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Accreditation No.	JCSS0049
Date of Initial Accreditation	1995-06-21
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Name and Address of Accredited Organization	Chubu, Japan Electric Meters Inspection Corporation 3-5-7, Kibuki-cho, Kasugai-shi, Aichi 487-0014, Japan JCN 4010405002454
Inquiry Point	Calibration Service Section of JEMIC Chubu Tel: +81-568-53-6336 FAX: +81-568-53-6337
Accreditation Standards	ISO/IEC 17025:2005 (Calibration)
Accreditation Scope	As attached

*JCN : Japan Corporate Number

General Field of Calibration : Time & Frequency & Rotational speed

Date of Initial Accreditation of the Field : 2018-06-21

Permanent Laboratory/On-site Calibration : Permanent Laboratory

Type of Service		Calibration Scope		CMC (Level of Confidence Approximately 95 %)
Time & Frequency Counter, etc.	Frequency Generator	From 1 Hz up to 10 MHz		2.4×10^{-7}
	Frequency Counter	From 1 Hz up to 10 MHz		2.4×10^{-7}
	Time-Interval Source *1	From 1 s up to 60 s		0.01 s
	Time-Interval Measuring Equipment	Calibration by Time-Interval Measurement	From 100 ms less than 10 s	0.000 1 s
			From 10 s up to 60 s	0.001 s
			More than 60 s up to 3 600 s	0.10 s

*1 : Limited to Withstand Voltage tester.

Note: In the CMC column, the values of Frequency Generator and Frequency Counter exclude sources of uncertainty attributed to a unit under test, the values of Time-Interval Source and Time-Interval Measuring Equipment include sources of uncertainty attributed to a unit under test.

Permanent Laboratory/On-site Calibration : On-site Calibration

Type of Service		Calibration Scope		CMC (Level of Confidence Approximately 95 %)
Time & Frequency Counter, etc.	Frequency Generator	From 1 Hz up to 10 MHz		4.0×10^{-6}
	Frequency Counter	From 1 Hz up to 10 MHz		4.0×10^{-6}
	Time-Interval Source *1	From 1 s up to 60 s		0.01 s
	Time-Interval Measuring Equipment	Calibration by Time-Interval Measurement	From 100 ms less than 10 s	0.000 1 s
			From 10 s up to 60 s	0.001 s
			More than 60 s up to 3 600 s	0.10 s

*1 : Limited to Withstand Voltage tester.

Note: In the CMC column, the values of Frequency Generator and Frequency Counter exclude sources of uncertainty attributed to a unit under test, the values of Time-Interval Source and Time-Interval Measuring Equipment include sources of uncertainty attributed to a unit under test.

General Field of Calibration : Electricity (Direct Current & Low Frequency)

Date of Initial Accreditation of the Field : 1995-06-21

Permanent Laboratory/On-site Calibration : Permanent Laboratory

Type of service		Calibration scope	CMC (Level of Confidence Approximately 95 %)	
Direct Current & Low Frequency Measuring Equipment, etc.	DC Resistor	0.001 Ω	0.000 03 m Ω	
		0.01 Ω	0.000 2 m Ω	
		More than 0.01 Ω less than 0.1 Ω	0.001 Ω	
			0.1 Ω	0.001 0 m Ω
			More than 0.1 Ω less than 1 Ω	0.10 m Ω
			1 Ω	0.005 m Ω
			More than 1 Ω less than 10 Ω	0.000 20 Ω
			1.9 Ω	0.000 10 Ω
			10 Ω	0.05 m Ω
			More than 10 Ω less than 100 Ω	0.002 0 Ω
			19 Ω	0.001 0 Ω
			100 Ω	0.40 m Ω
			More than 100 Ω less than 1 k Ω	0.020 Ω
			190 Ω	0.010 Ω
			1 k Ω	4.0 m Ω
			More than 1 k Ω less than 10 k Ω	0.20 Ω
			1.9 k Ω	0.10 Ω
			10 k Ω	0.040 Ω
			More than 10 k Ω less than 100 k Ω	2.0 Ω
			19 k Ω	1.0 Ω
			100 k Ω	0.40 Ω
			More than 100 k Ω less than 1 M Ω	0.020 k Ω
			190 k Ω	0.010 k Ω
			1 M Ω	0.005 0 k Ω
			More than 1 M Ω up to 10 M Ω	0.000 3 M Ω
			1.9 M Ω	0.000 2 M Ω
			More than 10 M Ω up to 11 M Ω	0.002 M Ω
			More than 11 M Ω up to 60 M Ω	0.1 %
			19 M Ω	0.006 M Ω
			More than 60 M Ω less than 100 M Ω	0.060 M Ω
			100 M Ω	0.005 M Ω
			More than 100 M Ω less than 1 G Ω	0.1 %
	1 G Ω	1.0 M Ω		
	More than 1 G Ω up to 2 G Ω	4 M Ω		
	More than 2 G Ω up to 3 G Ω	6 M Ω		

