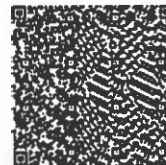




营业执照

(副本)

1-1



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统一社会信用代码
91371000MA3CE1GR5D

名称 山东中准检测技术有限公司

类型 有限责任公司(自然人投资或控股)

法定代表人 刘伟

经营范围 一般项目：计量技术服务；标准化服务；技术服务、技术开发、技术咨询、技术交流、技术转让、技术推广；认证咨询。（除依法须经批准的项目外，凭营业执照依法自主开展经营活动）
许可项目：检验检测服务；安全生产检验检测；认证服务。（依法须经批准的项目，经相关部门批准后方可开展经营活动，具体经营项目以相关部门批准文件或许可证件为准）

注册资本 壹仟万元整

成立日期 2016年 07 月 20 日

营业期限 2016 年 07 月 20 日至 年 月 日

住所 山东省威海市火炬高技术产业开发区怡园街道火炬路213号B座501、533（生产经营地：火炬路-167号三楼、一楼中间户）

登记机关





中国合格评定国家认可委员会 实验室认可证书

(注册号: CNAS L10994)

兹证明:

山东中准检测技术有限公司

(法人: 山东中准检测技术有限公司)

山东省威海市高新技术产业开发区火炬路 167 号, 264209

符合 ISO/IEC 17025: 2017《检测和校准实验室能力的通用要求》
(CNAS-CL01《检测和校准实验室能力认可准则》)的要求, 具备承担本
证书附件所列服务能力, 予以认可。

获认可的能力范围见标有相同认可注册号的证书附件, 证书附件是
本证书组成部分。

生效日期: 2024-05-14

截止日期: 2030-05-13



中国合格评定国家认可委员会授权人

张朝华

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China National Accreditation Service for Conformity Assessment
LABORATORY ACCREDITATION CERTIFICATE
(Registration No. CNAS L10994)

Shandong Zhongzhun Testing Technology Co., Ltd.

(Legal Entity: Shandong Zhongzhun Testing Technology Co., Ltd.)

No.167, Huoju Road, High-Tech Development Zone, Weihai, Shandong,
China

is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.

Effective Date: 2024-05-14

Expiry Date: 2030-05-13

Signed on behalf of China National Accreditation Service for Conformity Assessment

谷朝华

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Accreditation Cooperation Mutual Recognition Arrangement (APAC MRA).
The validity of the certificate can be checked on CNAS website at <http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml>.



中华人民共和国 专项计量授权证书

The People's Republic of China
Certificate of Metrological Authorization for Special Items

(威高)法计(2024)100501号

山东中准检测技术有限公司

根据《中华人民共和国计量法》、《中华人民共和国计量法实施细则》和《计量授权管理办法》的有关规定,在核定项目范围内,你单位经考核评定合格,现授权准予进行计量检定、校准和检测工作,特发此证(授权区域和项目见附件)。

This is to certify that your organization has been examined and deemed to be qualified within the authorized items in accordance with the provisions of the Law on Metrology of the People's Republic of China, the Rules for the Implementation of the Law on Metrology of the People's Republic of China, and the Administrative Measures on Metrological Authorization. Your organization is hereby authorized to carry out metrological verification, calibration and test (for authorized regions and items shown in the annex).

批准人签名:

Approved by:

Signature

发证机关:

Issued by:

发证日期:2024年5月17日

Issued on:

有效期至:2027年5月16日

Valid to:





检验检测机构 资质认定证书

证书编号: 231509011699

名称: 山东中准检测技术有限公司

地址: 山东省威海市火炬高技术产业开发区火炬路-167号三楼、一楼中间户(264209)

经审查, 你机构已具备国家有关法律、行政法规规定的基本条件和能力, 现予批准, 可以向社会出具具有证明作用的数据和结果, 特发此证。资质认定包括检验检测机构计量认证。

检验检测能力及授权签字人见证书附表。



许可使用标志



231509011699

发证日期: 2023年03月21日

有效期至: 2029年03月20日

发证机关: 山东省市场监督管理局

本证书由国家认证认可监督管理委员会监制, 在中华人民共和国境内有效。

Name: Shandong Zhongzhun Testing Technology Co., Ltd.

Address: No.167, Huoju Road, High-Tech Development Zone, Weihai, Shandong, China

Registration No. CNAS L10994

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

Effective Date: 2026-07-27 Expiry Date: 2030-05-13

SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

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

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
measuring equipment							
1、 Geometric quantity							
1	*Metallurgical Microscopes	Length	C.S. for Metallurgical Microscopes JJF1914	(0~10)mm	$U=2\text{ }\mu\text{m}$		
		magnification		Objective Lens:(4~100)X	$U_{\text{rel}}=1.5\%$		
2	*Reading Microscope and Measuring Microscope	Length	V.R.of Reading Microscope and Measuring Microscope JJG571	Reading Microscope:(0~8)mm	$U=1.5\text{ }\mu\text{m}$		
				Measuring Microscope:(0~50)mm	$U=2\text{ }\mu\text{m}$		
3	*Imaging Probe Measuring Machines	Length	C.S.for Imaging Probe Measuring Machines JJF1318	(0~500)mm	$U=0.5\text{ }\mu\text{m}+1.5\times 10^{-6}L$		
4	*Projectors	Length	C.S.for Projectors JJF1093	(0~200)mm	$U=1.3\text{ }\mu\text{m}+5\times 10^{-6}L_n$		



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The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Magnification		Objective Lens: (5~100) ×	$U_{rel}=0.02\%$		
		Angle		(0~360)°	$U=4'$		
5	*Coordinate Measuring Machine	Length	C.S. for Coordinate Measuring Machine JJF1064	(0~1000)mm	$U=0.4\mu m+1.8\times 10^{-6}L$		
6	*Current Calipers	Length	V.R. of Current Calipers JJG30	(0~300)mm	$U=0.01mm$		
				(300~500)mm	$U=0.02mm$		
				(500~1000)mm	$U=0.03mm$		
				(1000~2000)mm	$U=0.05mm$		
7	*Dial Gauges	Length	V.R. of Dial Gauges JJG34	Reading in 0.01 mm (0~10) mm	$U=4\mu m$		
				Reading in 0.01 mm (10~30) mm	$U=9\mu m$		
				Reading in 0.01 mm (30~100) mm	$U=10\mu m$		
				Reading in 0.001 mm (0~1) mm	$U=1.2\mu m$		
				Reading in 0.001 mm (1~3) mm	$U=2.5\mu m$		
				Reading in 0.001 mm (3~10) mm	$U=2.8\mu m$		
				Reading in 0.001 mm (10~30) mm	$U=3.7\mu m$		
8	*Micrometer	Length	V.R. of Micrometer JJG21	(0~500)mm	$U=0.8\mu m+4\times 10^{-6}L$		



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The scope of the accreditation in Chinese remains the definitive version.

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Proofing Rod:(25~475)mm	$U=0.4 \mu m+4 \times 10^{-6} L_n$		
9	Steel Rule	Length	V.R.of Steel Rule JJG1	(0~600)mm	$U=0.05\text{mm}$		
				(600~1000)mm	$U=0.07\text{mm}$		
				(1000~2000)mm	$U=0.10\text{mm}$		
10	Gauge blocks	Length	V.R.of Gauge Blocks JJG146	(0.5~100)mm	$U=0.5 \mu m+5 \times 10^{-6} L_n(k=2.6)$		
11	Cylindrical Measuring Pin	Length	C.S.for Cylindrical Measuring Pin JJF1207	d:(0.1~10)mm	$U=0.5 \mu m$		
				d:(10~25)mm	$U=0.7 \mu m$		
12	*Biological Microscopes	Length	C.S.for Biological Microscopes JJF1402	(0~10)mm	$U=3 \mu m$		
		magnification		Objective:(4~100)X	$U_{\text{rel}}=2\%$		
13	Fineness of Grind Gage	Length	V.R.of Fineness of Grind Gage JJG905	(0~25) μm	$U=0.5 \mu m$		
				(25~100) μm	$U=0.8 \mu m$		
				(100~150) μm	$U=1.2 \mu m$		
14	Welding inspecting rule	Length	Calibration Specification for Welding Inspection Callipers JJF 2161	(0~60)mm	$U=0.05\text{mm}$		
		angle		(30~150)°	$U=6'$		
15	*Thickness Gauges	Length	C.S. for Thickness Gauges JJF 1255	(0~30)mm	$U=2 \mu m$		
16	Bore Dial Indicators	Length	C.S. for Bore Dial Indicators JJF 1102	Graduation Value 0.01 mm:(3~250)mm	$U=4 \mu m$		
				Graduation Value 0.001 mm:(10~250)mm	$U=2.3 \mu m$		
17	Blocks used in Ultrasonic Testing	Length	C.S. for Blocks used in Ultrasonic Testing JJF 1487	Contour Dimension:(0~500)mm	$U=0.06\text{mm}$		

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The scope of the accreditation in Chinese remains the definitive version.

