

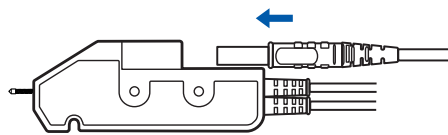
HIOKI L2003A981-01

Connecting the return cable

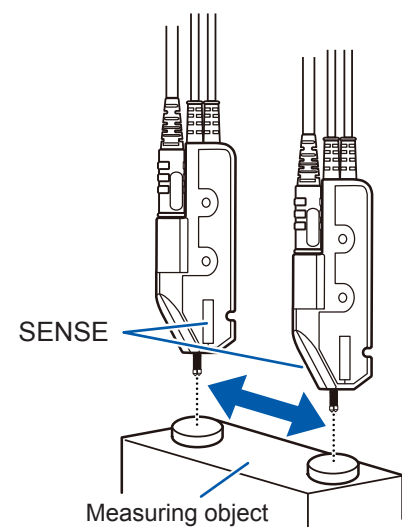
IMPORTANT

- Connect the return cable before measurement.
- Adjust the fixed position of the probe so that the return cable between the probes does not sag.

- 1 Securely insert the plug of the return cable up to the back of the probe (both red and black).

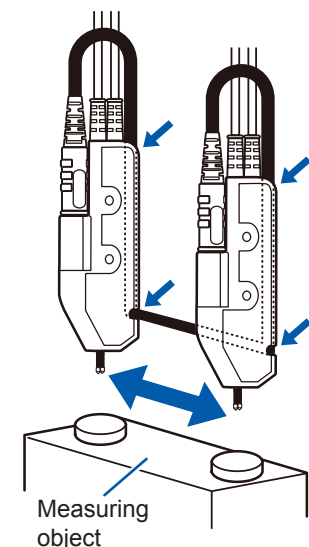


- 2 Arrange the probes so that the distance between the pin tips of the probe is the same as that between the terminals of the actual measuring object, with the SENSE sides of the probes (both red and black) facing inwards.

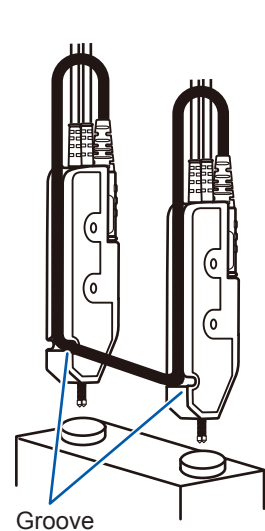


- 3 Adjust the position of the probes such that the return cable between the probes does not sag, and fix by pushing the return cable into the grooves of the probes.

When viewed from the front



When viewed from the rear



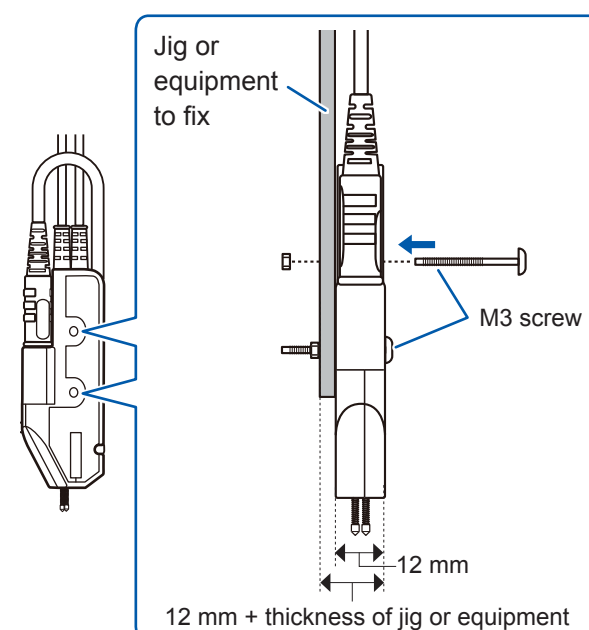
(The return cable is indicated black in the illustration above.)

Use a cable of suitable length for the distance between the terminals of the measuring object from the three types of accessory cables.

Return cable length	Distance between the terminals of the measuring object
400 mm	100 mm or less
550 mm (mounted before shipment)	100 mm to 250 mm
800 mm	250 mm to 500 mm

