

# CERTIFICATE OF TRACEABILITY



ORIX

オリックス・レンテック株式会社



Customer Name

LIGHTHOUSE Inc.

Division : Calibration Consignment Certificate Number : KJ-P0283934-20220406-00-N-0

Description : CLAMP ON LEAK TESTER

Model No. : 3283

Manufacturer : HIOKI

Customer ID No. : LHQ-07

Serial No. : 2020-200234804

Calibration Date : 06-Apr-2022

Location of : Tokyo Technical Center

Calibration 3-25-3 Kanamori, Machida-City, Tokyo 194-8585

Conditions : Temperature 23 °C Humidity 53 %R. H. Calibrated by : 390007

Location of Issue : Tokyo Technical Center  
3-25-3 Kanamori, Machida-City, Tokyo 194-8585  
TEL : +81-42-799-0586 FAX : +81-42-799-6154  
<https://www.orixrentec.jp/>

ORIX Rentec Corporation certifies that the above instrument was calibrated according to our calibration procedures.

The standards used for this calibration are traceable to National Standards directly or through the manufacturers on a regular basis.

The National Standards are such as AIST(National Institute of Advanced Industrial Science and Technology), and public calibration entities in other countries which participate in BIPM(Bureau International des Poids et Mesures), such as NIST(National Institute of Standards and Technology) .

Date of issue : 11-Apr-2022

Head of Issue

ORIX Rentec Corporation

General Manager Quality Assurance Department : Ryoetsu Nakagawa

*Ryoetsu Nakagawa*

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**【Reference Standards】**

|   | Description                                   |            | Manufacturer      |                                     |             |                |
|---|---|------------|-------------------|-------------------------------------|-------------|----------------|
|   | Model No.                                     | Serial No. | Asset No.         | Cal. Lab.                           | Cal. Date   | Cal. Due. Date |
| 1 | CESIUM FREQUENCY STANDARD                     |            | Microsemi         |                                     |             |                |
|   | 5071A   | US49353635 | 37649010          | Keysight Technologies International | 25-Jun-2021 | 30-Jun-2022    |
|   | Certificate Number(Issue No) : 211703-000     |            |                   |                                     |             |                |
| 2 | CALIBRATOR                                    |            | FLUKE             |                                     |             |                |
|   | 5700A   | 6580605    | 16157422          | ORIX Rentec M・S・C                   | 17-Sep-2020 | 31-Aug-2021    |
|   | Certificate Number(Issue No) : 20S0092        |            |                   |                                     |             |                |
| 3 | CALIBRATOR                                    |            | FLUKE             |                                     |             |                |
|   | 5730A   | 3214501    | 28590009          | ORIX Rentec M・S・C                   | 22-Dec-2020 | 30-Nov-2021    |
|   | Certificate Number(Issue No) : 20S0129        |            |                   |                                     |             |                |
| 4 | AC MEASUREMENT STANDARD                       |            | FLUKE             |                                     |             |                |
|   | 5790B   | 5151601    | 65456817          | ORIX Rentec M・S・C                   | 10-May-2021 | 30-Nov-2021    |
|   | Certificate Number(Issue No) : 21S0040        |            |                   |                                     |             |                |
| 5 | STANDARD RESISTOR                             |            | ALPHA ELECTRONICS |                                     |             |                |
|   | USR-1R0                                       | 05C0608    | 33852799          | JEMIC                               | 14-Jan-2021 | 31-Dec-2021    |
|   | Certificate Number(Issue No) : 011-20C612-100 |            |                   |                                     |             |                |

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# CERTIFICATE OF CALIBRATION



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Location of : Tokyo Technical Center

Calibration 3-25-3 Kanamori, Machida-City, Tokyo 194-8585

Conditions : Temperature 23 °C Humidity 53 %R. H. Calibrated by : 390007

Calibration Status : Non Adjustment

Result : Pass

Location of Issue : Tokyo Technical Center  
3-25-3 Kanamori, Machida-City, Tokyo 194-8585  
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Date of issue : 11-Apr-2022

Head of Issue

ORIX Rentec Corporation

General Manager Quality Assurance Department : Ryoetsu Nakagawa

*Ryoetsu Nakagawa*

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# RESULT OF CALIBRATION



オリックス・レンテック株式会社



Calibration Date : 06-Apr-2022  
 Model No. : 3283  
 Customer ID No. : LHQ-07  
 Serial No. : 2020-200234804  
 Certificate Number : KJ-P0283934-20220406-00-N-0

