

### 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.



When 73210 is installed



Measurement parameters



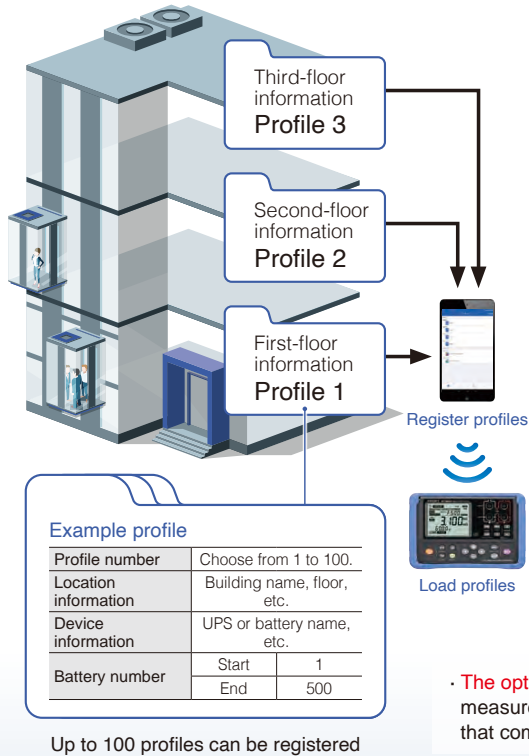
Measurement navigator that keeps you from going back.

## Simply follow the audio guidance to measure, record, and organize data.

1

### Register site informations in advance.

Register *profile* information for each measurement site using GENNECT Cross or GENNECT One and load it on the instrument.



2

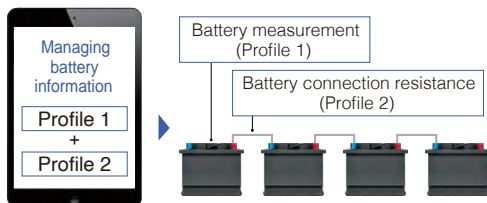
### Receive audio guidance about the measurement sequence.

The app provides audio guidance about the battery measurement sequence based on *profile* information. This approach prevents mistakes in sequencing and provides audio announcements of judgment results.

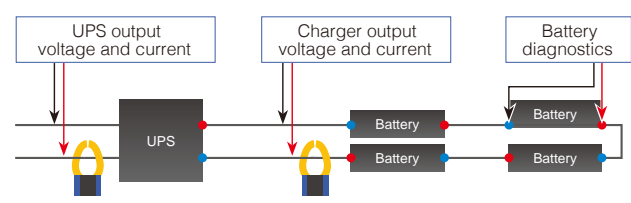


### Applications other than diagnostics

**Manage battery connection resistance values too**  
If you set up *profile* information for each measurement application, you can easily group readings with other measurement data for management purposes.



**Manage other UPS inspection data together**  
GENNECT can serve as a central repository for managing data from Hioki clamp meters and other instruments. Access the QR code for sample data. >>



### Product bundles

Model No. (Order code)	BT3554-92	BT3554-91	BT3554-52	BT3554-51	BT3554-50
Special Accessories	Pin Type Lead L2020 Wireless Adapter Z3210	Pin Type Lead 9465-10 Wireless Adapter Z3210	Pin Type Lead L2020	Pin Type Lead 9465-10	-
Standard accessories	Carrying Protector Fuse Set 0 Adj Board Neck strap USB cable GENNECT One				

Wireless Adapter Z3210

For Bluetooth® wireless communications technology; required in some environments.



3

### Record data automatically while probing.

Judgment results (PASS, WARNING, or FAIL) relative to comparator threshold values are recorded by the instrument along with measured values and transferred to your mobile device.

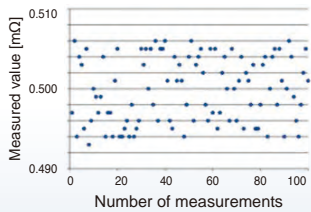


#### NOISE REDUCTION TECHNOLOGY

Noise resistance that lets you measure even when the UPS is in operation

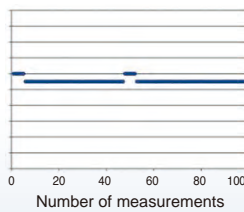
##### Normal instrument

Measured values fail to stabilize while the UPS is operating due to the effects of noise from nearby inverters.



##### Noise reduction technology

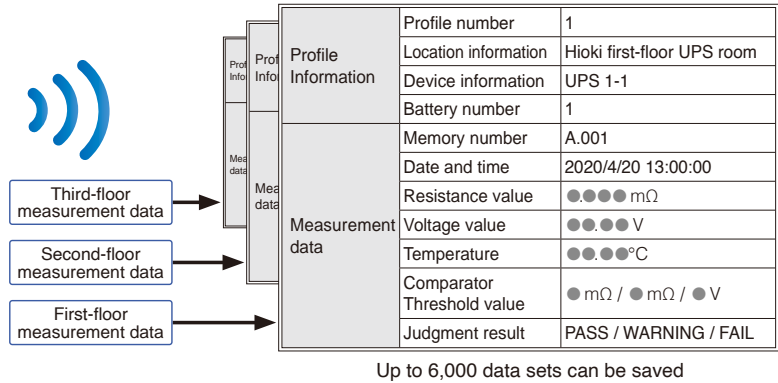
The effects of inverter noise are reduced to facilitate stable measurement.



