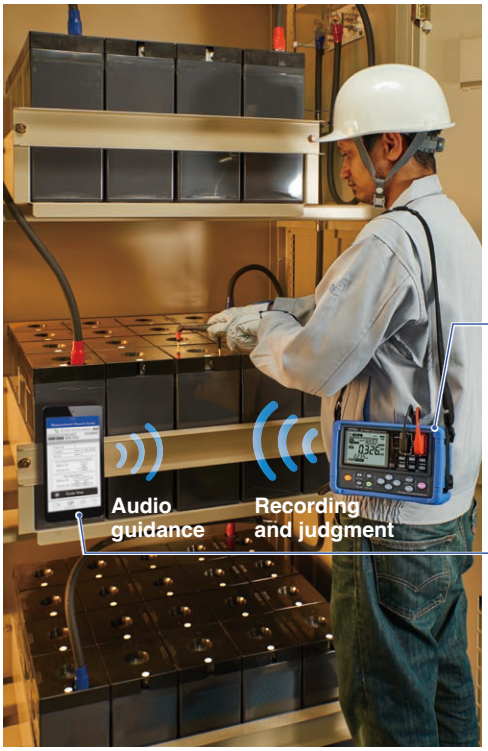
HIOKI

BATTERY TESTER BT3554-50

NEW



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

Measurement navigator	Streamlined data management	From measurement to recording
Audio guidance	**Profiles**	**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.

CE

3 year Warranty

Bluetooth®
When Z3210 is installed

Wireless Adapter Compatible

Measurement parameters

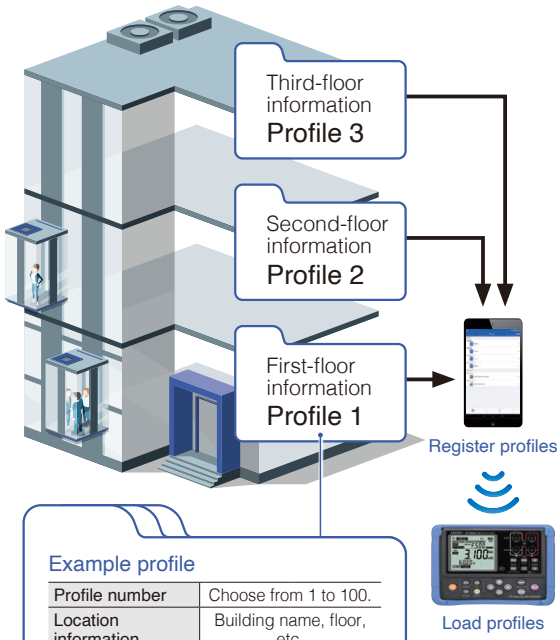
Voltage | Resistance | Temperature

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.



Example profile

Profile number	Choose from 1 to 100.	
Location information	Building name, floor, etc.	
Device information	UPS or battery name, etc.	
Battery number	Start	1
	End	500

Up to 100 profiles can be registered

2 Receive audio guidance about the measurement sequence.

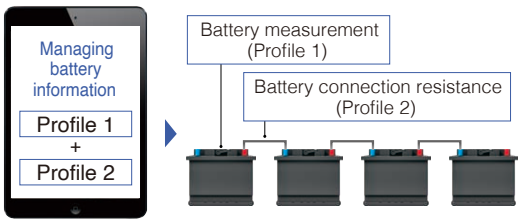
The app provides audio guidance about the battery measurement sequence based on *profile* information. This approach prevents mistakes in sequencing and provides audio announcements of judgment results.