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Dimension of Hole and Groove (1~100) mm	ilac-MRA CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE		$U=5 \mu m$		
		Depth of parallelism		$L: (0 \sim 500)mm$	$U=10\mu m$		
		Flatness		$(50 \times 50 \sim 500 \times 500)mm$	$U=5 \mu m$		
		verticality		$H: (0 \sim 200)mm$	$U=0.020mm$		
18	*Digital display Grohe	Length	C.S. for Height Measuring Instrument with Digital Display JJF 1254	$(0 \sim 500)mm$	$U=0.4 \mu m + 1.5 \times 10^{-6}L$		
19	Clinometers	angle	C.S. for Clinometers JJF1915	Digital Inclinator: $(-180 \sim +180)^{\circ}$	$U=0.01^{\circ}$		
				Optical Inclinator: $(-120 \sim +120)$	$U=12''$		
20	*Extensometer	Length	V.R. of Extensometer JJG 762	$(0 \sim 0.3)mm$	$U=0.8 \mu m$		
				$(0.3 \sim 25)mm$	$U_{rel}=0.2\%$		
				Mark Distance: $(0 \sim 500)mm$	$U=0.06mm$		
21	Pi Tapes	Length	C.S. for Pi Tapes JJF 1423	$D: (9 \sim 500)mm$	$U=0.02mm$		
				$D: (500 \sim 2100)mm$	$U=0.03mm$		
				$D: (2100 \sim 3100)mm$	$U=0.04mm$		
22	*Magnetic and Eddy Current Measuring Instrument for Coating Thickness	Length	V.R. of Magnetic and Eddy Current Measuring Instrument for Coating Thickness JJG 818	$H: (24 \sim 50) \mu m$	$U=0.5 \mu m$		
				$H: (50 \sim 30000) \mu m$	$U_{rel}=1\%$		
				Thickness Sheet $H: (0 \sim 50) \mu m$	$U=0.4 \mu m$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Thickness sheet:(50~30000) μm	$U_{\text{rel}}=0.8\%$		
23	Squares	Verticality	V.R. of Squares JJG 7	Knife-Edge Square H :(50~300)mm	$U=2\text{ }\mu\text{m}$	Except..for Cylindrical Square and Rectangular Square	
				Linear Square H :(150~500)mm	$U=0.05\text{mm}$		
				Wide Square H :(50~500)mm	$U=1.5\text{ }\mu\text{m}+5.2\times 10^{-6}H$		
				Triangular Square H :(50~500)mm	$U=1.5\text{ }\mu\text{m}+5.2\times 10^{-6}H$		
				Parallel Square H :(50~500)mm	$U=1.5\text{ }\mu\text{m}+5.2\times 10^{-6}H$		
				Cast Iron Square H :(50~500)mm	$U=1.5\text{ }\mu\text{m}+5.2\times 10^{-6}H$		
				Linear Square:(0~500)mm	$U=(0.15\sim 0.25)\text{mm}$		
		Length					
24	*Micrometers of Measuring Inside Dimension	Length	C.S for Micrometers of Measuring Inside Dimension JJF 1411	Three-Point Internal Micrometer:(6~100)mm	$U=2\text{ }\mu\text{m}$		
				Internal Test Micrometer:(5~200)mm	$U=2\text{ }\mu\text{m}$		
25	*Ultrasonic thickness Instruments	Length	C.S. for Ultrasonic Thickness Instruments JJF 1126	H :(0.5~10)mm	$U=0.03\text{mm}$		
				H :(10~200)mm	$U=0.03\text{mm}+1.3\times 10^{-3}H$		
26	*Laser Diameter Measuring Gauges	Length	C.S. for Laser Diameter Measuring Gauges JJF 1250	d :(0.1~10)mm	$U=0.8\text{ }\mu\text{m}$		
				d :(10~25)mm	$U=1.2\text{ }\mu\text{m}$		
				Standard Gauge for Self-Calibration d :(0.1~10)mm	$U=0.5\text{ }\mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				Standard Gauge for Self-Calibration: $d:(10\sim 25)\text{mm}$	$U=0.7\text{ }\mu\text{m}$		
27	Steel Measuring Tapes	Length	V.R. of Steel Measuring Tapes JJG 4	$(0\sim 100)\text{m}$	$U=0.1\text{mm}+2\times 10^{-5}L$		
28	*Micrometers with Gauge	Length	V.R. of Micrometers with Gauge JJG 427	$(0\sim 100)\text{mm}$	$U=1.0\text{ }\mu\text{m}$		
29	*Dial Test Indicator	Length	V.R. of Dial Test Indicator JJG 35	Dial Indicator: $(0\sim 1)\text{mm}$	$U=4\text{ }\mu\text{m}$		
				Dial gauge: $(0\sim 0.4)\text{mm}$	$U=2\text{ }\mu\text{m}$		
30	*Micrometers with Dial Comparator	Length	V.R. of Micrometers with Dial Comparator and Indication Snap Gauge JJG 26	$(0\sim 50)\text{mm}$	$U=1\text{ }\mu\text{m}$		
				$(50\sim 100)\text{mm}$	$U=2\text{ }\mu\text{m}$		
				Calibration Measuring Rod: $(25\sim 75)\text{mm}$	$U=0.5\text{ }\mu\text{m}$		
31	Height Caliper	Length	V.R. of Height Caliper JJG31	$(0\sim 300)\text{mm}$	$U=0.01\text{mm}$		
				$(300\sim 500)\text{mm}$	$U=0.02\text{mm}$		
				$(500\sim 1000)\text{mm}$	$U=0.03\text{mm}$		
32	Depth Micrometers	Length	V.R. of Depth Micrometers JJG 24	$(0\sim 200)\text{mm}$	$U=2\text{ }\mu\text{m}$		
				$(200\sim 300)\text{mm}$	$U=3.0\text{ }\mu\text{m}$		
				Calibration Measuring Rod: $(25\sim 75)\text{mm}$	$U=0.6\text{ }\mu\text{m}$		
				Calibration Measuring Rod: $(100\sim 175)\text{mm}$	$U=1.3\text{ }\mu\text{m}$		
				Calibration Measuring Rod: $(200\sim 275)\text{mm}$	$U=2.4\text{ }\mu\text{m}$		
33	*Common Normal	Length	V.R. of Common Normal	$(0\sim 100)\text{mm}$	$U=2\text{ }\mu\text{m}$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	Micrometer		Micrometer JJG 82	(100~200)mm	$U=3 \mu m$		
				Calibration Measuring Rod:(25~175)mm	$U=0.4 \mu m+5 \times 10^{-6}L$		
34	Depth Dial Gauge	Length	V.R. of Depth Dial Gauge JJG 830	Dial Indicator :(0~100)mm	$U=6 \mu m$		
				Dial gauge:(0~50)mm	$U=2 \mu m$		
35	*Cable Length Meter	Length	V.R. of Cable Length Meter JJG 987	(1~9999)m	$U_{rel}=0.18\%$		
36	Plain Limit Gauges	Length	V.R. of Plain Limit Gauges JJG 343	Plug gauge D :(1~100)mm	$U=1.5 \mu m$		
				Plug gauge D :(100~260)mm	$U=2.5 \mu m$		
				Ring gauge(14~100)mm	$U=2 \mu m$		
37	Fiber Tapes And Measuring Ropes	Length	V.R. of Fiber Tapes and Measuring Ropes JJG 5	(0~200)m	$U=0.2mm+2 \times 10^{-4}L$		
38	*Dial Snap Gauge	Length	C.S. for Dial Snap Gauges JJF 1253	Span:(5~100)mm	$U=15 \mu m$		
39	Frame Levels and Shaft Levels	angle	C.S. for Frame Levels and Shaft Levels JJF 1084	Graduation Value:(0.02~0.10)mm/m	$U_{rel}=7\%$		
40	Internal Micrometers	Length	V.R. of Internal Micrometers JJG 22	(50~1000)mm	$U=1 \mu m+6 \times 10^{-6}L_n$		
				Calibration Caliper:(50~150)mm	$U=0.8 \mu m+4 \times 10^{-6}L_n$		
41	*Surface Plates	Flatness	V.R. of Surface Plates JJG 117	(200×200~400×250)mm	$U=2 \mu m$		
				(400×250~1600×1000)mm	$U=3 \mu m$		
				(1600×1000~2500×1600)mm	$U=4 \mu m$		



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The scope of the accreditation in Chinese remains the definitive version.

№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(2500×1600~4000×2500)mm	U=6 μm		
42	Feeler Gauges	Length	V.R. of Feeler Gauges JJG 62	(0.02~0.10)mm	U=1.7 μm		
				(0.10~3.00)mm	U=2.7 μm		
43	Level Rulers	angle	C.S. for Level Rules JJF 1085	(0.5~10)mm/m	U _{rel} =7%		
		Length		(0~2000)mm	U=0.5mm		
44	General Bevel Protractors	angle	C.S for General Bevel Protractors JJF 1959	(0~360)°	U=2'		
45	*Rubber and Plastic Film Gage	Length	C.S. for Rubber and Plastic Film Gage JJF 1488	Plastic film gage: (0~1)mm	U=2 μm		
				Rubber gage: (0~30)mm	U=3 μm		
46	Cylindrical thread gauges	Length	C.S. for Cylindrical Thread Gauges JJF 1345	Plug Gage: M(1~100)mm	U=3 μm		
				Ring Gauge: M(14~100)mm	U=4 μm		
47	Radius Gauges	Length	Calibration Specification for Radius Gauges JJF 2187	(0.1~6) mm	U=6 μm		
				(6~25) mm	U=10 μm		
				(25~100) mm	U=20 μm		
48	Level Rod	Length	V.R. of Level Rod JJG 8	(0~3)m	U=0.8mm	Only Calibration: Tower Ruler	
				(3~5)m	U=1.2mm		
49	*Wide range electronic digital display dial	Length	C.S. For Wide Range Electronic Digital Display Dial Indicator JJF(zh) 1135	(0~30)mm	U=3 μm	Measuring range: (50~	
				(30~50)mm	U=4 μm		



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The scope of the accreditation in Chinese remains the definitive version.

