

Next battery:  
No. 2

Pass!

Next battery:  
No. 3



Audio guidance

Recording and judgment

## 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 Z3210 is installed



Measurement parameters



Measurement navigator that keeps you from going back.

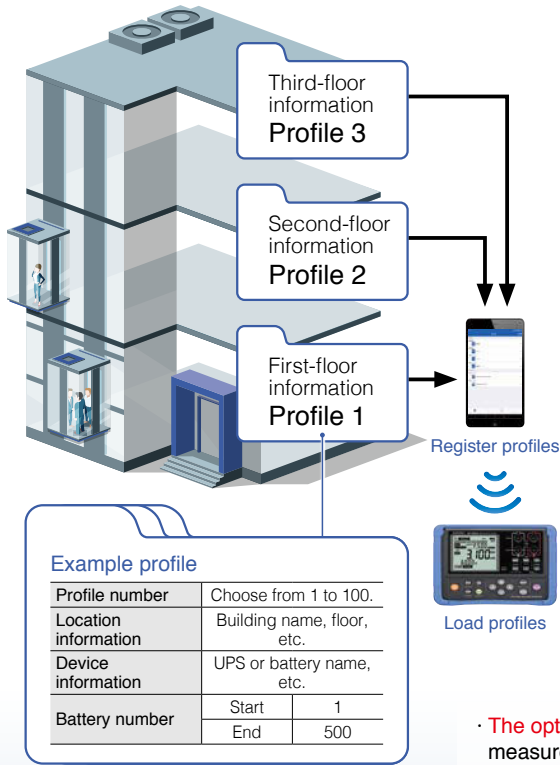
# Simply follow the audio guidance to measure, record, and organize data.

**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.

\*Requires GENNECT Cross version 1.8 or later (scheduled for release in 2021).

**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.

\*Requires GENNECT Cross version 1.8 or later (scheduled for release in 2021).



Up to 100 profiles can be registered

**Measurement instruction**

Next: No. 1

Measured values and judgment results are transferred to the app when the battery is probed.

No. 1: **PASS**

The app notifies the operator the judgment results and the next battery number to be measured.

Next: No. 2

No. 2: **WARNING**

Next: No. 3

No. 3: **FAIL**

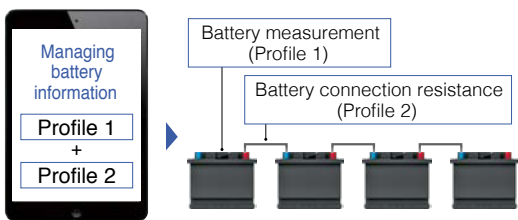
...

End of guidance

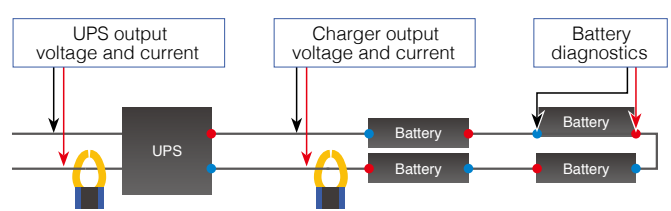
**The optional Wireless Adapter Z3210 is required in order to use the measurement and recording guidance function as well as other functions that communicate with smartphones or tablets.**

## 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 Case C1014 Protector Z5041 Fuse Set Z5050 0 Adj Board Neck strap USB cable GENNECT One Software CD				AA alkaline battery (LR6) × 8 User Manual

**Wireless Adapter Z3210**

For Bluetooth® wireless communications technology; required in order to communicate with mobile devices.