Type of service		Calibration scope	CMC (Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc.	DC Resistance Measuring Equipment	0.001 Ω	0.10 $\mu\Omega$
		0.01 Ω	0.50 $\mu\Omega$
		0.1 Ω	2.0 $\mu\Omega$
		1 Ω	7.0 $\mu\Omega$
		More than 1 Ω less than 10 Ω	0.20 m Ω
		10 Ω	40 $\mu\Omega$
		More than 10 Ω less than 100 Ω	1.0 m Ω
		100 Ω	0.40 m Ω
		More than 100 Ω up to 400 Ω	4.0 m Ω
		More than 400 Ω less than 1 k Ω	10 m Ω
		1 k Ω	4.0 m Ω
		More than 1 k Ω less than 10 k Ω	0.10 Ω
		10 k Ω	40 m Ω
		More than 10 k Ω up to 19 k Ω	1.0 Ω
		More than 19 k Ω less than 100 k Ω	2.0 Ω
		100 k Ω	0.40 Ω
		More than 100 k Ω up to 190 k Ω	10 Ω
		More than 190 k Ω less than 1 M Ω	20 Ω
		1 M Ω	5.0 Ω
		More than 1 M Ω up to 1.9 M Ω	0.4 k Ω
		More than 1.9 M Ω up to 10 M Ω	0.5 k Ω
		More than 10 M Ω less than 11 M Ω	2 k Ω
		From 11 M Ω up to 19 M Ω	10 k Ω
		More than 19 M Ω less than 33 M Ω	20 k Ω
		From 33 M Ω less than 100 M Ω	30 k Ω
		100 M Ω	5 k Ω
		More than 100 M Ω less than 110 M Ω	0.1 M Ω
	From 110 M Ω less than 330 M Ω	2.0 M Ω	
	From 330 M Ω less than 500 M Ω	1 %	
	From 500 M Ω less than 1 G Ω	5.0 M Ω	
	1 G Ω	1.0 M Ω	
	More than 1 G Ω up to 2 G Ω	1 %	
	DC Voltage Source	From 0 V up to 100 mV	4.5 ppm+0.7 μ V
More than 0.1 V up to 1 V		5.5 ppm+0.6 μ V	
More than 1 V up to 10 V		5.5 ppm+2 μ V	
More than 10 V up to 100 V		7.5 ppm+0.05 mV	
More than 100 V up to 600 V		13 ppm	
More than 600 V up to 1000 V		34 ppm- 12.6 mV	
More than 1 kV up to 1.9 kV		0.004 0 kV	
More than 1.9 kV up to 10 kV		0.020 kV	

