



SW9001  
SW9002

MULTIPLEXER MODULE

Instruction Manual

EN

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SW9001A960-00 18-06H



http://www.hioki.com



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Warranty Certificate



Model	Serial No.	Warranty period
		Three (3) years from date of purchase (___/___/___)

This product passed a rigorous inspection process at Hioki before being shipped.

In the unlikely event that you experience an issue during use, please contact the distributor from which you purchased the product, which will be repaired free of charge subject to the provisions of this Warranty Certificate. This warranty is valid for a period of three (3) years from the date of purchase. If the date of purchase is unknown, the warranty is considered valid for a period of three (3) years from the product's date of manufacture. Please present this Warranty Certificate when contacting the distributor. Accuracy is guaranteed for the duration of the separately indicated guaranteed accuracy period.

1. Malfunctions occurring during the warranty period under conditions of normal use in conformity with the Instruction Manual, product labeling (including stamped markings), and other precautionary information will be repaired free of charge, up to the original purchase price. Hioki reserves the right to decline to offer repair, calibration, and other services for reasons that include, but are not limited to, passage of time since the product's manufacture, discontinuation of production of parts, or unforeseen circumstances.
2. Malfunctions that are determined by Hioki to have occurred under one or more of the following conditions are considered to be outside the scope of warranty coverage, even if the event in question occurs during the warranty period:
  - a. Damage to objects under measurement or other secondary or tertiary damage caused by use of the product or its measurement results
  - b. Malfunctions caused by improper handling or use of the product in a manner that does not conform with the provisions of the Instruction Manual
  - c. Malfunctions or damage caused by repair, adjustment, or modification of the product by a company, organization, or individual not approved by Hioki
  - d. Consumption of product parts, including as described in the Instruction Manual
  - e. Malfunctions or damage caused by transport, dropping, or other handling of the product after purchase
  - f. Changes in the product's appearance (scratches on its enclosure, etc.)
  - g. Malfunctions or damage caused by fire, wind or flood damage, earthquakes, lightning, power supply anomalies (including voltage, frequency, etc.), war or civil disturbances, radioactive contamination, or other acts of God
  - h. Damage caused by connecting the product to a network
  - i. Failure to present this Warranty Certificate
  - j. Failure to notify Hioki in advance if used in special embedded applications (space equipment, aviation equipment, nuclear power equipment, life-critical medical equipment or vehicle control equipment, etc.)
  - k. Other malfunctions for which Hioki is not deemed to be responsible

- \*Requests
- Hioki is not able to reissue this Warranty Certificate, so please store it carefully.
  - Please fill in the model, serial number, and date of purchase on this form.

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Introduction

Thank you for purchasing the Hioki SW9001, SW9002 Multiplexer Module (hereafter referred to as simply "device"). To obtain maximum performance from the device over the long term, be sure to read this manual carefully and keep it handy for future reference.

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.

Cleaning

To clean the panel of the device, wipe it gently with a soft cloth moistened with water or mild detergent. Do not touch the circuit board.

Trouble shooting

If the device seems to be malfunctioning, contact your authorized Hioki distributor or reseller.

Store the packaging in which the device was delivered, as you will need it when transporting the device.

Overview

This device is a module that allows the SW1001 and SW1002 Switch Mainframe to switch between measurement lines. It can be used in a variety of measurement applications, for example in multichannel measurement of batteries.

Review the user manual that came with the Switch Mainframe before using this device.

Specifications

For more detailed specifications, see the instruction manual that came with the Switch Mainframe.