## 【Calibration Equipments Used】

|   | Description  |            |           | Manufacturer          |             |                |
|---|--|------------|-----------|-----------------------|-------------|----------------|
|   | Model No.  | Serial No. | Asset No. | Cal. Lab.             | Cal. Date   | Cal. Due. Date |
| 1 | DIGITAL MULTIMETER   |            |           | Keysight Technologies |             |                |
|   | 34401A   | US36066566 | 18045450  | ORIX Rentec           | 31-Aug-2021 | 31-Aug-2022    |
|   | Certificate Number(Issue No) : SK-18045450-20210831-00-N-0 |            |           |                       |             |                |
| 2 | CALIBRATOR   |            |           | FLUKE                 |             |                |
|   | 9100   | 38674      | 20724753  | ORIX Rentec           | 02-Nov-2021 | 31-Oct-2022    |
|   | Certificate Number(Issue No) : SK-20724753-20211102-00-N-0 |            |           |                       |             |                |

## 【Calibration Item】

### 1. AC CURRENT MEASUREMENT

Accuracy± (% of reading + digits)

| Test Condition/Range | Input | Accuracy  | Tolerance   |             | Dis. Val. | Judge |
|----------------------|-------|-----------|-------------|-------------|-----------|-------|
|                      |       |           | Lower Limit | Upper Limit |           |       |
| FILTER:OFF / 10 mA   | 9 mA  | ± (1.0+5) | 8.86 mA     | 9.14 mA     | 9.01 mA   | Pass  |
| FILTER:OFF / 100 mA  | 90 mA | ± (1.0+5) | 88.6 mA     | 91.4 mA     | 90.2 mA   | Pass  |
| FILTER:OFF / 1 A     | 0.9 A | ± (1.0+5) | 0.886 A     | 0.914 A     | 0.901 A   | Pass  |
| FILTER:OFF / 10 A    | 2 A   | ± (1.0+5) | 1.93 A      | 2.07 A      | 2.00 A    | Pass  |
| FILTER:OFF / 10 A    | 4 A   | ± (1.0+5) | 3.91 A      | 4.09 A      | 4.01 A    | Pass  |
| FILTER:OFF / 10 A    | 6 A   | ± (1.0+5) | 5.89 A      | 6.11 A      | 6.01 A    | Pass  |
| FILTER:OFF / 10 A    | 8 A   | ± (1.0+5) | 7.87 A      | 8.13 A      | 8.00 A    | Pass  |
| FILTER:OFF / 10 A    | 9 A   | ± (1.0+5) | 8.86 A      | 9.14 A      | 9.00 A    | Pass  |
| FILTER:OFF / 200 A   | 190 A | ± (1.5+5) | 186.7 A     | 193.3 A     | 189.4 A   | Pass  |
| FILTER:ON / 10 mA    | 9 mA  | ± (1.5+5) | 8.82 mA     | 9.18 mA     | 9.03 mA   | Pass  |
| FILTER:ON / 100 mA   | 90 mA | ± (1.5+5) | 88.2 mA     | 91.8 mA     | 90.3 mA   | Pass  |
| FILTER:ON / 1 A      | 0.9 A | ± (1.5+5) | 0.882 A     | 0.918 A     | 0.903 A   | Pass  |
| FILTER:ON / 10 A     | 9 A   | ± (1.5+5) | 8.82 A      | 9.18 A      | 9.03 A    | Pass  |
| FILTER:ON / 200 A    | 190 A | ± (2.0+5) | 185.7 A     | 194.3 A     | 189.8 A   | Pass  |

### 2. FREQUENCY MEASUREMENT

Accuracy± (% of reading + digits)

| Input | Accuracy  | Tolerance   |             | Dis. Val. | Judge |
|-------|-----------|-------------|-------------|-----------|-------|
|       |           | Lower Limit | Upper Limit |           |       |
| 50 Hz | ± (0.3+1) | 49.8 Hz     | 50.2 Hz     | 50.0 Hz   | Pass  |

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### 3. ANALOG OUTPUT (ACV)

Accuracy ± ( % of reading + mV)

Condition Frequency:55Hz  
 OUTPUT:MON  
 10A Range:1V/F.S., 200A Range:2V/F.S.

| Range/Disp.     | STD. Value | Accuracy | Tolerance   |             | Data    | Judge |
|-----------------|------------|----------|-------------|-------------|---------|-------|
|                 |            |          | Lower Limit | Upper Limit |         |       |
| 10 A / 9.00 A   | 900 mV     | ± (3+10) | 863 mV      | 937 mV      | 900 mV  | Pass  |
| 200 A / 180.0 A | 1.800 V    | ± (3+10) | 1.736 V     | 1.864 V     | 1.809 V | Pass  |

### 4. ANALOG OUTPUT (DCV)

Accuracy ± ( % of reading + mV)

Condition Frequency:55Hz  
 OUTPUT:REC  
 1V/F.S.

| Range/Disp.   | STD. Value | Accuracy | Tolerance   |             | Data   | Judge |
|---------------|------------|----------|-------------|-------------|--------|-------|
|               |            |          | Lower Limit | Upper Limit |        |       |
| 10 A / 9.00 A | 900 mV     | ± (3+10) | 863 mV      | 937 mV      | 901 mV | Pass  |

### 5. OTHER FUNCTION

| Item of Judgement  | Judge |
|--------------------|-------|
| DATA HOLD FUNCTION | Pass  |

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