· 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

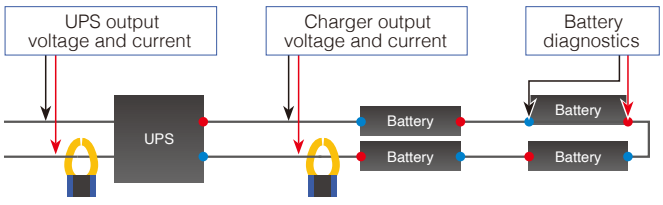
Manage battery connection resistance values too

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	Pin Type Lead 9465-10	Pin Type Lead L2020	Pin Type Lead 9465-10	-
	Wireless Adapter Z3210	Wireless Adapter Z3210	-	-	-
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.

Third-floor measurement data

Second-floor measurement data

First-floor measurement data

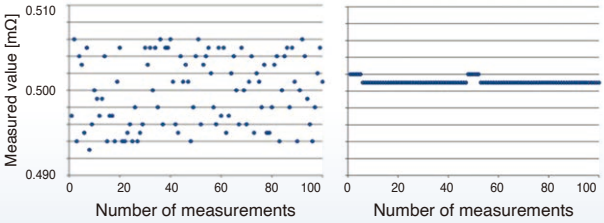
Profile Information	Profile number	1
	Location information	Hioki first-floor UPS room
	Device information	UPS 1-1
	Battery number	1
Measurement data	Memory number	A.001
	Date and time	2020/4/20 13:00:00
	Resistance value	●.●●● mΩ
	Voltage value	●●.●● V
	Temperature	●●.●●°C
	Comparator Threshold value	● mΩ / ● mΩ / ● V
	Judgment result	PASS / WARNING / FAIL

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

Normal instrument	Noise reduction technology
Measured values fail to stabilize while the UPS is operating due to the effects of noise from nearby inverters.	The effects of inverter noise are reduced to facilitate stable measurement.



Management and analysis software

Mobile app — Free

PC Software — Free

GENNECT Cross

Transfer measurement data to a smartphone

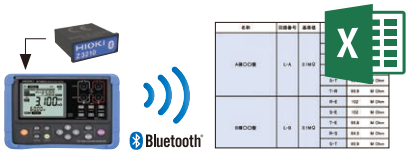
GENNECT One

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.



Access QR code for details.

App and software functionality

Easily create reports

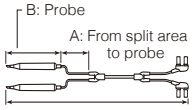
Create easy-to-read graphical reports with measurement results and photographs instantly.

Display trends for accumulated data

Display data for selected batteries and generate trend graphs by cubicle (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
L2020/9465-10 tip pin replacement

Tip Pin 9772-90
9772 tip pin replacement

Temperature Probe 9451S
Order code 9451-01
L: 100 mm (3.94")

Temperature Probe 9451
L: 1500 mm (59.06")

Fuse Set Z5050
Set of 5
For BT3554, BT3554-50

0 Adj Board Z5038
Separate surface fastener required if affixing to carrying case
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 mAH (Littelfuse model 216.630) (1 fuse is built into each BT3554-50.)

Accuracy Specifications

Accuracy guaranteed conditions	Accuracy guarantee duration: 1 year Accuracy guarantee temperature and humidity range: 23°C ±5°C (73°F ±9F°), 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.
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 L2020 ±6 dgt
When using 9772 ±1 dgt
When using 9460 ±16 dgt
When using 9467 ±5 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*2
-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

*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

Operation
Save, load, and delete measurement data
Save and delete *profile* information
Number of data sets: 6000
Memory architecture: 500 data sets per unit (12 units)

Saved data
Saved measurement data is linked to *profile* 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) *Profile* information
Profile information can be saved, loaded, and deleted using a supported application (GENNECT Cross or GENNECT One).
(*Profile* information cannot be saved, loaded, or deleted by operating the instrument.)
1. *Profile* numbers: 1 to 100
   The same number cannot be used twice
   Data (2), (3), and (4) below are saved for each *profile* 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	Operation 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). Preparations *Profile* 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 *profile* information (USB) Creates reports
Smartphone / tablet app (GENNECT Cross)	Loads/deletes memory data (Z3210) Edits and transfers comparator tables (Z3210) Edits and transfers *profile* 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 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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