



The HP21-TOS is a probe that is connected to the TOS3200 Leakage Current Tester for measuring the touch current. The easy-to-handle design cuts down on the time needed to connect wires to the EUT. It provides fingertip control to start the test.

NOTE

- The HP21-TOS is designed to be used with the TOS3200 Leakage Current Tester. Be sure to thoroughly read the warnings and precautions given in the TOS3200 manuals before use.
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Safety Precautions

- Touching the contact pin will cause electric shock.
Never touch the contact pins while the DANGER LED is illuminated.
- Be sure to connect the control cable.
Do not execute the test using the START switch on the tester without connecting the control cable.
- This probe cannot be used with other TOS series.
This probe is designed to be used only for the TOS3200 Leakage Current Tester. It cannot be used with other TOS series even if the connector fits.
- Do not swing the probe.
- Do not pull on the probe cable or wind the cable around your body.

Part names and functions

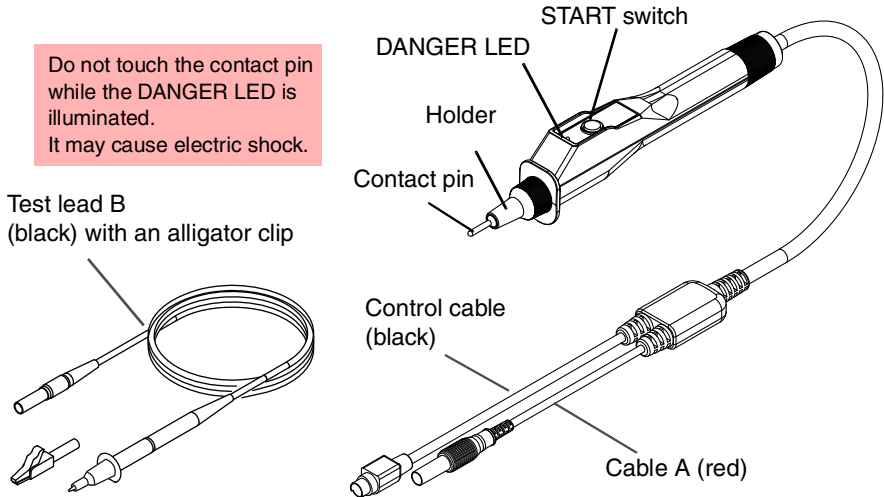


Fig.1 Part names and functions

Preliminary inspection

Check the following items before connecting the probe.

If you find any abnormalities in the preliminary inspection, stop using the probe immediately and contact your Kikusui agent or distributor for repairs.

- Check that there are no tears, cracks, or breaks in the insulation of the probe cable or test lead.
- Check that the START switch can be pressed normally.
- Check that the contact pin is not damaged or loose.

■ Adjusting the pin

It is dangerous if the pin is loose. If the pin is loose, tighten the pin as referred to the procedure below.

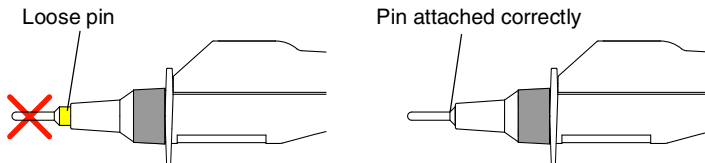


Fig.2 Checking the pin

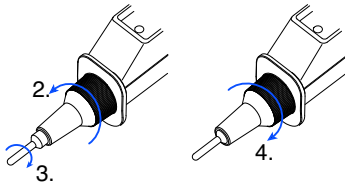
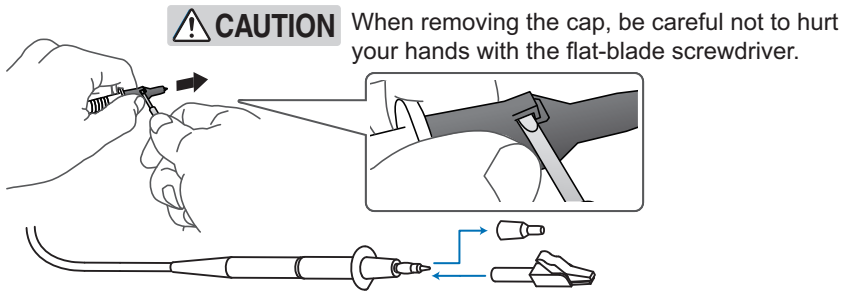


Fig.3 Adjusting the pin

- 1 Confirm that the probe is not connected to the TOS3200.
- 2 Turn the holder counterclockwise.
- 3 Turn the pin clockwise all the way.
- 4 Turn the holder clockwise all the way.

■ When using the alligator clip

When you attach the included alligator clip to the test lead wire, remove the cap beforehand. To remove the cap, use a flat-blade type pocket screwdriver. Insert the tip of the screwdriver under the pawl of the cap, lift the pawl, and remove the cap.



Connecting to the TOS3200

When the probe is connected to the TOS3200, the TOS3200 becomes to the equivalent condition as when the STOP switch is pressed, and the READY indicator on the display turns off.

