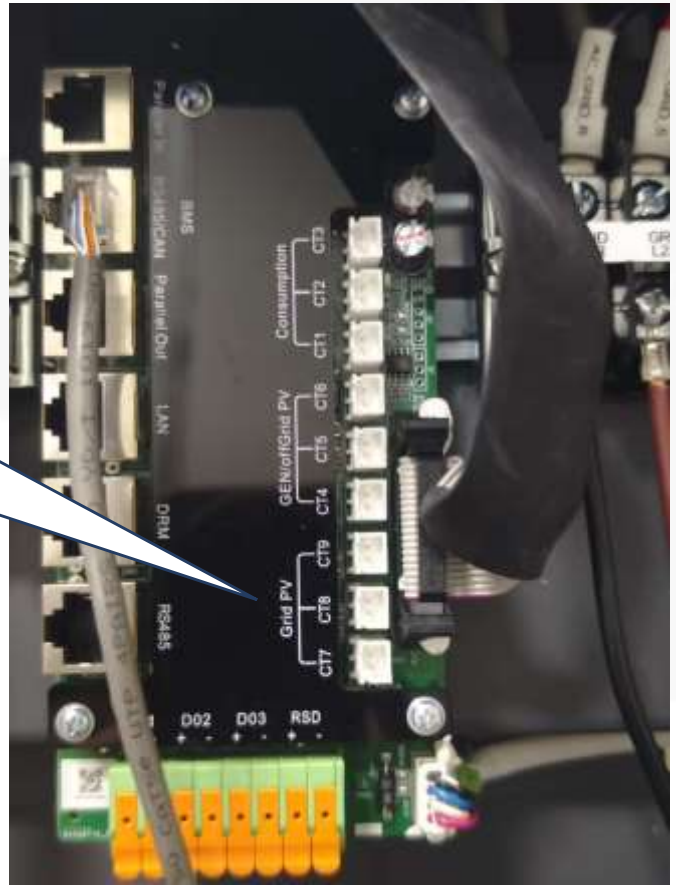


Install PV Production CTs – Step 1: Identify

1. **Identify** the **PV Production** cables (L1/R, L2/S, L3/T)

Tip: Use standard wire colors if available (e.g., ***Black → L1/R, Brown → L2/S,*** *Grey → L3/T).*

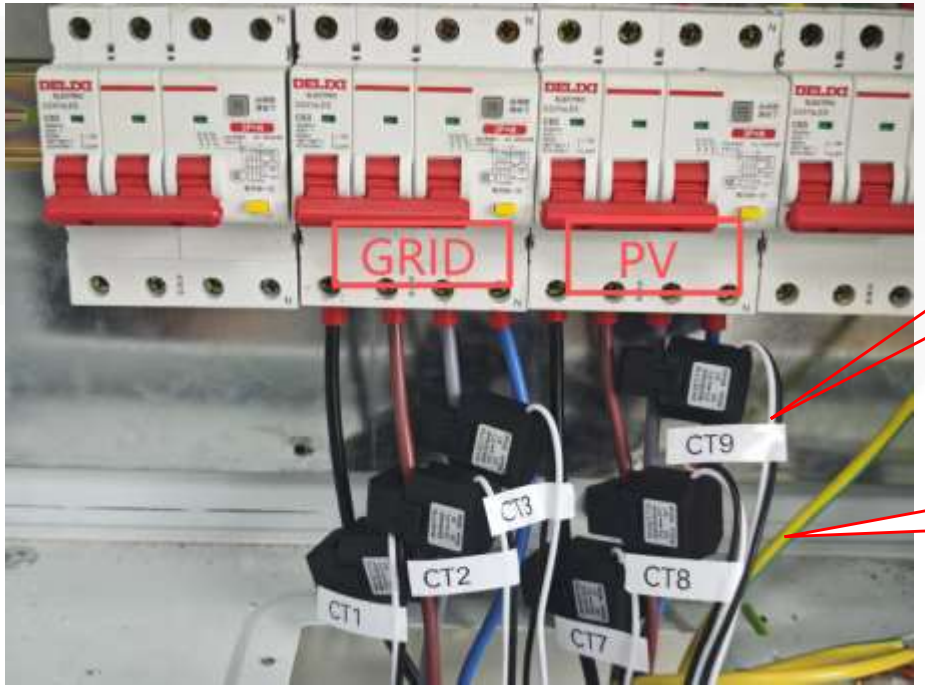
CT7 Port
CT8 Port
CT9 Port





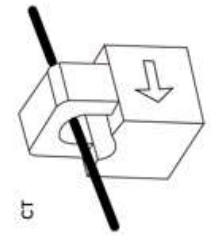
Install PV Production CTs – Step: Clamp

2. **Clamp CT7, CT8, CT9** onto each cable
3. **Check** the arrow points **TOWARDS the PCS**



