Troubleshooting

Meter AXIhycon

260923

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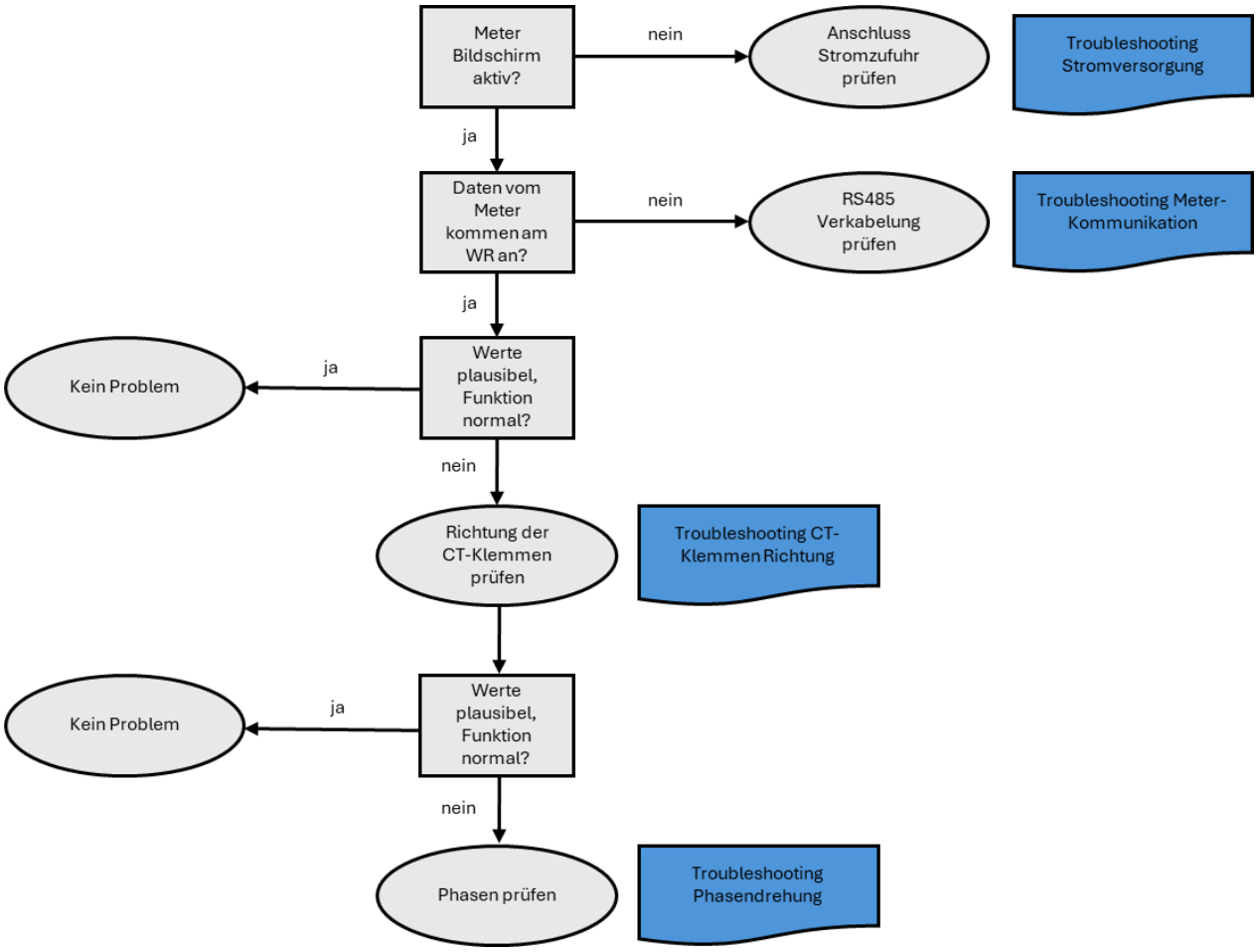
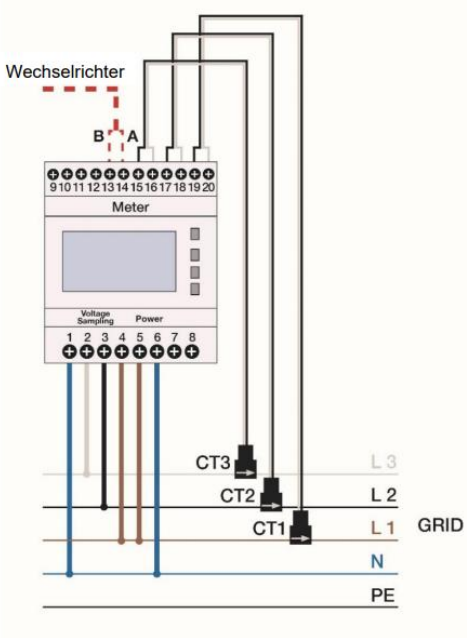
1. OVERVIEW – TROUBLESHOOTING THE METER

