

PCI-600

Primary Current Injection Source



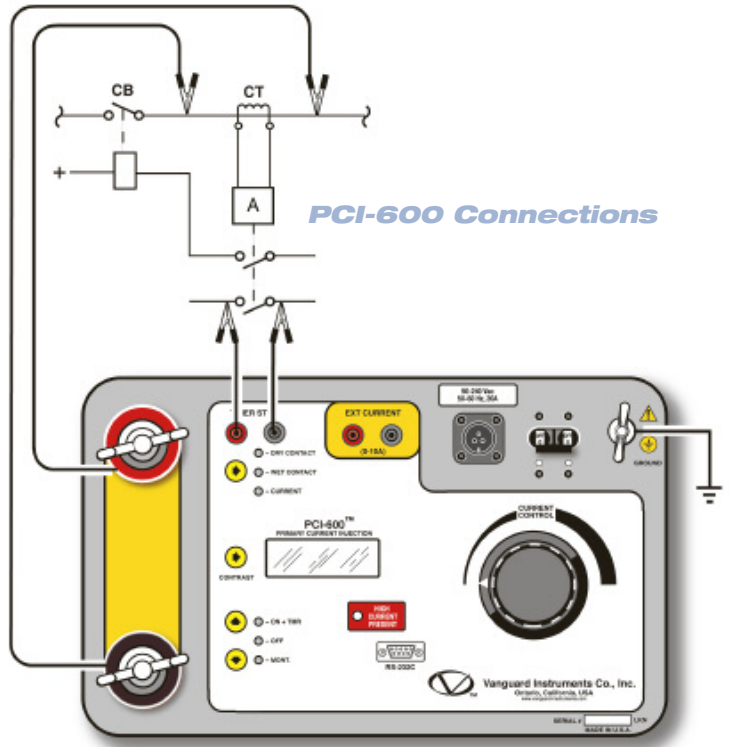
Vanguard Instruments Company

www.vanguard-instruments.com

Rapidly

OUTPUT CURRENT TABLE

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



PCI-600™

The PCI-600 is a programmable high-current source designed specifically for utility-substation applications. This alternating current (AC) test device is best suited for 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.

PCI-600 Timer Function

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

PCI-600 Current Source Functions

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 Functions

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.

FEATURES

- Isolated 10 – 600 ampere AC current source
- Test protection system (using primary injection current source)
- Tests the time-delay characteristic of protection relays and molded-case circuit-breakers
- Measures internal and external currents
- The PCI-600 is thermally protected

