



## SAFETY HiTESTER 3258

Field Measuring Instruments



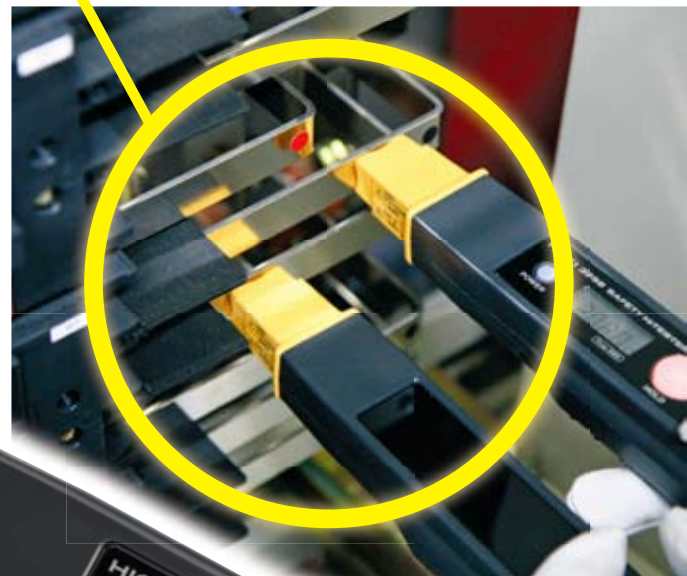
### Safely Measure Voltage Breaker Panels

#### ■ New Technology

Measure voltage on insulated electric cables

#### ■ Safety

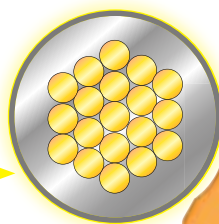
Measure safely around metal busbars and terminals



#### ■ Applicability

Optimized for 30-600 V AC

Measurable electrical cable: 38 mm<sup>2</sup> or larger insulated wires (100 mm<sup>2</sup> or larger recommended)



**True RMS**

**CAT IV 600V**



ISO 9001  
JMI-0216



ISO 14001  
JQA-E-90091



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HIOKI company overview, new products, environmental considerations and other information are available on our website.



# HIOKI's **new technology** enhances voltage measurement safety

Development of the SAFETY HiTESTER 3258 opens the door to a new realm of safety by accurately measuring non-destructively through wire insulation, a particular safety concern to those who maintain and inspect electrical facilities

## Safe Probe Heads



Reliably safe, non-metallic resin heads

## True RMS values on large, crystal-clear display

### Data Hold Indicator

Shows when data is being held (HOLD button pressed)

### APS Indicator (Auto Power Shutoff)

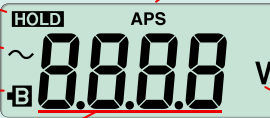
The HiTESTER automatically shuts off when 10 minutes have elapsed from the last operation (can be disabled)

### AC Indicator

### Low Battery Indicator

### Measured Value

True RMS values retain accuracy despite waveform distortion



### Voltage Unit Indicator

## Voltage Detector

## Power Button

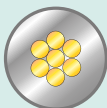


## Safety Barrier

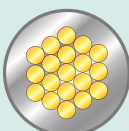
## Applicable electric cable types

Size: 38 mm<sup>2</sup> or larger insulated electric line (100 mm<sup>2</sup> or larger recommended)

### Actual-size cross sections



38 mm<sup>2</sup> (11.5 mm dia.) insulated cable



100 mm<sup>2</sup> (17 mm dia.) insulated cable

## Easy operation and informative display

### 1. Hot line check

The HOLD lamp flashes when an energized line (at least 30 V AC) is detected.

### Hot Line Indicator



### 2. Measured value

When the display has stabilized, the HOLD lamp lights and the measured value is displayed.

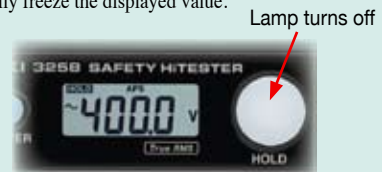
### Measured Value



### 3. Hold measured value

Press the HOLD button to temporarily freeze the displayed value.

### Measurement Hold



# Ensures safe measurements in the cubicle

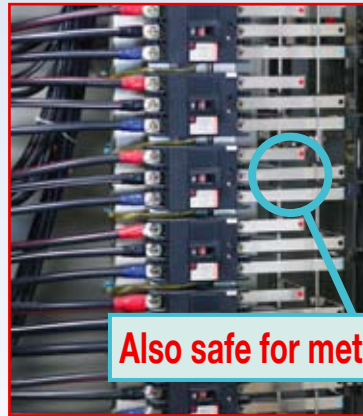
**Point 1**

**Easily measure right through cable insulation**



**Point 2**

**Safely measure around busbars**



**Also safe for metallic conductors**



**Actual size**

**Long grip for better safety**  
Safely measure 380-480 V AC lines

# Get accurate measurements easily

The HiTESTER measures the voltage between two probes. To ensure accurate measurements, apply the voltage detector probes perpendicular to the object to be measured. To measure voltage to ground, apply one probe to a ground conductor.