Fixing Using the Mounting Holes

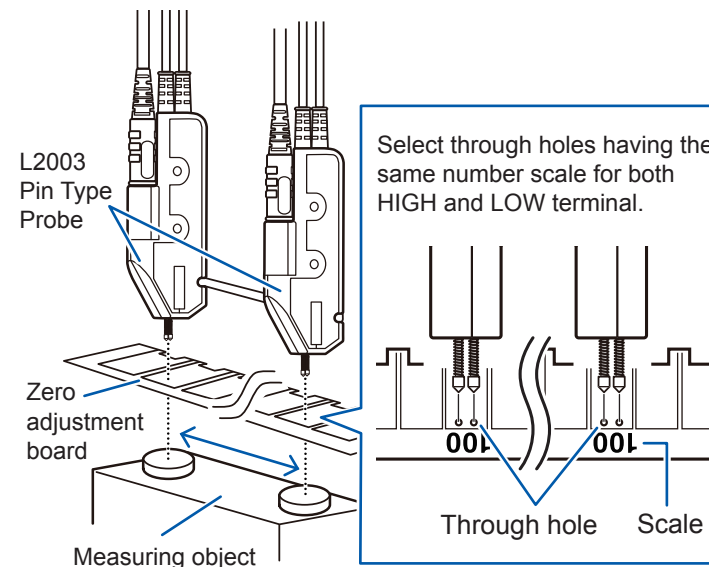
The probe can be fixed using the mounting holes. (Please prepare your own jig or equipment to fix.)
Hole diameter: 3.2 mm, use a M3 screw.



Zero Adjustment

Execute the zero adjustment using the zero adjustment board provided with the connected instrument.

Insert the tip pins of the probes into through holes having the same width as the terminals of the measuring object, and carry out the zero adjustment with the connected instrument.



IMPORTANT

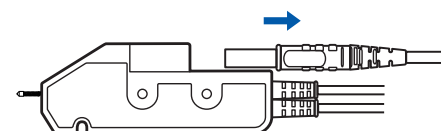
- Adjust the return cable between the terminals so that it does not sag.
- If there is no through hole with the same width as the terminals of the measuring object, perform zero adjustment with the most nearest width scale of the through hole as the terminals.
- Perform zero adjustment by facing the probe's (both red and black) SENSE side inwards.

Replacing the Used Tip Pin

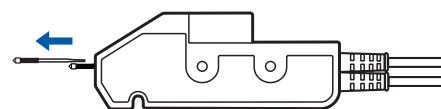
Replace the used tip pin with a new one when the tip pin breaks or is worn out. To purchase Model 9772-90 Tip Pin for replacement, contact your authorized Hioki distributor or reseller.

<Tools to be prepared> Model 9772-90 Tip Pin, pliers, etc.

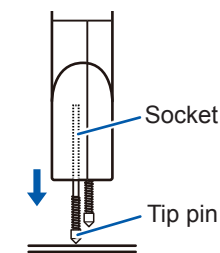
- 1 Turn off the power to the connected instrument and remove the return cables of the probes.



- 2 Grip the tip pin to be replaced with pliers and pull it out.



- 3 Insert a new tip pin in the socket, and securely push to the back by pressing with a hard board so that the tip pin does not fly out.



- 4 Measure a known measuring object to check if the measured value is correct.

Four-terminal Pair Method

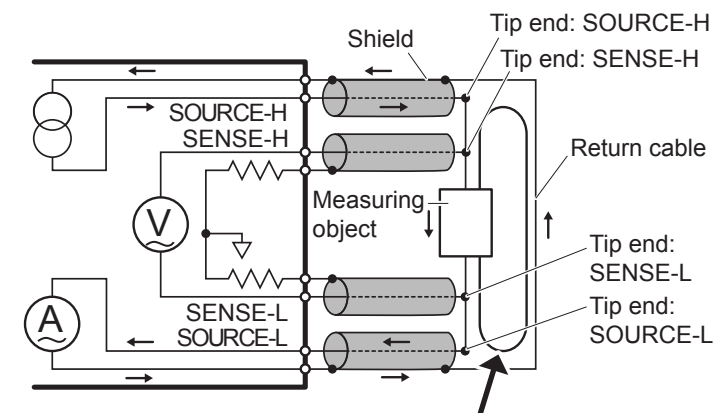
L2003 uses the four-terminal pair method as the measurement method.

Four-terminal pair method

In the four-terminal pair method, the current flows backward (current returns) with the same magnitude as the measuring current in the shields of the SOURCE cables, and then cancels the magnetic field of the measuring current. This method suppresses the induced electromotive force induced at the SENSE terminals, and detects the voltage actually generated in the object being measured.

Four-terminal pair method when using the optional probe

When the L2003 is used, the four-terminal pair method is structured as described below. Vicinity of the measurement object will not entirely be four-terminal pair, and will be affected by an inductive magnetic field. The shape of the return cable should not be changed, and kept away from metals when use. (When there are metals, inductive magnetic field occurs due to eddy current, and leads to measurement errors.)



- Keep the loop area between the return cable and measurement object as small as possible.
- Keep the loop shape and wiring position always the same.
- Keep away from metals.

When the measurement value fluctuates

Keep the return cable in shape, or the affects of the magnetic field changes and the measurement value may fluctuate. Twist the return cable to keep a fixed shape. (The return cable is indicated black in the illustration.)

