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Registration No. CNAS L5330

Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS

Effective Date: 2026-01-22 Expiry Date: 2030-01-15

SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

Note: The instruments with * represents onsite calibration can be performed.

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
1、Thermology measuring instrument							
1	Base Metal Thermocouple	Temperature	C.S. for Base Metal Thermocouple JJF 1637	(0～300) ℃	U=0.3℃		
				(300～1100)℃	U=0.9℃		
2	Industry Platinum and Copper Resistance Thermometers	Temperature	V. R. of Industry Platinum and Copper Resistance Thermometers JJG 229	(0～100)℃	U=(0.05～0.06)℃		
				(100～300)℃	U=(0.06～0.1)℃		
3	Liquid-in-Glass Thermometer for Working	Temperature	V.R. of Liquid-in-Glass Thermometers for Working JJG 130	(-30～100)℃	U=0.1℃		
				(100～300)℃	U=0.3℃		
4	*Digital Temperature Indicator and Controllers	Temperature	V.R. of Digital Temperature Indicators and Controllers JJG 617	With Thermocouple:(0～100) ℃	U=0.2℃	Accredited only for digital temperature indicator and	
				With Thermocouple:(100～1300) ℃	U=(0.2～0.6)℃		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				With Thermal Resistance:(0~600)℃	U=0.3℃	controllers with position control. Digital Temperature Indicator and Controllers	
5	Working Nobel Metal Thermocouples	Temperature	V.R. of Working Nobel Metal Thermocouples JJG 141	419.527℃	U=0.5℃	Except for Type B Thermocouple	
				660.323℃	U=0.7℃		
				1084.62℃	U=0.7℃		
6	Recorders for Industrial - Process Measurement	Temperature	V.R. of Recorders for Industrial - Process Measurement JJG 74	With Thermocouple:(0～100)℃	U=0.2℃		
				With Thermocouple:(100～1300)℃	U=(0.2～0.6)℃		
				With Thermal Resistance:(100～600)℃	U=0.3℃		
2、Mechanics measuring instruments							
1	Weight	Mass	V. R. of Weights JJG 99	(1～500)mg	U=(0.006～0.025)mg	Volume and magnetic are not determined.	
				(1～500)g	U=(0.03～0.8)mg		
				(1～20)kg	U=(1.6～30)mg		
2	*Electronic Balances	Mass	V.R. for Electronic Balance JJG 1036	10mg～1kg	U=(0.02～6)mg		
				(1～40)kg	U=6 mg～0.24 g		
3	*Digital Indicating	Mass	V. R. of Digital Indicating	(2～1000)g	U=(0.02～0.06)g		

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	Weighing Instrument		Weighing Instrument JJG 539	(1～100)kg	U=(0.06～10)g		
4	Leeb Hardness Tester	Hardness	V.R. of Leeb Hardness Tester JJG 747	(750～830)HLD	U=7HLD		
				(490～670)HLD	U=6HLD		
				(460~630)HLG	U=6HLG		
5	Digital Pressure Gauges	Pressure	V. R.of Digital Pressure Gauges JJG 875	(-0.1～0)MPa	U=0.013kPa		
				(0.01～60)MPa	U_{rel}=0.013%		
6	Elastic Element Precise Pressure Gauge and Vacuum Gauge	Pressure	V.R.of Elastic Element Precise Pressure Gauge and Vacuum Gauge JJG 49	(-0.1～60)MPa	U=0.05%FS		
7	Elastic Element, Pressure Gauge, Pressure-Vacuum Gauge and Vacuum Gauge for General Use	Pressure	V.R.of Elastic Element Pressure Gauge，Pressure-Vacuum Gauge and Vacuum Gauge for General Use JJG 52	(-0.1～60)MPa	U=0.2%FS		
8	Pressure Transmitter	Pressure	V. R.of the Pressure Transmitter JJG 882	(0.01～60)MPa	U=0.02%FS		
9	Tachometer	Tacho	V. R. of Tachometer JJG 105	contact(30～8000)r/min	U_{rel}=0.03%		
				non-contact(30～30000)r/min	U_{rel}=0.02%		
10	Torque Wrench	Torque	V.R. of Torque Wrenches JJG 707	5～3000)Nm	U_{rel}=1.0%		
11	*Tension,Compression and Universal Testing Machines	Force Value	V.R. of Tension,Compression and Universal Testing Machines JJG 139	(1～2000)kN	U_{rel}=0.13%	Only do level 1 and below	