CT7: PV Production L1/R
CT8: PV Production L2/S
CT9: PV Production L3/T

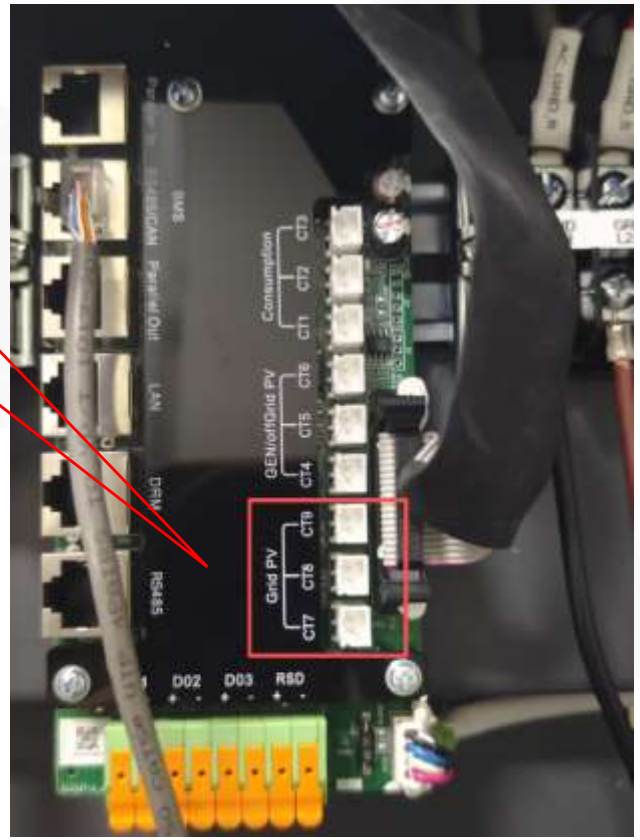
Arrow to PCS

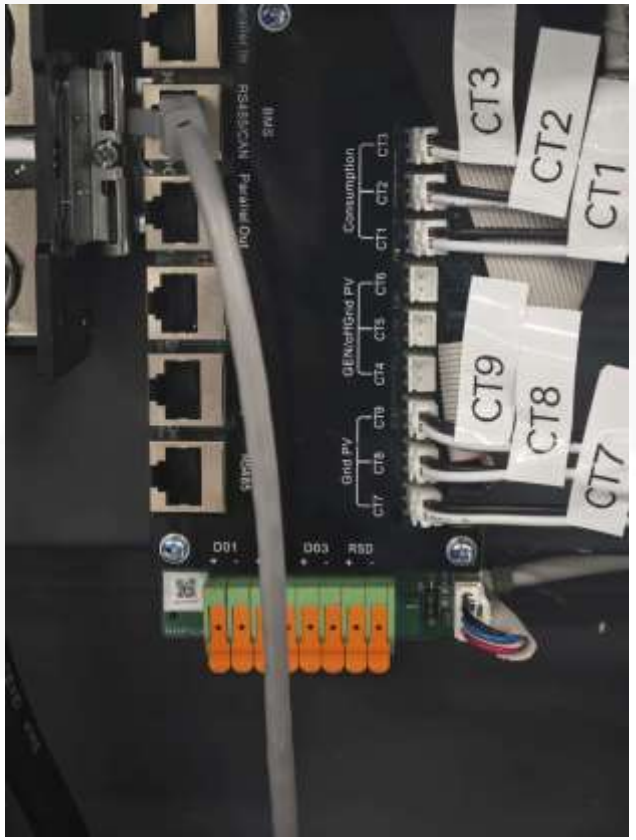


Install PV Production CTs – Step 3: Connect

4. **Connect the wires** to the matching terminals (CT7, CT8, CT9) on the PCS

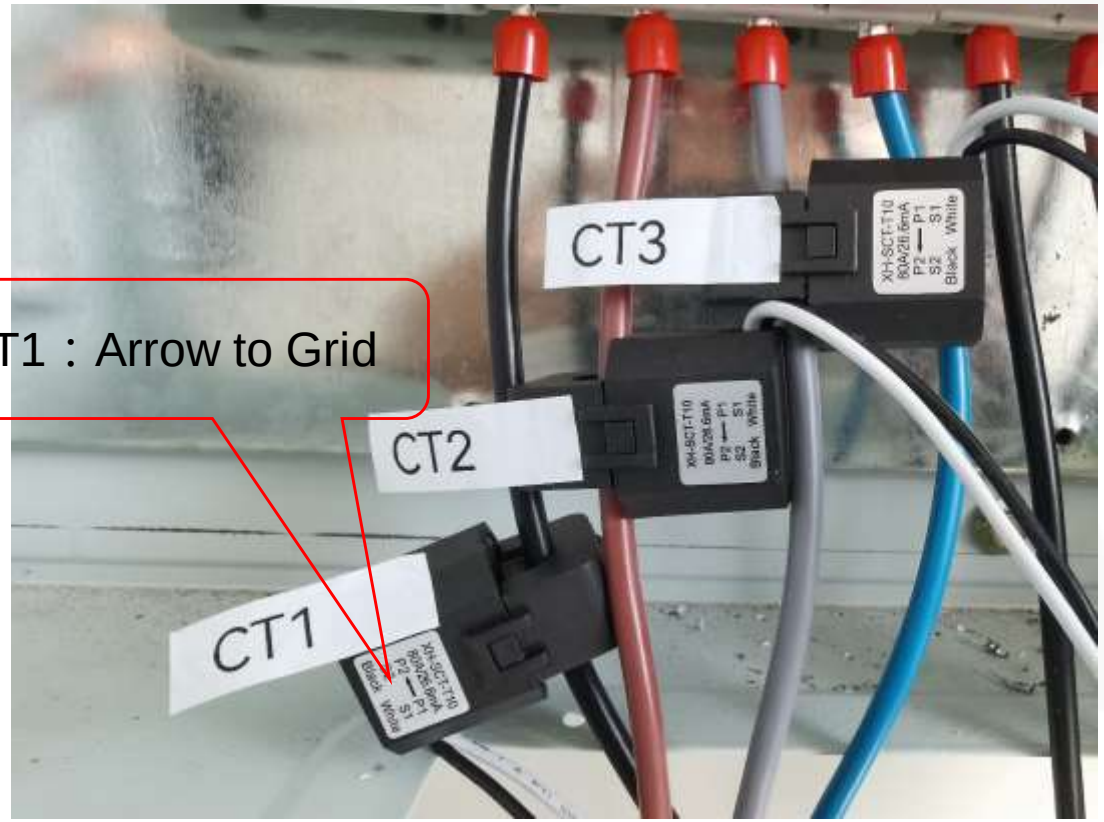
CT7 Port
CT8 Port
CT9 Port





Common Error 1: Wrong Direction

Wrong
Arrow to Grid = False Data



Right
Arrow to PCS = Accurate Data



Common Error 2: Wrong Phase

Wrong
Phases Mixed Up



Right
CT Phase = Cable Phase
(CT1 → L1, CT2 → L2, CT3 → L3)



Common Error 3: Wrong Port

Wrong

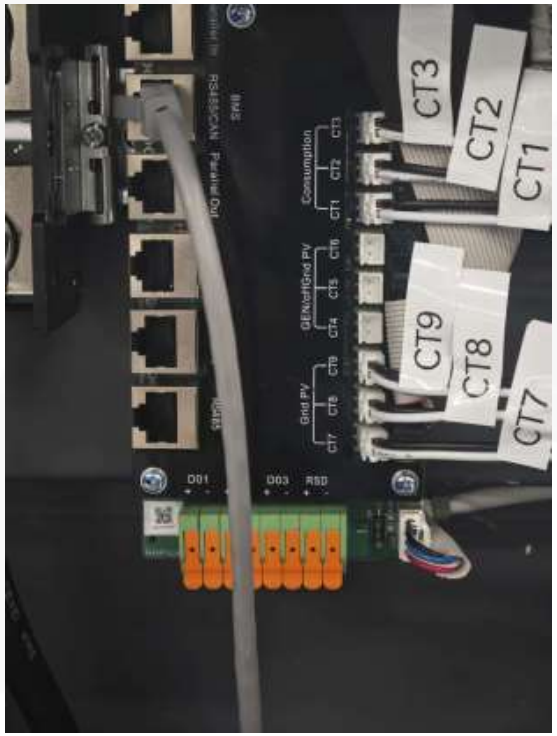
Grid CT in PV Port

CT1 is plugged into CT7
CT2 is plugged into CT8
…



Right

Grid CTs (1,2,3) to Grid ports
PV CTs (7,8,9) to PV ports



CT1 is plugged into CT1
CT2 is plugged into CT2
…

Final Checklist

☐ 1. All CT arrows point **TOWARDS** the PCS unit.

☐ 2. **Grid CTs** (1,2,3) are on **Grid** cables.

☐ 3. **PV Production CTs (7,8,9)** are on **PV** cables (GEN side).

☐ 4. All CT plugs are securely connected to the **correct ports**.

☐ 5. CT wires are properly routed and not pinched.

✓ **If all boxes are checked, your CTs are correctly installed!**

Appendix

If microinverters are connected to the **GEN** port, CT installation is NOT required for them.

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THANK YOU