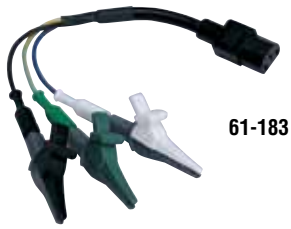
# SureTest® Circuit Analyzers

- Measures voltage drop under load*
- Hot and neutral conductor impedances
- Estimates Load on Line (ELL) up to 15A
- Tests GFCIs and EPDs for proper operation
- Super-bright display
- High accuracies
- True RMS
- Line voltage
- Peak voltage
- Frequency
- Ground to neutral voltage
- Ground impedance
- Identifies proper wiring in 3-wire receptacles
- Identifies false (bootleg) grounds
- Conducts testing without disturbing sensitive loads
- Verifies isolated grounds (with 61-176 adapter)
- 2-year warranty

*12A, 15A, 20A load tests


61-165



61-183

61-175

61-176

61-182

| Description | Cat. No. |
|---|---|
| SureTest® Circuit Analyzer - Tests AFCIs wiring, tests for shared neutrals | 61-165 |
| SureTest® Circuit Analyzer | 61-164 |

## Accessories

| Includes | |
|---|---|
| Carrying Case | 61-179 |
| 1' Extension Cord | 61-182 |
| **Optional** | |
| Ground Continuity Adapter | 61-175 |
| Isolated Ground Adapter | 61-176 |
| Alligator Clip Adapter | 61-183 |

## Specifications

| | Range & Resolution | Accuracy |
|---|---|---|
| AC Voltage | 85.0 - 265.0 VAC | 1.0% |
| Frequency | 45.0 - 65.0 Hz | 1.0% |
| Impedance | 0.00 - 1.99 Ω | 5.0% |
| Ground-Neutral Voltage | 0.0 - 24.0 VAC | 2.0% |
| % Voltage Drop 12A, 15A, 20A load tests | 0.1% - 50.0% | 5.0% |
| GFCI Test Current/Time | 6.0 - 9.0 mA 0.0 - 6500 mS | 2.0% |

## SureTest® Circuit Analyzer Functions

**Voltage Drop**

- NEC recommends no more than 5% voltage drop
- Higher voltage drop leads to heat buildup and performance issues
- <108V is a poor level for voltage load

**Line Voltage**

- Specification is 120VAC +/-10% (108 to 132 VAC)
- True RMS ensures accuracy in harmonic environments

**Ground-to-neutral Voltage**

- Good circuit has 2VAC or less
- Higher reading indicates loaded circuit, harmonic distortion or shared neutral

**Ground Impedance**

- Ground impedance should be 1Ω or less (0.25Ω or less for sensitive equipment to run properly)

**GFCI**

- Applies a 6-9mA fault current and measures the trip time
- Applies a 30mA fault current to check for equipment protection

Troubleshoots branch circuit problems with a variety of tests at the receptacle.

AFCI testing with alligator clips on an installed device.

# AFCI/GFCI Tester

- Tests AFCIs circuit wiring
- Tests GFCIs for proper operation
- Tests for shared neutrals
- Verifies wiring configuration
- Compact size fits comfortably in pocket
- 1-year warranty


| Description | Cat. No. |
|---|---|
| AFCI/GFCI Circuit Tester | 61-059 |

### Accessories

| Optional | |
|---|---|
| 1' Cord Adapter | 61-177 |
| Alligator Clip Adapter (3-wire) | 61-184 |
| Alligator Clip Adapter (2-wire) | TL-532A |
| Carrying Case with Belt Clip | C-50 |

C-50
w/Belt clip


# Voltage Performance Monitor

- Real-time TRMS voltage, frequency and harmonics monitoring
- Logs voltage, sags, swells and impulses
- Measures %THD and logs periods over 3% (line to neutral)
- Selectable thresholds based on the most accepted international standards, defaults to ITIC*
- Custom programmable event thresholds
- Invertible display, when it is necessary to plug in upside down
- 2-year warranty

* *Captures events that would affect equipment on branch circuit*

### Applications

**Monitor voltage near sensitive equipment**

- **Installation and Service Technicians** – Monitor voltage at point of equipment connection
- **Electricians** – Eliminate guesswork on service calls
- **Building Maintenance Technicians** – Identify voltage caused equipment failures
- **Equipment Manufacturers** – Eliminate unnecessary warranty costs
- **Hospital/IT Maintenance Engineers** – Monitor voltage quality to critical equipment

N12966

CAT III 300V

**See voltage through the eyes of your equipment**

Poor voltage quality increases facility expenses, warranty costs and downtime plus shortens the life of equipment. The IDEAL VPM identifies only those voltage conditions that can damage equipment or cause equipment failure.

| Description | Cat. No. |
|---|---|
| Voltage Performance Monitor | 61-830 |

### Accessories

| Includes | |
|---|---|
| Adapters (set of 4) | PA-830 |
| Carrying Case | 61-179 |
| **Optional** | |
| Alligator Clip Adapters (2-wire) | TL-532A |
| 1 ft. US Extension Cord | 61-177 |
| Kit with (1) SureTest® 61-164, (2) VPM 61-830, Soft Case C-2004 | 61-2003 |
| Kit with (1) SureTest® 61-164, (4) VPM 61-830, Soft Case C-2004 | 61-2004 |

### Specifications

| 61-830 | |
|---|---|
| Operating Range | 15-265V |
| Memory | 513 Events |
| Sampling Method | Continuous (128 samples per cycle) |
| Voltage Accuracy | 1% |
| Impulse Detection | 6µs, 4kV |
| Harmonic Distortion | 2%, FFT to 51st |

61-179


PA-830