

Current Transformer connection info

Disclaimer

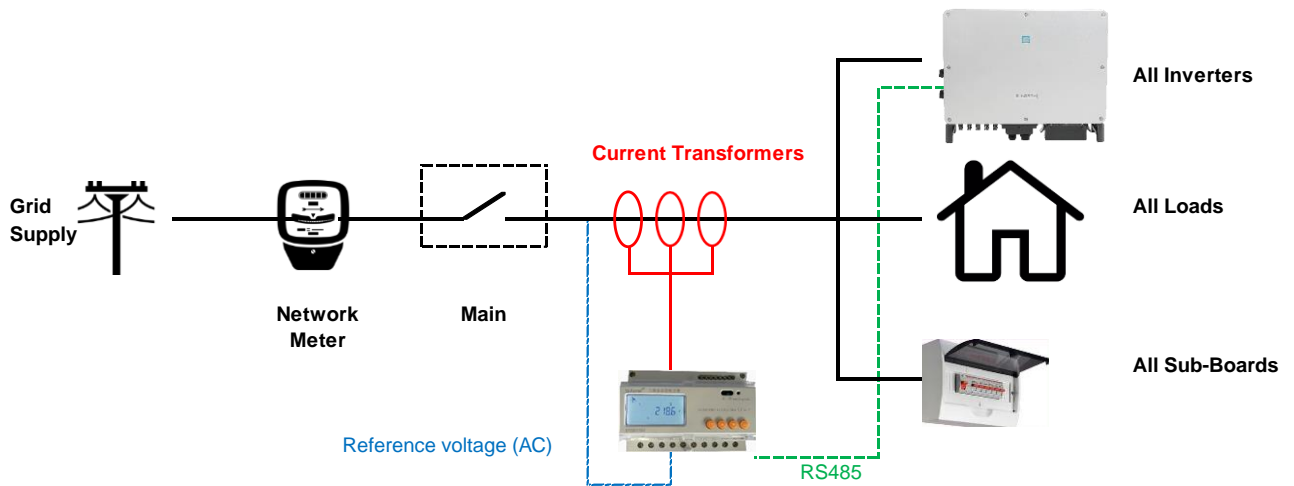
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Overview:

Current transformers are used where the supply is larger than 100 Amps. The CT's measure current flow, and the system then references it against voltage in the meter to calculate power ($V \times I = W$).

The reference voltage is taken from the busbar, and the CT's are placed between the grid / main switch, and all loads and inverters.

Split-core CT's are easier because the bus bar doesn't need to be removed first.



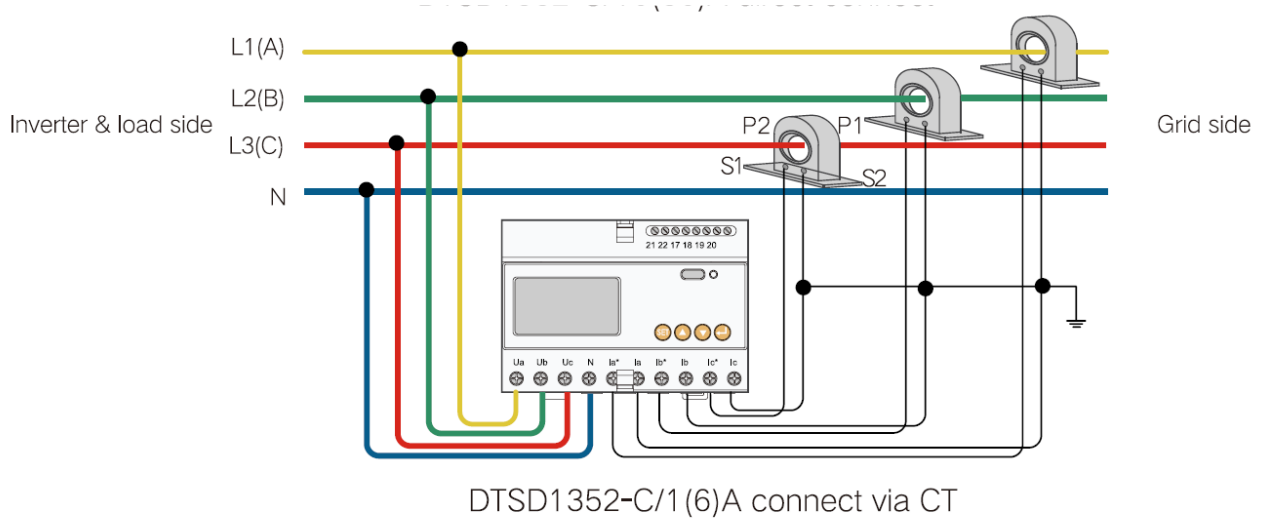
Picture 1 – Meter and CT placement

Overall wiring:

