



### Streamline UPS and lead-acid battery diagnostics with measurement and recording guidance.

Measurement navigator  
**Audio guidance**

Streamlined data management  
**Profiles**

From measurement to recording  
**As fast as 2 sec.**

#### Accurately assess lead-acid battery deterioration using proprietary technology.

The new Battery Tester BT3554-50 sets a new standard for UPS and lead-acid battery diagnostics. Since the battery's internal resistance and voltage are measured using the impedance method, diagnostics can be performed while the battery is connected to its host device, without taking it offline. Proprietary noise reduction technology allows more accurate measurement, even in noisy environments.

#### Enjoy measurement guidance and easy data management functionality with the latest software.

When the BT3554-50 is paired with a dedicated mobile app (GENNECT Cross), the mobile device will provide audio guidance announcing the next battery number to be measured. This feature helps prevent erroneous measurements. You can also set up measurement locations informations and battery numbers in advance to create *profiles* to which measurement data and diagnostic results will be linked. This capability simplifies data management, even when performing diagnostic work on large numbers of batteries.



Measurement parameters



# Specifications

## General Specifications

Measurement parameters	Battery internal resistance measurement Battery terminal voltage measurement (DC voltage only) Temperature measurement (when using 9460, 9451, or 9451S)
Measurement time	100 ms
Response time	Approx. 1.6 sec.
Location of use	Indoors, Level 2 pollution, maximum elevation of 2000 m (6562 ft.)
Operating temperature and humidity range	Temperature: 0°C to 40°C (32°F to 104°F) Humidity: 80% RH or less (non-condensing)
Storage temperature and humidity range	Temperature: -10°C to 50°C (14°F to 122°F) Humidity: 80% RH or less (non-condensing)
Power supply	Size AA alkaline battery (LR6) × 8 Rated supply voltage: 1.5 V DC × 8 (Nickel metal hydride batteries may be used. However, the battery life display is not supported in this configuration.)
Continuous operating time	About 8.3 hr. (without Z3210 installed) About 8.2 hr. (with Z3210 installed and wireless communications active)
Standard compliance	Safety: EN 61010-2-030 EMC: EN 61326-1
Dimensions	199W × 132H × 60.6D mm (7.83"W × 5.20"H × 2.39"D) (with Protector Z5041 installed)
Mass	960 g (33.9 oz.) (including batteries and Protector Z5041)
Communications interface	USB Wireless communications (when Z3210 installed)
Product warranty	3 years
Fuse	250 V, F 630 mA (Littelfuse model 216.630) (1 fuse is built into each BT3554-50.)

## Accuracy Specifications

Accuracy guaranteed conditions	Accuracy guarantee duration: 1 year Post-adjustment accuracy guarantee duration: 1 year Accuracy guarantee temperature and humidity range: 23°C ±5°C (73°F ±9°F) 80% RH or less Warm-up time: none				
Temperature Characteristics	For measurement within the operating temperature range but outside of the accuracy guaranteed temperature range: (n°×0.1)(measurement accuracy)+(measurement accuracy) n° = number of °C away from accuracy guarantee conditions				
Resistance measurement accuracy	Measurement current accuracy: ±10% Measurement current frequency: 1 kHz ±30 Hz With noise frequency avoidance function enabled, 1 kHz ±80 Hz.				
	Range	Maximum display	Resolution	Measurement accuracy	Measurement current
	3 mΩ	3.100 mΩ	1 μΩ	±1.0% rdg ±8 dgt*	160 mA
	30 mΩ	31.00 mΩ	10 μΩ	±0.8% rdg ±6 dgt	160 mA
	300 mΩ	310.0 mΩ	100 μΩ		16 mA
	3 Ω	3.100 Ω	1 mΩ		1.6 mA
	When using test leads other than recommended accessories or optional models, or when using extended test leads, accuracy is only guaranteed after performing zero adjustment. Test leads not manufactured by Hioki are not covered by the accuracy guarantee or product support, and may not operate properly.  *Add values listed below if zero adjustment has not been performed. When using 9465-10 ±5 dgt      When using 9460 ±16 dgt When using L2020 ±6 dgt      When using 9467 ±5 dgt When using 9772 ±1 dgt  *Use the included zero-adjustment board or the Z5038 0 Adj. Board to perform zero adjustment with the 9465-10, L2020, or 9772.				
Voltage measurement accuracy	Range	Maximum display	Resolution	Measurement accuracy	
	6 V	±6.000 V	1 mV	±0.08% rdg ±6 dgt	
	60 V	±60.00 V	10 mV		
Temperature measurement accuracy	Measurement range	Maximum display	Resolution	Measurement accuracy <sup>*2</sup>	
	-10°C to 60°C	60.0°C	0.1°C	±1.0°C	
	14°F to 140°F	140.0°F	0.1°F	±1.8°F	
	<sup>*2</sup> When using the Clip Type Lead with Temperature Sensor 9460. <sup>*2</sup> When using the Temperature Probe 9451, add ±0.5°C (±0.9°F) (cable length: 1.5 m [59.1"]) <sup>*2</sup> When using the Temperature Probe 9451S, add ±0.5°C (±0.9°F) (cable length: 0.1 m [3.94"])				
BT3554-50 standalone accuracy with simulated input: ±0.5°C (±0.9°F)					