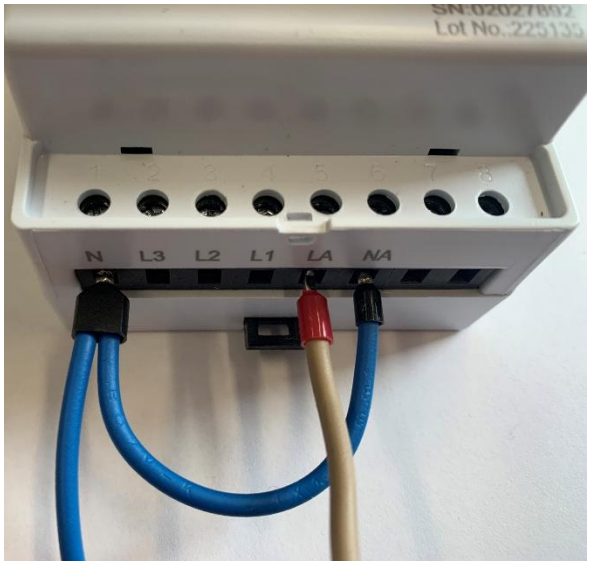


2. TROUBLESHOOTING THE POWER SUPPLY

2.1 CHECKING THE WIRING

- The neutral conductor must be connected to terminal N (1) and terminal NA (6).
- One phase must be connected to terminal LA (5).
- If the meter display remains blank, verify that the circuit-breaker is switched on and that the phase conductors carry voltage.





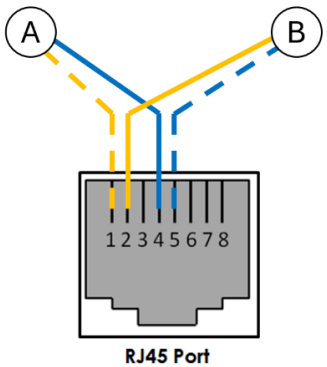
3. TROUBLESHOOTING METER COMMUNICATION

3.1 CHECKING THE WIRING

Before installation, verify that the battery system is compatible with the selected inverter.

- At the inverter, plug the cable labelled **METER** into the socket likewise labelled **Meter**.
- At the meter, insert the conductor labelled **B** into terminal **TXB (13)** and the conductor labelled **A** into terminal **TXA (14)**.

The pins of the meter port is shown below. RS485 A and B are available twice. At least for longer distances, all four ouns should be used. Do not connect A and B in short circuit, as this might damage the inverter.