4

### Manage data easily.

Measurement data is linked to *profile* information and saved. This approach lets you reduce the number of man-hours spent managing measured batteries.



#### Management and analysis software

Free

Free

Mobile app

PC Software



Transfer measurement data to a smartphone

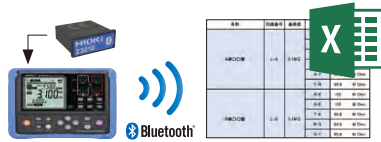


Transfer internal memory data to a computer

#### Optional functionality

##### Excel® Direct Input

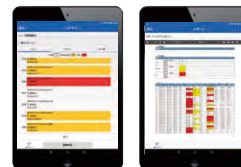
Excel® Direct Input function allows you to input measurement values directly and automatically into an Excel file once the measurement Auto-hold function is activated. You can easily input the data into an existing Excel form.



#### App and software functionality

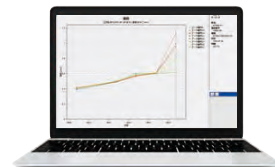
##### Easily create reports

Create easy-to-read graphical reports with measurement results and photographs instantly.



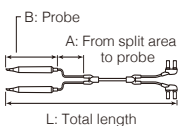
##### Display trends for accumulated data

Display data for selected batteries and generate trend graphs by cubic (up to 500 units).



#### Options

##### Regarding probe length



**Pin Type Lead L2020**  
 A: 70 mm (2.76") (red),  
 150 mm (5.91") (black, max.  
 630 mm (24.80")  
 B: 164 mm (6.46")  
 L: 1941 mm (76.42") (red)



**Pin Type Lead 9465-10**  
 A: 45 mm (1.77") (red),  
 400 mm (15.75") (black, max.)  
 B: 177 mm (6.97")  
 L: 1925 mm (75.79") (red)



**Pin Type Lead 9772**  
 A: 45 mm (1.77") (red),  
 400 mm (15.75") (black, max.)  
 B: 173 mm (6.81")  
 L: 1921 mm (75.63") (red)



**Clip Type Lead with Temperature Sensor 9460**  
 A: 300 mm (11.81")  
 B: 106 mm (4.17")  
 L: 2268 mm (89.29")



**Large Clip Type Lead 9467**  
 A: 300 mm (11.81")  
 B: 131 mm (5.16")  
 L: 1350 mm (53.15")  
 tip φ 28 mm (1.10")



**Remote Control Switch 9466**  
 Hold and save measured values by pressing the button.  
 Cable length: approx. 2 m (78.74")



Tip Pin  
9465-90



Tip Pin  
9772-90



Temperature Probe  
9451S



Temperature Probe  
9451



Fuse Set  
Z5050



0 Adj Board  
Z5038



Protector  
Z5041



Carrying Case  
C1014



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# 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 guarantee conditions	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		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. When a test lead other than those made by Hioki is used, the accuracy and proper operation cannot be guaranteed.				
*Add the following values to the measurement accuracy as influence values if zero adjustment has not been performed in the 3 mΩ range (reference values). 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
Temperature measurement accuracy	6 V		±6.000 V	1 mV	±0.08% rdg ±6 dgt
	60 V		±60.00 V	10 mV	
	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>3</sup> When using the Temperature Probe 9451, add ±0.5°C (±0.9°F) (cable length: 1.5 m [59.1"]). <sup>4</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)					

## 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.											
	<b>Auto-hold function</b>	Automatically holds measured values once resistance measured values stabilize.											
	<b>Measurement Navigator</b>	<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.											
<b>Auto power-off</b>	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).												
<b>PC Software (GENNECT One)</b>	Load/delete memory data (USB) Edits and transfers comparator tables (USB) Edits and transfers <i>profile</i> information (USB) Creates reports												
<b>Smartphone / tablet app (GENNECT Cross)</b>	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												
<b>Comparator Function</b>													
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												
	<table><tr><td></td><td>Resistance value (low)</td><td>Resistance value (medium)</td><td>Resistance value (high)</td></tr><tr><td>Voltage value (high)</td><td>PASS</td><td>WARNING</td><td>FAIL</td></tr><tr><td>Voltage value (low)</td><td>WARNING</td><td>WARNING</td><td>FAIL</td></tr></table>		Resistance value (low)	Resistance value (medium)	Resistance value (high)	Voltage value (high)	PASS	WARNING	FAIL	Voltage value (low)	WARNING	WARNING	FAIL
		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 determine the deterioration state of traditional open type (liquid) lead-acid or alkaline batteries which demonstrate smaller changes in internal resistance than sealed lead acid batteries.

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