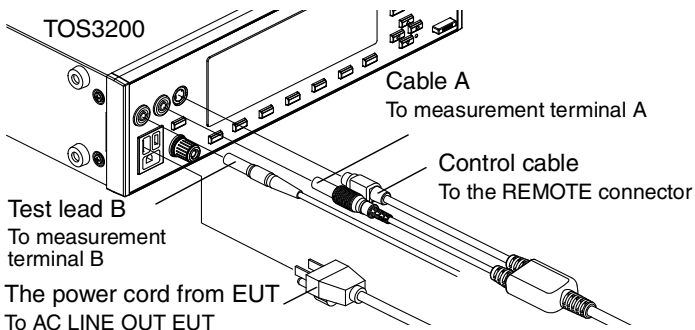


Fig.4 Connecting to the TOS3200

Measurement Procedure

Set the necessary measurement conditions in advance by referring to the TOS3200 user's manual.

The connection between the EUT and the probe/test lead varies depending on the type of touch current to be measured and the EUT class. See Table 4-1, "Test lead connections for the type of TC measurement", chapter 4, "TC and PCC Tests" in the TOS3200 user's manual. When referring the user's manual, read "test lead A" as "cable A."

Connect test lead B to the test point on the EUT. For details, see "Connecting the Test lead (TL21-TOS)", chapter 4, "TC and PCC Tests" in the TOS3200 user's manual.

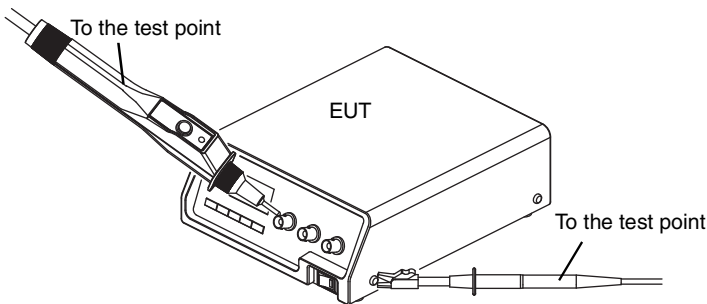


Fig.5 Connection example for touch current measurement

■ Starting the measurement

⚠ WARNING • There is a danger of electric shock. Never touch the contact pin while the DANGER LED is illuminated.

When you connect the probe to the TOS3200, the READY indicator on the display turns off. Even though, you can start the test using the START switch on the probe.

Keep holding down the START switch. If you release the switch, the measurement is aborted. The DANGER LED illuminates while the measurement is in progress. The DANGER LED illuminates (or turns off) simultaneously with the DANGER lamp on the TOS3200.

When you connect the probe to the TOS3200, the START switch on the panel is disabled. The STOP switch remains enabled.

Stop using the probe if broken

The probe is broken in the following cases. For your safety, immediately turn the TOS3200 POWER switch off and stop using the probe.

- The DANGER LED does not illuminate.
- The DANGER LED illuminates differently from the DANGER lamp on the TOS3200.
- The DANGER LED does not turn off even if you release the START switch.



WARNING There is a danger of electric shock.

- **Do not allow other people to use the probe until it is repaired.**
 - **Be sure to request repairs to your Kikusui agent or distributor.**
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Maintenance

Periodic maintenance and inspection are essential to maintain the initial performance of the product over an extended period.

- Be sure to remove the probe from the tester for maintenance work.
- Do not use volatile chemicals such as benzene or thinner as they may discolor the surface, erase printed characters, and so on.

■ Cleaning

If the probe needs cleaning, gently wipe using a soft cloth with water-diluted neutral detergent.

■ Periodic inspection

The cable, contact pin, and test lead of the probe are consumable parts. We recommend you have the probe inspected by a Kikusui service engineer once a year. Contact your Kikusui agent or distributor for an inspection.

Specifications

Rated operating voltage ^{*1}		250 Vrms
Rated operating current ^{*1}		100 mA rms
Environment	Installation location	Indoors, up to an altitude of 2000 m
	Operating temperature and humidity range	0 °C to 40 °C 20 %rh to 80 %rh (no condensation)
	Storage temperature and humidity range	-20 °C to 70 °C 90 %rh or lower (no condensation)
Insulation resistance	Between the contact pin and enclosure	100 MΩ or more (500 Vdc)
Withstand voltage	Between the contact pin and enclosure	2 mA or less when applying 2300 Vac for 2 seconds
Cable length		Approx. 1.8 m
Dimensions		28 (W) x 45.5 (H) x 226 (D) mm
Weight		Approx. 400 g
Accessories		Test lead B (with an alligator clip, 1.5 m): 1 Operation manual: 1

*1. Indicates the maximum voltage or current that can be handled in the operating temperature and humidity range.



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产品的废弃请遵守有关规定。

产品的制造年月可以在以下网址中确认。

<https://www.kikusui.co.jp/pi/>

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×	○	×	○	○	○

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