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12	*Electronic Universal Testing Machine	Force Value	Electronic Universal Testing Machine JJG 475	(1～2000)kN	U_{rel}=0.13%	Only do level 1 and below	
13	*Electro-hydraulic Servo Universal Testing Machines	Force Value	V.R. of Electro-hydraulic Servo Universal Testing Machines JJG 1063	(1～2000)kN	U_{rel}=0.13%	Only do level 1 and below	
14	Piezoelectric Accelerometer	acceleration	V.R. for Piezoelectric Aceelerometer JJG 233	a:2m/s^2～100m/s^2 f:（5～5000）Hz			
15	Verification Regulation of Vibration meters	acceleration	Verification Regulation of Vibration meters JJG 676	a:2m/s^2～100m/s^2 f:（5～5000）Hz	U_{rel}=2.2%		
		Velocity		v:(0.06～60)mm/s f:（5～1000）Hz	U_{rel}=2.2%		
		Displacement		a:（0.002～4000）μm f:（5～400）Hz	U_{rel}=2.2%		
3、Radio measuring instrument							
1	Analogue Oscilloscope	Scanning time factor	V.R. of Analogue Oscilloscope JJG 262	0.02μs/div～0.5s/div	U_{rel}=0.62%		
		Coefficient of vertical deflection		5mV/div～5V/div,(1MΩ)	U_{rel}=0.70%		
				5mV/div～2V/div,(50Ω)	U_{rel}=0.72%		
		Rise Time		2ns～100ns	U_{rel}=4%		
		Bandwidth		1MHz～100MHz	U_{rel}=4%		
4、Chemistry measuring instruments							
1	*Alarmer Detectors of Combustible Gas	Concentration	V. R. of Alarmer Detectors of Combustible Gas JJG 693	Methane:(10～60%)LEL	U_{rel}=2.2%		

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5、Electromagnetics measuring instruments							
1	DC Amperemeters,Voltmeters,Wattmeter	DC Current	V.R. of Amperemeters,Voltmeters,Wattmeters and Ohmmeters JJG 124	100μA～30A	U_{rel}=0.12%		
		DC Voltage		10mV～750V	U_{rel}=0.12%		
		DC Power		10W～6kW	U_{rel}=0.17%		
2	DC Bridge	Resistance	V.R. of DC Bridges JJG 125	(0.1～10)mΩ	U_{rel}=0.3%		
				(10～100)mΩ	U_{rel}=0.1%		
				(0.1～1)Ω	U_{rel}=0.09%		
				(1～10)Ω	U_{rel}=0.04%		
				(10～100)Ω	U_{rel}=0.02%		
3	Digital Multimeters	DC Voltage	V. R. of DC Multimeters JJF 1587	10mV～100V	$U_{rel}=3.5\times10^{-4}$		
				100V～1000V	$U_{rel}=2.9\times10^{-5}$		
		DC Current		1mA～100mA	$U_{rel}=3.7\times10^{-4}$		
				100mA～1A	$U_{rel}=4.4\times10^{-4}$		
				1A～A	$U_{rel}=6.2\times10^{-4}$		
				3A～10A	$U_{rel}=7.1\times10^{-4}$		
		Resistance		100Ω	$U_{rel}=4.0\times10^{-4}$		
				1kΩ	$U_{rel}=4.4\times10^{-4}$		
				10kΩ、100kΩ、1MΩ、10MΩ	$U_{rel}=3.5\times10^{-4}$		

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		AC Voltage		100mV～1V,(50Hz～1kHz)	U_{rel}=3.8×10^{-4}		
				1V～10V,(50Hz～1kHz)	U_{rel}=4.5×10^{-4}		
				10V～100V,(50Hz～1kHz)	U_{rel}=4.7×10^{-4}		
				100V～1000V,(50Hz～1kHz)	U_{rel}=3.8×10^{-4}		
		AC Current		1mA～3.3mA,(50Hz～1kHz)	U_{rel}=0.18%		
				3.3mA～33mA,(50Hz～1kHz)	U_{rel}=0.23%		
				33mA～330mA,(50Hz～1kHz)	U_{rel}=0.26%		
				0.33A～1.1A,(50Hz～1kHz)	U_{rel}=0.27%		
				1.1A～3A,(50Hz)	U_{rel}=0.31%		
				3A～10A,(50Hz)	U_{rel}=0.15%		
4	Megohmmeter	Resistance	V. R. of Megohmmeter JJG 622	0.1MΩ～10MΩ	U_{rel}=1.0%		
				10MΩ～100MΩ	U_{rel}=1.2%		
				100MΩ～1GΩ	U_{rel}=2.5%		
				1GΩ～10GΩ	U_{rel}=6%		
		Voltage		(100～500)V	U_{rel}=2%		
				(500～5000)V	U_{rel}=3%		
5	Electronic Insulation	Resistance	V. R. of Electronic Insulating Resistance Meters JJG 1005	0.1MΩ～10MΩ	U_{rel}=1.0%		