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)	
Direct Current & Low Frequency Measuring Equipment, etc.	DC Voltage Measuring Equipment	From 0 V up to 1 V		5.5 ppm+0.5 μ V	
		More than 1 V up to 10 V		5.5 ppm+2 μ V	
		More than 10 V up to 100 V		7.5 ppm+0.05 mV	
		More than 100 V up to 600 V		13 ppm	
		More than 600 V up to 1000 V		34 ppm- 12.6 mV	
		More than 1 kV up to 10 kV		0.06 % + 1 V	
	Direct Current Source	From 0 μ A up to 100 μ A		10 ppm+0.001 0 μ A	
		More than 0.1 mA up to 1 mA		10 ppm+0.015 μ A	
		More than 1 mA up to 10 mA		10 ppm+0.15 μ A	
		More than 10 mA up to 100 mA		10 ppm+2.0 μ A	
		More than 0.1 A up to 1 A		30 ppm+0.010 mA	
		More than 1 A up to 30 A		35 ppm+0.15 mA	
	Direct Current Measuring Equipment	From 0 μ A up to 100 μ A		10 ppm+0.001 0 μ A	
		More than 0.1 mA up to 1 mA		10 ppm+0.015 μ A	
		More than 1 mA up to 10 mA		10 ppm+0.15 μ A	
		More than 10 mA up to 100 mA		10 ppm+2.0 μ A	
		More than 0.1 A up to 1 A		30 ppm+0.010 mA	
		More than 1 A up to 30 A		35 ppm+0.15 mA	
	Direct Current Standard Shunt	0.1 Ω	10 A, 8 A, 6 A, 4 A, 2 A, 1 A		0.000 004 0 Ω
		0.01 Ω	100 A, 60 A, 50 A, 40 A, 30 A, 20 A, 10 A		0.000 000 80 Ω
	AC Voltage Source	From 10 mV up to 20 mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	0.005 mV	
		More than 20 mV up to 60 mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	0.025 %	
		More than 60 mV up to 200 mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	0.015 %	
		More than 200 mV up to 600mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	95 ppm	
		From 300 mV up to 600 mV	10 kHz	95 ppm	
		300 mV, 600 mV	100 kHz	0.015 %	
		More than 600 mV up to 200 V	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz, 10 kHz	50 ppm	
		1 V, 2 V, 6 V, 10 V, 20 V, 60 V, 100 V, 200 V	100 kHz	0.010 %	
		600 V	100 kHz	0.040 %	
		More than 200 V up to 1000 V	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz, 10 kHz	60 ppm	
More than 1 kV up to 1.9 kV		50 Hz, 60 Hz	0.004 0 kV		
More than 1.9 kV up to 10 kV		50 Hz, 60 Hz	0.020 kV		

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc.	AC Voltage Measuring Equipment	From 10 mV up to 20 mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	0.005 mV
		More than 20 mV up to 60 mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	0.025 %
		More than 60 mV up to 200 mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	0.015 %
		More than 200 mV up to 600 mV	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz	95 ppm
		From 300 mV up to 600 mV	10 kHz	95 ppm
		300 mV, 600 mV	100 kHz	0.015 %
		More than 600 mV up to 200 V	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz, 10 kHz	50 ppm
		1 V, 2 V, 6 V, 10 V, 20 V, 60 V, 100 V, 200 V	100 kHz	0.010 %
		600 V	100 kHz	0.040 %
		More than 200 V up to 1000 V	40 Hz, 50 Hz, 60 Hz, 400 Hz, 1 kHz, 10 kHz	60 ppm
		More than 1 kV up to 2 kV	50 Hz, 60 Hz	0.07 % + 0.8 V
		More than 2 kV up to 10 kV	50 Hz, 60 Hz	0.07 % + 4 V

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc.	Alternating Current Source	From 0.001 A up to 0.006 A	50 Hz, 60 Hz	0.025 % + 0.1 μ A
		More than 0.006 A less than 0.01 A	50 Hz, 60 Hz	0.025 % + 0.5 μ A
		From 0.01 A up to 0.02 A	50 Hz, 60 Hz	0.015 % + 0.3 μ A
		More than 0.02 A up to 0.2 A	50 Hz, 60 Hz	0.015 % + 3 μ A
		More than 0.2 A up to 2 A	50 Hz, 60 Hz	0.028 % + 0.03 mA
		More than 2 A up to 10 A	50 Hz, 60 Hz	0.038 % + 0.2 mA
		More than 10 A up to 20 A	50 Hz, 60 Hz	0.045 % + 0.5 mA
		More than 20 A up to 60 A	50 Hz, 60 Hz	0.045 % + 1 mA
	Alternating Current Measuring Equipment	From 0.001 A less than 0.01 A	50 Hz, 60 Hz	0.030 % + 0.5 μ A
		From 0.01 A up to 0.02 A	50 Hz, 60 Hz	0.015 % + 0.3 μ A
		More than 0.02 A up to 0.2 A	50 Hz, 60 Hz	0.015 % + 3 μ A
		More than 0.2 A up to 2 A	50 Hz, 60 Hz	0.028 % + 0.03 mA
		More than 2 A up to 10 A	50 Hz, 60 Hz	0.038 % + 0.2 mA
		More than 10 A up to 20 A	50 Hz, 60 Hz	0.15 %
		More than 20 A up to 60 A	50 Hz, 60 Hz	0.18 % + 0.01 A
		More than 60 A up to 100 A	50 Hz, 60 Hz	0.2 %
		More than 100 A less than 150 A	50 Hz, 60 Hz	0.7 % + 0.3 A
		From 150 A up to 500 A	50 Hz, 60 Hz	0.7 % + 1 A

