PCI-600

portable relay test set

Vanguard Instruments
A DOBLE COMPANY

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portable relay test set

Product Overview

The PCI-600 is a programmable AC high-current source designed specifically for utility-substation applications. This device is well suited for primary injection testing of protective relays. This versatile device can also be used for testing thermal, magnetic, and solid-state motor-protection relays and molded-case circuit-breakers, as well as any application that requires a high-current source.

Built-in Timer

The PCI-600's built-in timer can test the time-delay characteristics of protection relays and molded-case circuit-breakers. Once the test is initiated, the current source and the timer are automatically turned on at the next zero-crossing point of the AC. The timer stops when the PCI-600 input detects a change in the dry contact or voltage input, or detects the removal of the test current. The test results are then displayed in milliseconds and fractions of a cycle(s) on the unit's back-lit LCD screen (20 characters by 4 lines).

External Current Input

The PCI-600 also has an external-current input (0 – 10 A). Both the internal current source amplitude and the external current source measurement readings can be viewed at the same time.

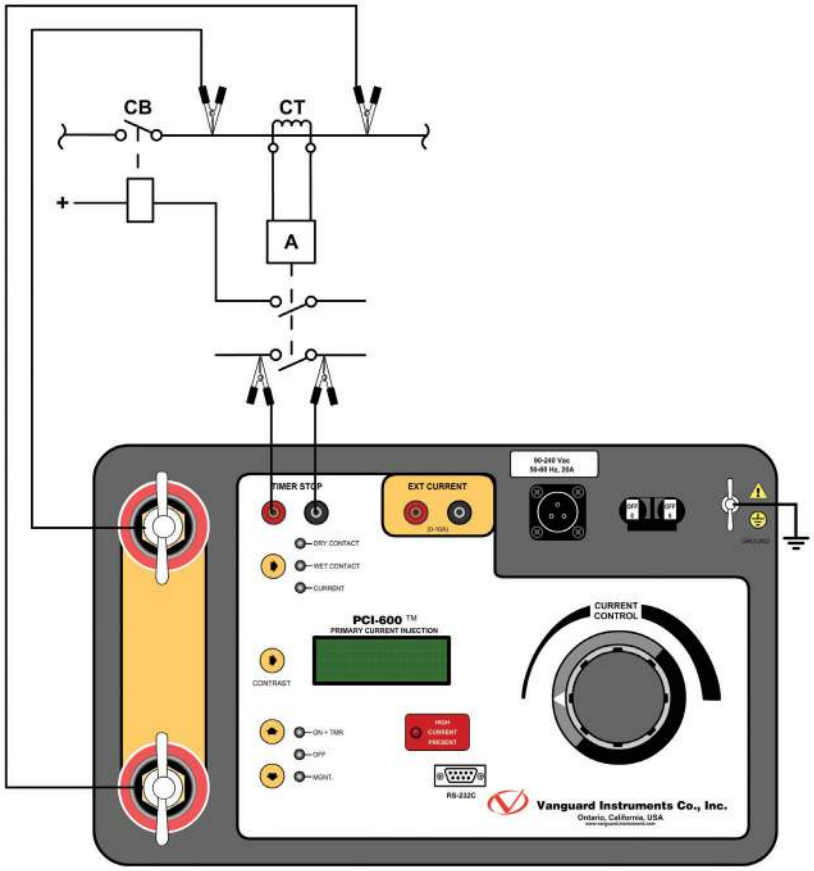
Current Source

Test currents, ranging from 10 to 600 amperes, can be set by using the rotary dial knob on the control panel. The test current is then measured, and the results are displayed on the LCD screen. When the PCI-600 is used as a current source, the current-on time (duration of current flow) is displayed on the LCD screen.