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	indicator			(50~100)mm	$U=5\text{ }\mu\text{m}$	100) mm, No on-site calibration	
50	*Linear Displacement Sensors	Length	C.S. for Linear Displacement Sensors JJF 1305	Pull wire (rope) displacement sensor (0~1000)mm	$U=0.05\%\text{FS}$	Inductive, Differential Transformer, and Resistive Displacement Sensors are Only Calibrated for Linear Displacement Sensors Capable of Outputting Length Dimensions	
				Vibrating wire (strain) displacement sensor (0~0.05)mm	$U=0.14\%\text{FS}$		
				Vibrating wire (strain) displacement sensor (>0.05~1.25)mm	$U=0.1\%\text{FS}$		
				Inductive displacement sensor (0~500)mm	$U=0.08\%\text{FS}$		
				Differential transformer displacement sensor (0~500)mm	$U=0.08\%\text{FS}$		
				Resistor displacement sensor (0~500)mm	$U=0.08\%\text{FS}$		
51	*Projectors for Detecting The Notch of Test Sample	Angle	C.S. for Projectors for Detecting The Notch of Test Sample JJF(ZHE)1133	V-Notch Angle:(43~47)°	$U=4'$		
		Length		(11.25~53.5)mm	$U=0.01\text{mm}$		
		magnification		Objective Lens:50X	$U_{\text{rel}}=0.3\%$		
52	*Large Dimension Outside Micrometers	Length	C.S. for Large Dimension Outside Micrometers JJF 1088	Micrometer Head:(0~50)mm	$U=1.3\text{ }\mu\text{m}$	Measuring Rod no on-site calibration	
				(500~800)mm	$U=4\text{ }\mu\text{m}$		
				(800~1000)mm	$U=7\text{ }\mu\text{m}$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Calibration Measuring Rod:(500~975) mm	$U=1\ \mu\text{m}+3\times 10^{-6}L$		
53	Testers for Dial Gauges	Length	V.R. of Testers for Dial Gauges JJG 201	Dial Gauge Calibrator:(0~2)mm	$U=0.4\ \mu\text{m}$		
				Dial Indicator Calibrator:(0~25)mm	$U=2\ \mu\text{m}$		
				Grating Type for Tester for Dial Gauges:(0~10)mm	$U=0.5\ \mu\text{m}$		
				Grating Type for Tester for Dial Gauges:(10~50)mm	$U=1.5\ \mu\text{m}$		
54	Digital Step Gauge	Length	C.S. for Digital Step Gauge JJF (ZHE) 1130	(-50~+50)mm	$U=0.01\text{mm}$		
55	Combined Tybe Angle Rules	Length	C.S. for Combined Tybe Angle Rules JJF 1132	(0~300)mm	$U=0.05\text{mm}$		
		Angle		(0~180)°	$U=4'$		
56	*Straight Edges	Straightness	C.S. for Straight Edges JJF 1097	(0~500)mm	$U=0.7\ \mu\text{m}$		
				(500~1000)mm	$U=1.4\ \mu\text{m}$		
				(1000~2000)mm	$U=3\ \mu\text{m}$		
				(2000~4000)mm	$U=6\ \mu\text{m}$		
				(4000~6300)mm	$U=9\ \mu\text{m}$		
57	Levels	Angle	V.R. of Levels JJG 425	$i:(-25\sim+25)''$	$U=4''$		
58	Electronic Theodolite	Angle	V.R. of Electronic Tachometer Total Station JJG 100	Horizontal Direction:(0~360)°	$U=0.4''$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
59	Optical Theodolite	Angle	V.R. of Optical theodolites JIG 414	Horizontal Direction:(0~360)°	$U=0.4''$		
60	*Micrometers with Prismatically Arranged Measuring Faces	Length	V.R. of Micrometers with Prismatically Arranged Measuring Faces JIG 182	(1~50)mm	$U=1.5 \mu m$		
				Calibration Measuring Tool:(5~65)mm	$U=0.8 \mu m$		
61	Screw Templates	Length	V.R. of Screw Templates JIG 60	P:(0.40~6.35)mm	$U=3.2 \mu m$		
62	*Optimeter	Length	V.R. of Optimeter JIG 45	(-100~+100) μm	$U=0.07 \mu m$	except for Precision Optimeters	
63	*Contact(Stylus)Instruments of Surface Roughness Measurement by Profile Method	Roughness	C.S. for Contact (Stylus) Instruments of Surface Roughness Measurement by Profile Method JJF 1105	Ra:(0.02~10) μm	$U_{rel}=4\%$		
64	Surface Profile Gauges	Length	C.S. for Surface Profile Gauges JJF 1476	(0~6.5)mm	$U=1.8 \mu m$		
65	Vee Blocks	Length	V.R of Vee Blocks JJG (MIN) 23	(0~200)mm	$U=2.5 \mu m$		
		Verticality		H(0~200)mm	$U=2.2 \mu m$		
66	Calibrator of Extensometers	Length	C.S. for Calibrator of Extensometers JJF 1096	(0~0.3)mm	$U=0.16 \mu m$		
				(0.3~25)mm	$U_{rel}=0.05\%$		
67	Microcator	Length	V.R. of Microcator JJG 118	Graduation Value0.5 μm :(-50~+50) μm	$U=0.12 \mu m$		
				Graduation Value1 μm :(-100~+100) μm	$U=0.2 \mu m$		
				Graduation Value2 μm :(-120~+120) μm	$U=0.3 \mu m$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
68	Comparators of Machine Type	Length	V.R. of Comparators of Machine Type JJG 39	Graduation Value 5 μm : (-150 ~ +150) μm	$U=0.7 \mu\text{m}$		
				Graduation Value 10 μm : (-300 ~ +300) μm	$U=1 \mu\text{m}$		
				Graduation Value 1 μm : (-100 ~ +100) μm	$U=0.2 \mu\text{m}$		
				Graduation Value 2 μm : (-120 ~ +120) μm	$U=0.3 \mu\text{m}$		
69	Roughness Comparison Specimens	Roughness	C.S. for Roughness Comparison Specimens JJF 1099	Graduation Value 5 μm : (-150 ~ +150) μm	$U=0.7 \mu\text{m}$		
				Graduation Value 10 μm : (-300 ~ +300) μm	$U=1 \mu\text{m}$		
				Ra: (0.012 ~ 10) μm	$U_{\text{rel}}=6.8\%$		
				M: (1 ~ 50) mm	$U=0.01\text{mm}$		
70	Gear Tooth Calipers	Length	C.S. for Gear Tooth Calipers JJF 1072	M: (1 ~ 50) mm	$U=0.01\text{mm}$		
71	Box Plates	Vertical degree	V.R. of Box Plates JJG 194	H: (100 ~ 400) mm	$U=3.2 \mu\text{m}$		
72	Straight Edge	Straightness	V.R. of Straight Edge JJG 63	(75 ~ 175) mm	$U=0.4 \mu\text{m}$		
				(200 ~ 225) mm	$U=0.6 \mu\text{m}$		
				300 mm	$U=0.8 \mu\text{m}$		
73	Photoelectric Shaft Encoders	Angle	C.S. for Photoelectric Shaft Encoders JJF 1115	(0 ~ 360) °	$U=12''$		
74	Water level Gauge	Length	V.R. of Water level Gauge JJG (JT) 168	(0 ~ 100) m	$U=0.3\text{mm}+0.6 \times 10^{-4}L$		
75	Laser Markers	Angle	C. S. for Laser Markers JJF 2002	(-1 ~ +1) mm/m	$U=0.2\text{mm/m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
76	Micropattern Standards	Length	C.S. for Micropattern Standards JJF 1917	(0~10)mm	$U=1\text{ }\mu\text{m}+4\times 10^{-6}L$	Only Calibration: Micropattern Standards (Line width $>3\text{ }\mu\text{m}$)	
		Angle		(0~360)°	$U=1.2'$		
77	*Conical Ruler	Length	C.S. of Conical Ruler JJF(Wan)89	(0~60) mm	$U=0.01\text{mm}$		
78	*Creepage Distance(Clearance)Test Card	Length	C.S. for Creepage Distance (Clearance) Test Card JJF(Shan)105	(1~10) mm	$U=0.010\text{mm}$		
79	*Special Plate of Callipers for Welding Inspection	Length	C.S. for Special Plate of Callipers for Welding Inspection JJF (Jin) 88	(6~48) mm	$U=0.01\text{mm}$		
80	*Inside Calipers	Length	C.S. for Inside Calipers JJF(Zhe)1091	(10~300) mm	$U=0.01\text{mm}$		
81	*Center Distance Calipers	Length	C.S. for Center Distance Calipers JJF (LU) 162	(10~300) mm	$U=0.02\text{mm}$		
82	*Bottom Wall Thickness Measuring Instrument	Length	C.S. for Bottom Wall Thickness Measuring Instrument JJF (JI) 152	(0~50) mm	$U=4\text{ }\mu\text{m}$		
83	*Wide Face Caliper	Length	C.S. for Wide Face Caliper JJF(Zhe)1172	(0~300) mm	$U=0.01\text{mm}$		
84	Wooden Rule、Plastic Ruler	Length	V.R. of Wooden Rule (Wooden Folded Rule) JJG 2	(0~1000) mm	$U=0.3\text{mm}$		
85	Film Applicator Blades	Length	C.S. for Film Applicator Blades JJF (SH) 053	(0~1000) μm	$U=2\text{ }\mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
86	Standard Round Tube 、 Standard Thickness Blocks	Length	C.S. for Standard Thickness Blocks JJF(GAN) 021	(0.5~200) mm	$U=3 \mu\text{m}$		
87	*Blade Micrometer	Length	C.S. for Blade Micrometer JJF(Zhe)1090	(0~100) mm Calibrating lever: (25~175) mm	$U=2 \mu\text{m}$ $U=0.3 \mu\text{m}+3.5 \times 10^{-6} L_n$		
88	*Micromete With μm Reading	Length	C.S. for Micromete With μm Reading JJF(ZHE)1134	(0~100) mm Calibrating lever: (15~50) mm Calibrating lever: 75mm	$U=2 \mu\text{m}$ $U=0.4 \mu\text{m}$ $U=0.6 \mu\text{m}$		
89	*Small anvil micrometer	Length	C.S. for Small anvil micrometer JJF(Zhe)1131	(0~100) mm Calibrating lever: (25~50) mm Calibrating lever: 75mm	$U=2 \mu\text{m}$ $U=0.4 \mu\text{m}$ $U=0.6 \mu\text{m}$		
90	*circle anvil micrometer	Length	C.S. for circle anvil micrometer JJF(Zhe)1132	(0~100) mm Calibrating lever: (25~50) mm Calibrating lever: 75mm	$U=2 \mu\text{m}$ $U=0.4 \mu\text{m}$ $U=0.6 \mu\text{m}$		
91	Digital weld gauge	Length Angle	C.S. for Digital weld gauge JJF(BGMP)0030	(0~20) mm (60~90) °	$U=0.01\text{mm}$ $U=0.2^\circ$		
92	Anti-Sag Meters	Length	C.S. for Anti-Sag Meters JJF(SH)052	(0~1500) μm	$U=2 \mu\text{m}$		
93	Test Finger for Safety Regulationr	Length	C.S. of Test Finger for Safety Regulationr JJF(YU)324	(0~25) mm	$U=0.01\text{mm}$		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(25~180) mm	$U=0.04\text{mm}$		
		Angle		(0~50) °	$U=3'$		
94	*Point Micrometers	Length	C.S. for Point Outside Micrometers JJF(Zhe)1045	(0~150)mm	$U=2\text{ }\mu\text{m}$		
			Calibrating lever: (25~125) mm		$U=0.3\text{ }\mu\text{m}+3.5\times 10^{-6}L$		
95	Hand-held Laser Distance Meters	Length	V.R. of Hand-held Laser Distance Meters JJG 966	(0~10)m	$U=1\text{mm}$		
96	Multifunction Slope Scale	Angle	C.S. for Multifunction Slope Scale JJF (Ji) 140	(-90~+90)°	$U=0.3^\circ$		
97	Point-Line Gauge	Length	Calibration Specification For Point-Line Gauge JJF(JI)240	Line spacing: (0~200)mm	$U=0.02\text{mm}$		
				Line spacing: (>200~300)mm	$U=0.06\text{mm}$		
				Line width: (0~10)mm	$U=0.006\text{mm}$		
				Diameter: (0~10)mm	$U=0.006\text{mm}$		
98	*Toolmaker's Microscope	Length	Verification Regulation of Toolmaker's Microscope JJG 56	(0~200)mm	$U=1.3\text{ }\mu\text{m}$	Do not Make a Universal Tool Microscope	
99	*Bel lows inner diameter measuring instrument	Length	Calibration Specification for Bellows inner diameter measuring instrument JJF(GUI)135	Minor deformation: (0~25)mm	$U=0.04\text{mm}$		
				Indicated value(10~500)mm	$U_{\text{rel}}=0.15\%$		
100	Glass engraved ruler	Length	Calibration Specification for Material Measures of Length Measuring Instrument with Optical Principle JJF 1941	(0~200)mm	$U=1.3\text{ }\mu\text{m}+1.3\times 10^{-5}L$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
101	*Stereomicroscope	Length	Calibration Specification for Stereomicroscope JJF(JIN) 87	(0~10)mm	$U=3\text{ }\mu\text{m}$		
		Magnification		(4~100)×	$U_{\text{rel}}=1.4\%$		
102	*Dial Gauges Crankshaft	Length	Calibration Specification for Dial Gauges Crankshaft JJF(ZHE) 1170	(60~500) mm	$U=5\text{ }\mu\text{m}$		
103	Grating Micrometers	Length	Calibration Specification for Grating Micrometers JJF 1682	(0~100) mm	$U=1.5\text{ }\mu\text{m}$		
104	Measuring wheels	Length	Calibration Specification for Measuring wheels JJF (LIAO) 384	Diameter: (0~350) mm	$U=0.07\text{mm}$		
				movement: (0~1) mm	$U=0.1\text{mm}$		
				(20~100) m	$U_{\text{rel}}=0.1\%$		
105	*Concentricity Tester	Length	Calibration Specification for Concentricity Tester JJF 1109	(20~30) μm	$U=1.6\text{ }\mu\text{m}$		
106	Electromagnetic Layered Settlement Gauge	Length	Verification Regulation of Electromagnetic Layered Settlement Gauge JJG (JT) 149	(0~100) m	$U=0.1\text{mm}+5\times 10^{-5}L$		
107	*Screw Thread Micrometers	Length	Verification Regulation of Screw Thread Micrometers JJG 25	Micrometer head: (0~25) mm	$U=1.3\text{ }\mu\text{m}$		
				(0~100) mm	$U=2\text{ }\mu\text{m}+4\times 10^{-6}L$		
108	*Large Deformation Extensometer	Length	Calibration Specification for Large Deformation Extensometer JJF(E) 141	(20~2000) mm	$U_{\text{rel}}=0.17\%$		
109	*Optical Contact Angle Measuring Instruments	Angle	Calibration Specification for Optical Contact Angle Measuring Instruments JJF 2099	(3~120) °	$U=0.11^\circ$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
2、Thermology							
1	*The Equipment of the Environmental Testing	Temperature	C.S. for Environmental Testing Equipment for Temperature and Humidity Parameters JJF1101	$(-80 \sim 300)^{\circ}\text{C}$	$U=0.3^{\circ}\text{C}$		
		Humidity		$10\%\text{RH} \sim 95\%\text{RH}(20^{\circ}\text{C} \sim 50^{\circ}\text{C})$	$U=2\%\text{RH}$		
2	Radiation Thermometers	Temperature	V.R. of Radiation Thermometers JJG856	$(-30 \sim 1200)^{\circ}\text{C}$	$U=(0.9 \sim 4.0)^{\circ}\text{C}$		
3	Thermal Imagers	Temperature	Calibration Specification for Thermal Imagers JJF1187	$(-20 \sim 1100)^{\circ}\text{C}$	$U=(0.9 \sim 4.0)^{\circ}\text{C}$		
4	*Thermostatic Baths for Temperature Calibration	Temperature	Measurement and Test Norm of Metrological Characteristics of Thermostatic Baths for Temperature Calibration JJF1030	$(-80 \sim 300)^{\circ}\text{C}$	Temperature uniformity: $U=0.006^{\circ}\text{C}$, Temperature stability: $U=0.006^{\circ}\text{C}$		
		Temperature change rate		$(0.1 \sim 1)^{\circ}\text{C}/\text{min}$	$U=0.005^{\circ}\text{C}/\text{min}$		
5	Industry Platinum Resistance Thermometers	Temperature	V.R. of Industry Platinum and Copper Resistance Thermometers JJG229	$(-80 \sim 300)^{\circ}\text{C}$	$U=(0.03 \sim 0.09)^{\circ}\text{C}$		
6	Base Metal Thermocouples	Temperature	C.S. for Base Metal Thermocouples JJF1637	$(-40 \sim 300)^{\circ}\text{C}$	$U=0.3^{\circ}\text{C}$		
				$(300 \sim 1200)^{\circ}\text{C}$	$U=1.0^{\circ}\text{C}$		
7	Bimetallic Thermometers	Temperature	C.S. for Bimetallic Thermometers JJF1908	$(-80 \sim 300)^{\circ}\text{C}$	$U=0.4^{\circ}\text{C}$		
8	Liquid-in-Glass thermometer For Working	Temperature	V.R. of Liquid-in-Glass Thermometers for Working JJG130	$(-80 \sim 300)^{\circ}\text{C}$	$U=0.03^{\circ}\text{C}$		
9	Digital thermohygrometers	Temperature	C.S. for Digital Temperature-hygrometers JJF1076	$(5 \sim 50)^{\circ}\text{C}$	$U=0.2^{\circ}\text{C}$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Humidity		10%RH~95%RH(10℃~50℃)	$U=1.2\%RH \sim 1.7\%RH$		
10	Mechanical Thermo-hygrometers	Temperature	V.R. of Mechanical Thermo-hygrometers JJG205	(5~50)℃	$U=0.5^{\circ}C$		
		Humidity		30%RH~95%RH(20℃)	$U=2.0\%RH$		
11	Thermometer of WBGT-index Meters	Temperature	C.S. for Thermometers of WBGT-index Meters JJF1407	(5~120)℃	$U=0.3^{\circ}C$		
12	Temperature Block Calibrators	Temperature	C.G. of Temperature Block Calibrators JJF1257	(-80~0)℃	$U=0.3^{\circ}C$		
				0℃	$U=0.05^{\circ}C$		
				(0~300)℃	$U=0.3^{\circ}C$		
				(300~1100)℃	$U=1.2^{\circ}C$		
13	*Recorders for industrial-process measurement	Temperature	V.R. of Recorders for industrial-process measurement JJG74	with thermal resistance:(-100~850)℃	$U=0.1^{\circ}C$		
				with thermocouples:(0~1300)℃	$U=(0.5 \sim 0.9)^{\circ}C$		
14	Sheathed Thermocouples	Temperature	C.S. for Sheathed Thermocouples JJF1262	(-40~300)℃	$U=0.3^{\circ}C$		
				(300~1100)℃	$U=1.0^{\circ}C$		
15	Temperature Transmitters	Temperature	Calibration Specification for Temperature Transmitters JJF1183	With thermocouple, no sensor: (-200 to 1600)℃	$U=(0.5 \sim 0.9)^{\circ}C$		
				With thermistor, no sensor: (-100 to 850)℃	$U=0.1^{\circ}C$		
				With thermistor, with sensor: (-80 to 300)℃	$U=0.1^{\circ}C$		
				With thermocouple, with sensor: (0 to 300)℃	$U=0.5^{\circ}C$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				With thermocouple, with sensor: (300 to 1100)°C	U=1.6°C		
16	Temperature and Humidity Itinerant Detecting Instruments	Temperature Humidity	C.S for temperature and humidity patrol detecto JJF1171	(-80~300)°C	U=0.03°C		
				(300~1200)°C	U=0.8°C		
				10%RH~95%RH(10°C~50°C)	U=1.7%RH		
17	*Box-type Resistance Furnace	Temperature	C.S. for Box-type Resistance Furnace JJF1376	(300~1100)°C	U=1.6°C		
18	Filled System Thermometers	Temperature	C.S. for Filled System Thermometers JJF1909	(-80~300)°C	U=0.4°C		
19	Standard Mercury-in-Glass Thermometers	Temperature	V.R. of Standard Mercury-in-Glass Thermometers JJG161	(-60~300)°C	U=(0.04~0.06)°C		
20	Clinical Electronic Thermometer	Temperature	V.R. of Clinical Electronic Thermometers JJG1162	(34~44)°C	U=0.04°C		
21	Digital Thermometer	Temperature	C.S. for Digital Thermometer JJF(SU) 95	(-80~300)°C	U=0.04°C		
				(300~1000)°C	U=1.1°C		
22	Thermistor Thermometer	Temperature	C.S. of Thermistor Thermometers JJF1379	(-50~200)°C	U=0.03°C		
23	Temperature Data Acquisition Instrument	Temperature	C.S. of Temperature Data Acquisition Instruments JJF1366	With Sensor outside:(-80~300)°C	U=(0.04~0.06)°C		
				built-in sensors:(-30~60)°C	U=(0.2~0.5)°C		
24	*Thermocouple Calibration Furnace	Temperature	Testing Specification of Temperature Uniformity in Thermocouple Calibration Furnaces JJF1184	(300~1200)°C	U=0.3°C		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
25	*Calibration Specification for Temperature and Pressure of Stream Sterilizer	Temperature	C.S. for Temperature and Pressure Parameter of Stream Sterilizer JJF(SU) 96	(40~140)°C	U=0.2°C		
		pressure		(100~400)kPa abs	U=1.4kPa abs		
26	Electric Ventilation Psychrometer	Temperature	V.R. of Electric Ventilation Psychrometers JJG993	(5~50)°C	U=0.04°C	Accredited only for the working class electric ventilation hygrometer	
		Humidity		20%RH~95%RH(20°C)	U=1.3%RH		
27	*Insulating Glass Dew Point Analyzer	Temperature	C.S. for Insulating Glass Dew Point Analyzer JJF(MIN)1112	Semiconductor refrigeration:(-60~0)°C	U=0.4°C		
		Temperature		Dry ice refrigeration: (-40~0)°C	U=0.1°C		
28	*Temperature Indicators	Temperature	C.S. for Temperature Indicators JJF1664	TC:(-200~1600)°C	U=(0.4~0.9)°C		
		Temperature		RTD:(-200~850)°C	U=0.1°C		
29	*Asphalt Aging Oven	Temperature	V.R. of Asphalt Aging Oven JJG(JT)056	(Indoor temperature~200)°C	U=0.3°C		
		Rotating speed		(1~20)r/min	U=0.1r/min		
		Length		(0~300)mm	U=0.05mm		
		Flow rate		(1~10)L/min	U _{rel} =1.6%		
30	*Water Vapor Transmission Rate Testor	Water Vapor Transmission	C.S. for Water Vapor Transmission Rate Testor JJF(JI)191	1.8g/(m ² •24h)、4.4g/(m ² •24h)	U=0.9g/(m ² •24h)		
31	Working Noble Metal Thermocouples	Temperature	V.R. of Working Noble Metal Thermocouples JJG141	(300~1100)°C	U=0.8°C		



