


Introduction

Thank you for purchasing this HIOKI "9269 DC BIAS CURRENT UNIT."

To get the maximum performance from the unit, please read this manual first, and keep this at hand.

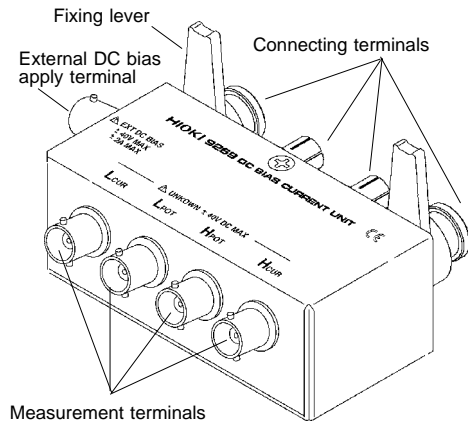
Safety

This Instruction Manual provides information and notes essential for operating this equipment in a safe manner and for maintaining it in safe operating condition. Before using this equipment, be sure to carefully read the following safety notes.

 CAUTION	Indicates that incorrect operation presents possibility of injury to the user or damage to the equipment.
NOTE	Denotes items of advice related to performance of the equipment or to its correct operation.

1. Overview

The HIOKI 9269 DC BIAS CURRENT UNIT is an optional unit, which can be connected between a HIOKI LCR/Z HiTESTER and the fixture, to allow a DC bias current to be applied to an inductor or transductor.



2. Connecting the DC Bias Current Unit and Test Fixture

DC bias unit

Plug the fixture into the measurement terminals (UNKNOWN) of the tester, with the product name up. Fasten it in place with the left and right fixing levers.

Test fixture

Connect the test fixture (or measurement probe) to the measurement terminals (UNKNOWN) of the tester, so that the H and L terminals match.

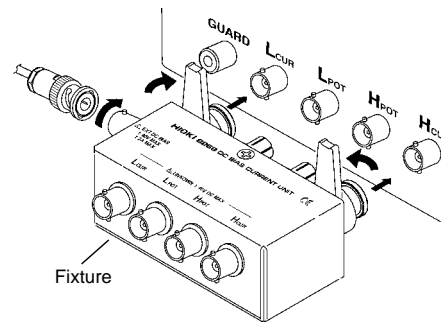
For fixing sample, refer to the Instruction Manual of the fixture.

External DC bias power supply

Make sure that the external DC bias power supply is turned off, and then plug the cable into the external DC bias apply terminals (BNC terminal) of the 9269 to connect.

NOTE

A separate external power supply for the DC bias current is also required.



3. Measurement Method

For safety reason, follows the procedure carefully. Before measurement, always read the notes on use.

1. To eliminate measurement errors due to the internal circuit of the DC bias unit, before carrying out measurement, always carry out open-circuit compensation and short-circuit compensation. Carry out the open-circuit compensation and short-circuit compensation with the 9269 and fixture (or measurement probe) connected, and with the bias application cable not connected. For details on compensation, refer to Instruction Manuals of the tester and fixture.

2. Fix the sample in the fixture.

3. Set the output current of the external DC bias supply to 0 A, then apply the current. Next, increase the output current setting progressively to reach the required setting.

4. Set the DC bias characteristics of the sample.
5. Gradually decrease the output current of the external DC bias supply until it reaches 0 A.
6. Remove the sample from the fixture.

4. Notes on Use

- Be careful about the polarity when connecting together, the sample to be tested, and the DC bias current source.
- It takes a little time for the DC current which is being supplied to the sample under test to reach the set current, so you should wait for a certain stabilization time period before performing testing. Be careful, because if you perform testing before this stabilization time period has elapsed, the results will not be reliable.

NOTE

This 9269 can be used only with the 3511, 3522, 3531, or 3532.

CAUTION

- The maximum DC bias current which can be supplied to the 9269 is 2 ADC. If a DC bias current greater than this limit is supplied continuously, the units may be damaged.
- Do not apply the DC bias current more than rated current of sample. Doing so may damage the sample and testers.
- In order to avoid electric shock accident, be absolutely sure not to touch the test terminals while the DC bias current is being supplied to them.
- Do not short circuit of the fixture with the DC bias current still being supplied. Doing so may damage the fixtures or cause a short circuit accident.

5. Specifications

Compatible instrument	3511/ 3522/ 3531/ 3532
Measurement range	100 μ H max.
Measurement frequency range	42 Hz to 100 kHz
Maximum apply voltage	2 A DC
Dimensions	116(W)X45(H)X55(D) mm 4.57"WX1.77"HX2.17"D (excluding protrusions)
Mass	300 g (10.6 oz.)
Operating temperature and humidity range	0 to 40°C (32°F-104°F), 80%rh or less with no condensation
Storage temperature and humidity range	-10 to 55°C (14°F-131°F), 80%rh or less with no condensation
Location for use	Altitude up to 2000 m (6562 feet) indoor

6. Notes on Using the DC Bias Voltage Unit

- Be careful to avoid dropping the unit or subjecting to other mechanical shock.
- Do not use the unit in direct sunlight, dusty conditions, or in the presence of corrosive gases.
- If the unit has gotten seriously wet, oily, or dusty, stop using it and send it for service at an approved HIOKI service facility.
- For using the tester to which the test fixture is connected and fixture, refer to Instruction Manual of them.
- Gently wipe dirt with a soft cloth moistened with a small amount of water.
- When the DC bias unit is attached to the tester, be careful not to put any weight on it. This could lead to damage both to the tester and to the DC bias unit.



HIOKI
HIOKI E. E. CORPORATION

HEAD OFFICE

81 Koizumi, Ueda, Nagano 386-1192, Japan
TEL +81-268-28-0562 / FAX +81-268-28-0568
E-mail: os-com@hioki.co.jp

HIOKI USA CORPORATION

6 Corporate Drive, Cranbury, NJ 08512, USA
TEL +1-609-409-9109 / FAX +1-609-409-9108