Ordering Information

PCI-600 Primary Current Injection Tester

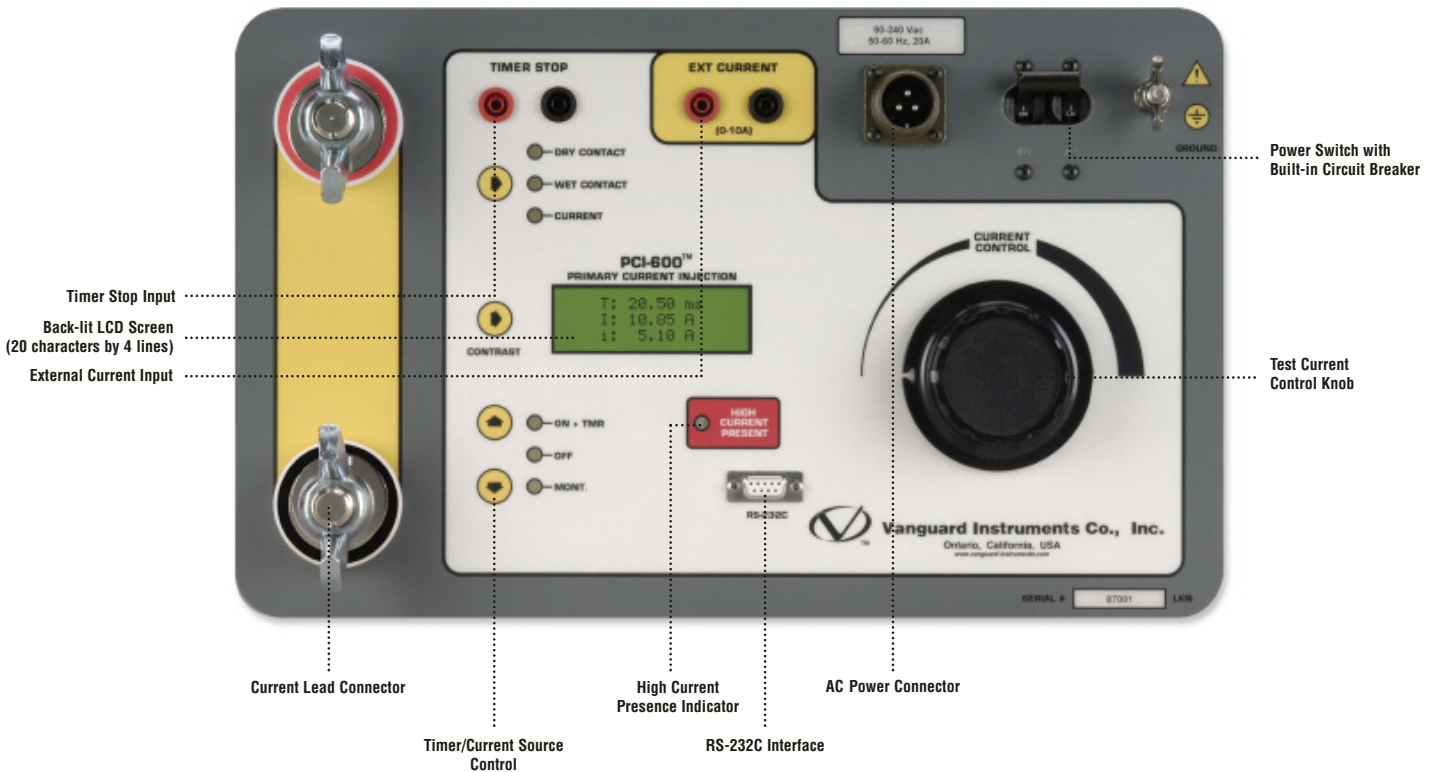
PCI-600 Universal Current Source
 PCI-600 Shipping case
 PCI-600 Test Leads-10 ft
 PCI-600 Test Leads-20 ft

Part No: PCI-600
 Part No: PCI-600 case
 Part No: PCI-600 Test Leads-10 ft
 Part No: PCI-600 Test Leads-20 ft

Primary Current Injection Tester

Test

Protective Relays, thermal, magnetic and solid state motor-protection relays & molded case circuit breakers



SPECIFICATIONS

TYPE	10 – 600 Amp current source
PHYSICAL SPECIFICATIONS	16.8"W x 12.6"H x 10.6" D (42.6 cm by 32.0 cm by 27 cm); Weight: 46lbs (21kg)
INPUT POWER	100 – 120 Vac or 200 – 240 Vac (factory pre-set), 50/60 Hz
INTERNAL CURRENT METER	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 $+122^{\circ}\text{F}$); Storage: -30°C to 70°C (-22°F to $+158^{\circ}\text{F}$)
HUMIDITY	90% RH @ 40°C (104°F) non-condensing
ALTITUDE	2,000m (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 $+25^{\circ}\text{C}$ ($+77^{\circ}\text{F}$). Specifications are subject to change without notice.

Vanguard Instruments Company
Reliability Through Instrumentation

RvFeb10

Vanguard Instruments Company, Inc.

Vanguard Instruments Co., (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 circuit-breaker analyzer, which was a resounding success. It became the forerunner of an entire series of circuit-breaker 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, winding-resistance meters, transformer tap-changing controllers, megaohm 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.

Vanguard products are available from:



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