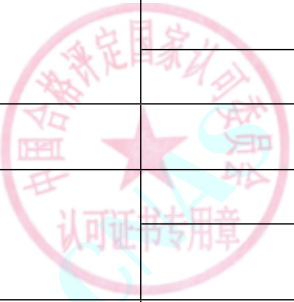
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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
32	*Disintegration Analyzers	Temperature	C.S. for Disintegration Analyzers JJF1449	(20~40)°C	U=0.07°C		
		Time		(1~3600)s	U=0.4s		
		Frequency		(0~100)mm	U=0.09mm		
		Frequency		(10~100)times/mm	U _{rel} =0.9%		
		Time of Disintegration		888s	U=85s		
33	*Vacuum Ovens	Temperature	C.S. for Vacuum Ovens JJF(MIN)1093	(20~160)°C	U=0.3°C		
		pressure		(5~101)kPa abs	U=1.2kPa		
34	*Temperature Performance of Liquid Constant Temperature Testing Equipment	Temperature	Measurement Specification for Temperature Performance of Liquid Constant Temperature Testing Equipment JJF2019	Deviation: (-80~300)°C	U=(0.3~0.8)°C		
				Fluctuation: (-80~300)°C	U=0.04°C		
				Uniformity: (-80~300)°C	U=0.04°C		
35	*Temperature Alternating and Temperature Shock Testing Equipments	Temperature	C.S. for Temperature Alternating and Temperature Shock Testing Equipments JJF(MIN)1121	(-80~200)°C	U=0.3°C		
		Rate of Temperature Change		(0~60)°C/min	U=0.2°C/min		
		Time		(0~1440)s	U=5s		
36	Surface Thermometers	Temperature	C.S. for the Surface Thermometers JJF1409	(30~400)°C	U=1.0°C		
37	*Petroleum products-vapour pressure meter (Leid method)	Temperature	C.S. for Petroleum products-vapour pressure meter (Leid method) JJF(XIN)45	(30~40)°C	U=0.17°C		
		pressure		(0~100)kPa	U=0.5kPa		
38	Short Base	Temperature	C.S. for Short Base Metal	(-40~300)°C	U=0.3°C		

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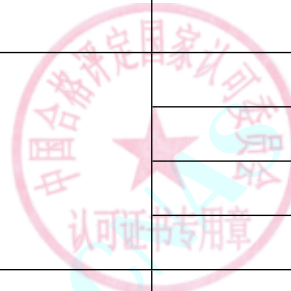
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
	Metal Thermocouples		Thermocouples JJF1991	(300~1000)℃	<i>U</i> =1.0℃		
39	Compensation Conductor for Thermocouple	Temperature	C.S. for Base Metal Thermocouples Appendix C Calibration Method of Compensation Conductor for Thermocouple JJF1637	(0~100)℃	<i>U</i> =0.1℃		
40	Refrigerator Thermometer	Temperature	Verification Regulation of Refrigerator Thermometers JJG(YUE)073	(-30~60)℃	<i>U</i> =0.1℃		
41	Constant temperature heating plate	Temperature	C.S for constant temperature heating platform JJF (military) 256	(50~400)℃	<i>U</i> =1.6℃		
42	*Temperature and Humidity Standard Chambers	Temperature	Calibration Specification for Temperature and Humidity Standard Chambers JJF1564	Uniformity: (5~50)℃	<i>U</i> =0.08℃		
				Volatility: (5~50)℃	<i>U</i> =0.06℃		
		Temperature change rate		(0~1)℃/min	<i>U</i> =0.06℃/min		
		Humidity		Uniformity: 10%RH~90%RH(20℃)	<i>U</i> =0.6%RH		
				Volatility: 10%RH~90%RH(20℃)	<i>U</i> =0.2%RH		
				0%RH/min~5%RH/min(20℃)	<i>U</i> =0.3%RH/min		
43	*Thermostatic Metal Baths	Temperature	Calibration Specification for Thermostatic Metal Baths JJF2333	Deviation : (-30 to 150)℃	<i>U</i> =0.6℃		
				Fluctuation: (-30 to 150)℃	<i>U</i> =0.1℃		
				Uniformity: (-30 to 150)℃	<i>U</i> =0.4℃		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date	
44	*SaltMistTestingChambers	Temperature	CalibrationSpecificationforSaltMistTestingChamber	(20~50)℃	<i>U</i> =0.3℃			
		Salt Fog Precipitation Rate	JJF2168	(1.0~2.0)mL/(h • 80cm ²)	<i>U</i> =0.04mL/(h • 80cm ²)			
45	*Temperature Parameters ofMicrowave Digestion Instruments	Temperature	C.S for temperature parameters of microwave digestion instrumen JJF2143	(0~170)℃	<i>U</i> =0.3℃			
3、Mechanics								
1	*Electronic Universal Testing Machine	Force	V.R.of Electronic Universal Testing Machine JJG475	1N~2MN	<i>U</i> _{rel} =0.2%			
				(2~10) MN	<i>U</i> _{rel} =0.4%			
		displacement		(0~10) mm	<i>U</i> =0.01mm			
				(10~50) mm	<i>U</i> =0.05mm			
				(50~1000) mm	<i>U</i> =0.3mm			
				Angle	(1~1000) mm/min			<i>U</i> _{rel} =0.3%
		Coaxiality		(0~30) %	<i>U</i> =2%			
2	*Hydraulic Jack	Force	V.R.of Tension, Compression and Universal Testing Machines JJG139	1N~2MN	<i>U</i> _{rel} =0.2%			
				(2~10) MN	<i>U</i> _{rel} =0.4%			
		displacement		(0~500) mm	<i>U</i> =0.1mm			
		Coaxiality		(0~30) %	<i>U</i> =2%			
3	*Hydraulic Jack	Force	V. R. of Hydraulic Jacks JJG621	2kN~10MN	<i>U</i> _{rel} =0.8%			



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
4	*Digital indicating instrument	Mass	V.R.of Digital Indicating Weighing Instruments JJG539	1g~1kg	$U=(0.01\sim0.04)\text{ g}$		
				(1~10) kg	$U=(0.04\sim0.4)\text{ g}$		
				(10~30) kg	$U=(0.4\sim2)\text{ g}$		
				(30~300) kg	$U=(2\sim20)\text{ g}$		
				(300~1000) kg	$U=(20\sim40)\text{ g}$		
				(1000~5000) kg	$U=40\text{ g}\sim0.24\text{ kg}$		
5	*Electronic Balance	Mass	C. S. for Electronic Balances JJF 1847	1mg~10g	$U=(0.002\sim0.01)\text{ mg}$		
				(10~50) g	$U=(0.01\sim0.04)\text{ mg}$		
				(50~500) g	$U=(0.04\sim0.4)\text{ mg}$		
				(0.5~5) kg	$U=(0.4\sim4)\text{ mg}$		
				(5~10) kg	$U=(4\sim40)\text{ mg}$		
				(10~150) kg	$U=40\text{ mg}\sim1.5\text{ g}$		
6	*Equipment of Power Measuring	Torque	V.R.of Equipment of Power Measuring JJG653	(1~5000) Nm	$U_{\text{rel}}=0.3\%$		
		Rotating speed		(30~20000) r/min	$U_{\text{rel}}=0.2\%$		
7	*Automatic Gravimetric Filling Instruments	Mass	V. R. of Automatic Gravimetric Filling Instruments JJG564	(0.1~1.5) kg	$U_{\text{rel}}=0.08\%$		
				1.5kg~5t	$U_{\text{rel}}=0.16\%$		
8	*Pendulum Impact Testing Machines	Length	V.R. of Pendulum Impact Testing Machines JJG145	(0~100) mm	$U=0.02\text{ mm}$		
				(100~1000) mm	$U_{\text{rel}}=0.2\%$		



