3EM calibration of the N-clamp

Calibration instructions for the N-transformer clamp

With firmware 1.12 the 3EM is finally able to measure the current flowing through the neutral conductor.

This requires a fourth 120A Transformer/Measuring Transformer which must first be calibrated across one of the other 3 phases and then wired around the neutral wire.

It also allows the user to place a trip signal to signal unusual deviations in the total current flowing through the three phases compared to that through the neutral.

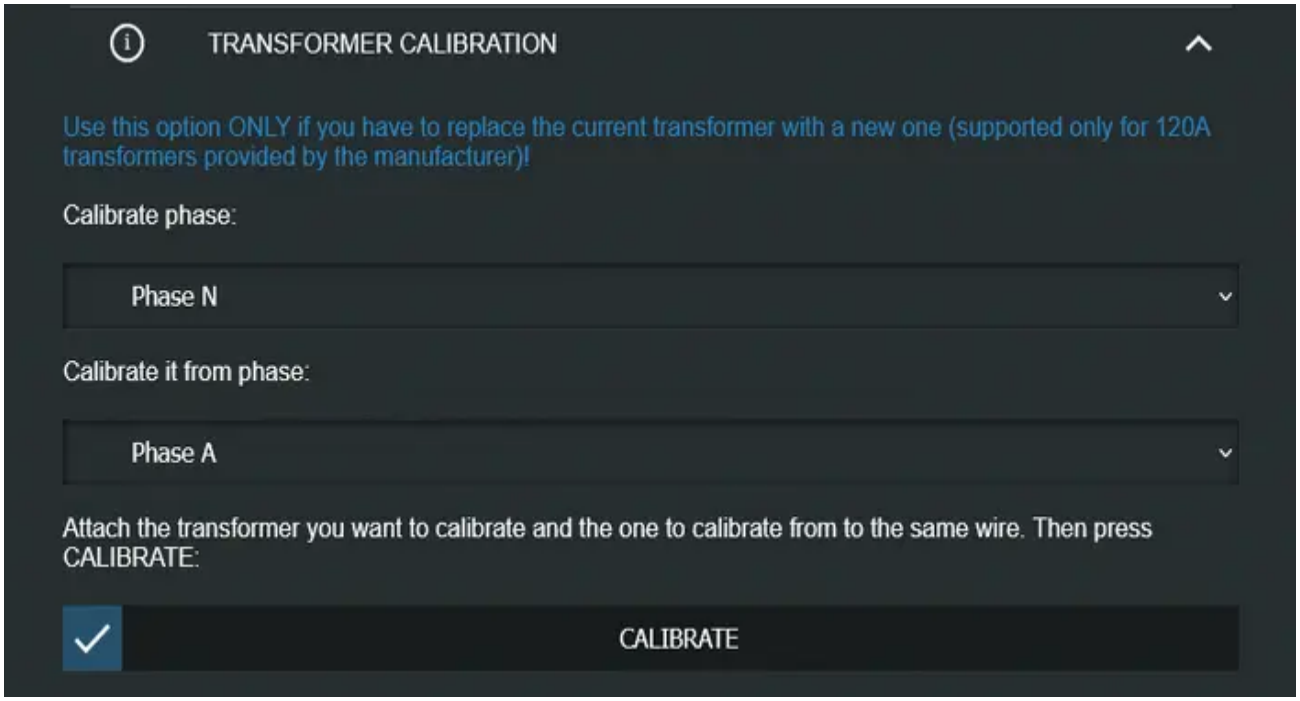
Calibration of the N transformer (example calibration with phase A) :

1. Latch the new N-transformer together/next to the existing transformer on phase A, the phase transformer terminal remains latched and unchanged.

2. In the WEB-UI under Settings -> Transformer choose Calibration Calibrate phase: **N** -> Calibrate it from phase: **A**

3. If the calibration fails, flip/reverse the N-transformer clamp and try to calibrate again.

4. If the calibration was successful, dismantle the transformer for N and clamp it to the neutral wire.



These calibration instructions and the Transformer Calibration function can also be used to recalibrate the phase A / B or C measuring transformers, e.g. after replacement.

Note: for the calibration, a minimum load must be present on the phase on which the two converters are clamped.

ATTENTION: For a correct measurement use only original 120A Shelly transformer clamps. Using clamps from other manufacturers can destroy the device.