3.2 CHECKING THE RS-485 SIGNAL AT THE METER

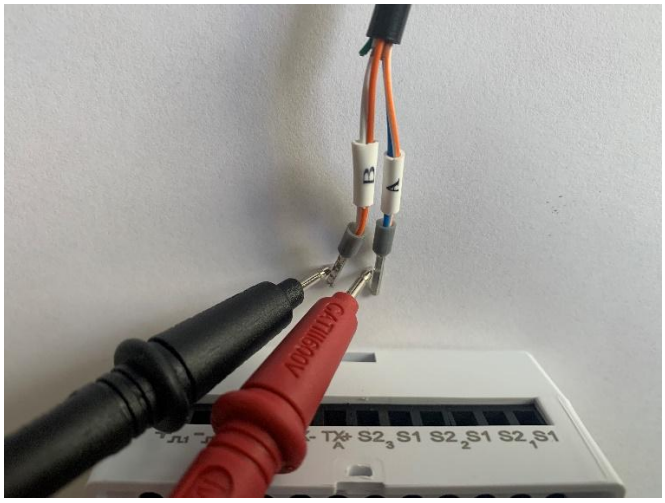
- Disconnect the cable from the inverter at the meter.
- Measure the DC voltage between **TXB (13)** and **TXA (14)**.
- A DC voltage between **1 V and 5 V** should be present.
- If no voltage is present, the meter is probably defective.

3.3 CHECKING THE RS-485 SIGNAL AT THE CABLE

To test whether the cable is intact and a signal from the inverter reaches the meter, the inverter must be switched **on**.

- Disconnect the cable from the inverter at the meter.
- Measure the DC voltage between the A and B conductors.
- A DC voltage between 1 V and 5 V should be present.

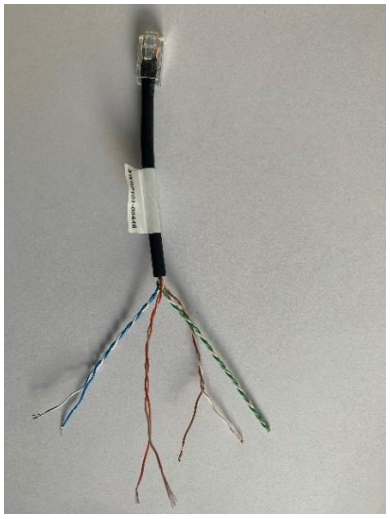
- If no voltage is present, either the cable is defective or the inverter is not sending a signal (see step 3.4).



3.4 CHECKING THE RS-485 SIGNAL AT THE INVERTER

This check is required if, in step 3.3, no voltage was detected at the cable end.
The inverter must be switched **on**.

- Disconnect the meter cable at the inverter.
- Measure the DC voltage at the inverter's meter port between pin 2 and pin 4. If the test probes are too large, use a short cable piece as shown in the photo to contact the blue and orange leads.
- A DC voltage between 1 V and 5 V should be present.
- If no voltage is present, the meter port of the inverter is probably defective.

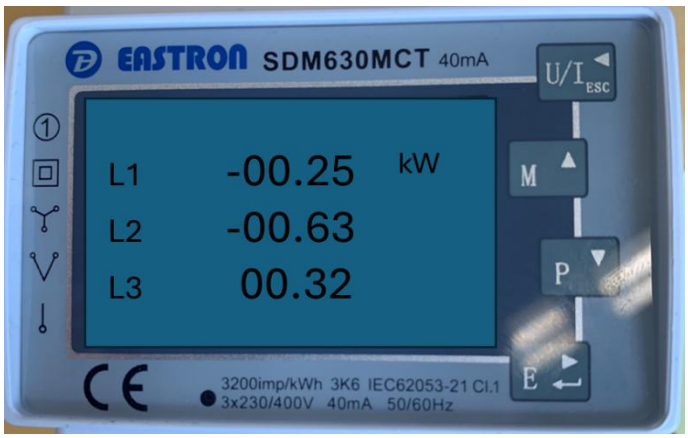


4. TROUBLESHOOTING CT-CLAMP ORIENTATION

4.1 CHECK VIA THE METER DISPLAY

- Switch the battery off.
- Switch the photovoltaic system off.
- On the meter, press the P button.
- If loads are connected on all three phases, each phase must show a negative power value (import from the grid).
- If overall household load is too low or not present on all phases, switch the battery on and activate a forced grid charge; this will create an import on all three phases.
- If one or more phases show a positive value, the CT clamp on those phases is reversed – see steps 4.2 and 4.3.