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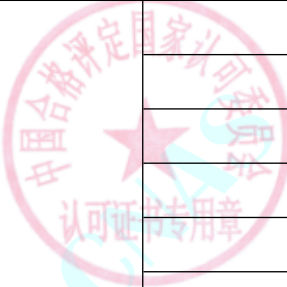
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Pendulum torque		(1~750) Nm	<i>U</i> _{rel} =0.12%		
		Initial potential energy		(1~750) J	<i>U</i> _{rel} =0.2%		
		Energy		(0~40) J	<i>U</i> =0.8J		
				(40~300) J	<i>U</i> _{rel} =1.5%~1.7%		
		Impact velocity		(1~10)m/s	<i>U</i> =0.02m/s		
		Angle		(0~180)°	<i>U</i> =0.1°		
9	*Elastic Element Pressure Gauges	Pressure	V.R.of Elastic Element Pressure Gauges , Pressure-Vacuum Gauges and Vacuum Gauges for General Use JJG52	(-0.1~250)MPa	<i>U</i> =0.3%FS		
10	*Digital Pressure Gauge	Pressure	V.R.of Digital Pressure Gauges JJG875	(-0.1~70)MPa	<i>U</i> =0.012%FS	0.1 grade and below can be calibrated on site	
				(70~100)MPa	<i>U</i> =0.03%FS		
				(100~250)MPa	<i>U</i> =0.06%FS		
11	Working Glass Container	Capacity	V.R.of Working Class Container JJG196	(0.1~25)mL	<i>U</i> = (0.002~0.02) mL		
				(25~100)mL	<i>U</i> = (0.02~0.07) mL		
				(100~500)mL	<i>U</i> = (0.07~0.15) mL		
				(500~2000)mL	<i>U</i> = (0.15~0.22) mL		
12	*Elastic Element Precise Pressure Gauges	Pressure	V.R.of Elastic Element Precise Pressure Gauges and Vacuum Gauges JJG49	(-0.1~100)MPa	<i>U</i> =0.03%FS		
				(100~250)MPa	<i>U</i> =0.06%FS		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
13	Shore A Durometers	Force value	V.R.of Shore A Durometers JJG304	(0.1~10)N	U=20mN		
		Length		(0~3)mm	U=0.01mm		
		Angle		(30~40)°	U=5'		
14	*Falling Weight Impact Testing Machines	Length	C. S. for Falling Weight Impact Testing Machines JJF 1445	radius (0~350) mm	U=0.02mm	Except for GB/T 8363, GB/T 11548, and JB/T 9389 standard types Testing Machines	
				height (0~5000) mm	U= (0.7~2) mm		
		quality		0.5g~6100g	U=0.2g		
				6100g~26kg	U=2g		
				26kg~60kg	U=20g		
				60kg~200kg	U=40g		
				200kg~1000kg	U=0.2kg		
15	Shore D Durometers	Force value	V.R.of Shore D Durometers JJG1039	(0.1~50)N	U=20mN		
		Length		(0~3)mm	U=0.01mm		
		Angle		(28~32)°	U=5'		
16	*Rockwell Hardness Tester	Hardness	V.R.of Metallic Rockwell Hardness Testing Machines (Scales A, B, C, D, E, F, G, H, K, N, T) JJG112	(40~88) HRA	U=0.6HRA		
				(30~100) HRBW	U=0.6HRBW		
				(20~70) HRC	U=0.7HRC		
				(40~47) HRD	U=0.6HRD		
				(84~90) HREW	U=0.6HREW		
				(55~75) HRGW	U=0.6HRGW		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(80~100) HRHW	$U=0.6\text{HRHW}$		
				(40~100) HRKW	$U=0.6\text{HRKW}$		
				(89~91) HR15N	$U=0.6\text{HR15N}$		
				(74~80) HR30N	$U=0.6\text{HR30N}$		
				(32~61) HR45N	$U=0.6\text{HR45N}$		
				(88~93) HR15TW	$U=0.6\text{HR15TW}$		
				(70~82) HR30TW	$U=0.6\text{HR30TW}$		
				(12~72) HR45TW	$U=0.6\text{HR45TW}$		
		Angle		(0~125) °	$U=5'$		
		Length		(0~5) mm	$U=3\text{ }\mu\text{m}$		
17	*Metallic Vickers Hardness Testers	Hardness	V.R.of Metallic Vickers Hardness Testers JJG151	HV0.1~HV1: (175~800)HV	$U_{\text{rel}}=3.5\%$		
				HV2~HV30: (175~800)HV	$U_{\text{rel}}=2.2\%$		
18	Precision Liquid Manometer for Cistern and U-tube	pressure	V. R. of Precision Liquid Manometer for Cistern and U-tube JJG 241	(-8~8)kPa	$U=0.1\%\text{FS}$		
19	*Equotip hardness tester	hardness	V. R. of Equotip Hardness tester JJG 747	(490~570)HLD	$U=7\text{HLD}$		
				(590~670)HLD	$U=7\text{HLD}$		
				(750~830)HLD	$U=7\text{HLD}$		
20	*Relative densitometer	Length	C. S. for Relative density meter JJD 1021	(0.01~200) mm	$U=0.04\text{mm}$		
		quality		(1000~1500) g	$U=0.2\text{g}$		



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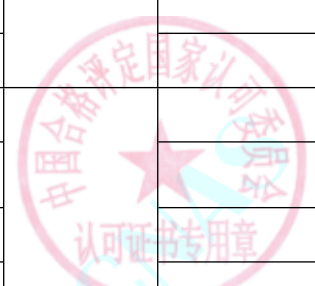
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
21	*Weight	quality	V. R. of Weights JJG 99	1mg~5g	$U=(0.002\sim0.016)\text{mg}$	Only M1 level and below can carry out on-site calibration	
				(5~20)g	$U=(0.016\sim0.042)\text{mg}$		
				(20~200)g	$U=(0.042\sim0.21)\text{mg}$		
				200g~5kg	$U=0.21\text{mg}\sim0.014\text{g}$		
				(5~25)kg	$U=(0.014\sim0.3)\text{g}$		
22	*Electrodynamic vibration testing systems	Frequency	V. R. of Electrodynamic Vibration Testing Systems JJG 948	(10~4000)Hz	$U_{\text{rel}}=0.3\%$		
		acceleration		(0.1~100)m/s ²	$U_{\text{rel}}=4\%$		
23	*Torque wrench	torque	V. R. of Torque Wrenches JJG 707	(0.01~2000)Nm	$U_{\text{rel}}=0.6\%$		
				(2000~20000)Nm	$U_{\text{rel}}=1.0\%$		
24	*Mechanical vibration test rig	Displacement	V. R. of Mechanical Vibration Genetator for Testing JJG 189	(0.1~50)mm	$U_{\text{rel}}=4.0\%$		
		Frequency		(10~4000)Hz	$U_{\text{rel}}=0.4\%$		
		acceleration		(0.5~100)m/s ²	$U_{\text{rel}}=4.5\%$		
25	*Dynamometer	Force	V.R.of Working Dynamometers JJG455	0.1N~2MN	$U_{\text{rel}}=0.2\%$		
				(>2~10) MN	$U_{\text{rel}}=0.4\%$		
26	Special glass container	capacity	V. R. of Special Glassware JJG 10	(0.1~10) mL	$U=(2\sim9) \mu\text{L}$		
				(10~100) mL	$U=(9\sim17) \mu\text{L}$		
				(100~2000) mL	$U=17 \mu\text{L}\sim0.19\text{mL}$		
27	Piezoelectric Accelerometer	Acceleration	V.R. of Piezoelectric Accelerometer JJG 233	(1~100)m/s ² ,160Hz	$U_{\text{rel}}=1.5\%$		
				(1~100)m/s ² , (10~4000)Hz	$U_{\text{rel}}=2.0\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
28	Calibration Instrument for Torque Wrenches	Torque	V. R. of Calibration Instrument for Torque Wrenches JJG 797	(0.01~3000) Nm	$U_{rel}=0.1\%$		
29	*Aneroid Barometers and Aneroid Barographs	Pressure	V.R.of Aneroid Barometer & Aneroid Barograph JJG272	(500~1060)hPa	$U=0.8\text{hPa}$		
		Temperature coefficient		(-1~1)hPa/°C	$U=0.02\text{hPa}/^{\circ}\text{C}$		
30	*Standard Vibrators	Frequency	V.R.of Standard Vibrators JJG298	(10~4000)Hz	$U_{rel}=0.3\%$		
		Acceleration		(0.1~100)m/s ²	$U_{rel}=3.0\%$		
31	*Torsion testing machines	Torque	V. R. of Torsion testing machines JJG 269	(1~2000)Nm	$U_{rel}=0.2\%$		
		Length		(0~150)mm	$U=0.04\text{mm}$		
		Angle		(0.5~360)°	$U=0.08^{\circ}$		
32	*Pressure Transmitters	Pressure	V. R. of Pressure Transmitters JJG 882	(-0.1~70)MPa	$U=0.014\%\text{FS}$	0.1 grade and below can be calibrated on site	
				(70~100)MPa	$U=0.03\%\text{FS}$		
				(100~250)MPa	$U=0.06\%\text{FS}$		
33	Shore AO Durometers	Frequency	C.S.for Shore AO Durometers JJF 1312	(0.1~10) N	$U=20\text{mN}$		
		Length		(5~6)mm	$U=0.03\text{mm}$		
34	*Wear-resistant test machine	Length	C. S. for Abrasion Resistance Instruments JJF(Zhe) 1070	(0.1~20) mm	$U=0.01\text{mm}$		
		Revolution Speed		(100~300) r/min	$U=2\text{r/min}$		
		quality		(0.1~2000) g	$U=0.5\text{g}$		
		Time		(10~1800) s	$U=1\text{s}$		
35	Pipette	capacity	V. R. of Locomotive pipette	(0.1~10) μL	$U=(0.01~0.1) \mu\text{L}$		



№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
			JJG 646	(10~50) μ L	$U=0.2 \mu$ L		
				(50~500) μ L	$U=0.3 \mu$ L		
				(500~1000) μ L	$U=0.5 \mu$ L		
				(1000~10000) μ L	$U=1.0 \mu$ L		
				(10~100)mL	$U=(2\sim20) \mu$ L		
36	*Cup test machine	IE	V. R. of cupping testing machine JJG 583	(0~20)mm	$U=0.01$ mm		
		Force value		(1~10) kN	$U_{rel}=0.5\%$		
		Length		(5~45)mm	$U=0.03$ mm		
37	*Pressure Regulators with Bourdon Tube Pressure Gauge	pressure	C. S. for Pressure Regulators with Bourdon Tube Pressure Gauge JJF 1328	(0~35)MPa	$U=0.8\%$ FS		
38	vibration meter	acceleration	V. R. of Measuring Vibration Instruments JJG 676	(0.1~100)m/s ² , 20Hz~4kHz	$U_{rel}=2.0\%$		
		Speed		(0.1~50)mm/s	$U_{rel}=2.0\%$		
		Displacement		(0.01~20)mm	$U_{rel}=2.0\%$		
		Frequency		(10~4000)Hz	$U_{rel}=0.2\%$		
39	*Mechanical balance	quality	V. R. of Mechanism balance JJG 98	(1~100)mg	$U=(0.02\sim0.05)$ mg		
				(100~500) mg	$U=(0.06\sim0.10)$ mg		
				(0.5~5)g	$U=(0.10\sim0.12)$ mg		
				(5~500)g	$U=(0.12\sim1.3)$ mg		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(0.5~10)kg	U=1.3mg~0.4g		
40	*non-self-indicating instrument	quality	V. R. of Non-self-indicating Weighing Instruments JJG 14	(0.5~1000) g	U= (0.01~0.04) g		
				(1~10)kg	U= (0.04~0.4) g		
				(10~50)kg	U= (0.4~2.4) g		
				(50~100)kg	U= (2.4~4) g		
				(100~200)kg	U= (4~8) g		
				(200~500)kg	U= (8~24) g		
				(500~5000) kg	U=40g~0.24kg		
41	*Plate balance	quality	V. R. of Table Balances JJG 156	(0.1~100)g	U=(0.01~0.02) g		
				(100~200)g	U= (0.02~0.06) g		
				(200~500)g	U= (0.08~0.2) g		
				(500~1000)g	U= (0.2~0.3) g		
				(1~2)kg	U= (0.3~0.6) g		
				(>2~5)kg	U= (0.8~1.5) g		
42	*Flexure Testing Machine	Force value	V. R. of Flexure Testing Machine JJG 476	20N~1MN	U _{rel} =0.2%		
		Loading speed		(40~65) N/s	U=0.5N/s		
		Length		(0~300) mm	U=0.05mm		
				(300~2000) mm	U=0.5mm		
43	*Centrifugal constant	acceleration	V. R. of Constant Acceleration Centrifugal Test	(1~1000) m/s²	U _{rel} =2.3%		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	acceleration test machine	Revolution Speed	Machines JJG 972	(20~3000) r/min	$U_{rel}=0.3\%$		
		Length		(0~7000) mm	$U=1.2\text{mm}$		
44	*Liquid Level Measuring Devices	Length	V. R. of liquid level gauge JJG971	(0~2) m	$U=0.5\text{mm}$		
				(2~10) m	$U=(0.5\sim2)\text{mm}$		
				(10~20) m	$U=(2\sim5)\text{mm}$		
45	*Torsion balance	Quality	V. R. of Torsion Balance JJG46	(1~50) mg	$U=(0.03\sim0.05)\text{mg}$		
				(50~500) mg	$U=(0.05\sim0.3)\text{mg}$		
				(500~2500) mg	$U=(0.3\sim1.5)\text{mg}$		
46	Ralative Density Balance for Liquid	Ralative density	V.R. of Ralative Density Balance for Liquid JJG 171	0.0001~2.0000	$U=0.0005$		
47	*Concrete Batching Scale	Mass	V.R. for Concrete Batching Scale JJG1171	static (1~10) kg	$U=0.46\text{g}$		
				static (10~100) kg	$U=4.6\text{g}$		
				static (100~500) kg	$U=30\text{g}$		
				static (500~1000) kg	$U=48\text{g}$		
				static (1000~5000) kg	$U=0.43\text{kg}$		
				Matirials (1~5000) kg	$U_{rel}=0.4\%$		
48	Working Glass Hydrometer	Density	V.R. of Working Glass Hydrometers JJG 42	(650~1500) kg/m ³	$U=0.4\text{kg/m}^3$		
		Alcohol Content		q:(0~100)%	$U=0.6\%$		
49	Non-nuclear Density Gauge for Asphalt Pavement	Density	V.R. of Non-nuclears Density Gauge for Asphalt	(1400~2700) kg/m ³	$U=1\text{kg/m}^3$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Temperature	Pawement JJG（JT）141	（50～200）℃	U=0.3℃		
50	*Quantitative Filling Machine for Liquid Material	Mass	V.R. of Quantitative Filling Machine for Liquid Material JJG 687	1g～60kg	U _{rel} =0.1%		
		Capacity		1mL～60L	U _{rel} =0.3%		
51	Soap Film Flow meter	volume	V.R. of Soap Film Flow meter JJG 586	10mL～2L	U=（0.015～0.22）mL		
		flow		(20～3500)mL/min	U _{rel} =0.8%		
				(0.2～6) m³/h	U _{rel} =0.8%		
52	*Pressure Controllers	Pressure	V.R. of Pressure Controllers JJG 544	(-0.1～250)MPa	U=0.1%FS		
53	Tilting Tube Micromanometers	Pressure	V.R. of Tilting Tube Micromanometers JJG 172	(-2500～-1500)Pa	U=1.6Pa		
				(-1500～1500)Pa	U=1.0Pa		
				(1500～2500)Pa	U=1.6Pa		
54	*Record Pressure Gauge, Pressure Vacuum Gauge and Vacuum Gauge	Pressure	V.R. of Record Pressure Gauges,Pressure Vacuum Gauges and Vacuum Gauges JJG 926	(-0.1～250)MPa	U=0.55%FS		
		Length		(0～100)mm	U=0.05mm		
		Time		(0～24)h	U=11s		
55	*Electro-hydraulic Servo Universal Testing Machines	Force value	V.R. of Electro-hydraulic Servo Universal Testing Machines JJG 1063	0.1N～2MN	U _{rel} =0.2%		
				（2～10）MN	U _{rel} =0.4%		
		Coaxiality		0.5%～40%	U _{rel} =2.6%		
56	*High-Temperature Creep and Stress-Rupture Testing Machines	Force value	V.R. of High-Temperature Creep and Stress-Rupture Testing Machines JJG 276	0.1N～2MN	U _{rel} =0.2%		
				（2～10）MN	U _{rel} =0.4%		
		Temperature		（300～1000）℃	U=1.0℃		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Coaxiality		0.5%~40%	$U_{rel}=2.6\%$		
		Time		(0~60) min	$U=(0.4\sim2)$ s		
57	*Rotating Pure Bending Fatigue Testing Machines	Force value	V.R. of Rotating Pure Bending Fatigue Testing Machines JJG 652	20N~2MN	$U_{rel}=0.3\%$		
		Length		(0~500) mm	$U=0.06\text{mm}$		
		Temperature		(300~1000) °C	$U=0.5^\circ\text{C}$		
		Speed		(30~20000) r/min	$U_{rel}=0.1\%$		
58	*Anchorage Testing Machines	Force value	V.R. of Anchorage Testing Machines JJG 1083	1N~10MN	$U_{rel}=0.4\%$		
		Displacement		(5~500) mm	$U=0.06\text{mm}$		
59	*Interface Tensiometers	Tension	C.S. for Interface Tensiometers JJF 1464	(0.1~5000)mN/m	$U_{rel}=0.3\%$		
60	*Electric and Pneumatic Torque wrenches	Torque	C.S. for Electric and Pneumatic Torque Wrenches JJF 1610	(0.5~5000)Nm	$U_{rel}=1.2\%$		
61	*Wire Bending Testing Machine	Angle	V.R. of Wire Bending Testing Machine JJG (YUE) 022	(0~320)°	$U=0.3^\circ$		
		Rate		(0~120)times/min	$U=0.3\text{times/min}$		
		Mass		(0.01~2) kg	$U=(0.2\sim2)$ g		
62	*Metallic Brinell Hardness Tester	Hardness	V.R. of Metallic Brinell Hardness Testers JJG 150	(80~400)HBW	$U_{rel}=1.3\%$		
63	*Ultrasonic hardness tester	Hardness	C.S. for Ultrasonic Hardness Testers JJF 1436	(200~800)HV	$U_{rel}=2.5\%$		
		Force value		(1~200)N	$U_{rel}=0.4\%$		
64	*Metallic Webster hardness tester	Hardness	V.R. of Metallic Webster Hardness Testing Machines JJG 944	(4~20)HW	$U=0.4\text{HW}$		



