

HIOKI

Introduction

Thank you for purchasing the HIOKI Model 8997 ALARM UNIT.. To obtain maximum performance from the device, please read this manual first, and keep it handy for future reference.

The 8997 ALARM UNIT is an option product for Hioki 8423 MEMORY HiLOGGER devices. Be sure to use this input module only by installing it in a Memory HiLogger. For information on how to install and use the input module, refer to the documentation for the Memory HiLogger.

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 dealer or HioKI representative.

Preliminary Checks

Before using the device the first time, verify that it operates normally to ensure that the no damage occurred during storage or shipping. If you find any damage, contact your dealer or HioKI representative.

Maintenance and Service

- To clean the device, wipe it gently with a soft cloth moistened with water or mild detergent. Never use solvents such as benzene, alcohol, acetone, ether, ketones, thinners or gasoline, as they can deform and discolor the case.
- If the device seems to be malfunctioning, contact your dealer or HioKI representative.
- Pack the device so that it will not sustain damage during shipping, and include a description of existing damage. We cannot accept responsibility for damage incurred during shipping.

This manual contains information and warnings essential for safe operation of the device and for maintaining it in safe operating condition. Before using it, be sure to carefully read the following safety precautions.

⚠ DANGER

This device is designed to comply with IEC 61010 Safety Standards, and has been thoroughly tested for safety prior to shipment. However, 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. We disclaim any responsibility for accidents or injuries not resulting directly from device defects.

Safety Symbol

	In the manual, the ⚠ symbol indicates particularly important information that the user should read before using the device. The ⚠ symbol printed on the device indicates that the user should refer to a corresponding topic in the manual (marked with the ⚠ symbol) before using the relevant function.
The following symbols in this manual indicate the relative importance of cautions and warnings.	
	Indicates that incorrect operation presents an extreme hazard that could result in serious injury or death to the user.
	Indicates that incorrect operation presents a significant hazard that could result in serious injury or death to the user.
	Indicates that incorrect operation presents a possibility of injury to the user or damage to the device.
	Indicates advisory items related to performance or correct operation of the device.

Follow these precautions to ensure safe operation and to obtain the full benefits of the various functions.

⚠ DANGER

- The maximum rated voltage between input terminals and ground (voltage between the 8997 output terminal and main unit frame, and between input terminals of other input modules) is 600 V AC or 600 V DC. Attempting to measure voltages exceeding this level could damage the device and result in personal injury.
- The maximum rated voltage between channels is 33 Vrms or 70 V DC. Do not apply voltage exceeding this level between channels. Doing so could destroy the instrument and result in personal injury or death.
- Avoid making always-on connections where there is a possibility of a surge that could exceed the above maximum voltage rating. Doing so could destroy the instrument and result in personal injury or death.

⚠ WARNING

- Do not allow the device to get wet, and do not take measurements with wet hands. This may cause an electric shock.
- Do not use the device where it may be exposed to corrosive or combustible gases. The device may be damaged or cause an explosion.

⚠ CAUTION

- Do not store or use the device where it could be exposed to direct sunlight, high temperature or humidity, or condensation. Under such conditions, the device may be damaged and insulation may deteriorate so that it no longer meets specifications.
- This device is not designed to be entirely water- or dust-proof. Do not use it in an especially dusty environment, nor where it might be splashed with liquid. This may cause damage.
- To avoid damage to the device, protect it from physical shock when transporting and handling. Be especially careful to avoid physical shock from dropping.

NOTE

This device may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.

Number of output channels	15 channels Up to 15 output channels are available for analog, pulse and digital inputs (each output channel is isolated from the others and from the 8423 HiLogger).
Output terminals	M3 screw-type terminal block (two terminals per channel)
Output type	Open collector (active low)
Maximum Switching capacity	DC 5 to 60 V, 10 mA
Output refresh	Once each recording interval
Maximum rated voltage to earth	600 V rms or 600 VDC (between each output channel and main unit, and between each unit)
Maximum rated voltage between channels	33 Vrms or 70 VDC (between each output channels)
Dielectric strength	4.29 kVAC for 1 minute (between each output channel and main unit, and between each unit) 350 VAC for 1 minute (between each output channels)
Location for use	Altitude up to 2000 m (6562 feet), indoors, Pollution degree 2
Operating temperature and humidity	Temperature 0°C to 40°C (32°F to 104°F) Humidity 30 to 80% RH (no condensation)
Storage temperature and humidity	Temperature -10°C to 50°C (14°F to 122°F), Humidity 80%RH max (no condensation)
Product warranty period	3 years
Dimensions	Approx. 38.5W × 133H × 141.2D mm (1.52"W × 5.24"H × 5.56"D) (excluding projections)
Mass	Approx. 500 g (17.6 oz.)
Accessories	Instruction manual, connection plate
Applying standards	Safety EMC
	EN 61010 EN 61326 Class A