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc.	Temperature Indicator	Thermocouple B, with Reference Junction	From 291 μV up to 13820 μV (From 250 $^{\circ}\text{C}$ up to 1820 $^{\circ}\text{C}$)	4 μV
		Thermocouple R, with Reference Junction	From -226 μV up to 21103 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	4 μV
		Thermocouple S, with Reference Junction	From -236 μV up to 18694 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	4 μV
		Thermocouple N, with Reference Junction	From -3990 μV up to 47513 μV (From -200 $^{\circ}\text{C}$ up to 1300 $^{\circ}\text{C}$)	20 μV
		Thermocouple K, with Reference Junction	From -5891 μV up to 54886 μV (From -200 $^{\circ}\text{C}$ up to 1372 $^{\circ}\text{C}$)	21 μV
		Thermocouple E, with Reference Junction	From -8825 μV up to 76373 μV (From -200 $^{\circ}\text{C}$ up to 1000 $^{\circ}\text{C}$)	25 μV
		Thermocouple J, with Reference Junction	From -8095 μV up to 69553 μV (From -210 $^{\circ}\text{C}$ up to 1200 $^{\circ}\text{C}$)	23 μV
		Thermocouple T, with Reference Junction	From -5603 μV up to 20872 μV (From -200 $^{\circ}\text{C}$ up to 400 $^{\circ}\text{C}$)	22 μV
		Thermocouple B, without Reference Junction	From 291 μV up to 13820 μV (From 250 $^{\circ}\text{C}$ up to 1820 $^{\circ}\text{C}$)	2 μV
		Thermocouple R, without Reference Junction	From -226 μV up to 21103 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	2 μV
		Thermocouple S, without Reference Junction	From -236 μV up to 18694 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	2 μV
		Thermocouple N, without Reference Junction	From -3990 μV up to 47513 μV (From -200 $^{\circ}\text{C}$ up to 1300 $^{\circ}\text{C}$)	4 μV
		Thermocouple K, without Reference Junction	From -5891 μV up to 54886 μV (From -200 $^{\circ}\text{C}$ up to 1372 $^{\circ}\text{C}$)	4 μV
		Thermocouple E, without Reference Junction	From -8825 μV up to 76373 μV (From -200 $^{\circ}\text{C}$ up to 1000 $^{\circ}\text{C}$)	6 μV
		Thermocouple J, without Reference Junction	From -8095 μV up to 69553 μV (From -210 $^{\circ}\text{C}$ up to 1200 $^{\circ}\text{C}$)	5 μV
		Thermocouple T, without Reference Junction	From -5603 μV up to 20872 μV (From -200 $^{\circ}\text{C}$ up to 400 $^{\circ}\text{C}$)	5 μV
			Resistance thermometer Sensor	From 18.52 Ω up to 390.48 Ω (From -200 $^{\circ}\text{C}$ up to 850 $^{\circ}\text{C}$)