\*2 When using the Clip Type Lead with Temperature Sensor 9460.  
\*2 When using the Temperature Probe 9451, add ±0.5°C (±0.9°F) (cable length: 1.5 m [59.1']).  
\*2 When using the Temperature Probe 9451S, add ±0.5°C (±0.9°F) (cable length: 0.1 m [3.94']).  
BT3554-50 standalone accuracy with simulated input: ±0.5°C (±0.9°F)

## Functional Specifications

Memory functionality	<b>Operation</b> Save, load, and delete measurement data Save and delete <i>profile</i> information Number of data sets: 6000 Memory architecture: 500 data sets per unit (12 units)  <b>Saved data</b> Saved measurement data is linked to <i>profile</i> information.  (1) Measurement data (Data can be saved, loaded, and deleted by operating the instrument.) 1. Date and time 2. Resistance value, voltage value, and temperature 3. Comparator threshold value and judgment result  (2) <i>Profile</i> information <i>Profile</i> information can be saved, loaded, and deleted using a supported application (GENNECT Cross or GENNECT One). ( <i>Profile</i> information cannot be saved, loaded, or deleted by operating the instrument.) 1. <i>Profile</i> numbers: 1 to 100 The same number cannot be used twice Data (2), (3), and (4) below are saved for each <i>profile</i> number 2. Location: 72-byte string (example: 72 single-byte alphanumeric characters) User-defined comment such as location of UPS 3. Device information: 72-byte string (example: 72 single-byte alphanumeric characters) User-defined comment such as UPS management number 4. Battery number: 1 to 500 (start number, end number) Number assigned to measurement target; number used for audio measurement and recording guidance
	<b>Auto memory function</b> Automatically saves measured values once they are held.
Auto-hold function	Automatically holds measured values once resistance measured values stabilize.
Measurement Navigator	<b>Operation</b> Announces the next battery number to be measured via a screen display and audio guidance. Audio output is generated by a connected mobile device when using the Z3210 and a supported application (GENNECT Cross).  <b>Preparations</b> <i>Profile</i> information that's been registered with a supported application (GENNECT Cross or GENNECT One) must be transferred to the instrument.
Auto power-off	The instrument turns off automatically when a no-operation state or measurement current anomaly detection state continues for at least 10 min. (except when sending or receiving data or when using measurement and recording guidance).
PC Software (GENNECT One)	Load/delete memory data (USB) Edits and transfers comparator tables (USB) Edits and transfers <i>profile</i> information (USB) Creates reports
Smartphone / tablet app (GENNECT Cross)	Loads/deletes memory data (Z3210) Edits and transfers comparator tables (Z3210) Edits and transfers <i>profile</i> information (Z3210) Measurement and recording guidance (Z3210) Creates reports

## Comparator Function

Comparator	Compares measured values with set threshold values to make judgments and reports them to the user. Judgment notification method: Results are displayed as shown below (segment) and beeping tones sound			
		Resistance value (low)	Resistance value (medium)	Resistance value (high)
	Voltage value (high)	PASS	WARNING	FAIL
	Voltage value (low)	WARNING	WARNING	FAIL
If the judgment result is WARNING or FAIL, the audio tone is accompanied by a red backlight.				
User-selectable voltage judgment method ·ABS (absolute value judgment) ·POL (polarity judgment)				
Savable settings: 200 tables				

### Operating precautions

Pass/fail judgment threshold values vary with factors including the battery's manufacturer, type, and capacity. The internal resistance and terminal voltage of a new or known-good battery must be measured first. It may be difficult to detect deterioration in sealed lead-acid batteries, which exhibit fewer variations in internal resistance than open (liquid) and alkaline lead-acid batteries.

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