Example: In the picture below, the CT clamp on **Phase 3** is reversed.



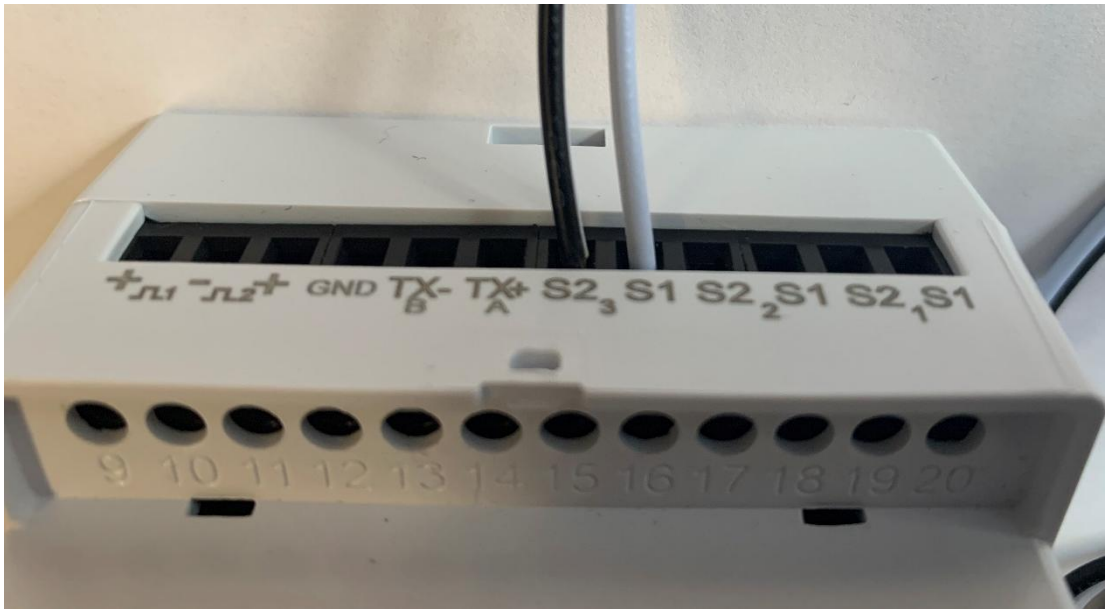
Faulty connection

Correct connection

4.2 CHECKING THE WIRING

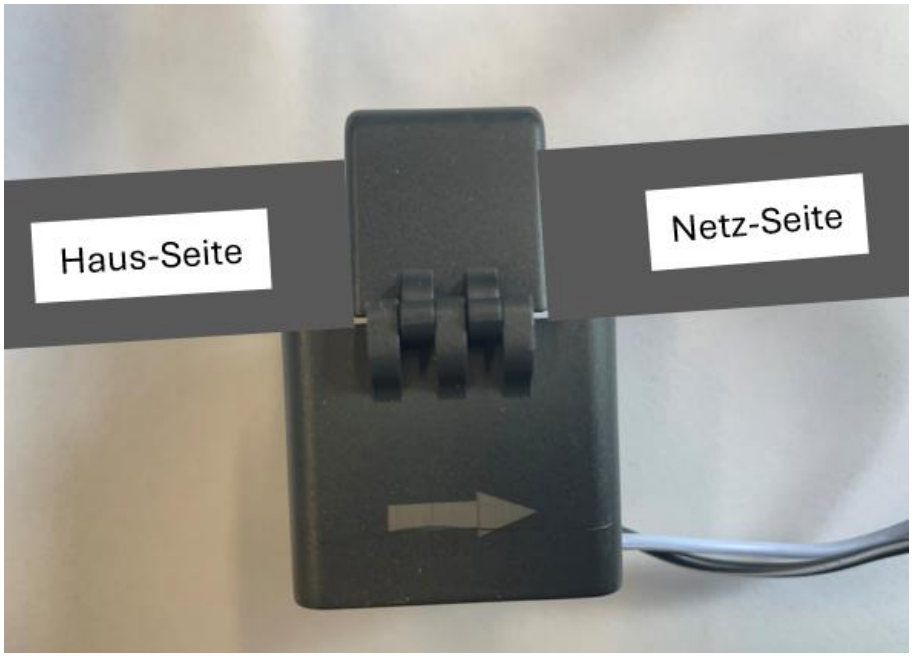
For **each phase**:

- The **black** wire must be inserted into the **left** terminal,
- The **white** wire into the **right** terminal.
  Example Phase 3: ***S2 (15)*** *black,* ***S1 (16)*** *white.*



4.3 CHECKING THE ARROW DIRECTION

The arrows on the CT clamps **must point towards the grid**.



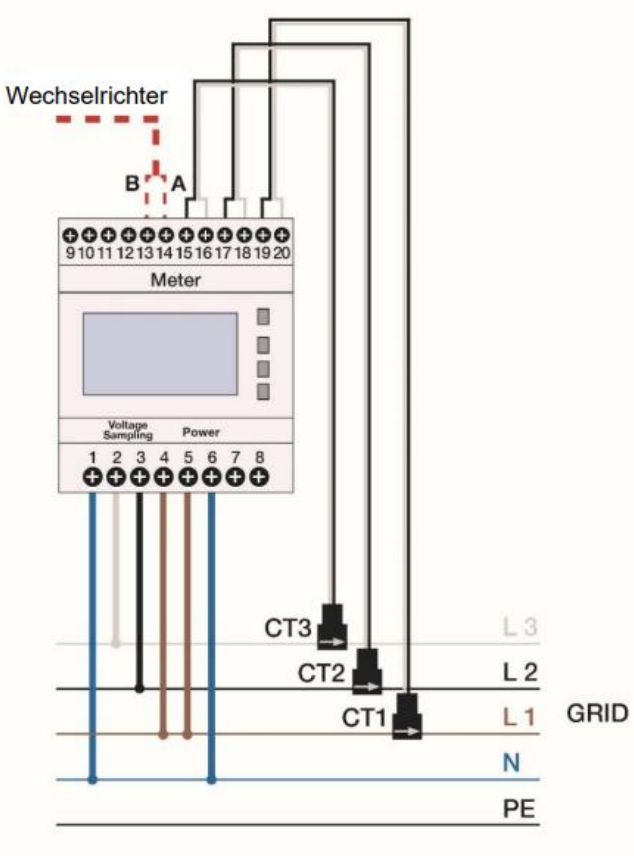
5. TROUBLESHOOTING PHASE ROTATION

If the meter shows implausible values or the inverter does not operate correctly, check for phase rotation. Two independent error causes are possible and must be examined separately:

- **Phases at the AC connector and/or at the voltage inputs of the meter are swapped.**
- **CT clamps are connected to the wrong phases.**

5.1 CHECKING THE WIRING

Ensure that **Phase 1** is connected to meter input **L1 (4)**. The corresponding **CT1** must also be installed on Phase 1 and connected to meter inputs **S2/S1 (19 & 20)**.



5.2 CHECKING THE PHASE OF THE VOLTAGE SIDE

Verify that Phase 1 actually reaches meter input 4 and corresponds to Phase 1 at the inverter's AC plug.

- Measure the voltage between the meter input and the **L1** outgoing terminal. *If the same phase is present, the reading is ~0 V; if the phase is swapped, ~400 V will be displayed.*

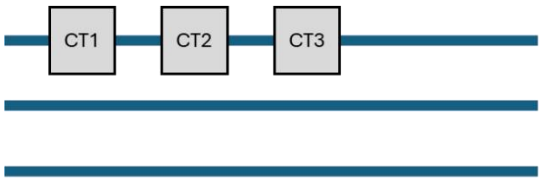
5.3 CORRECTING PHASE ROTATION AT THE CT CLAMPS