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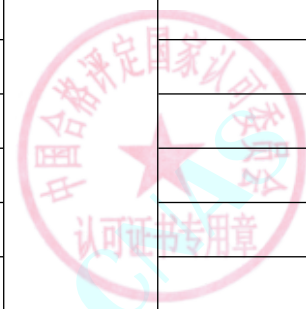
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
65	Tachometers	Rotating speed	V.R. of Tachometer JJG 105	(20~30000) r/min	$U_{rel}=0.02\%$		
66	Electromagnetic Velocity Transducer	speed	V.R. of Electromagnetic Velocity Transducer JJG 134	(2~100)mm/s, (10~4000)Hz	$U_{rel}=3.0\%$		
67	Calibration Specification for Digital Air Flow Hood	Air flow	C.S. for Air Flowrate Meters JJF(ZHE)1150	(100~3500) m³/h	$U_{rel}=1.5\%$		
68	*Weirs and Flumes for Flow Measurement	Flow rate	V. R. of Weirs and Flumes for Flow Measurement JJG 711	(1~10000)m³/h	$U_{rel}=1.6\%$		
69	*Flow Integration Meters	Flow rate	V. R. of Flow Integration Meters JJG 1003	(0.01~20000)m³/h	$U_{rel}=0.03\%$		
70	*Portable Rockwell Hardness Testers	Hardness	C. S. for Portable Rockwell Hardness Testers JJF 1594	(40~88)HRA	$U=0.6HRA$		
				(30~100)HRBW	$U=0.6HRBW$		
				(20~70)HRC	$U=0.7HRC$		
				(89~91) HR15N	$U=0.6HR15N$		
				(74~80) HR30N	$U=0.6HR30N$		
				(32~61) HR45N	$U=0.6HR45N$		
				(88~93) HR15TW	$U=0.6HR15TW$		
				(70~82) HR30TW	$U=0.6HR30TW$		
				(12~72) HR45TW	$U=0.6HR45TW$		
		Force value		(147.1~1471)N	$U_{rel}=0.2\%$		



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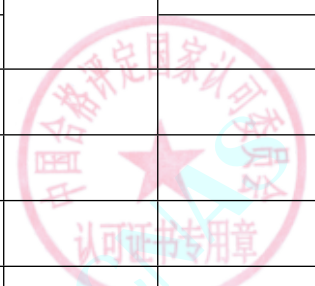
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
71	*Portable Brinell Hardness Testers	Hardness	C. S. for Portable Brinell Hardness Testers JJF 1595	(80~400)HBW	$U_{rel}=1\%\sim 1.3\%$		
				(100~400)HBS10/3000	$U_{rel}=1\%\sim 1.3\%$		
				(175~225)HBS5/750	$U_{rel}=1\%\sim 1.3\%$		
		Force value	600N~30kN		$U_{rel}=0.2\%$		
72	*Type A Barcol Hardness Testers	Hardness	V. R. of Type A Barcol Hardness Testers JJG 610	(42~88)HBa	$U=1.2HBa$		
73	*Continuous Totalizing Automatic Weighing Instruments(Belt Weighers)	Mass	V. R. of Continuous Totalizing Automatic Weighing Instruments(Belt Weighers) JJG 195	(0.1~1000)t/h	$U_{rel}=0.08\%$		
74	Digital Barometers	Pressure	V. R. of Digital Barometers JJG 1084	(10~1100)hPa	$U=0.06\%FS$		
75	*Linear Velocity Measuring Instrument	velocity	C. S. for Linear Velocity Measuring Instrument JJF 1801	Contact: (0.1~4)m/s	$U_{rel}=0.6\%$		
				Non-Contact: (0.3~30)m/s	$U_{rel}=0.3\%$		
76	Standard Torque-meters	Torque	V. R. of Standard Torque-meters JJG 557	(0.1~3000) Nm	$U_{rel}=0.1\%$		
77	Working Torque-meters	Torque	V. R. of Working Torque-meters JJG 1146	(0.1~3000) Nm	$U_{rel}=0.3\%$		
78	Special Plastic Container	Capacity	C. S. for Special Plastic Container JJF(Chuan) 179	(0.1~25)mL	$U=(0.002\sim 0.02)mL$		
				(25~100)mL	$U=(0.02\sim 0.07)mL$		
				(100~500)mL	$U=(0.07\sim 0.15)mL$		
				(500~2000)mL	$U=(0.15\sim 0.22)mL$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Time		(1~60)s	$U=0.4s$		
79	Gas Displacement Meters	Flow	V.R. of Gas Displacement Meters JJG 633	(20~3500) mL/min	$U_{rel}=0.8\%$		
				(0.2~6) m ³ /h	$U_{rel}=0.6\%$		
80	Float Meter	Flow	V.R. of Float Meter JJG 257	Gas: (20~3500) mL/min	$U_{rel}=0.8\%$		
				Gas: (0.2~6) m ³ /h	$U_{rel}=0.6\%$		
81	Goriolis Mass Flow Meters	Flow	V.R. of Goriolis Mass Flow Meters JJG 1038	Gas: (20~3500) mL/min	$U_{rel}=0.8\%$		
				Gas: (0.2~6) m ³ /h	$U_{rel}=0.6\%$		
82	Differential Pressure Flowmeters	Gas Flow	V.R. of Differential Pressure Flowmeters JJG 640	Gas: (20~3500) mL/min	$U_{rel}=0.8\%$		
				Gas: (0.2~6) m ³ /h	$U_{rel}=0.6\%$		
83	Thermal Mass Gas Flowmeters	Flow	V.R. of Thermal Mass Gas Flowmeters JJG 1132	(20~3500) mL/min	$U_{rel}=0.8\%$		
				(0.2~6) m ³ /h	$U_{rel}=0.6\%$		
84	Wet Gas Meters	Flow	C.S. for Wet Gas Meters JJF 1357	(20~3500) mL/min	$U_{rel}=0.8\%$		
				(0.2~6) m ³ /h	$U_{rel}=0.6\%$		
85	Turbine Flowmeter	Flow	V.R. of Turbine Flowmeter JJG 1037	Gas: (0.2~6) m ³ /h	$U_{rel}=0.6\%$		
86	Vortex-shedding Flowmeter	Flow	V.R. of Vortex-shedding Flowmeter JJG 1029	Gas: (0.2~6) m ³ /h	$U_{rel}=0.6\%$		
87	Target Flowmeter	Flow	V.R. of Target Flowmeter JJG 461	Gas: (0.2~6) m ³ /h	$U_{rel}=0.6\%$		
88	Vortex Precession Flowmeters	Gas Flow	V.R. of Vortex Precession Flowmeters JJG 1121	Gas: (0.2~6) m ³ /h	$U_{rel}=0.6\%$		



