9636 RS-232C CABLE

INSTRUCTION MANUAL

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Introduction

Thank you for purchasing this HIOKI "9636 RS-232C CABLE." To get the maximum performance from the product, please read this manual first, and keep this at hand.

Request

We have tried to bring this manual as close to perfection as we could achieve. If perchance you find any unclear portions, mistakes, omissions, or the like, we would be most obliged if you could please notify us of them via any HIOKI agent, or directly.

Shipping Check

When the product is delivered, check and make sure that it has not been damaged in transit.

If the product is damaged, or fails to operate according to the specifications, contact your dealer or HIOKI representative.

Check the 9636 product and the Supplied Accessories

Main product 9636 RS-232C CABLE (Straight, cord length 1.3 m, D-sub 9 pin, female)

Supplied accessories Instruction manual

1

Introduction

i.

Safety

Incorrect measurement procedures could result in injury or death, as well as damage to the equipment. Please read this manual carefully and be sure that you understand its contents before using the equipment. The manufacturer disclaims all responsibility for any accident or injury except that resulting due to defect in its product.

> This Instruction Manual provides information and warnings essential for operating this product in a safe manner and for maintaining it in safe operating condition. Before using this product, be sure to carefully read the following safety notes.

The following symbols are used in this Instruction Manual to indicate the relative importance of cautions and warnings.

| | Indicates that incorrect operation presents possibility of injury to the user or damage to the equipment. |
|------|---|
| NOTE | Denotes items of advice related to performance of the equipment or to its correct operation. |

Safety Symbols

| This symbols is affixed to locations on the |
|---|
| product where the operator should consult |
| corresponding topics in this manual (which |
| are also marked with the M symbol) before |
| using relevant functions of the product. |
| In the manual, this mark indicates |
| explanations which it is particularly |
| important that the user read before using |
| the product. |

Attentions During Use

In order to ensure safe operation and to obtain maximum performance from the product, observe the cautions listed below.

- To avoid electrocution, turn off the power to all devices before pluggingor unplugging any of the interface connectors.
- To avoid damaging cables, do not kink or pull on the leads.
- This product is designed for indoor use, and operates reliably from 0° to 40° (32°F to 104°F).

Chapter 1 RS-232C CABLE Overview

1.1 Overview

Measurement data can be output by connecting a printer with the RS-232C cable supplied with the 9636

To print from the 3286 (-20), press the **HOLD** key for about one second to output the data.

1.2 Printing Contents



1. Printing Example 1 30PF (Output format: ALL)

2. Printing Example 2 Current harmonics (Output format: ALL



3. Printing Example 3 (Output format: DISP) Outputs the data displayed on the 3286 (-20) LCD.

1. 1¢P 2.92kW 171.8 V 9.8 A 2. REC 00h00m 2.92kM 2.93kWmax 2.92kWmin 3. BATT Lo (1/1) BATT Lo 0.03kW 1.5 V 11.2 A The battery low is expressed. (\bigcirc)

Chapter 1 RS-232C CABLE Overview

4. Explanation of the printing contents

Function

1P_P : 1¢P Meter 1P_PF: 1¢PF Meter 3P_PF: 3¢PF Meter HARM_I: Current harmonics HARM_U: Voltage harmonics

Phase information

-0.5deg: "-" means Lead phase. No sign means Lag phase.



- As for the setting of the output format, please refer to "3.2 DATA OUTPUT SETUP Mode".
- BATT Lo is printed when the battery is completely discharged.

Chapter 2 Connection Procedure

2.1 Printer Model

| Use our Model 9442 Pr | inter and 1196 Recording |
|------------------------|-----------------------------|
| Paper (both optional) | |
| Printer Model | 9442 (Seiko Instrument Co., |
| | Ltd. Model DPU-414) |
| AC Adapter for Printer | 9443-02 (Seiko Instrument |
| | Co., Ltd. Model PW-4007- |
| | E1) (For the EU) |
| | 9443-03 (Seiko Instrument |
| | Co., Ltd. Model PW-4007- |
| | U1) (For the UL) |
| | |

- The 9442 Printer is shipped to operate with the default settings upon connection to the 3286 (-20). (If using another printer, some of the default printer settings may not be the same, in which case the printer settings should be changed according to its operating manual.)
- Please read the operating manual supplied with the printer carefully to ensure proper operation.
- Please use Model 1196 Recording Paper (thermal paper, 10 rolls), or equivalent.
- We strongly recommend that the above model be used, because the other RS-232C printers would not work due to the control sequence difference.

2.2 Connection Procedure

- 1. Turn the 3286 (-20) and the printer off.
- 2. Connect the 9636 RS-232C cable to the DATA OUTPUT terminal of the 3286 (-20).



Printer Connection



• Be careful of the cable direction when connecting it to the 3286 (-20).

Chapter 3 3286 (-20) Settings

To use the RS-232C CABLE, make settings at DATA OUTPUT SETUP and at OPTION mode on the 3286 (-20).

NOTE

• If the printer does not work after settings, initialize the setting (refer to "3.3 Default Settings") and retry the settings.

3.1 OPTION Mode

To use an option with the 3286 (-20), enable its OPTION mode.

1. OPTION Types

| Model | Name | Input type | Function |
|--------------------|------|---------------|----------------|
| 9636 RS-232C CABLE | | 9636-00 | Printer Output |

- 2. To activate the OPTION mode, hold the **U/▼** key while pressing **POWER** to turn the 3286 (-20) on.
- The digit selected for changing the OPTION mode blinks. Pressing the MODE key moves the blinking selection to the right, and pressing the MAX/MIN key moves it the left.
- 4. Set the numerical value to ∃ □ □ □ by pressing the U/▼ and I/▲ keys to change the blinking digit.
- 6. If you desire to revert the option to the default state, on the OPTION mode, press the HOLD key so that
 9999 99 is displayed, then turn the power off.