**○ Apply each voltage detector probe perpendicular to the object to be measured.**

Conductor

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**✗ Incorrect measurement**

Conductor

**Correct measurement method**

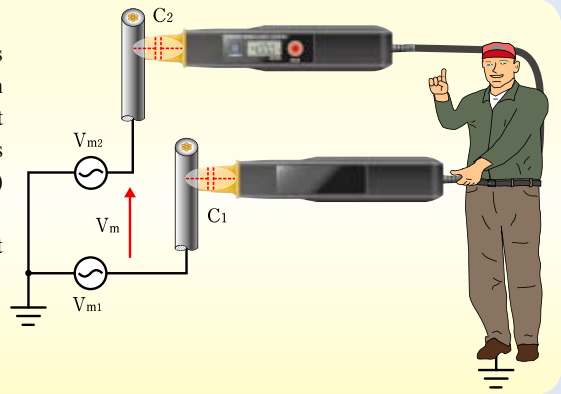
Conductor



### □ HiTESTER 3258 measurement principle

Measurements with traditional non-metallic-contact voltmeters and phase detectors depend on the coupling capacitance ( $C_1$  and  $C_2$ ) between voltage detector electrodes in the probe tips and the measurement objects. That voltage detection method can present problems due to the dependence of the coupling capacitance on the material properties of the measurement objects, making accurate voltage determination ( $V_m = V_{m2} - V_{m1}$ ) problematic.

The SAFETY HiTESTER 3258 employs a new technological principle to detect accurate measurement voltage ( $V_m$ ) independent of coupling capacitance.



### ■ Model 3258 Specifications (accuracy guaranteed for one year at 23 ±5°C and 80% RH or less)

|                                   |   |
|-----------------------------------|---|
| Measurement parameter             | AC voltage (AC potential bridge)  |
| Measurement objects               | Insulated electric lines (Indoor PVC or equivalent, 100 mm <sup>2</sup> or larger), metal conductors<br>Note: Not suitable for shielded cables                              |
| Measurement values                | True RMS display  |
| Max. rated voltage to earth       | 600 Vrms AC   |
| Circuit dynamics                  | Crest factor 1.8 (sine wave only at 600 V range)  |
| Temp. characteristics             | 0.05% rdg./°C   |
| Effect of conductor diameter      | 0.5% rdg. (add to measurement accuracy for 38 to 100 mm <sup>2</sup> insulated cables)  |
| Effect of nearby conductors       | ±5% rdg. or less  |
| Effect of external magnetic field | none  |
| Display                           | 4200 counts, with less than 10 counts zero-suppressed   |
| Display refresh rate              | Approx. once every 0.6 seconds  |
| Display response time             | 2.4 s or less   |
| Functions                         | Data Hold, Auto Power Shutoff, Low-Battery Warning  |
| Operating temp. & humidity        | 0 to 40°C, 80% RH or less, non-condensating   |
| Storage temp. & humidity          | -10 to 50°C, 80% RH or less, non-condensating   |
| Operating environment             | Indoors, up to 2000 m ASL   |
| Applicable standards              | Safety: EN61010, EMC: EN61326   |
| Power source                      | Six AA (LR6) alkaline batteries<br>Max. operating time: approx. 14 h (power on, no input),<br>or the equivalent of 1000 one-minute operations or 200 five-minute operations |
| Max. rated power                  | 2 VA  |
| Size and weight                   | 51W(2.01") × 275H(10.83") × 37.5D(1.48") mm (per probe),<br>Cable length: 900 mm (35.43"), 670 g (23.6 oz.) (including batteries)   |



AC Voltage Measurement Accuracy (on insulated PVC cables or equivalent, 100 mm<sup>2</sup> or larger)

| Ranges (auto-ranging) | Displayable range | Display resolution | Range of guaranteed accuracy | Accuracy           |                    |
|-----------------------|-------------------|--------------------|------------------------------|--------------------|--------------------|
|                       |                   |                    |                              | 40 to 66 Hz        | 66 to 400 Hz       |
| 420.0 V               | 0.0 to 420.0 V    | 0.1 V              | 30.0 to 420.0 V              | ±1.5% rdg. ±5 dgt. | ±2.5% rdg. ±5 dgt. |
| 600 V                 | 380 to 600 V      | 1 V                | 380 to 480 V                 | ±2.0% rdg. ±5 dgt. | /                  |
|                       |                   |                    | 481 to 600 V                 | ±5.0% rdg. ±5 dgt. |                    |

## SAFETY HiTESTER 3258

Supplied Accessories: One manual, one soft case and six AA (LR6) batteries



Supplied Accessory: soft case

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