⚠ WARNING

- To avoid electric shock accidents, turn off the Memory HiLogger and disconnect all cables before connecting and disconnecting modules.
- Always attach the connector cover supplied with the Memory HiLogger to the module nearest the edge

⚠ CAUTION

To avoid damaging the 8997 ALARM UNIT, do not apply voltage directly to the output terminals.

NOTE

- The 8997 ALARM UNIT will not work if it is the only module connected to the 8423 MEMORY HiLOGGER. Always connect at least one other module with the Alarm Unit.
- Up to eight input modules can be connected to the Model 8423 Memory HiLogger. Measurement is not possible when nine or more modules are connected.

Attach the 8997 module to the Memory HiLogger using the supplied connection plate and connection fittings at the top and bottom edges.

For details, refer to the instruction manual for the Model 8423 MEMORY HiLOGGER.

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Warranty Certificate

Model	Serial number	Warranty period
		Three (3) years from date of purchase (____ / ____ / ____)
Customer name:		
Customer address:		
Important:	• Please note this warranty on HIOKI. Duplicates cannot be released. • Complete the certificate within the model number, serial number and date of purchase, along with your name and address. The personal information you provide on this form will only be used to provide repair service and information about HIOKI products and services. This document certifies that the product has been inspected and verified to conform to HIOKI's standards. Please contact the place of purchase in the event of a malfunction and provide this document, in which case HIOKI will repair or replace the product subject to the warranty terms described below. Warranty terms: 1. The product is guaranteed to operate properly during the warranty period (three (3) years from the date of purchase). If the date of purchase is unknown, the warranty period is defined as three (3) years from the date (month and year) of manufacture (as indicated by the first four digits of the serial number on Y/M/M/Manufacture). 2. If the product comes with an AC adapter, the adapter is warranted for one (1) year from the date of purchase. 3. The accuracy of measured values and other data generated by the product is guaranteed as described in the product specifications. 4. In the event that the product or AC adapter malfunctions during its respective warranty period due to a defect of workmanship or materials, HIOKI will repair or replace the product or AC adapter free of charge. 5. The following malfunctions and issues are not covered by the warranty and as such are not subject to free repair or replacement: -1. Malfunctions or damage of consumables, parts with a defined service life, etc. -2. Malfunctions or damage of connectors, cables, etc. -3. Malfunctions or damage caused by shipment, dropping, relocation, etc., after purchase of the product -4. Malfunctions or damage caused by inappropriate handling that violates information found in the instruction manual or on precautionary labeling on the product itself -5. Malfunctions or damage caused by a failure to perform maintenance or inspections as required by law or recommended in the instruction manual -6. Malfunctions or damage caused by fire, storms or flooding, earthquakes, lightning, power anomalies (unintended voltage, inrush current, etc.) or use or removal of components with relation to other parts of the device -7. Damage that is limited to the product's appearance (cosmetic blemishes, deformation of enclosure shape, bending of etc. etc.) -8. Other malfunctions or damage for which HIOKI is not responsible 6. The warranty will be considered invalidated in the following circumstances, in which case HIOKI will be unable to perform service such as repair or calibration: -1. If the product has been repaired or modified by a company, entity, or individual other than HIOKI -2. If this product has been embedded in another piece of equipment for use in a special application (peripherals, transfer printer, medical use, vehicle control, etc.) without HIOKI's having received prior notice -3. If you experience a loss caused by use of the product and HIOKI determines that it is responsible for the underlying issue, HIOKI will provide compensation in an amount not to exceed the purchase price, with the following exceptions: -1. Secondary damage arising from damage to a measured device or component that was caused by use of the product -2. Damage arising from measurement results provided by the product -3. Damage to a device other than the product that was sustained when connecting the device to the product (including via network connections) 8. HIOKI reserves the right to decline to perform repair, calibration, or other service for products for which a certain amount of time has passed since their manufacture, products whose parts have been discontinued, and products that cannot be repaired due to unforeseen circumstances.	

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