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Certificate of Accreditation

International Accreditation Japan (IAJapan) hereby accredits the following conformity assessment body as a calibration laboratory of ASNITE accreditation program.

Accreditation Identification: ASNITE 0025 Calibration

Name of Conformity Assessment Body: Calibration Laboratory,
Japan Electric Meters Inspection Corporation

Name of Legal Entity: Japan Electric Meters Inspection Corporation

Location of Conformity Assessment Body: 4-15-7 Shibaura, Minato-ku, Tokyo 108-0023, JAPAN

Scope of Accreditation: as the following pages

Accreditation Requirement: ISO/IEC 17025:2017*

* The relevant accreditation requirements described in the ASNITE-C (NMI) Accreditation Scheme Document are also applied.

Effective Date of Accreditation: 2019-10-15

Expiry Date of Accreditation: 2024-10-14

Date of Initial Accreditation: 2009-03-17

SAKAMOTO Kozo

Chief Executive, International Accreditation Japan (IAJapan)

National Institute of Technology and Evaluation

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- International Accreditation Japan (IAJapan) is a laboratory accreditation body which has signed MRAs of ILAC (International Laboratory Accreditation Cooperation) and APAC (Asia Pacific Accreditation Cooperation).
 - MRA requirements are, in addition to relevant international standards and guides, requirements for participation in proficiency testing programs, surveillance and reassessment, and the policy for the traceability of measurement for MRA purpose.
 - This laboratory fulfills ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation means this laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).
 - The latest accreditation information is publicly available on IAJapan Website as an accreditation certificate.

Accreditation Category for Calibration Laboratory: ElectromagneticsLaboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Quantity	Calibration and Measurement Capabilities					Effective Date of Accreditation
	Instrument or Artifact	Measurand Level or Range	Measurement Conditions /Independent Variable	Expanded Uncertainty (Level of Confidence Approximately 95 %)	Remarks	
AC Power and Energy Single Phase	Power Converter Power Meter	0 W to 6000 W	50 V to 120 V 0.5 A to 50 A P.F. any 45 Hz to 65 Hz	10 μ W/(VA) to 45 μ W/(VA)	See Table 1-2	2020.3.30
	Reactive Power Meter	0 var to 6000 var		28 μ var/(VA) to 44 μ var/(VA)		
	Energy Meter	200 J to 9000 J	50 V to 120 V 2.5 A to 5 A P.F. 1 to 0.1 L/C 45 Hz to 65 Hz	27 μ J/(VA s) to 35 μ J/(VA s)	See Table 1-3	
	Reactive Energy Meter	200 var s to 9000 var s	50 V to 120 V 2.5 A to 5 A P.F. 0L to 0.995L, 0C to 0.995C 45 Hz to 65 Hz	27 μ var s/(VA s) to 35 μ var s/(VA s)		
AC Power and Energy Single Phase Three wire Three Phase Three wire and Four wire	Power Meter	0 W to 1800 W	50 V to 120 V 2.5 A to 5 A P.F. any 45 Hz to 65 Hz	27 μ W/(VA) to 40 μ W/(VA)	See Table 1-2	
	Reactive Power Meter	0 var to 1800 var		27 μ var/(VA) to 40 μ var/(VA)		
	Energy Meter	400 J to 27000 J	50 V to 120 V 2.5 A to 5 A P.F. 1 to 0.1 L/C 45 Hz to 65 Hz	27 μ J/(VA s) to 39 μ J/(VA s)	See Table 1-3	
	Reactive Energy Meter	400 var s to 27000 var s	50 V to 120 V 2.5 A to 5 A P.F. 0L to 0.995L, 0C to 0.995C 45 Hz to 65 Hz	27 μ var s/(VA s) to 39 μ var s/(VA s)		
Direct Current & Low Frequency Measuring Equipment, etc.	DC Resistor	1 Ω	-	0.6 ppm	-	2021.12.24
		10 k Ω		0.6 ppm		

Table 1-2 CMCs for AC power in $\mu\text{V}/\text{V}$, $\mu\text{W}/(\text{VA})$ and $\mu\text{var}/(\text{VA})$

Quantity	Instrument or Artifact	-	-	-	60, 100, 120 V	50 - 120 V	
AC Power	Power Converter	Single Phase	5 A	P.F.1	22	41	
				P.F.0.5	14	33	
				P.F.0	11	30	
			0.5 - 50 A	P.F.1	41	45	
				P.F.0.5	36	37	
				P.F.0	34	34	
	Power Meter	Single Phase	5 A	P.F.1	22	40	
				P.F.0.5	14	31	
				P.F.0	10	28	
			0.5 - 50 A	P.F.1	40	44	
				P.F.0.5	34	37	
				P.F.0	32	33	
		Single Phase Three wire	2.5 - 5 A	P.F.1	36	40	
				P.F.0.5	30	31	
				P.F.0	27	28	
		Three Phase Three wire	2.5 - 5 A	P.F.1	34	38	
				P.F.0.5	29	31	
				P.F.0	28	30	
		Three Phase Four wire	2.5 - 5 A	P.F.1	36	40	
				P.F.0.5	30	31	
				P.F.0	27	28	
		Reactive Power Meter	Single Phase	2.5 - 5 A	P.F.0	36	40
					P.F.0.866	30	31
					P.F.1	28	28
	0.5 - 50 A			P.F.0	40	44	
				P.F.0.866	34	37	
				P.F.1	32	33	
	Single Phase Three wire		2.5 - 5 A	P.F.0	36	40	
				P.F.0.866	30	31	
				P.F.1	27	28	
	Three Phase Three wire		2.5 - 5 A	P.F.0	34	40	
				P.F.0.866	29	33	
				P.F.1	28	33	
	Three Phase Four wire		2.5 - 5 A	P.F.0	36	40	
				P.F.0.866	30	31	
				P.F.1	28	28	

