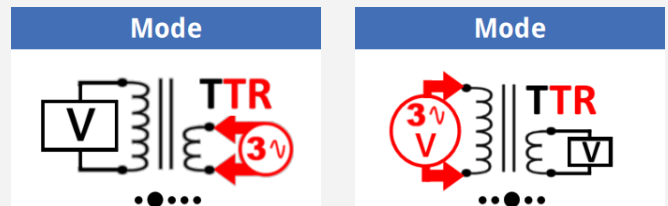


## TTRU3 Calibration Verification

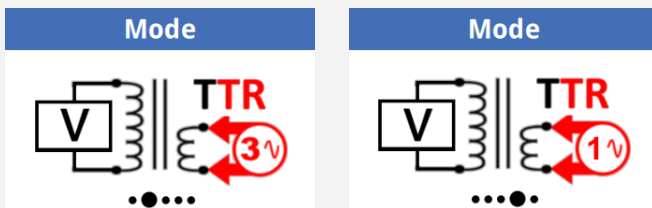
When performing calibration verification of the **TTRU3**, the following factors need to be considered to achieve accurate measurements and prevent damage to your calibration fixture or **TTRU3**.

The patent pending step up design of the **TTRU3** allows for excitation of the high or low voltage winding. By default the **TTRU3** uses an Auto test mode, where ratios < 200:1 are measured by exciting the low voltage winding. If the calibration standard being used states not to excite the low voltage winding, you may damage the calibration standard or **TTRU3** in this test mode. Be careful and make sure to set the test mode properly!

### Step Up vs Step Down



### 3Ø vs 1Ø



When using the Auto test mode, the **TTRU3** will choose to excite all three phases simultaneously if a three phase diagram is selected and no issues were detected during pre-test. This means that three single phase ratio standards can be used to provide one click verification! If you only have one ratio standard you will need to use the **TTRU3 Single Phase.exe** found in the PC install directory to verify phases other than H1-H2/X1-X2.

In general, traceable calibration requires testing an instrument with another instrument at least four times as accurate, otherwise the tests are usually considered a verification of functionality. For this reason, the **TRS1+** was developed. The **TRS1+** is a high accuracy ratio standard, calibrated to  $\pm 0.01\%$ . It allows for calibration verification in both step up and step down modes, making it perfectly suited for the **TTRU3**!

### $\pm 0.05\%$ vs $\pm 0.01\%$