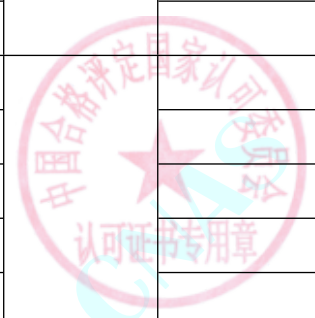
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
89	Reference Leaks by Soap Film Flowmeter	Leak rates	C.S. for Reference Leaks by Soap Film Flowmeter JJF 1627	1mL/min~10L/min	$U_{rel}=2.8\%$		
90	*differential pressure air leakage testers	Pressure	C.S. for differential pressure air leakage testers JJF 1986	(0~700)kPa	$U=0.2\text{kPa}$		
				Differential pressure: (-2500~2500)Pa	$U=3\text{Pa}$		
		Leakage rate		(1~100)mL/min	$U_{rel}=1.2\%$		
91	*Peristaltic Pumps	Flow rate	C.S. for Peristaltic Pumps JJF(Min) 1115	0.1mL/min~20L/min	$U_{rel}=(0.4\sim1.2)\%$		
		Rotating speed		(20~600)r/min	$U_{rel}=0.5\%$		
92	Pile Measuring Instrument	Acceleration	V.R. of Pile Dynamic Measuring Instrument JJG 930	(0.1~100)m/s ² , 160Hz	$U_{rel}=2\%$	Accredited only for vibration method	
				(0.1~100)m/s ² , (10~4000)Hz	$U_{rel}=3\%$		
		Frequency		(10~4000)Hz	$U_{rel}=0.3\%$		
		Dynamic strain		(10~1000) $\mu\epsilon$	$U_{rel}=5\%$		
		Time		1ms~1s	$U_{rel}=2\%$		
93	Tyre Pressure Gauges	pressure	V.R. of Tyre Pressure Gauges JJG 927	(0~3.5)MPa	$U=0.3\%FS$		
94	*Cantilever beam type iMPact tester	energy	V.R. of Cantilever-Beam(Izod-Type) Impact Testing Machine JJG 608	(1~100)J	$U_{rel}=0.35\%$		
		Length		(30~500)mm	$U=0.04\text{mm}$		
95	*High precision decorative brick bonding strength tester, rivet pullout apparatus, door	Force value	V.R. of Calibration Specification for Working Force Measuring Machines for Special Purposes JJF 1134	0.1N~2000kN	$U_{rel}=0.2\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	and window angle strength tester			(2000~10000)kN	$U_{rel}=0.4\%$		
96	*Bending Tester	Angle	C.S. for Bending Tester JJF (SHAN) 065	(0~360)°	$U=0.4^\circ$		
		Frequency		(1~300)次/分	$U_{rel}=0.2\%$		
		Time		(1~5000)time	$U=1\text{time}$		
97	*High strength bolt tester	Force value	C.S. for High Strength Bolt Testers JJF 1478	(50~500)kN	$U_{rel}=0.6\%$		
		torque		(100~2000)Nm	$U_{rel}=0.5\%$		
98	*Metallic Stress Relaxation Testing Machines	Force	C.S. for Metallic Stress Relaxation Testing Machines JJF 2271	(0.02~2000) kN	$U_{rel}=0.2\%$		
		Displacement		(0~500) mm	$U=6\text{ }\mu\text{m}$		
		Speed		(1~300) mm/min	$U_{rel}=0.3\%$		
99	*Electromagnetic Flowmeters	Flow rate	Online Calibration Specification for Electromagnetic Flowmeters JJF 2216	(0.05~10000) m ³ /h	$U_{rel}=0.8\%$		
100	*Filter Integrity Testers	Pressure	C.S. for Filter Integrity Testers JJF 2142	(0~1600) kPa	$U=1.0\text{ kPa}$		
		Flow rate		(0.1~100) mL/min	$U_{rel}=1.4\%$		
101	*Static Uniaxial Test Machines	Force	C.S. for Static Uniaxial Test Machines—Part 1: Force JJF 2328.1, C.S. for Static Uniaxial	1N~2MN	$U_{rel}=0.2\%$		
				(2~10) MN	$U_{rel}=0.4\%$		
		Length	Test Machines—Part 2: Displacement and Speed JJF 2328.2	(0~10) mm	$U=0.01\text{ mm}$		
				(10~50) mm	$U=0.05\text{ mm}$		
				(50~1000) mm	$U=0.3\text{ mm}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Speed		(1~1000)mm/min	$U_{rel}=0.3\%$		
102	*Body Scale	Mass	C.S.for Body Scale JJF 2256	(0~300) kg	$U=(12\sim35)$ g		
103	*Electronic Lift Truck Scales	Mass	C.S.for Electronic Lift Truck Scales JJF 2283	1kg~3t	$U=(0.01\sim0.5)$ kg		
104	*Automatic Catchweighing Instruments	Mass	C.S.for Automatic Catchweighing Instruments JJF 2331	1g~100kg	$U=(0.08\sim6)$ g		
105	*Asphalt Mixture and Cement Concrete Mixing Device Measure System	Mass	V.R.of Asphalt Mixture and Cement Concrete Mixing Device Measure System JJG(JT) 071	1kg~5t	$U_{rel}=0.08\%$		
		Temperature		(50~200) °C	$U=0.3^{\circ}\text{C}$		
106	LX-C Micropore Material Durometers	Length	C.S.for LX-C Micropore Material Durometers JJF(Su) 285	(0~3) mm	$U=0.01\text{mm}$		
		Force		(0.1~10) N	$U=20\text{mN}$		
107	*Digital Tyre Pressure Gauges	Pressure	V.R.of Digital Tyre Pressure Gauges JJG 1201	(0~2.5) MPa	$U=0.3\%\text{FS}$		
108	*Micro-differential Pressure Gauge	Pressure	C.S.for Micro-differential Pressure Gauge JJF(Xin) 60	(-5000~5000) Pa	$U=0.8\%\text{FS}$		
109	*Constant Revolution Speed Sources	Rotating speed	C.S.for Constant Revolution Speed Sources JJF 2121	(100~250) r/min	$U_{rel}=0.2\%$		
4、Acoustics							
1	*Acoustic Detector	Time of transmitted sound	V.R. of Acoustic Detector JJG 990	Sound Signal Method(1~2500) μs	$U_{rel}=0.30\%$		
				Electric Signal Method:(10 μs ~2s)	$U_{rel}=0.15\%$		
		Amplitude		(6~80)dB	$U=0.3\text{dB}$		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date		
		Voltage		(50~1500)V	<i>U</i> _{rel} =0.5%				
2	*Ultrasonic Flow Detectors	Frequency	V.R. of Ultrasonic Flow Detectors JJG 746	(0.5~25)MHz	<i>U</i> _{rel} =0.69%				
		Attenuation		(0.1~80)dB	<i>U</i> =0.1dB~0.5dB				
		Inearity of Vertical Display		5%~90%	<i>U</i> =1.7%				
		Linearity of Time Base		1%~100%	<i>U</i> =0.13%				
3	*Ultrasonic Phased Array Flow Detectors	Length	C.S. for Ultrasonic Phased Array Flow Detectors JJF 1338	Resolution:(0.9~8)mm	<i>U</i> _{rel} =2.0%				
				Geometric Dimensions:(0.1~55)mm	<i>U</i> _{rel} =2.0%				
		Fan Scanning Angle		15°~120°	<i>U</i> _{rel} =2.0%				
5、Electromagnetics									
1	*Multimeters	DC Voltage	C.S.for Multimeters JJF1587	(10~100)mV	<i>U</i> =1.1×10 ⁻⁵ <i>U</i> _x +0.34 μ V				
				100mV~1V	<i>U</i> =9×10 ⁻⁶ <i>U</i> _x +0.43 μ V				
				(1~10)V	<i>U</i> =9.2×10 ⁻⁶ <i>U</i> _x +0.43 μ V				
				(10~1000)V	<i>U</i> =1.2×10 ⁻⁵ <i>U</i> _x +27 μ V				
		DC Current		10 μ A~1mA	<i>U</i> =2.8×10 ⁻⁵ <i>I</i> _x +0.58nA				
				(1~10)mA	<i>U</i> =2.8×10 ⁻⁵ <i>I</i> _x +5.8nA				
				(10~100)mA	<i>U</i> =4.0×10 ⁻⁵ <i>I</i> _x +0.6 μ A				
				100mA~1A	<i>U</i> =1.2×10 ⁻⁴ <i>I</i> _x +13 μ A				



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				(1~2.2)A	$U=3.5 \times 10^{-4} I_x + 62 \mu A$		
				(2.2~10)A	$U=7.1 \times 10^{-4} I_x + 0.62mA$		
				(10~20)A	$U=4 \times 10^{-4} I_x + 0.8mA$		
				(20~100)A	$U=1 \times 10^{-3} I_x + 0.1A$		
		Resistance		(0.1~10) Ω	$U=9 \times 10^{-4} R_x + 11m\Omega$		
				10 Ω ~ 100k Ω	$U=6 \times 10^{-5} R_x + 2.6m\Omega$		
				(100~330)k Ω	$U=1.4 \times 10^{-4} R_x + 6.9\Omega$		
				330k Ω ~ 1M Ω	$U=2 \times 10^{-4} R_x + 75\Omega$		
				(1~3)M Ω	$U=1.8 \times 10^{-4} R_x + 0.12k\Omega$		
				(3~10)M Ω	$U=7 \times 10^{-4} R_x + 0.8k\Omega$		
				(10~30)M Ω	$U=1.2 \times 10^{-3} R_x + 0.67k\Omega$		
				(30~100)M Ω	$U=5.8 \times 10^{-3} R_x + 6.4k\Omega$		
		AC Voltage		(10~100)mV, (45Hz~1kHz)	$U=7.6 \times 10^{-5} U_x + 2.5 \mu V$		
				(10~100)mV, (1kHz~20kHz)	$U=1.6 \times 10^{-4} U_x + 2.4 \mu V$		
				(10~100)mV, (20kHz~50kHz)	$U=3.4 \times 10^{-4} U_x + 2.4 \mu V$		
				100mV~1V, (45Hz~10kHz)	$U=1.6 \times 10^{-4} U_x + 24 \mu V$		
				100mV~1V, (10kHz~20kHz)	$U=1.6 \times 10^{-4} U_x + 26 \mu V$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				100mV~1V, (20kHz~50kHz)	$U=3.4 \times 10^{-4} U_x + 28 \mu V$		
				(1~10)V, (45Hz~20kHz)	$U=1.6 \times 10^{-4} U_x + 0.24mV$		
				(1~10)V, (20kHz~50kHz)	$U=3.4 \times 10^{-4} U_x + 0.28mV$		
				(10~100)V, (45Hz~1kHz)	$U=2.3 \times 10^{-4} U_x + 2.6mV$		
				(100~1000)V, (45Hz~1kHz)	$U=4.6 \times 10^{-4} U_x + 22mV$		
		AC Current		0.1mA~30mA, (45Hz~1kHz)	$U=5.8 \times 10^{-3} I_x + 36nA$		
				30mA~100mA, (45Hz~1kHz)	$U=1.7 \times 10^{-3} I_x + 5.7 \mu A$		
				100mA~10A, (45Hz~1kHz)	$U=4 \times 10^{-4} I_x + 37 \mu A$		
				(10~20)A, (50Hz~400Hz)	$U=4 \times 10^{-3} I_x + 4.5mA$		
				(20~100)A, (45Hz~65Hz)	$U=1.2 \times 10^{-3} I_x + 2.6mA$		
2	*Surface Resistance Tester	Resistance	C.S.for Surface Resistance Tester JJF1285	1k Ω ~ 10M Ω	$U_{rel}=0.3\%$		
				10M Ω ~ 100M Ω	$U_{rel}=0.6\%$		
				100M Ω ~ 1000M Ω	$U_{rel}=1.3\%$		
				1G Ω ~ 10G Ω	$U_{rel}=2.5\%$		
				10G Ω ~ 1000G Ω	$U_{rel}=5.8\%$		
		Voltage		(1~250)V	$U_{rel}=0.2\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Mass		(1~5)kg	<i>U</i> =0.02kg		
		Length		(10~150)mm	<i>U</i> =0.03mm		
3	*DC Stabilized Power Supply	DC Voltage	C.S.for DC Stabilized Power Supplies JJF 1597	(0.1~1000)V	<i>U</i> _{rel} =0.02%		
		DC Current		1mA~1A	<i>U</i> _{rel} =0.02%		
				1A~100A	<i>U</i> _{rel} =0.05%		
4	Contactless Electrostatic Voltage Measuring Instruments	DC Voltage	C.S. for Contactless Electrostatic Voltage Measuring Instruments JJF1517	(0.1~20)kV	<i>U</i> _{rel} =1.7%		
5	*Wrist Strap and Footwear Tester	Resistance	C.S. of Wrist Strap and Footwear Tester JJF(DZ) 31502	100k Ω ~10M Ω	<i>U</i> _{rel} =2.1%		
				(10~100)M Ω	<i>U</i> _{rel} =2.4%		
				(100~200)M Ω	<i>U</i> _{rel} =2.6%		
6	*Clamp Ammeters	AC Current	C.S.for Clamp Ammeters JJF1075	(0.1~20)A,50Hz	<i>U</i> _{rel} =0.2%		
				(20~1000)A,50Hz	<i>U</i> _{rel} =0.5%		
				(1000~2000)A,50Hz	<i>U</i> _{rel} =0.6%		
		DC Current		(0.1~20)A	<i>U</i> _{rel} =0.2%		
				(20~1000)A	<i>U</i> _{rel} =0.5%		
				(1000~2000)A	<i>U</i> _{rel} =0.6%		
7	*Withstanding Voltage Tester	DC Voltage	V.R.of Withstanding Voltage Testers JJG795	(0.1~15)kV	<i>U</i> _{rel} =0.8%		
		AC Voltage		(0.1~15)kV, (50Hz、60Hz)	<i>U</i> _{rel} =0.8%		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		DC Current		(0.5~200)mA	$U_{rel}=0.8\%$		
		AC Current		(0.5~200)mA, (50Hz、60Hz)	$U_{rel}=0.8\%$		
		Time		(1~90)s	$U_{rel}=1.2\%$		
8	*Earth Resistance Meter	Resistance	V.R. of Earth Resistance Meters JJG366	0.01 Ω ~ 0.1 Ω	$U_{rel}=5\%$		
				0.1 Ω ~ 1 Ω	$U_{rel}=1.3\%$		
				1 Ω ~ 10k Ω	$U_{rel}=0.15\%$		
9	*Electronic Insulation Resistance Meters	Resistance	V.R. of Electronic Insulation Resistance Meters JJG 1005	100 Ω ~ 10M Ω	$U_{rel}=0.25\%$		
				10M Ω ~ 100M Ω	$U_{rel}=0.59\%$		
				100M Ω ~ 1G Ω	$U_{rel}=1.2\%$		
				1G Ω ~ 10G Ω	$U_{rel}=2.4\%$		
				10G Ω ~ 1000G Ω	$U_{rel}=5.8\%$		
		Voltage		(0.05~5)kV	$U_{rel}=1.2\%$		
10	*Megohmmeter	Resistance	V.R. of Megohmmeter JJG 622	100 Ω ~ 100M Ω	$U_{rel}=0.7\%$		
				100M Ω ~ 100G Ω	$U_{rel}=2.5\%$		
				100G Ω ~ 1000G Ω	$U_{rel}=5.8\%$		
		Voltage		(50~5000)V	$U_{rel}=1.2\%$		
11	*DC low Resistance Meters	Resistance	V.R. of D.C. low Resistance Meters JJG 837	1m Ω , 10m Ω , 100m Ω	$U_{rel}=0.02\%$		
				0.2 Ω ~ 100k Ω	$U_{rel}=0.03\%$		
12	*Amperemeters, V	DC Voltage	V.R. of	20mV~1000V	$U_{rel}=0.2\%$		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Volts, Wattmeters and Ohmmeters	AC Voltage	Amperemeters, Voltmeters, Wattmeters and Ohmmeters JJG 124	20mV~1000V, (45Hz~65Hz)	$U_{rel}=0.2\%$		
		DC Current		100 μ A ~ 100A	$U_{rel}=0.2\%$		
		AC Current		100 μ A ~ 100A, (45Hz~65Hz)	$U_{rel}=0.2\%$		
		DC power		(1~10)kW	$U_{rel}=0.3\%$		
		AC power		(1~10)kW, (45Hz~65Hz)	$U_{rel}=0.35\%$		
		Resistance		1 Ω ~ 1M Ω	$U_{rel}=0.2\%$		
13	*Digital AC Electrical Parameters Meter	AC Current	C.S. for Digital AC Electrical Parameters Meter JJF 1491	10mA~100A, (45Hz~65Hz)	$U_{rel}=0.08\%$		
		AC Voltage		(1~1000)V, (45Hz~65Hz)	$U_{rel}=0.08\%$		
		AC Power		1W~10kW, (45Hz~65Hz)	$U_{rel}=0.07\%$		
		Frequency		45Hz~1kHz	$U_{rel}=0.01\%$		
		Power Factor		0.1~1	$U=0.002$		
14	*D.C. Resistance box	Resistance	V.R. of D.C. Resistance Box JJG 982	(0.01~0.1) Ω	$U_{rel}=1.7\%$		
				(0.1~1) Ω	$U_{rel}=0.2\%$		
				(1~10) Ω	$U_{rel}=0.02\%$		
				10 Ω ~ 1M Ω	$U_{rel}=0.002\%$		
15	DC High voltage divider	Voltage Division Ratio	V.R. of DC High Voltage Dividers JJG 1007	(1~35)kV/(1V~1kV)	$U_{rel}=0.7\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
16	*Clamp Earth Resistance Meters	Resistance	V.R. of Clamp Earth Resistance Meters JJG 1054	(10~100)m Ω	$U_{rel}=6\%$		
				100m Ω ~ 1 Ω	$U_{rel}=2\%$		
				(1~10) Ω	$U_{rel}=0.5\%$		
				10 Ω ~ 100k Ω	$U_{rel}=0.2\%$		
17	*Process Calibrators	DC Voltage	C.S. for Process Calibrators JJF 1472	Output:(10~100)mV	$U=1.1 \times 10^{-5} U_x + 1.2 \mu V$		
				Output:100mV~1V	$U=1 \times 10^{-5} U_x + 1.1 \mu V$		
				Output:1V~10V	$U=1 \times 10^{-5} U_x + 2 \mu V$		
				Output:10V~100V	$U=1.2 \times 10^{-5} U_x + 0.04mV$		
				输出:100V~300V	$U=1.2 \times 10^{-5} U_x + 0.12mV$		
				Measurement:(10~330)mV	$U=7.2 \times 10^{-5} U_x + 4 \mu V$		
				Measurement:(0.33~3.3)V	$U=6 \times 10^{-5} U_x + 6 \mu V$		
				Measurement:(3.3~33)V	$U=6 \times 10^{-5} U_x + 0.06mV$		
				Measurement:(33~300)V	$U=7 \times 10^{-5} U_x + 0.6mV$		
				Output:(20~100) μA	$U=2.4 \times 10^{-5} I_x + 1nA$		
		DC Current		Output:(0.1~10)mA	$U=2.4 \times 10^{-5} I_x + 0.06 \mu A$		
				Output:(10~100)mA	$U=4 \times 10^{-5} I_x + 0.6 \mu A$		
				Measurement:20 μA ~ 3.3mA	$U=1.6 \times 10^{-4} I_x + 0.06 \mu A$		
				Measurement:(3.3~33)mA	$U=1.2 \times 10^{-4} I_x + 0.3 \mu A$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Resistance		Measurement:(33~100)mA	$U=1.2 \times 10^{-4} I_x + 4 \mu A$		
				Output:(1~100) Ω	$U=1.5 \times 10^{-5} R_x + 1 m \Omega$		
				Output: 100 Ω ~ 100k Ω	$U_{rel}=0.002\%$		
				Measurement:(1~10) Ω	$U=1 \times 10^{-4} R_x + 11 m \Omega$		
				Measurement:(10~100) Ω	$U=6 \times 10^{-5} R_x + 2.6 m \Omega$		
				Measurement:(0.1~1)k Ω	$U=1.1 \times 10^{-4} R_x + 0.08 \Omega$		
				Measurement:(1~10)k Ω	$U=1.1 \times 10^{-4} R_x + 0.8 \Omega$		
		Temperature		Measurement:(10~100)k Ω	$U=1.4 \times 10^{-4} R_x + 8 \Omega$		
				Thermal Resistor Measurement:(-200~200) $^{\circ}C$	$U=0.05^{\circ}C$		
				Thermal Resistor Measurement:(200~600) $^{\circ}C$	$U=0.1^{\circ}C$		
				Thermal Resistor Measurement:(600~850) $^{\circ}C$	$U=0.15^{\circ}C$		
				Thermal Resistor Output:(-200~850) $^{\circ}C$	$U=0.04^{\circ}C$		
				Thermocouple Measurement:(-200~1300) $^{\circ}C$	$U=0.09^{\circ}C$		



