

SMALL BUT MIGHTY

Expanded range of functions for COMPANO 100



CBF1

- › Accessory for testing self-powered relays up to 10 A
- › 160×210×130 mm (6.2×8.2×5.0 in), 3.3 kg (7.3 lb)



BNO1

- › Semiconductor relay output for up to 10 A AC/DC (2 A continuous)
- › 90×45×25 mm (3.6×1.8×1.0 in), 100 g (3.5 oz)



VBO4

- › Voltage transformer to expand the voltage range to 300 V or 750 V,
- › 160×210×130 mm (6.2×8.2×5.0 in), 3.1 kg (6.9 lb)

COMPANO 100 is a universal, easy-to-use solution for engineers, technicians and professionals who need to perform simple standard tests on electrical power systems. Thanks to the controlled electronic sources, the test set precisely emits each signal with the set value and if required it can also be emitted with variable frequencies. What's more, it also produces DC signals which allow it to be used for micro-ohm measurements. In addition to normal state transitions, the integral flexible sequencer even supports ramps and

pulse ramps. The highly flexible inputs can be configured for a wide range of applications; for example, as a binary input for relay testing, a voltage input (AC or DC), or as a current input when using a shunt or a current clamp.

The VBO4, CBF1, and BNO1 are three recently developed accessories for the COMPANO 100 that have expanded the application possibilities for the test set.

CBF1: ACCESSORY FOR SELF-POWERED RELAYS



Self-powered relays usually receive their power supply directly from the current transformer via their current input. They use an internal switched-mode power supply for this which takes the energy from the secondary current path and supplies the relay's electronics.

This principle leads to voltage distortion in the current path (Figure 1, top). When testing relays with electronic test sets, this distortion has some influence on the signal quality of the current output (Figure 1, bottom).

For some types of relays this influence is so small that they can be tested directly without encountering any problems. However, this influence is so great for others that they can no longer perform relay tests adequately.

Small currents require correspondingly higher voltages in order to obtain the same amount of energy from the transformer. Therefore, this issue becomes exacerbated as soon as these types of relays are tested with small current values.

The new CBF1 accessory for the COMPANO 100 delivers better quality results when testing relays of this kind. It contains a specially adapted current transformer with a 10:1 ratio which is activated between the test set and current input of the relay. It minimizes the influence on the current, thus facilitating correct testing. Figure 2 shows the clear-cut current curve when using the CBF1. Since the current is the only thing being measured, the form of the voltage curve (Figure 2, top) has no impact. ▶

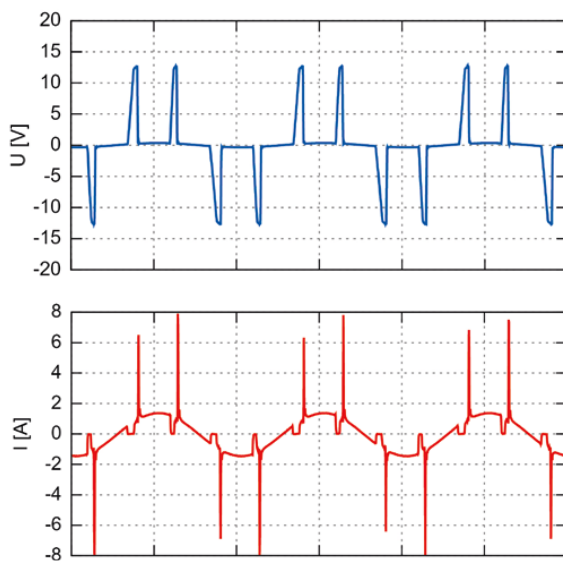


Figure 1: Testing a self-powered relay without CBF 1

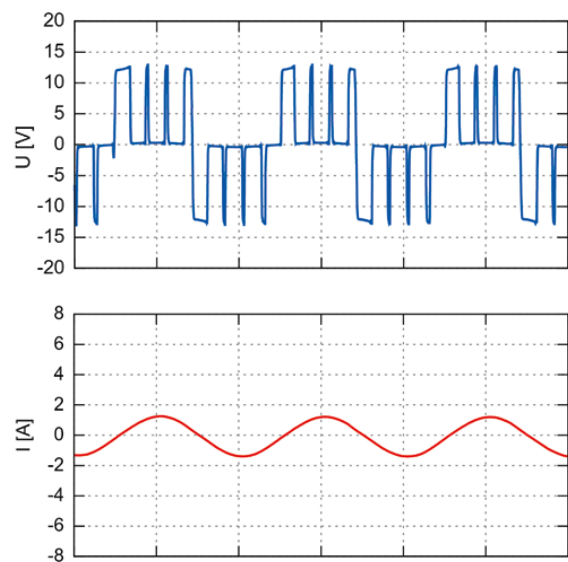


Figure 2: Testing a self-powered relay with CBF 1

VBO4: 150V TO 300V / 750V VOLTAGE TRANSFORMER



The 150 V AC provided by the COMPANO 100 is perfectly suitable for secondary testing. However, some applications in industrial facilities and the renewable energy field require higher voltages.

The new VBO4 voltage transformer expands the available test voltages for the COMPANO 100 to 300 V or 750 V depending on the requirements.

This opens up entirely new application possibilities for testers; for example, it is now possible to carry out test voltage and frequency protection for higher voltage levels. The wiring of protective devices can also be verified with voltage sensors in the distribution network. As a rule, these need a primary voltage of over 150 V in order for them to detect and display a voltage for the respective phase.

BNO1: BINARY RELAY



For some tests, switching operations need to be triggered in a precise manner by using the test set so that the switching time can be measured precisely; for example, for determining the switching time of a circuit breaker.

The new BNO1 binary relay makes this possible when it is combined with the COMPANO 100. The V OUT voltage output of the COMPANO 100 controls the BNO1 binary relay, which can apply 10 A AC/DC (2 A continuous) and thus actuates the tripping input of a circuit breaker for measuring the switching time. The switching time is then measured by the COMPANO 100 using the configurable binary inputs.

The new accessories presented here expand the varied application possibilities of the COMPANO 100 in its role as a multifunctional, portable, off-grid, and easy-to-use

testing tool. The complementary accessories are small and light, which also make them ideal for mobile applications in any location. ■