

Name of Accreditation Program	JCSS Accreditation Program
Accreditation No.	JCSS0058
Date of Initial Accreditation	1995-06-21
Latest Date of Issue	2018-02-02
Name and Address of Accredited Organization	Measurement Standards Dept., QHSE Control Div. Audit, Compliance & Quality Assurance HQ, Yokogawa Electric Corporation 155 Takamuro-cho, Kofu-shi, Yamanashi 400-8558, Japan JCN 4012401012569
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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 : 2007-09-03

Permanent Laboratory/On-site Calibration : Permanent Laboratory

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	CMC (Level of Confidence Approximately 95 %)
Time & Frequency Counter, etc.	Frequency Standards	1 MHz, 5 MHz, 10 MHz	1.0×10^{-12}
	Frequency Generator	1 MHz, 5 MHz, 10 MHz	1.0×10^{-12}
	Frequency Counter	1 MHz, 5 MHz, 10 MHz	1.0×10^{-12}

The values in the CMC column exclude sources of uncertainty attributed to a unit under test.

#All Calibration Procedures are in-house procedures developed by this laboratory.

Permanent Laboratory/On-site Calibration : Non-Permanent Laboratory (Remote Calibration)

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range	Service Area	CMC (Level of Confidence Approximately 95 %)
Time & Frequency Counter, etc.	Frequency Standards	10 MHz	500 km	6.5×10^{-6} Hz
			1600 km	9.0×10^{-6} Hz

The values in the CMC column exclude sources of uncertainty attributed to a unit under test.

#All Calibration Procedures are in-house procedures developed by this laboratory.

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

Calibration Procedures# and Type of Instruments/Materials to be calibrated	Range	CMC (Level of Confidence Approximately 95 %)	
Direct Current & Low Frequency Measuring Equipment, etc.	DC Resistor	1 m Ω	3.0 $\mu\Omega/\Omega$
		10 m Ω	2.6 $\mu\Omega/\Omega$
		100 m Ω	1.8 $\mu\Omega/\Omega$
		1 Ω	0.30 $\mu\Omega/\Omega$
		10 Ω	1.2 $\mu\Omega/\Omega$
		100 Ω	1.2 $\mu\Omega/\Omega$
		1 k Ω	1.7 $\mu\Omega/\Omega$
		10 k Ω	1.7 $\mu\Omega/\Omega$
		100 k Ω	5.0 $\mu\Omega/\Omega$
		1 M Ω	5.0 $\mu\Omega/\Omega$
		More than 0.1 Ω Less than 100 Ω (except 1 Ω ,10 Ω)	0.60 m Ω
		More than 100 Ω Less than 10 k Ω (except 1k Ω)	6.0 $\mu\Omega/\Omega$
		More than 10 k Ω Less than 100 k Ω	12 $\mu\Omega/\Omega$
		More than 100 k Ω Less than 1 M Ω	20 $\mu\Omega/\Omega$
	DC Resistance Measuring Equipment	0.1 Ω , 0.2 Ω	50 $\mu\Omega/\Omega$
		0.5 Ω , 2 Ω , 5 Ω	15 $\mu\Omega/\Omega$
		1 Ω , 10 Ω , 100 Ω , 1 k Ω , 10 k Ω	4.0 $\mu\Omega/\Omega$
		100 k Ω	7.0 $\mu\Omega/\Omega$
		1 M Ω	10 $\mu\Omega/\Omega$
		More than 10 Ω Less than 10 k Ω (except 100 Ω ,1k Ω)	8.0 $\mu\Omega/\Omega$
		More than 10 k Ω Less than 100 k Ω	10 $\mu\Omega/\Omega$
		More than 100 k Ω Less than 1 M Ω	18 $\mu\Omega/\Omega$
	DC Voltage Source	1 V, 1.018 V	2.0 $\mu\text{V}/\text{V}$
		10 V	0.50 $\mu\text{V}/\text{V}$
		30 V, 40 V, 50 V, 60 V, 70 V, 80 V, 90 V, 100 V, 200 V, 300 V, 400 V, 500 V, 600 V, 700 V, 800 V, 900 V,1000 V	3.0 $\mu\text{V}/\text{V}$
		From 1 mV less than 100 mV	0.50 μV
		From 100 mV up to 200 mV	0.60 μV
		More than 200 mV up to 20 V	3.0 $\mu\text{V}/\text{V}$
		More than 100 mV up to 200 mV	0.70 μV
	DC Voltage Measuring Equipment	1 mV, 2 mV, 5 mV, 10 mV, 20 mV	0.50 μV
		50 mV, 100 mV	0.70 μV
		30 V, 40 V, 50 V, 60 V, 70 V, 80 V, 90 V, 100 V 200 V, 300 V, 400 V, 500 V, 600 V, 700 V, 800 V, 900 V,1000 V	4.0 $\mu\text{V}/\text{V}$
		More than 100 mV up to 200 mV	0.70 μV
		More than 200 mV up to 20 V	3.0 $\mu\text{V}/\text{V}$
		More than 20 V Less than 1000 V (except 30V,40V,50V,60V,70V,80V,90V,100V ,200V,300V,400V,500V,600V,700V,800V,900V)	6.0 $\mu\text{V}/\text{V}$
		From 100 μA up to 10 mA	12 $\mu\text{A}/\text{A}$
	Direct Current Source	More than 10 mA up to 100 mA	25 $\mu\text{A}/\text{A}$
		More than 100 mA up to 10 A	41 $\mu\text{A}/\text{A}$
		More than 10 A up to 20 A	0.10 mA/A
		More than 20 A up to 30 A	0.20 mA/A
		From 100 μA up to 10 mA	15 $\mu\text{A}/\text{A}$
	Direct Current Measuring Equipment	More than 10 mA up to 100 mA	30 $\mu\text{A}/\text{A}$
		More than 100 mA up to 1 A	40 $\mu\text{A}/\text{A}$