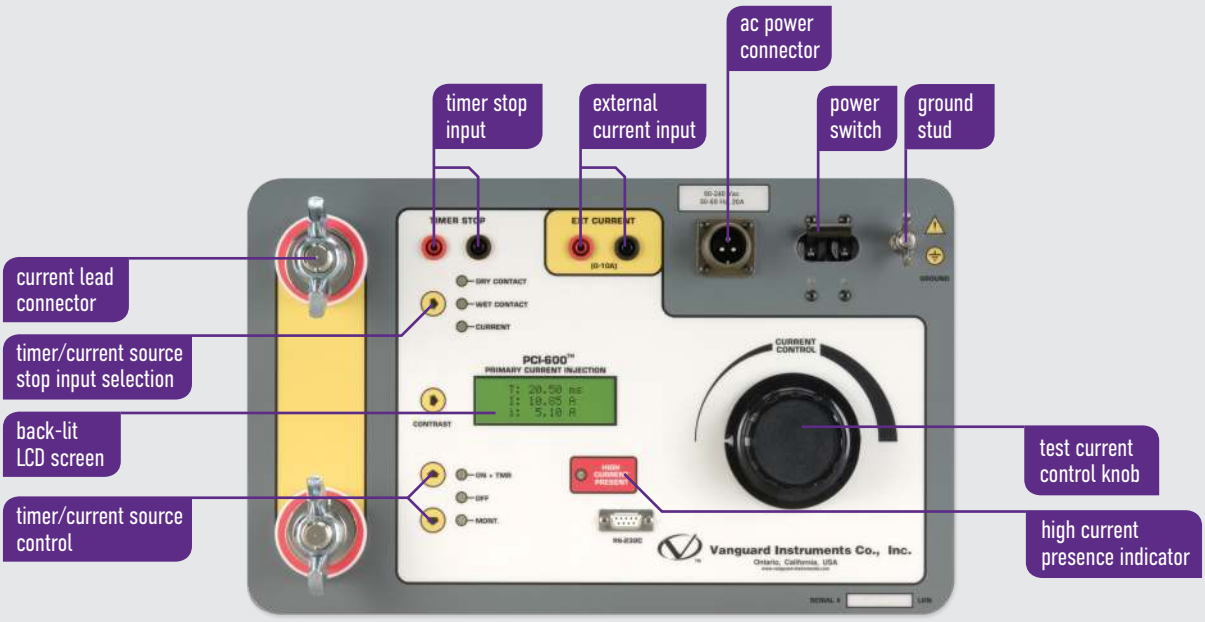
ordering information

Part No.	Description
9029-UC	110V PCI-600 and cables
9058-UC	220V PCI-600 and cables
9029-SC	PCI-600 shipping case

PCI-600 connections



PCI-600 Features



PCI-600 technical specifications

physical specifications	**Dimensions:** 17"W x 12.5"H x 10.5"D, (42.6 cm x 32 cm x 27 cm) **Weight:** 46 lbs. (21 Kg)
internal meter range	100 mA – 1,000 A; accuracy: 1% of reading, ±20 mA **Measuring method:** isolated CT
external meter range	10 mA – 10 A; accuracy: 1% of reading, ±2 mA **Measuring method:** isolated CT
safety	designed to meet IEC61010 (1995), UL 61010A-1, CSA-C22.2 standards
temperature	**Operating:** -10°C to +50°C (+15°F to +122°F) **Storage:** -30°C to +70°C (-22°F to +158°F)
cables	10-foot (3.05m) #1/0 AWG test leads, power cord, ground cable
warranty	one year on parts and labor

input power	100 – 120 Vac or 200 – 240 Vac (factory pre-set), 50/60 Hz
timer reading range	1 ms – 2 hours; accuracy: 0.1% of reading ±1 ms
timer stop input	voltage input (24–300 V, dc or peak ac), dry-contact input, or removal of primary current
humidity	90% RH @ 40°C (104°F) non-condensing
altitude	2,000 m (6,562 ft) to full safety specifications
options	shipping case

NOTE : the above specifications are valid at nominal voltage and ambient temperature of +25°C (+77°F). Specifications are subject to change without notice.

Output Current and Duration Table

output @ 120 Vac	output @ 240 Vac	time
5.6 Vac @ 100A	9.5 Vac @ 100A	1 hour
5.3 Vac @ 200A	9.4 Vac @ 200A	5 minutes
4.9 Vac @ 300A	9.0 Vac @ 300A	2 minutes
4.6 Vac @ 400A	8.2 Vac @ 400A	1 minute
4.2 Vac @ 500A	7.5 Vac @ 500A	30 seconds
3.9 Vac @ 600A	7.0 Vac @ 600A	20 seconds

Instruments designed and developed by the hearts and minds of utility electricians around the world.

Founded in 1991 and located in Ontario, California, USA, Vanguard Instruments™ offers a wide range of diagnostic test equipment that accurately and efficiently measures the health of critical substation equipment, such as transformers, circuit breakers, and protective relays.

Our first product was a computerized, extra high voltage (EHV) circuit breaker analyzer, which became the forerunner of an entire line of EHV circuit breaker test equipment. Over the years, our portfolio has grown tremendously to include microcomputer-based precision micro-ohmmeters; single- and three-phase transformer winding turns-ratio testers; transformer winding-resistance meters; mega-ohm resistance meters; and a variety of other application-specific products.

Our instruments are rugged, reliable, accurate, and user friendly. They eliminate tedious and time-consuming operations, while providing fast, complex test-result calculations. Using our equipment helps reduce errors and eliminates the need to memorize long sequences of procedural steps.

In 2017, Vanguard Instruments became a part of Doble Engineering Company, an energy industry leader in hardware, software, and services that diagnose and monitor the health of critical assets.

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