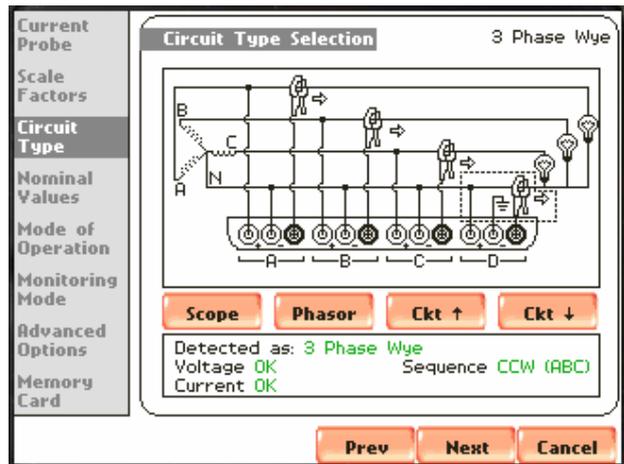
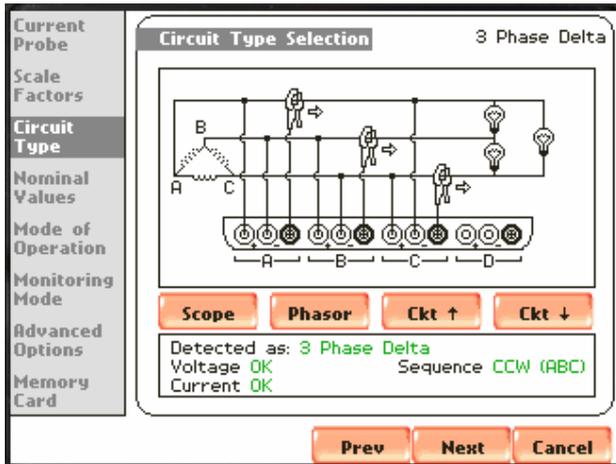


MAVOWATT 30/40/70 – Application Note

Connection to a 690V 3-Phase System

Measuring task: In a 3-phase 3-wire network with 3x 690V delta voltage (phase-to-phase) shall be carried out measurements with the MAVOWATT 30/40/70. But the voltage input range of these analyzers is 600V only. Is there a way to measure directly in this circuit without voltage transformers?

Result: Usually for measurements in a 3-phase 3-wire network the device would be connected like shown in the device display for setting the Circuit Type *3 Phase Delta*. But with 3x 690V delta voltage this configuration is not possible because the voltage measuring range of 600V is exceeded.



This problem can be solved by an artificial neutral point being formed and thus the device can be set for Circuit Type *3 Phase Wye*. For this purpose, a suitable set of 3 pieces star point resistors STP100k (100kOhm, 0.2%, 4W) is available under the item Z865B, which can easily be plugged into each of the voltage measurement inputs A, B, C. Linking the three negative poles of the voltage inputs using the 3-pin short-circuit cable (supplied with the analyzer) forms a sufficiently stable and precise artificial star point. The voltage applied to the voltage inputs then is only 400V. Theoretically, this configuration makes it suitable to a maximum delta voltage of 1000V.

