Introduction
Thank you for purchasing the Hioki L2020 Pin Type Lead. To obtain maximum performance from the device, please read this manual first, and keep it handy for future reference.

Overview
The L2020 Pin Type Lead has a 4-terminal structure that can be used in small spaces where there may be difficulty in contacting an object to be measured, such as during emergency battery maintenance. Since the conductor contact pins have an outside diameter of 2.9 mm, they can be used to measure batteries via the battery terminal cover's test holes without needing to remove the cover.

Inspection and Maintenance
Initial Inspection
When you receive the device, inspect it carefully to ensure that no damage occurred during shipping. If damage is evident, or if it fails to operate according to the specifications, contact your authorized Hioki distributor or reseller.

Maintenance and Service
• To clean the device, wipe it gently with a soft cloth moistened with water or mild detergent.
• If the device seems to be malfunctioning, contact your authorized Hioki distributor or reseller.

Transporting the device
During shipment of the device, handle it carefully so that it is not damaged due to a vibration or shock.

Disposal
Handle and dispose of the device in accordance with local regulations.

Safety Information
Before using the device be certain to carefully read the following safety notes:

- **DANGER**
  - Mishandling during use could result in injury or death, as well as damage to the device. Be certain that you understand the instructions and precautions in the manual before use.

- **WARNING**
  - With regard to the electricity supply, there are risks of electric shock, heat generation, fire, and arc flash due to short circuits. If persons unfamiliar with electricity measuring device are to use the device, another person familiar with such device must supervise operations.

- **CAUTION**
  - Indicates prohibited actions.
  - Indicates the action which must be performed.

Notation
In this document, the risk seriousness and the hazard levels are classified as follows.

- **DANGER**
  - Indicates an imminently hazardous situation that will result in death or serious injury to the operator.

- **WARNING**
  - Indicates a potentially hazardous situation that may result in death or serious injury to the operator.

- **CAUTION**
  - Indicates a potentially hazardous situation that may result in minor or moderate injury to the operator or damage to the device or malfunction.

- **IMPORTANT**
  - Indicates information related to the operation of the device or maintenance tasks with which the operators must be fully familiar.

Memo
Procedure

1. Make sure that power of the instrument to connect the L2020 to is off.
2. Connect the L2020 to the input terminal of the instrument.
3. Perform zero adjustment.
4. Connect the L2020 to a sample.

Specifications

General Specifications
- Operating environment: Indoors, Pollution Degree 2, altitude up to 2000 m (6562 ft.)
- Operating temperature and humidity: 0°C to 40°C (32°F to 104°F), 80% RH or less (no condensation)
- Storage temperature and humidity: -10°C to 50°C (14°F to 122°F), 80% RH or less (no condensation)
- Dimensions: Approx. 1950 mm (76.77")
- Mass: Approx. 210 g (7.4 oz.)
- Accessory: Instruction manual
- Option: Model 9465-90 Tip Pin

Basic Specifications
- Rated current: 2 AAC/DC continuous
- Maximum rated voltage to earth: Effective value 30 V, Peak value 42.4 V, Direct current 60 V
- Measurement connector: SOURCE Hi, SOURCE Lo, SENSE Hi, SENSE Lo, No GUARD connector

Replacing the Pin Tip (Option)

The conductive contact pin is replaceable. Replace the pin with a new one if it is broken or worn. Purchase the 9465-90 Pin Tip, which includes the conductor contact pin and the pin base (plastic portion).

1. Turn off the power of the instrument and remove the L2020.
2. Rotate the grip to loosen it.
3. Remove the pin tip.
4. Replace the pin tip to a new one.
5. Rotate the grip to fasten it.
6. To avoid broken wires and contact failures, check that the cable is firmly held.
7. Check the performance.

Part Names

1. Protective cap
   - Remove this cap before use.
   - Reattach the cap when not using the lead.
2. Conductive contact pin
3. Grip
4. SOURCE connector
5. SENSE connector

Enlarged view of pin

Unit: mm