BT3554
BT3554-01

HIOKI

Calibration Manual

BATTERY TESTER

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BT3554_Cal_01_EN_G

EN

Contents

Introduction

1. This manual provides information necessary to calibrate the applicable product. Information for adjustment is not included.
2. For details about operating procedures, operation, specifications, and safety information, refer to the instruction manual.
3. Perform the calibration with great care so as to avoid any risk of electric shock due to voltage or current.
4. If your product cannot be calibrated following the instructions in this calibration manual, please contact Hioki for calibration services.

1 Status

Ambient temperature and humidity	23ºC ±5ºC, 80% RH or less
Power supply voltage and frequency	Power supply voltage and frequency specified on the main unit
Warm-up time	None
Unit settings	Noise frequency avoidance function OFF (normal start), no zero adjustment

2 Recommended Equipment and Accessories

Name	Manufacturer, model name, specifications	Remarks
Variable resistor	Alpha Electronics ADR-3204GR or equivalent	Accuracy test (temperature measurement)
Voltage calibrator	ADCMT 6166 or equivalent	Accuracy test (voltage measurement)
Resistor	Effective resistance at 980 Hz 0 mΩ (0.002 mΩ or less)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 1 mΩ (±0.0045 mΩ, 51.2 µW or more)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 3 mΩ (±0.0095 mΩ, 153.6 µW or more)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 10 mΩ (±0.035 mΩ, 512 µW or more)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 30 mΩ (±0.075 mΩ, 1.536 mW or more)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 100 mΩ (±0.35 mΩ, 51.2 µW or more)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 300 mΩ (±0.75 mΩ, 153.6 µW or more)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 1 Ω (±0.0035 Ω, 5.12 µW or more)	Accuracy test (resistance measurement)
Resistor	Effective resistance at 980 Hz 3 Ω (±0.0075 Ω, 15.36 µW or more)	Accuracy test (resistance measurement)

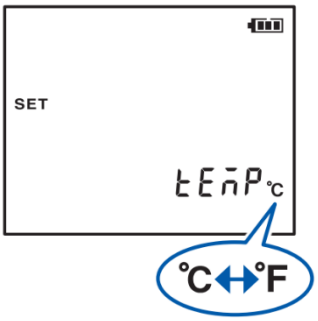
Name	Manufacturer, model name, specifications	Remarks
Connection cable for accuracy test (temperature measurement)	Jack-Banana Use a cable equivalent to the cable supplied with the product to connect the equipment and main unit.	Accuracy test (temperature measurement)
Various other connection cables	Use a cable equivalent to the cable supplied with the product to connect the equipment and main unit.	Various tests

3 Calibration Items

No.	Item	Function	Range	Input	Stability time	Tolerance
1	Accuracy	Resistance Ω	3 mΩ	0 mΩ	3.0 s	Refer to the Test Report.*1
				1 mΩ	3.0 s	
				3 mΩ	3.0 s	
			30 mΩ	0 mΩ	3.0 s	
				10 mΩ	3.0 s	
				30 mΩ	3.0 s	
			300 mΩ	0 mΩ	3.0 s	
				100 mΩ	3.0 s	
				300 mΩ	3.0 s	
			3 Ω	0 Ω	3.0 s	
				1 Ω	3.0 s	
				3 Ω	3.0 s	
		Voltage V Conduct the test in the 3 Ω range.	6V	0V	3.0 s	
				3V	3.0 s	
				5.95V	3.0 s	
			60V	30V	3.0 s	
				-30V	3.0 s	
				59.5V	3.0 s	
		Temperature	When the temperature unit setting is Fahrenheit °F, change it to Celsius °C.*2			
			−	0°C (459.29 Ω) *3	1.0 s	Refer to the Test Report.*1
				25°C (500.00 Ω) *3	1.0 s	
				50°C (540.37 Ω) *3	1.0 s	
			If the temperature unit setting is Fahrenheit °F before calibration, set the unit to Fahrenheit °F again.			

*1 For tolerance, download the Test Report from https://www.hioki.com/global/support/download .
*2 Changing the temperature display unit (Fahrenheit °F ↔ Celsius °C).

1.  Turn off the instrument.
2.  Display the setting of the temperature unit.



3.  Press the key for at least 3 seconds.
4.  Confirm the setting.
   The instrument is restarted.
   The settings will not change if the power is turned off before the settings are applied.

*3 Include the resistance value of the connecting cable.

4 Connection Diagrams

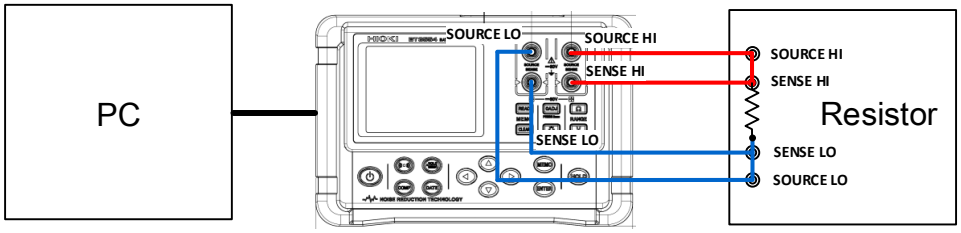


Figure 1 Wiring example for accuracy test (resistance measurement)

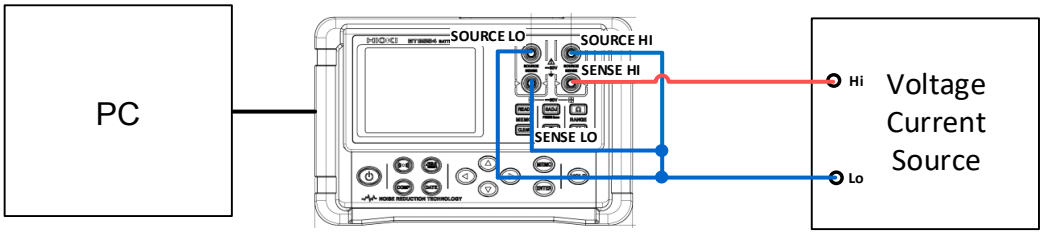


Figure 2 Wiring example for accuracy test (voltage measurement)

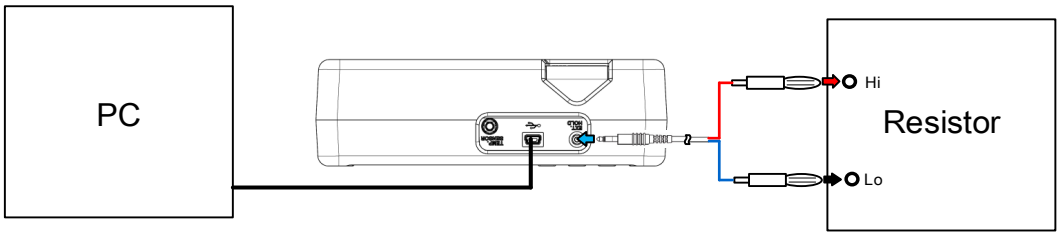


Figure 3 Wiring example for accuracy test (temperature measurement)

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www.hioki.com/

HEADQUARTERS
81 Koizumi
Ueda, Nagano 386-1192 Japan

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