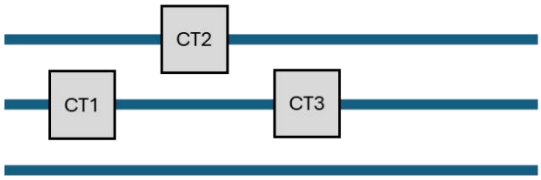
The correct phase for each CT clamp can be found easily:

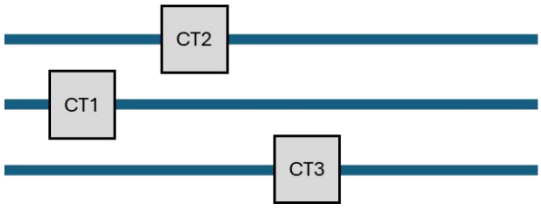
- Switch the inverter off.
- Place all three CT clamps on one of the three phases.

- Read the active power (P) on the meter. The phase with the highest active power is wired correctly. Move the other two CT clamps to the next phase.
- Ignore the phase already identified as correct. Of the remaining two, the phase with the higher active power is correct; place the last CT clamp on the remaining phase.

Example:

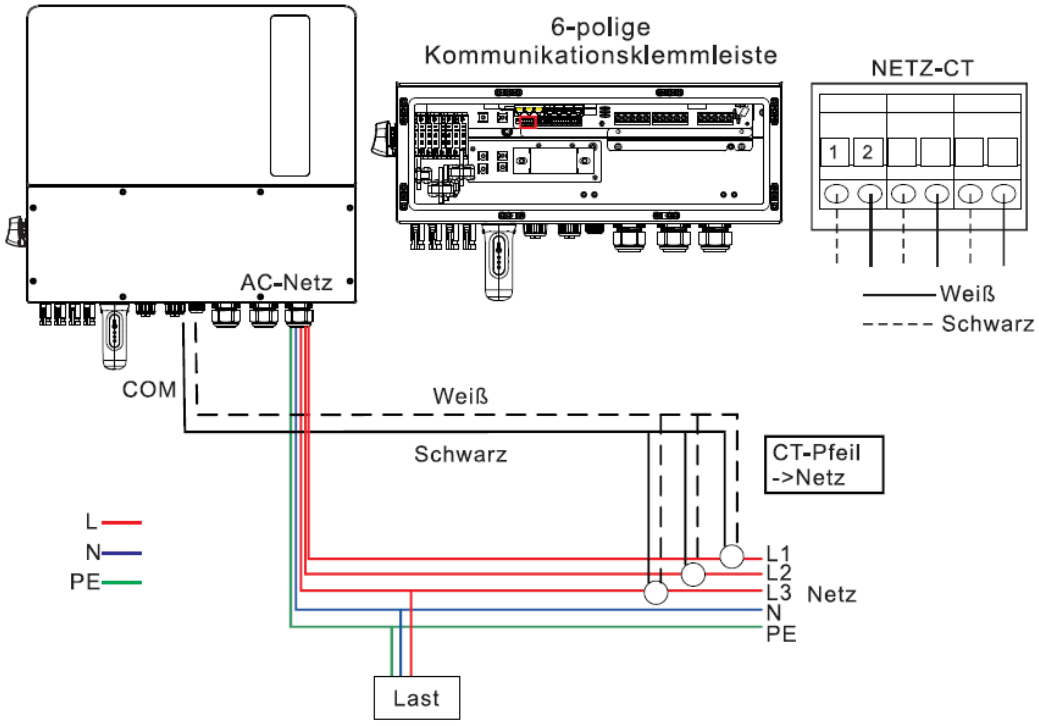






5.4 PHASE ROTATION WITHOUR METER (AXIHYCON 12-50H)

Checking the wiring:



- Switch off the battery system and PV power.
  WARNING: Never operate the PV isolator under load!
- Place all three CT clamps on one of the three phases as in step 5.3.
- In the app, read the active power (P):
  Service → Local Operation → The Grid (More) → Active Power (W)
- Proceed as described in step 5.3.