	SW9001	SW9002
Connection method	2-wire/4-wire	4-terminal pair/2-wire
Contact system	Armature relay	
Number of channels	22 channels (2-wire) 11 channels (4-wire)	6 channels
Opening/closing time	5 ms (open)/5 ms (close) except for the control time and contact bounce time	
Maximum allowable voltage	60 V DC, 30 V rms AC, 42.4 V peak	
Maximum allowable current	1 A DC, 1 A rms AC	SOURCE: 2 A DC, 2 A rms AC SENSE: 1 A DC, 1 A rms AC
Maximum rated voltage to earth	60 V DC	
Contact lifetime (reference value)	No load: 50 million cycles 30 V capacitive load (1.2 $\mu$ F + 60 $\Omega$ , Peak 500 mA): 10 million cycles	No load: 50 million cycles
Accessory	Instruction manual	
Product warranty period	3 years (except for the relays, fuses, and connector)	

Installing or Removing the Device

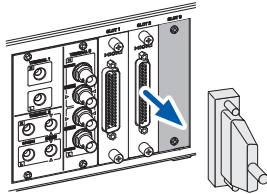
Required items: Phillips screwdriver (No. 2), antistatic gloves

⚠ WARNING

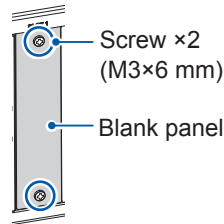
- To prevent an electric shock, before removing or replacing the device, confirm that the Switch Mainframe is turned off and that all the measurement cables, connection cables, and the power cord are disconnected.
- ❗ Installing a device while the Switch Mainframe is turned on may prevent detection of the contact state of relays on the device or result in short-circuiting of the measuring object. Damage of the Switch Mainframe or device may cause the measuring object to be shorted or the instrument to fail.

Installing

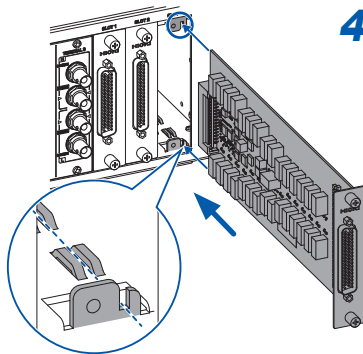
Front



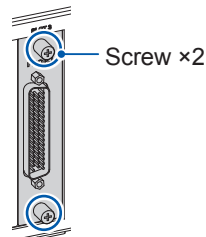
- 1 Turn off the Switch Mainframe.
- 2 Remove all the measurement cables connected to the Switch Mainframe and device.  
(to prevent electric shock and short-circuit of the measuring object).



- 3 Loosen the two screws (M3 × 6 mm) and then remove the blank panel.  
Store the blank panel and screws.  
You need the screws when using the Switch Mainframe after removing the device.



Align with the guide rail



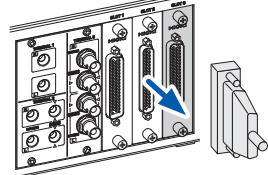
- 4 Insert the device to the back of the Switch Mainframe.
- 5 Tighten and secure the two screws.

⚠ CAUTION

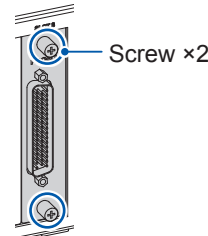
- When installing or removing the device, be sure to observe the following precautions:
- Touch the GND terminal of the Switch Mainframe with your hand to release static and then use antistatic gloves to perform procedures.
  - ❗ Hold the sheet metal area of the device. Directly touching the board with your hand may damage the circuit board due to static. If the measurement target has high resistance, the error component due to factors such as oil from your fingers may increase in magnitude.

Removing

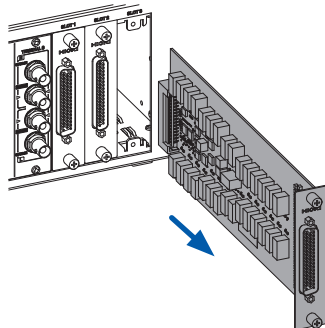
Front



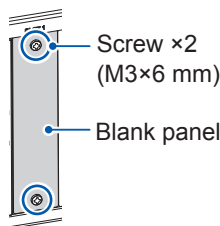
- 1 Turn off the Switch Mainframe.
- 2 Remove all the measurement cables connected to the Switch Mainframe and device.  
(to prevent electric shock and short-circuit of the measuring object).



- 3 Loosen the two screws.



- 4 Pull out the device from the Switch Mainframe.



- 5 Attach the blank panel and tighten the two screws (M3 × 6 mm) to secure the panel.