 $\Box \Box \Box$ is displayed, and the option setting reverts to its default.



• The digits may not flash, depending on the version of software used for the 3286 (-20). When using a version of software for which the digits do not flash, use the U/▼ or I/▲ key to change the input type setting.

3.2 DATA OUTPUT SETUP Mode

The DATA OUTPUT function must be enabled in the DATA OUTPUT SETUP mode. The DATA OUTPUT SETUP mode also allows setting the output type, output items and communications parameters. The RS-232C communications speed (item 2-04), RS-232C data length (item 2-05), RS-232C stop bits (item 2-06) and RS-232C parity bit (item 2-07) must be set to be the same as printer settings.

- To activate the DATA OUTPUT SETUP mode, hold the SET2 key while pressing the POWER key to turn the 3286 (-20) on.
- Select the appropriate settings. Use the MODE and MAX/MIN keys to increment and decrement the item number, respectively. The communications status display (item 2-03) is off by default. Items 2-04 to 2-07 are displayed by setting the communications status display to d 15 P.
- 3. Change the settings as needed using the **U/▼** and **I/▲** keys.
- 4. If needed, the settings can be returned to their default values by pressing the **HOLD** key twice.

5. When finished setting, turn the power off:
 S 用 ⊔ E E ⊓ d (SAVE END) is displayed as the settings are saved.

| Display 1 Item No. | Display 2 Item Name | Display 3 Available Settings | Default Value |
|-----------------------|---------------------------|---------------------------------|------------------|
| 2-01 | 9 U T U P | oFF/Prn | ۵FF |
| 2-05 | ForN | ALL/d ISP | ALL |
| 5-03 | гSıF | oFF/d iSP | ۵FF |
| 2-04 | ЬАПЧ | 300/600/1200 2400/4800/9600 | 9600 |
| 2-05 | LEn | 86 гЕ/ЛВ гЕ | 86 i E |
| 2-06 | SEoP | וף יד/ קדי קו | 16 iE |
| 2-07 | РАг і | non/EuEn/odd | поп |



• Items 2-04 and later are not displayed unless item $2-03 (\neg 5 | F)$ is set to d | 5 P.

6. Setting Details

| (1) | DATA | OUTPUT Function: Item 2-01 | J H F H |
|-----|--------|------------------------------------|----------------|
| | off | DATA OUTPUT Function disabled | σFF |
| | PRN | Select the 9442 Printer for output | Ргп |
| (2) | Output | Format: Item 2-02 | (FORM) |
| | ALL | Select all items for output | ALL |
| | DISP | Select display items for output | d iSP |
| (3) | RS-232 | C Communications Display: Item 2-0 | 03 |
| | | - S ı F | (RS-IF) |
| | off | No display | σFF |
| | DISP | Display items 2-04 to 2-07 | d i S P |

Chapter 3 3286 (-20) Settings

| (4) | RS-2320 | C Communications Speed: | Item 2-04 ⊢ 日 ⊔ d | 1 (BAUD) |
|-----|-----------|---------------------------|----------------------|-------------|
| | Select fi | rom 300/600/1200/2400/48 | 00 or 960 | 00 bps |
| (5) | RS-2320 | C Data Length: Item 2-05 | | LEn |
| | 8 bits | Set data length to 8 bits | | 86 16 |
| | 7 bits | Set data length to 7 bits | | ЛЬ іЕ |
| (6) | RS-2320 | C Stop Bits: Item 2-06 | | StoP |
| | 1 bit | Select one stop bit | | ІБ іЕ |
| | 2 bits | Select two stop bits | | 5P 'F |
| (7) | RS-2320 | C Parity Bit: Item 2-07 | РАг | I (PARI) |
| | none | Select no parity bit | | поп |
| | EVEN | Select even parity bit | | ЕцЕп |
| | ODD | Select odd parity bit | | odd |

3.3 Default Settings

This procedure returns the RS-232C settings to their factory defaults.

- 1. Hold the **SET2** key while turning the power on.
- 2. Press the **HOLD** key until $\Box \Box \Box$ is displayed.
- 3. Press the **HOLD** key again to initialize the settings to their default values.

Default Values

DATA OUTPUT Function Output Format

Communication Speed Data Length Stop Bits Parity OFF ALL (All items for output) 9600 bps 8 bits 1 bit none NOTE

• Holding down the **RANGE** key, as turning power on, will display "HLL cLr" and initialize all the saved settings (RS-232C settings, SETUP function and measurement status saving function).

3.4 Print

Enable both the OPTION mode and the DATA OUTPUT SETUP mode, then hold down the **HOLD** key for about one second to output the data.

Chapter 4 Troubleshooting

Although the following problems might seem to be program malfunctions, they can result from other causes. So before seeking repair service, please confirm the indicated items.

| Symptom | Confirmation item | |
|--|--|--|
| not able to print it | Confirm that the RS-232C cable is properly connected to the 3286 (-20). Confirm that the RS-232C cable is properly connected to the 9442. Confirm that the communication settings of the 3286 (-20) and the 9442 match each other. | |
| If the problem is not solved after the troubleshooting, initialize the settings. To initialize, hold down the RANGE key as powering on. The entire LCD will go on, and " $\exists L \ \Box \ \Box'$ " will appear. This will reset all the saved contents to their initial values. | | |

HIOKI 9636 RS-232C CABLE

Instruction Manual

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- All reasonable care has been taken in the production of this manual, but if you find any points which are unclear or in error, please contact your supplier or the Sales and Marketing International Department at HIOKI headquarters.
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