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Resistance Meter			10MΩ～100MΩ	U_{rel}=1.2%		
				100MΩ～1GΩ	U_{rel}=2.5%		
				1GΩ～10GΩ	U_{rel}=6%		
		Voltage		(100～500)V	U_{rel}=2%		
				(500～5000)V	U_{rel}=3%		
Geometric sense measuring instruments							
1	Gauge Block	Length	V.R.of Gauge Blocks JJG 146	(0.5～100)mm	U=0.09 μm+1.3× $10^{-6}L$		
				(125～1000)mm	U=0.2 μm+1.3×$10^{-6}L$		
2	Angle Gauge Blocks	Angle	V.R. of Angle Gauge Blocks JJG 70	15° 10′ ～ 90°	U=6″		
3	General Bevel Protractors	Angle	Calibration Specification for General Bevel Protractors JJF 1959	(0～360)°	U=1.6′		
4	Frame Levels and Shaft Levels	Angle	Calibration Specification for Frame Levels and Shaft Levels JJF 1084	Resolution(0.02～0.10)mm/m	U_{rel}=6.0%		
5	Squares	Verticality	V.R. of Squares JJG 7	(50～100)mm	U=0.8μm		
				(100～200)mm	U=1.2μm		
				(200～300)mm	U=1.6μm		
				(300～400)mm	U=2.0μm		
				(400～500)mm	U=2.4μm		
6	Optical Flat	Plane degree	V.R. of Optical Flat JJG 28	D(30～100)mm	U=0.02μm		

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Parallelism		H(15.00～91.00)mm	U=0.2μm		
7	Straight Edges	Line degree	Calibration Specification for Straight Edges JJF 1097	(300～1000)mm	U=0.6μm		
				（1000~2000）mm	U=1.1μm		
				(2000～3000)mm	U=1.4μm		
				(3000～6300)mm	U=U=3.0μm		
8	Straight Edge	Line degree	V.R. of Straight Edge JJG 63	(75～175)mm	U=0.4μm		
				(200~300)mm	U=0.8μm		
9	Surface Plates	Plane degree	V.R. of Surface Plates JJG 117	(160×100)mm	U=0.4μm		
				(160×100～ 400×250)mm	U=1.0μm		
				(400×250～ 630×400)mm	U=1.2μm		
				(630×400～1000×630)mm	U=1.5μm		
				（1000×630～1600×1000）mm	U=2.3μm		
				（1600×1000～2000×1000）mm	U=2.5μm		
				（2000×1000～2500×1600）mm	U=3.5μm		
				（2500×1600～4000×2500）mm	U=5μm		
10	Steel Ruler	Length	V.R. of Steel Ruler JJG 1	(0～1000)mm	U=0.07mm		
				(1000～2000)mm	U=0.10mm		

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
11	Steel Tape	Length	V.R. of Steel Tape JJG 4	(0～10)m	U=0.06mm+3×10^{-5}L		
				(10～20)m	U=0.10mm+3×10^{-5}L		
12	Micrometers	Length	V.R. of Micrometers JJG 21	(0～100)mm	U=1.6μm		
				(100～200)mm	U=2.4μm		
				(200～300)mm	U=3.2μm		
				(300～400)mm	U=4.1μm		
				(400～500)mm	U=5.1μm		
				digital(0～100)mm	U=0.9μm		
				digital(100～200)mm	U=1.2μm		
				digital(200～300)mm	U=1.4μm		
				digital(300～400)mm	U=1.7μm		
				digital(400～500)mm	U=2.1μm		
13		Length	V.R. of Micrometers with Gauge JJG 427	(0～25)mm	U=0.7μm		
				(25～50)mm			
				(50～75)mm			
				(75~100)mm			
14	Large Dimension Outside Micrometers	Length	Calibration Specification for Large Dimension Outside Micrometers JJF 1088	（500～3000）mm	U=1.3μm		
15	Internal Micrometers	Length	V.R. of Internal Micrometers JJG 22	（50～1000）mm	U=1.2μm+3.4×10^{-6}L		