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc.	Temperature Indicator calibration equipment	Thermocouple B, with Reference Junction	From 291 μV up to 13820 μV (From 250 $^{\circ}\text{C}$ up to 1820 $^{\circ}\text{C}$)	4 μV
		Thermocouple R, with Reference Junction	From -226 μV up to 21103 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	4 μV
		Thermocouple S, with Reference Junction	From -236 μV up to 18694 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	4 μV
		Thermocouple N, with Reference Junction	From -3990 μV up to 47513 μV (From -200 $^{\circ}\text{C}$ up to 1300 $^{\circ}\text{C}$)	20 μV
		Thermocouple K, with Reference Junction	From -5891 μV up to 54886 μV (From -200 $^{\circ}\text{C}$ up to 1372 $^{\circ}\text{C}$)	21 μV
		Thermocouple E, with Reference Junction	From -8825 μV up to 76373 μV (From -200 $^{\circ}\text{C}$ up to 1000 $^{\circ}\text{C}$)	25 μV
		Thermocouple J, with Reference Junction	From -8095 μV up to 69553 μV (From -210 $^{\circ}\text{C}$ up to 1200 $^{\circ}\text{C}$)	23 μV
		Thermocouple T, with Reference Junction	From -5603 μV up to 20872 μV (From -200 $^{\circ}\text{C}$ up to 400 $^{\circ}\text{C}$)	22 μV
		Thermocouple B, without Reference Junction	From 291 μV up to 13820 μV (From 250 $^{\circ}\text{C}$ up to 1820 $^{\circ}\text{C}$)	2 μV
		Thermocouple R, without Reference Junction	From -226 μV up to 21103 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	2 μV
		Thermocouple S, without Reference Junction	From -236 μV up to 18694 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	2 μV
		Thermocouple N, without Reference Junction	From -3990 μV up to 47513 μV (From -200 $^{\circ}\text{C}$ up to 1300 $^{\circ}\text{C}$)	2 μV
		Thermocouple K, without Reference Junction	From -5891 μV up to 54886 μV (From -200 $^{\circ}\text{C}$ up to 1372 $^{\circ}\text{C}$)	2 μV
		Thermocouple E, without Reference Junction	From -8825 μV up to 76373 μV (From -200 $^{\circ}\text{C}$ up to 1000 $^{\circ}\text{C}$)	2 μV
		Thermocouple J, without Reference Junction	From -8095 μV up to 69553 μV (From -210 $^{\circ}\text{C}$ up to 1200 $^{\circ}\text{C}$)	2 μV
		Thermocouple T, without Reference Junction	From -5603 μV up to 20872 μV (From -200 $^{\circ}\text{C}$ up to 400 $^{\circ}\text{C}$)	2 μV
		Resistance thermometer Sensor	From 18.52 Ω up to 390.48 Ω (From -200 $^{\circ}\text{C}$ up to 850 $^{\circ}\text{C}$)	0.010 Ω

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Electric Power Measuring Equipment, etc.	AC Voltage Transformer	50 Hz, 60 Hz (Input voltage is from 5 % up to 120% of the rated voltage)	Primary voltage 110 V , 220 V, 440 V 1 100 V, 2 200 V 3 300 V	Ratio error 0.02 % Phase angle 0.6'
		50 Hz, 60 Hz (Input voltage is from 5 % up to 120% of the rated voltage)	Primary voltage 6 600 V, 11 000 V 22 000 V, 33 000 V	Ratio error 0.02 % Phase angle 0.8'
		50 Hz, 60 Hz (Input voltage is from 5 % up to 120% of the rated voltage)	Primary voltage 66 kV, 77 kV, 110 kV	Ratio error 0.03 % Phase angle 0.8'
		50 Hz, 60 Hz (Input voltage is from 5 % up to 120% of the rated voltage)	Primary voltage 110/√3 kV 154/√3 kV 187/√3 kV	Ratio error 0.04 % Phase angle 0.8'
		50 Hz, 60 Hz (Input voltage is from 5 % up to 110% of the rated voltage)	Primary voltage 220/√3 kV	Ratio error 0.04 % Phase angle 0.8'
	Alternating Current Transformer	50 Hz, 60 Hz (Input current is from 2.5 % up to 120% of the rated current)	Primary current From 0.1 A up to 200 A 250 A, 300 A	Ratio error 0.02 % Phase angle 0.6'
		50 Hz, 60 Hz (Input current is from 2.5 % up to 120% of the rated current)	Primary current 400 A, 500 A, 600 A 750 A, 800 A, 1000 A 1200 A, 1500 A, 2000 A 2500 A, 3000 A, 4000 A	Ratio error 0.02 % Phase angle 0.9'