When connecting Current Transformers to a Sungrow 3-Phase meter, the polarity and phasing are vital for correct operation. Reverse polarity of any or all of the CT's will result in false readings and incorrect operation.

Always ensure the secondary current is 5 Amps (i.e. 100/5)

The diagram below shows the general connection layout. Please note the grounding of the S2 lines.



Picture 2 – Connection diagram

Split-core CT:



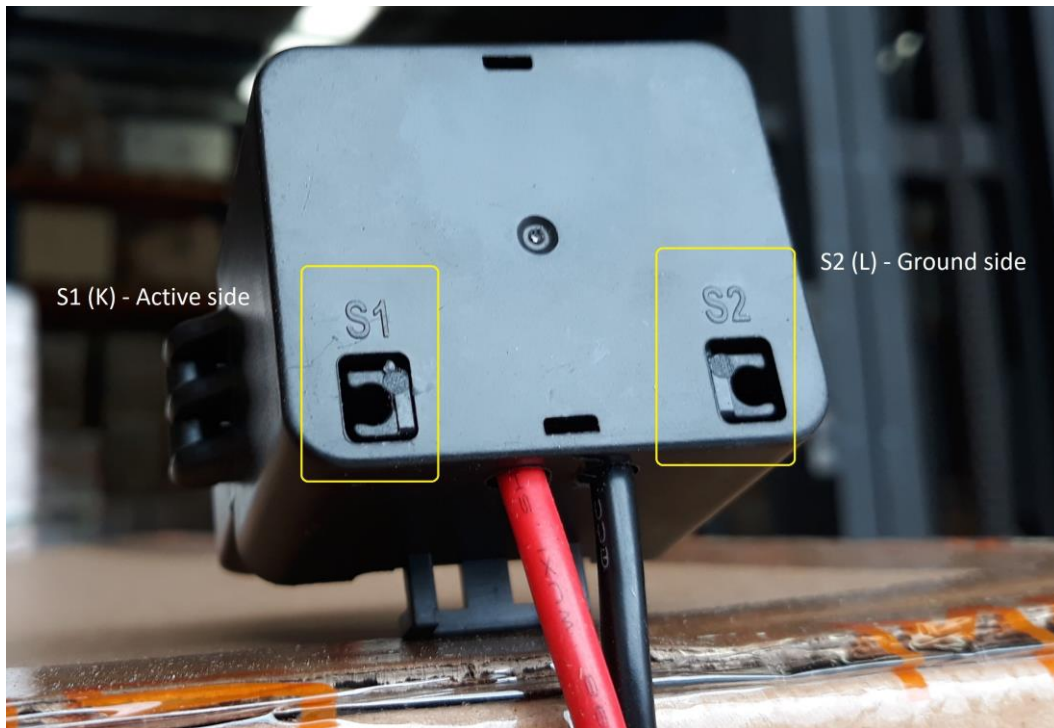
Picture 3 – Example split-core CT

CT connection detail:**P1 and P2 identification:**

The CT's are polarised, and there is an arrow on the inside which always points to the loads / inverter. P1 faces grid and P2 faces loads / inverter.



Picture 4 – P1 and P2 polarity with arrow

S1 and S2 identification:

Picture 5 – S1 and S2 connection

S1 (K) is the active wire, and S2 (L) is ground

All three ground wires are common.

Ensure the correct phasing is also observed, otherwise inaccurate load readings will result.

Testing the correct polarity of CT's:

This is best done with the inverter off (PV disconnected and AC power still on).

Log into the inverter using the 'Local Access' feature of the iSolarCloud App. This will give real time data.

With the PV power off, remove all loads from the distribution board (as much as practical). Introduce a known load on each phase one at a time, and confirm load on the iSolarCloud App.

If it shows export, the CT is reverse polarity.

If the issue persists after following above procedures, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au, Monday- Friday 9am - 5pm (AEDT).