Direct Current & Low Frequency Measuring Equipment, etc.	AC Voltage Source	500 Hz, 10 kHz	300 mV, 1 V, 10 V, 100 V	44 μ V/V		
		1 kHz	300 mV, 600 mV, 1 V, 2 V, 6 V, 10 V, 20 V, 60 V, 100 V, 200 V	44 μ V/V		
		50 kHz	300 mV, 600 mV, 1 V, 2 V, 10 V, 20 V, 100 V	44 μ V/V		
		100 kHz	300 mV, 600 mV, 1 V, 2 V, 6 V, 10 V, 20 V	44 μ V/V		
		1 kHz	600 V	50 μ V/V		
		500 Hz, 1 kHz	1000V	50 μ V/V		
		From 50 Hz up to 50 kHz	From 300 mV up to 200V	70 μ V/V		
		More than 50 kHz up to 100 kHz	From 300 mV up to 200V	80 μ V/V		
		From 50 Hz up to 1 kHz	More than 200 V up to 1000V	70 μ V/V		
	AC Voltage Measuring Equipment	500 Hz, 10 kHz	300 mV, 1 V, 10 V, 100 V	40 μ V/V		
		1 kHz, 100 kHz	300 mV, 600 mV, 1 V, 2 V, 6 V, 10 V, 20 V, 60 V, 100 V, 200 V	40 μ V/V		
		50 kHz	300 mV, 600 mV, 1 V, 2 V, 10 V, 20 V, 100 V	40 μ V/V		
		1 kHz	600 V	45 μ V/V		
		500 Hz, 1 kHz	1000V	45 μ V/V		
		From 50 Hz up to 50 kHz	From 300 mV up to 200V	65 μ V/V		
		More than 50 kHz up to 100 kHz	From 300 mV up to 200V	75 μ V/V		
		From 50 Hz up to 1 kHz	More than 200 V up to 1000V	65 μ V/V		
	Alternating Current Source	60 Hz	50 mA	0.26 mA/A		
			From 100 mA less than 200 mA	0.15 mA/A		
			From 200 mA up to 500 mA	0.12 mA/A		
More than 500 mA up to 2 A			0.11 mA/A			
More than 2 A up to 20 A			0.12 mA/A			
Alternating Current Measuring Equipment	60 Hz	50 mA	0.15 mA/A			
		5 A	0.10 mA/A			
		100 mA, 150 mA, 200 mA, 300 mA, 400 mA, 500 mA, 600 mA, 700 mA, 800 mA, 900 mA, 1 A, 2 A, 3 A, 4 A, 10 A, 20 A	0.11 mA/A			
Electric Power Measuring Equipment, etc.	Power Converter	60 Hz	100 V	Power factor 1	70 μ W/W	
			5 A	Power factor 0	60 μ W/(V·A)	
	Power Meter	60 Hz	100 V	5 A	Power factor 1	70 μ W/W
				5 A	Power factor 0	60 μ W/(V·A)

#All Calibration Procedures are in-house procedures developed by this laboratory.

General Field of Calibration : Pressure

Date of Initial Accreditation of the Field : 2000-12-21

Permanent Laboratory/On-site Calibration : Permanent Laboratory

Calibration Procedures# and Type of Instruments/Materials to be calibrated		Range		CMC (Level of Confidence Approximately 95 %)
Pressure Gauge	Pressure Balance	Gas Gauge Pressure	From 25 kPa up to 150 kPa	$(0.3+0.033P)$ Pa (P :Measuring pressure[kPa])
			More than 150 kPa up to 350 kPa	0.0035 %
	Pressure Gauges (Digital Pressure Gauges)	Gas Gauge Pressure	From -83 kPa up to -3 kPa	22 Pa
			From 10 Pa up to 1000 Pa	0.13 Pa
			More than 1000 Pa up to 10000 Pa	$(0.14+0.031P)$ Pa (P :Measuring pressure[kPa])
			More than 10 kPa less than 13 kPa	1.7 Pa
			From 13 kPa less than 26 kPa	1.0 Pa
			From 26 kPa up to 130 kPa	$(1.0+0.027 \times (P-26))$ Pa (P :Measuring pressure[kPa])
			More than 130 kPa less than 200 kPa	10 Pa
			From 200 kPa up to 700 kPa	$(10+0.042 \times (P-200))$ Pa (P :Measuring pressure[kPa])
			More than 700 kPa up to 3000 kPa	$(25+0.033 \times (P-600))$ Pa (P :Measuring pressure[kPa])
		Gas Absolute Pressure	From 5 kPa less than 10 kPa	3.1 Pa
			From 10 kPa less than 60 kPa	2.5 Pa
			From 60 kPa up to 130 kPa	$(2.5+0.030 \times (P-60))$ Pa (P :Measuring pressure[kPa])
			More than 130 kPa less than 350 kPa	16 Pa
			From 350 kPa up to 700 kPa	$(16+0.033 \times (P-350))$ Pa (P :Measuring pressure[kPa])
		Differential Pressure *1	From 10 Pa up to 1000 Pa	$(0.05+0.02P)$ Pa (P :Measuring pressure[kPa])
			More than 1000 Pa up to 10000 Pa	$(0.035+0.035P)$ Pa (P :Measuring pressure[kPa])

*1 Line Pressure is from 90 kPa abs up to 110 kPa abs.

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