Cerificate No. JCSS24-XXX

JCSS 0139

Calibration Certificate

Customer name	IWATSU ELECTRIC CO.,LTD Test & Measurement Sales Dept.
Address of customer	7-41, 1-Chome, Kugayama ,Suginami-ku Tokyo, 168-8501, Japan
Name of item	Curve Tracer
Type	CS-8200
Serial number	BB247200046
Name of manufacture	IWATSU ELECTRIC CO.,LTD
Calibration method	Calibration manual J24006-1
Calibration location	7-41, 1-Chome, Kugayama ,Suginami-ku Tokyo, 168-8501, Japan IWATSU ELECTRIC CO., LTD. Quality Satisfaction Dept. Standardization Center Standard Lab.
Environmental conditions	Temparature 23℃±2℃, Humidity 55%±10%
Calibration date	December 9, 2024
Measurand	DC Voltage

We certify your calibraion results are as the following page.

Date of issue December 9, 2024

IWATSU ELECTRIC CO., LTD. Quality Satisfaction Dept.
Standardization Center
7-41, 1-Chome, Kugayama ,Suginami-ku Tokyo, 168-8501, Japan
Manager of Standardization Center

Authorised signature

- This certificate is based on article 144 of the Measurement Act and indicates the result of calibration in accordance with measurement standards traceable to Primary Measurement Standards (National Standards) which realizes the physical units of measurement according to the International System of Units (SI). The accreditation symbol is attestation of which the result of calibration is traceable to Primary Measurement Standards (National Standards).
- The certificate shall not be reproduced except in full, without the written approval of the issuing laboratory.
- The calibration laboratory which issued this calibration certificate conforms to ISO/IEC 17025:2017.
- This calibration certificate was issued by the calibration laboratory accredited by IAJapan who is a signatory to the Mutual Recognition Arrangement (MRA) of International Laboratory Accreditation Cooperation (ILAC) and Asia Pacific Accreditation Cooperation (APAC). These calibration results may be accepted internationally through ILAC/APAC MRA.

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Calibration Results

Range	Input value	Calibration value	Expanded uncertainty (Coverage Factor k=2)
200 mV/div	−200.670 mV	−200.728 mV	0.17 %
200 mV/div	0.67305 mV	0.60300 mV	0.11 mV
200 mV/div	201.046 mV	201.041 mV	0.17 %
500 mV/div	−502.534 mV	−502.607 mV	0.17 %
500 mV/div	0.66024 mV	0.72625 mV	0.11 mV
500 mV/div	502.945 mV	503.052 mV	0.17 %
1 V/div	−1.00560 V	−1.00565 V	0.17 %
1 V/div	0.00064 V	0.00052 V	0.11 mV
1 V/div	1.00618 V	1.00622 V	0.17 %
2 V/div	−2.01228 V	−2.01345 V	0.17 %
2 V/div	0.00064 V	0.00021 V	0.11 mV
2 V/div	2.01243 V	2.01365 V	0.17 %
5 V/div	−5.02870 V	−5.03328 V	0.17 %
5 V/div	0.00062 V	0.00054 V	0.18 mV
5 V/div	5.02899 V	5.03396 V	0.17 %
10 V/div	−10.0485 V	−10.0599 V	0.17 %
10 V/div	0.00057 V	0.00003 V	0.30 mV
10 V/div	10.0475 V	10.0600 V	0.17 %
20 V/div	−20.0201 V	−20.0413 V	0.17 %
20 V/div	0.00062 V	−0.00095 V	0.63 mV
20 V/div	20.0133 V	20.0375 V	0.17 %

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Calibration Results

Range	Input value	Calibration value	Expanded uncertainty (Coverage Factor k=2)
50 V/div	-49.7078 V	-49.7717 V	0.17 %
50 V/div	0.00231 V	0.00900 V	2.4 mV
50 V/div	50.1775 V	50.2563 V	0.17 %
100 V/div	-99.8215 V	-99.9478 V	0.17 %
100 V/div	0.00154 V	0.00200 V	3.3 mV
100 V/div	100.291 V	100.444 V	0.17 %
200 V/div	-200.091 V	-200.306 V	90 ppm
200 V/div	-0.00011 V	-0.01450 V	6.7 mV
200 V/div	200.517 V	200.770 V	0.17 %
500 V/div	-500.536 V	-501.016 V	0.17 %
500 V/div	-0.00536 V	0.03375 V	16 mV
500 V/div	500.981 V	501.647 V	0.17 %
1 kV/div	-1.00041 kV	-1.00150 kV	67 ppm
1 kV/div	-0.00001 kV	-0.00001 kV	31 mV
1 kV/div	1.00081 kV	1.00210 kV	0.17 %

Note:

①The reported expanded uncertainty of measurementt is stated as the standard uncertainty of measurment multiplied by the coverage factor k=2 shuch that the coverage probability corresponds to approximately 95%.

②The displayed value of the reference standard is corrected by the external calibration result of the reference standard. The corrected displayed value is used as the Input value.

③The displayed value of the curve tracer is used as the Calibration value.

— End —

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