

### Why the maximum voltage applied at the high side should not exceed 35 kV?

The nameplate of the transformer states that the maximum rated voltage is  $60 \text{ kV} / \sqrt{3} = 34.6 \text{ kV}$  which is roughly similar to 35 kV. That means that if this voltage is exceeded it could result in the damage or destruction of the components of the test setup, because the insulation will fail.

### How the voltage is measured on HV side? Which equipment is used?

The voltage in the HV side is measured using a capacitive voltage divider, which is better than a resistive voltage divider for HV measurements, as capacitors can withstand higher voltages than resistors without power consumption or heating.

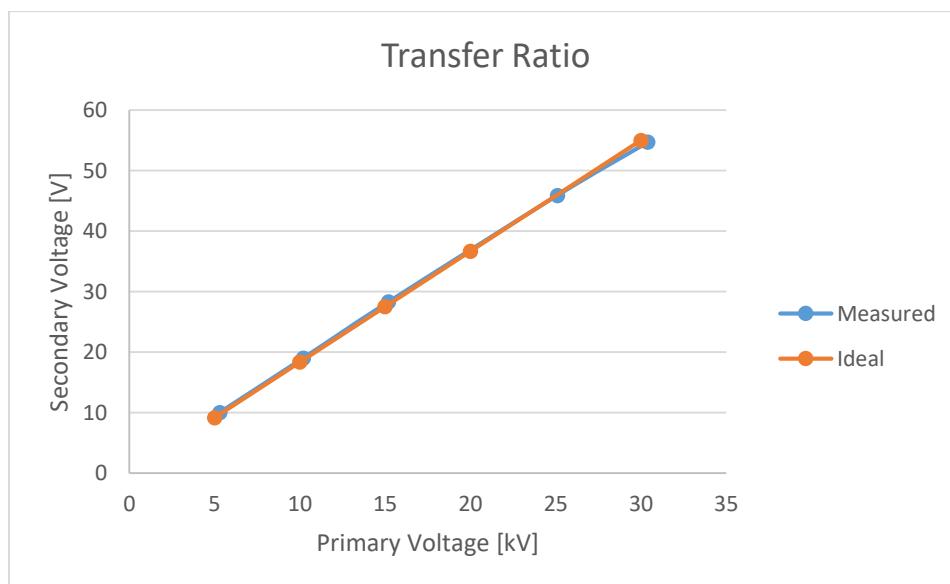
### How the voltage is measured on LV side? Which equipment is used?

The voltage in the LV side is measured using a multimeter because the output is a DC low voltage signal.

### How many secondary windings on the LV side are tested?

Two secondary windings on the LV side were tested, 1a-1n and 2a-2n, so it is possible to verify the functionality of the transformer by comparing the results obtained in both cases.

Assess the linearity of the voltage transformer ratio. Illustrate in a graph the relationship between the voltage measured on HV side and the voltage measured on LV side.



Assess the measurement accuracy of the measured transfer ratio, both high voltage and low

Difference in Transfer Ratio	Difference[%]
-15,45	-2,83
-8,61	-1,58
-8,35	-1,53
1,39	0,25
10,30	1,89
Mean difference [%]	-0,76