

Knopp

KC-1500 current transformer testing system



description

The Knopp Type KC-1500 Current Transformer Testing System is designed to measure the accuracy of instrument transformers having 5 ampere secondaries and primaries of up to 1500 amperes. When purchased with the optional Type KATC-CI Comparator, the KC-1500 is capable of testing transformers with 1 or 5 ampere secondaries. The system uses a high accuracy multirange current transformer as a reference standard. The KC-1500 has been designed with field testing requirements in mind.

The system is well suited for utilities whose current transformer testing needs include primary currents up through 1500 amperes. The phase angle and ratio errors of the transformer-under-test (TUT) are measured by the built-in Knopp Automatic Transformer Comparator.

Some of the standard features of the KC-1500 are:

- AUTOMATIC and AUTORANGING Type KATC-C Current Transformer Comparator provides minimum measurement time (typically within three seconds after adjustment of test current).
- DIGITAL DISPLAY of test current, ratio error (in Percent or Ratio Correction Factor), and phase angle error (in Minutes or Milliradians).
- ACCURACY CLASS for which the TUT qualifies is digitally calculated and displayed.
- SELF CHECK feature allows the KC-1500 system accuracy to be easily verified without the use of an external reference standard.
- PROTECTIVE CIRCUITRY senses error conditions, such as wrong ratio or wrong polarity, and removes power from the KC-1500 loading circuitry.
- ZERO START feature requires that the test current control be at zero before power can be applied to the loading circuitry (and thus the TUT).
- PORTABILITY means that the system can easily be transported to a field testing location.
- 120 VOLT OPERATION allows the use of readily available power sources in the lab or the field.

Options include:

- Type KATC-CI Comparator.
- ANSI BURDENS which are packaged separately so that only required burdens need be purchased.
- SERIAL (RS-232C) output port to allow transfer of test results to a printer or computer.
- CONNECTION KIT which includes cables to facilitate connection of most instrument transformers to the KC-1500 terminals.

operation

The desired ANSI burden is connected to the test system. The required primary range is selected by a rotary switch in combination with use of the appropriate test terminals on the KC-1500. After the TUT is connected, and the test current adjusted, the HOLD pushbutton on the Comparator is pressed. This holds the results on the Comparator display while the operator returns the test current to zero. After the test results are recorded, or printed, RESET is pressed to prepare the system for the next test.

specifications

dimensions:	Console 1: 6.5" (16.5 cm) High, 30.3" (77.0 cm) Wide, 16.0" (40.6 cm) Deep.
	Console 2: 9.5" (24.1 cm) High, 28.2" (71.6 cm) Wide, 24.7" (62.7 cm) Deep.
weight:	Console 1: 55 pounds (24.9 kg). Console 2: 95 pounds (43.1 kg).
input power:	120 VAC, single phase, 60 Hz, at 15 amperes maximum.
system accuracy:	Within $\pm 0.025\%$ on ratio and ± 2 minutes on phase angle at 1.2, or less, accuracy class.
test current ranges:	5, 10, 15, 20, 25, 30, 40, 50, 75, 100, 150, 200, 300, 400, 500, 600, 800, 1000, 1200, and 1500 amperes.
	400% tests can be performed up to 300 amperes and 200% tests up to 600 amperes.
optional burdens:	ANSI B-0.1/B-0.2/B-0.5/B-0.9/B-1/B-1.8/B-2/B-4/B-8.
	Burdens up to B-1.8 are rated for 400% tests while the remaining burdens (B-2, B-4, B-8) are rated for 200% tests.

Knopp

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