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)	
Electric Power Measuring Equipment, etc.	Power Meter	From 10 V up to 300 V From 250 mA up to 30 A 50 Hz, 60 Hz Power factor, whole range		0.28 mW/VA ~ 0.32 mW/VA (Appendix 1)	
	Reactive Power Meter	From 10 V up to 300 V From 250 mA up to 30 A 50 Hz, 60 Hz Power factor, whole range		0.30 mvar/VA ~ 0.38 mvar/VA (Appendix 1)	
	Energy Meter	110 V, 100 V 5 A 50 Hz, 60 Hz	Three phase three wire *include a unbalanced load	Power factor 1 Power factor 0.866 lag* Power factor 0.866 lead* Power factor 0.5 lag Power factor 0.5 lead *110V only	0.02 %
			Single phase three wire *include a unbalanced load	Power factor 1 Power factor 0.5 lag Power factor 0.5 lead	
			Single phase two wire	Power factor 1 Power factor 0.5 lag Power factor 0.5 lead	

Appendix 1

Category	Calibration Scope						CMC (Level of Confidence Approximately 95 %)
	Type	Phase wire	Frequency	Voltage	Current	Power factor	
Power Meter	Active Power	Single phase two wire	50 Hz 60 Hz	100 V	5 A	1	0.30 mW/VA
						0.5 lag	0.28 mW/VA
						0.5 lead	0.28 mW/VA
						0 lag	0.28 mW/VA
						0 lead	0.28 mW/VA
		300 V	5 A	1	0.31 mW/VA		
		100 V	0.5 A	1	0.32 mW/VA		
		Single phase three wire	50 Hz 60 Hz	100 V	5 A	1	0.29 mW/VA
		Three phase three wire	50 Hz 60 Hz	100 V	5 A	1	0.29 mW/VA
Reactive Power Meter	Reactive power	Single phase two wire	50 Hz 60 Hz	100 V	5 A	1	0.30 mvar/VA
						0.5 lag	0.30 mvar/VA
						0.5 lead	0.30 mvar/VA
						0 lag	0.30 mvar/VA
						0 lead	0.30 mvar/VA
						300 V	5 A
		100 V	0.5 A	0 lag	0.32 mvar/VA		
		Single phase three wire	50 Hz 60 Hz	100 V	5 A	0 lag	0.30 mvar/VA
		Three phase three wire	50 Hz 60 Hz	100 V	5 A	0 lag	0.30 mvar/VA

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Low Frequency Impedance Measuring Equipment, etc.	AC Resistor	0.01 Ω , 0.02 Ω , 0.05 Ω	50 Hz, 60 Hz	0.042 %
		0.1 Ω , 0.2 Ω	50 Hz, 60 Hz	0.032 %
		1 Ω , 10 Ω	50 Hz, 60 Hz	0.020 %
		100 Ω	50 Hz, 60 Hz	0.016 %
	AC Resistance Measuring Equipment	From 0.001 Ω up to 2 Ω (From 3 A up to 60 A)	50 Hz, 60 Hz	0.5 % + 0.001 Ω

Permanent Laboratory/On-site Calibration : On-site Calibration

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc.	DC Resistance Measuring Equipment	From 0.01 M Ω less than 0.2 M Ω		0.002 0 M Ω
		From 0.2 M Ω up to 100 M Ω		1 %
		More than 100 M Ω up to 190 M Ω		2 .0 M Ω
		More than 190 M Ω up to 2 000 M Ω		1 %
	DC Voltage Source	From 0 V up to 100 mV		0.006 % + 0.005 mV
		More than 0.1 V up to 1 V		0.005 % + 0.000 01 V
		More than 1 V up to 10 V		0.005 % + 0.000 1 V
		More than 10 V up to 100 V		0.006 % + 0.001 V
		More than 100 V up to 1 000 V		0.006 % + 0.02 V
		More than 1 kV up to 1.9 kV		0.004 kV
		More than 1.9 kV up to 10 kV		0.02 kV
	DC Voltage Measuring Equipment	From 0 V up to 100 mV		0.004 % + 0.005 mV
		More than 0.1 V up to 1 V		0.004 % + 0.000 01 V
		More than 1 V up to 10 V		0.004 % + 0.000 1 V
		More than 10 V up to 100 V		0.005 % + 0.001 V
		More than 100 V up to 1 000 V		0.005 % + 0.01 V
	Direct Current Source	From 0 μ A up to 30 A		0.10 %
	Direct Current Measuring Equipment	From 0 μ A up to 10 A		0.10 %
	AC Voltage Source	From 0.1 kV up to 1.9 kV	50 Hz, 60 Hz	0.004 kV
		More than 1.9 kV up to 10 kV	50 Hz, 60 Hz	0.02 kV
	Alternating Current Source	From 0.1 mA up to 1 mA	50 Hz, 60 Hz	0.01 mA
More than 1 mA up to 10 mA		50 Hz, 60 Hz	0.10 mA	
More than 10 mA up to 100 mA		50 Hz, 60 Hz	1.0 mA	
Alternating Current Measuring Equipment	From 10 mA up to 50 A	50 Hz, 60 Hz	1.0 %	
	More than 50 A less than 150 A	50 Hz, 60 Hz	0.7 % + 0.3 A	
	From 150 A up to 500 A	50 Hz, 60 Hz	0.7 % + 1 A	