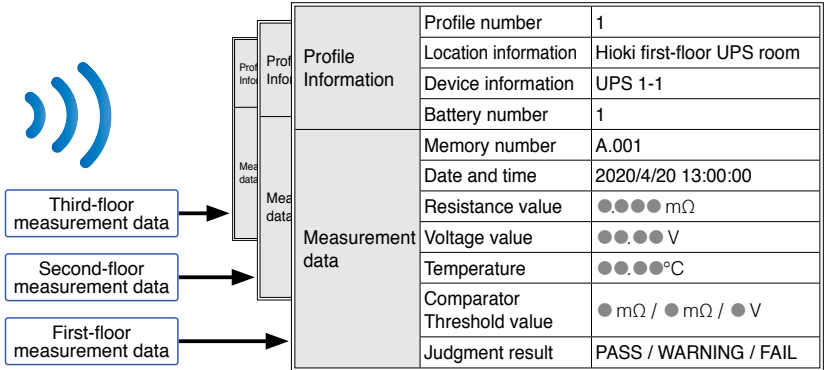
### 3 Record data automatically while probing.

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.

### 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.

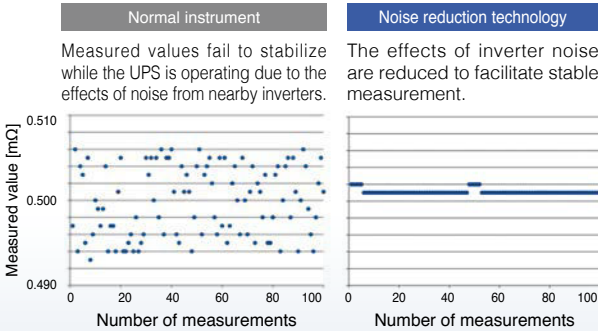
\*Requires GENNECT Cross version 1.8 or later (scheduled for release in 2021).



Up to 6,000 data sets can be saved

#### NOISE REDUCTION TECHNOLOGY

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



#### Management and analysis software



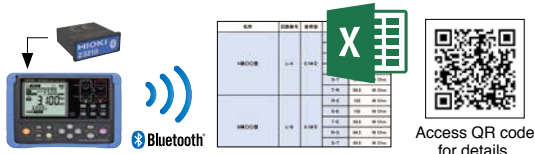
Transfer measurement data to a smartphone      Transfer internal memory data to a computer

#### 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.

\*Hioki plans to make this functionality available as part of an update to the Z3210 in 2021.



#### App and software functionality

##### Easily create reports

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

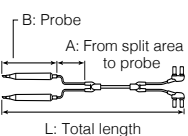
##### Display trends for accumulated data

Display data for selected batteries and generate trend graphs by cube (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), 105 mm (4.13") (black, max. 515 mm [20.28"])  
B: 176 mm (6.93")  
L: 1883 mm (74.13") (red)
- Pin Type Lead 9772**  
A: 45 mm (1.77") (red), 105 mm (4.13") (black, max. 515 mm [20.28"])  
B: 173 mm (6.81")  
L: 1880 mm (74.02") (red)
- Clip Type Lead with Temperature Sensor 9460**  
A: 300 mm (11.81")  
B: 106 mm (4.17")  
L: 2268 mm (89.29")  
Max. clip diameter: approx. φ29 mm
- Large Clip Type Lead 9467**  
A: 300 mm (11.81")  
B: 116 mm (4.57")  
L: 1360 mm (53.54")  
Max. clip diameter: approx. φ29 mm
- Remote Control Switch 9466**  
Hold and save measured values by pressing the button. Cable length: approx. 2 m (78.74")
- Tip Pin 9465-90**  
L2020/9465-10 tip pin replacement
- Tip Pin 9772-90**  
9772 tip pin replacement
- Temperature Probe 9451S**  
L: 100 mm (3.94")
- Temperature Probe 9451**  
L: 1500 mm (59.06")
- Fuse Set Z5050**  
For BT3554, BT3554-50
- 0 Adj Board Z5038**  
For L2020, 9465-10, and 9772
- Protector Z5041**  
For BT3554 and BT3554-50
- Carrying Case C1014**  
Hard case

# 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>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			
Auto memory function	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			
<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			
		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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