Table 1-3 CMCs for energy in $\mu\text{J}/(\text{VA s})$ and $\mu\text{var s}/(\text{VA s})$

Quantity	Instrument or Artifact				60, 100, 120 V	50 - 120 V
Energy	Energy Meter	Single Phase	2.5 - 5 A	P.F.1	35	
				P.F.0.5	29	
				P.F.0.1	27	
		Single Phase Three wire	2.5 - 5 A	P.F.1	35	
				P.F.0.5	29	
				P.F.0.1	27	
		Three Phase Three wire	2.5 - 5 A	P.F.1	39	
				P.F.0.5	32	
				P.F.0.1	32	
		Three Phase Four wire	2.5 - 5 A	P.F.1	35	
				P.F.0.5	29	
				P.F.0.1	27	
	Reactive Energy Meter	Single Phase	2.5 - 5 A	P.F.0	35	
				P.F.0.866	29	
				P.F.0.995	27	
		Single Phase Three wire	2.5 - 5 A	P.F.0	35	
				P.F.0.866	29	
				P.F.0.995	27	
		Three Phase Three wire	2.5 - 5 A	P.F.0	39	
				P.F.0.866	32	
				P.F.0.995	32	
		Three Phase Four wire	2.5 - 5 A	P.F.0	35	
				P.F.0.866	29	
				P.F.0.995	27	

Accreditation Category for Calibration Laboratory: ThermometryLaboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Quantity	Calibration and Measurement Capabilities			Effective Date of Accreditation	
	Instrument or Artifact	Measurand Level or Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)		
Contact type thermometer	Fixed point apparatus	Triple point of Water	0.30 mK	2019.10.15	
		Freezing point of Indium	1.9 mK		
	Platinum resistance thermometer (Fixed point calibration)	Triple point of Mercury	1.0 mK		
		Freezing point of Indium	2.1 mK		
		Freezing point of Tin	1.9 mK		
		Freezing point of Zinc	2.6 mK		
Radiation thermometer	Fixed point apparatus	Freezing point of Zinc	0.15 °C		
		Freezing point of Aluminum	0.12 °C		
		Freezing point of Silver	0.12 °C		
		Freezing point of Copper	0.14 °C		
	Radiation thermometer (Fixed-point calibration)		0.9 μm		0.65 μm
		Freezing point of Zinc	0.15 °C		-
		Freezing point of Aluminum	0.12 °C	-	
		Freezing point of Silver	0.12 °C	0.16 °C	
	Radiation thermometer (Comparison calibration)		Freezing point of Copper	0.14 °C	0.14 °C
			960 °C	0.43 °C	0.42 °C
			1000 °C	0.41 °C	0.39 °C
			1100 °C	0.41 °C	0.38 °C
			1200 °C	0.45 °C	0.41 °C
			1300 °C	0.49 °C	0.43 °C
			1400 °C	0.53 °C	0.48 °C
			1500 °C	0.59 °C	0.52 °C
			1600 °C	0.63 °C	0.55 °C
			1700 °C	0.95 °C	0.89 °C
		1800 °C	0.98 °C	0.91 °C	
		1900 °C	1.0 °C	0.92 °C	
		2000 °C	1.1 °C	0.95 °C	
		2100 °C	-	0.98 °C	
	2200 °C	-	1.1 °C		
	2300 °C	-	1.1 °C		
	2400 °C	-	1.2 °C		
	2500 °C	-	1.3 °C		
	2600 °C	-	1.4 °C		
	2700 °C	-	1.5 °C		
	2800 °C	-	1.7 °C		

Accreditation Category for Calibration Laboratory: Photometry
Laboratory's permanent facility/On-site Calibration: Laboratory's permanent facility

Quantity	Calibration and Measurement Capabilities			Effective Date of Accreditation
	Instrument or Artifact	Measurand Level or Range	Expanded Uncertainty (Level of Confidence Approximately 95 %)	
Standard lamp for luminous intensity, etc.	Distribution Temperature Standard Lamp	2045 K 2200 K 2350 K 2600 K 2856 K	17 K	2021.04.22
	Luminous Intensity Standard Lamp	From 10 cd up to 3000 cd	1.0 %	
	Total Luminous Flux Standard Lamp	From 5 lm up to 20000 lm	1.0 %	
	Illuminance Standard Lamp	From 1 lx up to 3000 lx	1.0 %	
	Spectral Irradiance Standard Lamp	From 250 nm up to 350 nm	4.2 %	
		More than 350 nm up to 450 nm	3.4 %	
		More than 450 nm up to 600 nm	3.0 %	
		More than 600 nm up to 830 nm	3.2 %	
More than 830 nm up to 2300 nm		3.6 %		
More than 2300 nm up to 2500 nm	6.2 %			

(End of Attachment)