Type of service		Calibration scope		CMC (Level of Confidence Approximately 95 %)
Direct Current & Low Frequency Measuring Equipment, etc.	Temperature Indicator	Thermocouple B, with Reference Junction	From 291 μV up to 13820 μV (From 250 $^{\circ}\text{C}$ up to 1820 $^{\circ}\text{C}$)	10 μV
		Thermocouple R, with Reference Junction	From -226 μV up to 21103 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	10 μV
		Thermocouple S, with Reference Junction	From -236 μV up to 18694 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	10 μV
		Thermocouple N, with Reference Junction	From -3990 μV up to 47513 μV (From -200 $^{\circ}\text{C}$ up to 1300 $^{\circ}\text{C}$)	22 μV
		Thermocouple K, with Reference Junction	From -5891 μV up to 54886 μV (From -200 $^{\circ}\text{C}$ up to 1372 $^{\circ}\text{C}$)	23 μV
		Thermocouple E, with Reference Junction	From -8825 μV up to 76373 μV (From -200 $^{\circ}\text{C}$ up to 1000 $^{\circ}\text{C}$)	27 μV
		Thermocouple J, with Reference Junction	From -8095 μV up to 69553 μV (From -210 $^{\circ}\text{C}$ up to 1200 $^{\circ}\text{C}$)	25 μV
		Thermocouple T, with Reference Junction	From -5603 μV up to 20872 μV (From -200 $^{\circ}\text{C}$ up to 400 $^{\circ}\text{C}$)	24 μV
		Thermocouple B, without Reference Junction	From 291 μV up to 13820 μV (From 250 $^{\circ}\text{C}$ up to 1820 $^{\circ}\text{C}$)	9 μV
		Thermocouple R, without Reference Junction	From -226 μV up to 21103 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	9 μV
		Thermocouple S, without Reference Junction	From -236 μV up to 18694 μV (From -50 $^{\circ}\text{C}$ up to 1768.1 $^{\circ}\text{C}$)	9 μV
		Thermocouple N, without Reference Junction	From -3990 μV up to 47513 μV (From -200 $^{\circ}\text{C}$ up to 1300 $^{\circ}\text{C}$)	11 μV
		Thermocouple K, without Reference Junction	From -5891 μV up to 54886 μV (From -200 $^{\circ}\text{C}$ up to 1372 $^{\circ}\text{C}$)	11 μV
		Thermocouple E, without Reference Junction	From -8825 μV up to 76373 μV (From -200 $^{\circ}\text{C}$ up to 1000 $^{\circ}\text{C}$)	13 μV
		Thermocouple J, without Reference Junction	From -8095 μV up to 69553 μV (From -210 $^{\circ}\text{C}$ up to 1200 $^{\circ}\text{C}$)	12 μV
		Thermocouple T, without Reference Junction	From -5603 μV up to 20872 μV (From -200 $^{\circ}\text{C}$ up to 400 $^{\circ}\text{C}$)	12 μV
		Resistance thermometer Sensor	From 18.52 Ω up to 390.48 Ω (From -200 $^{\circ}\text{C}$ up to 850 $^{\circ}\text{C}$)	0.10 Ω