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				（1000～3000）mm	U=2.4 μ m+3.4×10^{-6}L		
				（3000～6000）mm	U=4 μ m+4×10^{-6}L		
16	Depth Micrometers	Length	V.R. of Depth Micrometers JJG 24	（0～25）mm	U=1.1μm		
				（25～50）mm	U=1.4μm		
				（50～100）mm	U=1.8μm		
				（100～150）mm	U=2.4μm		
17	Screw Thread Micrometers	Length	V.R. of Screw Thread Micrometers JJG 25	(0～50)mm	U=4.1μm		
				(50～100)mm	U=5.2μm		
				(100～150)mm	U=6.4μm		
				(150～200)mm	U=7.6μm		
18	Micrometers for Measuring Inside Dimension	Length	C.S.for Micrometers of Measuring Inside Dimension JJF 1411	(5～30)mm	U=1.7μm	only calibrate two point type	
				(30～150)mm	U=2.4μm		
				(150～200)mm	U=3.0μm		
19	Calipers	Length	V.R. of Current Calipers JJG 30	(0～150)mm	U=13μm		
				(150～200)mm	U=13μm		
				(200～300)mm	U=14μm		
				(300～500)mm	U=17μm		
				(500～1000)mm	U=25μm		
				(1000～1500)mm	U=35μm		

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(1500～2000)mm	U=45μm		
				digital(0～150)mm	U=7μm		
				digital(150～200)mm	U=8μm		
				digital(200～300)mm	U=10μm		
				digital(300～500)mm	U=13μm		
				digital(500～1000)mm	U=23μm		
				digital(1000～1500)mm	U=33μm		
				digital(1500～2000)mm	U=44μm		
20	Height Calipers	Length	V.R. of Height Caliper JJG 31	(0～150)mm	U=13μm		
				(150～200)mm	U=13μm		
				(200～300)mm	U=14μm		
				(300～500)mm	U=17μm		
				(500～1000)mm	U=25μm		
				(1000～1500)mm	U=35μm		
				(1500～2000)mm	U=45μm		
				digital(0～150)mm	U=7μm		
				digital(150～200)mm	U=8μm		
				digital(200～300)mm	U=10μm		
				digital(300～500)mm	U=13μm		

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				digital(500～1000)mm	U=23μm		
				digital(1000～1500)mm	U=33μm		
				digital(1500～2000)mm	U=44μm		
21	Dial Gauges	Length	V.R. of Dial Gauges JJG 34	division value0.01mm（0～10）mm	U=4.4μm		
				division value0.001mm、0.002mm（0～1）mm	U=1.7μm		
				division value 0.1mm（0～50）mm	U=30μm		
				division value 0.01mm：（0～50）mm	U=10μm		
				division value 0.001、0.002mm：（0～10）mm	U=3.4μm		
				digital display resolution 0.01mm：（0～50）mm	U=10μm		
				dgital display resolution0.001mm：（0～1）mm	U=1.9μm		
				digital display resolution0.001mm：（0～10）mm	U=3.5μm		
				digital display resolution0.001mm：（0～30）mm	U=5.2μm		
22	Dial Test Indicator	Length	V.R. of Dial Test Indicator JJG 35	dial test indicator（0～1）mm	U=2.4μm		

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				micrometer test indicator（0～0.4）mm	U=1.4μm		
23	Bore Dial Indicators	Length	Calibration Specification for Bore Dial Indicators JJF 1102	Bore dial indicator（2～450）mm	U=4.4μm		
				bore micrometer indicators（10～400）mm	U=1.4μm		
24	Measuring Pin	Length	Calibration Specification for Cylindrrical Measuring Pin JJF 1207	D（0.118～6.585）mm	U=0.26μm		
25	Feeler Gauges	Length	V.R. of Feeler Gauges JJG 62	(0.02～0.10)mm	U=1.8μm		
				(0.10～ 1)mm	U=2.7μm		
26	Roughness Comparison Specimens	Roughness	Calibration Specification of Roughness Comparison Specimens JJF 1099	Ra (0.2～ 12.5) μm	U_{rel}=6.0%		
27	Calibration Specification for Integrity	Length	Calibration Specification for Integrity(Stylus)(6000mm～10000mm)Internal Micrometers JJF 1215	(6000～10000)mm	U=10 μm+4×$10^{-6}L$		
28	*Extensometer	Displacement	V.R.for Extensometer JJG 762	（0～0.3）mm	U=0.6 μm	Only do level 0.5 and below	
				（0.3～25）mm	U_{rel}=0.22%		
29	Cylindrical Thread Gauges	Length	Calibration Specification for Cylindrical Thread Gauges JJF1345-2012	Plug Gauge M（1～200）mm	U=4 μm		