PCI-600

portable relay test set

Vanguard Instruments Company, Inc.
www.vanguard-instruments.com

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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 protectionrelays 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 milli-seconds and fractions of a cycle(s) on the unit's back-lit LCD screen (20 characters by 4 lines).

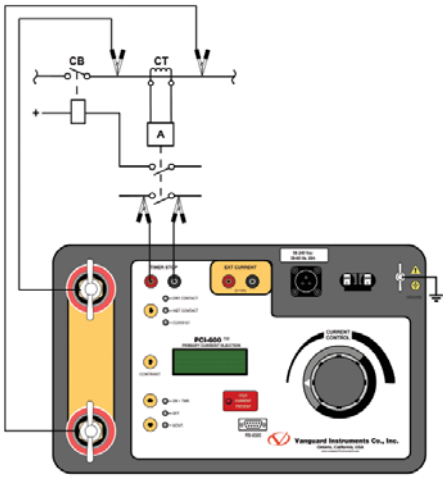
Current Source

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.

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.

PCI-600 *connections*



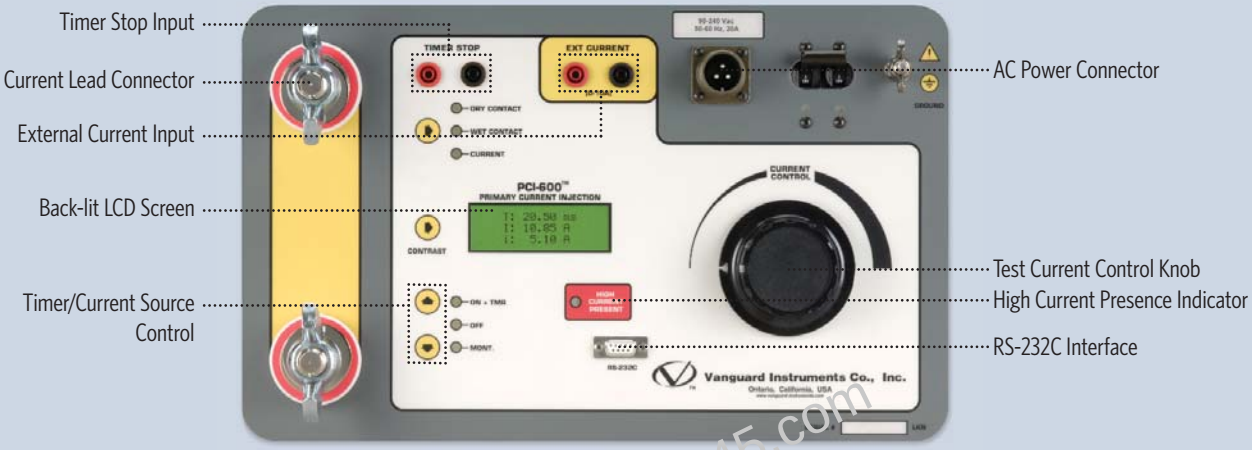
Output Current and Duration *table*

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

ordering information

Part number **PCI-600**	PCI-600 and cables
Part number **PCI-600-CASE**	PCI-600 shipping case
Part number **PCI-600-10FT**	PCI-600 test leads - 10 foot
Part number **PCI-600-20FT**	PCI-600 test leads - 20 foot

PCI-600 Controls & Indicators



PCI-600 specifications

type	100 – 600 Amp current source
physical specifications	17"W x 12½"H x 10½"D, (42.6 cm x 32 cm x 27 cm); Weight: 46 lbs (21 kg)
input power	100 – 120 Vac or 200 – 240 Vac (factory pre-set), 50/60 Hz
internal meter range	100 mA – 1000 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
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
computer interface	RS-232C port (19,200 baud) for factory calibration and diagnostics
safety	designed to meet IEC61010 (1995), UL 61010A-1, CSA-C22.2 standards
environment	Operating: -10°C to +50°C (+15°F to +122°F); Storage: -30°C to +70°C (-22°F to +158°F)
humidity	90% RH @ 40°C (104°F) non-condensing
altitude	2,000 m (6,562 ft) to full safety specifications
cables	10-foot #1/0 AWG test leads, power cord, ground cable
options	transportation case
warranty	one year on parts and labor

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

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

Vanguard Instruments Company, (VIC), was founded in 1991. Currently, our 28,000 square-foot facility houses Administration, Design & Engineering, and Manufacturing operations. From its inception, VIC's vision was, and is to develop and manufacture innovative test equipment for use in testing substation EHV circuit breakers and other electrical apparatus.

The first VIC product was a computerized circuitbreaker analyzer, which was a resounding success. It became the forerunner of an entire series of circuitbreaker test equipment. Since its beginning, VIC's product line has expanded 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 electrical utility maintenance support products.

VIC's performance-oriented products are well suited for the utility industry. They are rugged, reliable, accurate, user friendly, and most are computer controlled. Computer control, with innovative programming, provides many automated testing functions. VIC's instruments eliminate tedious and time-consuming operations, while providing fast, complex, test-result calculations. Errors are reduced and the need to memorize long sequences of procedural steps is eliminated. Every VIC instrument is competitively priced and is covered by a liberal warranty.

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