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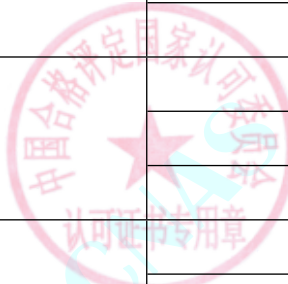
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
				Thermocouple Output:(-200~1300)℃	<i>U</i> =0.06℃		
		Frequency		Output:10Hz~500kHz	<i>U</i> _{rel} =0.006%		
		AC Voltage		Measurement:10Hz~500kHz	<i>U</i> _{rel} =0.006%		
				10mV~3.3V,(50Hz~10kHz)	<i>U</i> =4×10 ⁻⁴ <i>U</i> _x +0.1mV		
				(3.3~33)V,(50Hz~10kHz)	<i>U</i> =5×10 ⁻⁴ <i>U</i> _x +1mV		
				(33~300)V,(50Hz~1kHz)	<i>U</i> =6×10 ⁻⁴ <i>U</i> _x +8mV		
		AC Current		(10~200)mA,(50Hz~1kHz)	<i>U</i> _{rel} =0.5%		
18	*Earth-Continuity Testers	Resistance	V.R. of Earth-Continuity Testers JJG 984	DC: (10~400)m Ω	<i>U</i> _{rel} =0.7%		
				AC: (10~400)m Ω , (45Hz~65Hz)	<i>U</i> _{rel} =0.8%		
		Current		DC: (1~100)A	<i>U</i> _{rel} =0.9%		
				AC: (1~100)A, (45Hz~65Hz)	<i>U</i> _{rel} =1.1%		
19	*D.C. Bridges	Resistance	V.R. of D.C. Bridges JJG 125	1m Ω 、10m Ω 、100m Ω	<i>U</i> _{rel} =0.03%		
				0.2 Ω ~100k Ω	<i>U</i> _{rel} =0.03%		
20	*Cable Testers	ACV	C.S. for Cable Testers JJF 1457	(0.1~1.5)kV, (50Hz)	<i>U</i> _{rel} =0.8%		
		AC Current		(0.1~2)mA, (50Hz)	<i>U</i> _{rel} =0.58%		
		DCV		(0.1~1.5)kV	<i>U</i> _{rel} =0.8%		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Insulation Resistance		10kΩ～10MΩ	U _{rel} =0.25%		
		(10～100)MΩ		U _{rel} =0.59%			
		DC Resistance		0.1Ω～1Ω	U _{rel} =1.5%		
		1Ω～10Ω		U _{rel} =0.25%			
		10Ω～1MΩ		U _{rel} =0.2%			
		Capacitance		1nF,10nF,100nF,1μF (1kHz)	U _{rel} =0.12%		
		Distortion degree		0.1%～10%, (50Hz)	U _{rel} =3.0%		
21	*Single Phase AC Constant Voltage Power Supply	AC Voltage	Calibration Specification of Single Phase AC Constant Voltage Power Supply JJF(Liao) 194	(10～350)V, (45Hz～440Hz)	U _{rel} =0.2%		
		Frequency		45Hz～440Hz	U _{rel} =0.2%		
22	*Components of Lightning Tester	Voltage	C.S. for Components of Lightning Testers JJF(Gui)18	1V～2kV	U _{rel} =0.6%		
		Current		(10～1000)μA	U _{rel} =0.6%		
23	*DC Standard Current Source	Current	V.R. for DC Standard Current Source JJG (JG) 69	1mA～1A	U _{rel} =0.02%		
				1A～100A	U _{rel} =0.05%		
24	*Welding Power Source of DC Electric Welding Machine	DC Current	C.S. for Weiding Power Sources of DC Electric Weiding Machines JJF 1985	(1～1000)A	U _{rel} =0.2%		
				(1000～2000)A	U _{rel} =0.5%		
		DC Voltage		(1～200)V	U _{rel} =0.2%		
25	*Multifunction Standard Sources	DC Voltage	C.S. for Multifunction Standard Source JJF1638	10mV～1000V	U _{rel} =0.003%		
		AC Voltage		10mV～10V, (45Hz～1kHz)	U _{rel} =0.015%		

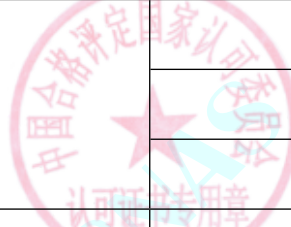


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date		
		DC Current		10V~100V, (45Hz~1kHz)	$U_{rel}=0.03\%$				
				100V~1000V, (45Hz~1kHz)	$U_{rel}=0.05\%$				
				10 μ A~100mA	$U_{rel}=0.015\%$				
				100mA~1A	$U_{rel}=0.025\%$				
				(1~20)A	$U_{rel}=0.05\%$				
		AC Current		10mA~100mA, (45Hz~1kHz)	$U_{rel}=0.32\%$				
				100mA~10A, (45Hz~1kHz)	$U=4\times 10^{-4}I_x+37\text{ }\mu\text{ A}$				
				10A~20A, (50Hz)	$U_{rel}=0.2\%$				
		Resistance		(1~10)Ω	$U_{rel}=0.015\%$				
				10Ω~1MΩ	$U_{rel}=0.003\%$				
				(1~10)MΩ	$U_{rel}=0.007\%$				
				(10~100)MΩ	$U_{rel}=0.07\%$				
26	*Static Resistance Strain Gauge Indicators	Static Strain	V.R. of Resistance Strain Gauge Indicators JJG 623	(0.1~1000) μ ε , (1kHz)	$U=0.6\text{ }\mu\text{ }\varepsilon$				
				(1000~10000) μ ε , (1kHz)	$U=2.4\text{ }\mu\text{ }\varepsilon$				
				(10000~100000) μ ε , (1kHz)	$U=16\text{ }\mu\text{ }\varepsilon$				
27	*Magnetic Yoke Detectors	Magnetizing current	C.S. for Magnetic Yoke Detectors JJF 1458	(1~50)A	$U_{rel}=3.0\%$				
		Force		(10~300)N	$U_{rel}=1.5\%$				



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
28	*AC & DC Resistance Simulators	DC Current	Calibration Specification for AC & DC Resistance Simulators JJF 1723	(0.1~100)A	$U_{rel}=0.1\%$		
		AC Current		(0.1~100)A, (45Hz~65Hz)	$U_{rel}=0.1\%$		
		DC Resistance		1m Ω ~ 200 Ω , (0.1A~100A)	$U_{rel}=0.1\%$		
		AC Resistance		1m Ω ~ 200 Ω , (0.1A~100A, 45Hz~65Hz)	$U_{rel}=0.1\%$		
29	*Delayed Test Devices for Action Characteristics of Low Voltage Circuit Breakers	AC current	Calibration Specification for Test Devices for Action Characteristics of Low Voltage Circuit Breakers JJF 1799	1A~100A, (50Hz)	$U_{rel}=0.5\%$		
		Distortion		1%~10%, (100Hz~1kHz)	$U_{rel}=5\%$		
30	*AC Magnetic Particle Flaw Detector	AC Current	C.S. for Magnetic Particle Flaw Detector JJF 1273	(0.5~5)kA, (50Hz)	$U_{rel}=2.0\%$		
31	*Electronic Control Load Cabinet and Switch/Socket Testers	AC Voltage	C.S. of Electronic Control Load Cabinet and Switch/Socket Testers JJF(Liao) 371	(1~500)V, (50Hz)	$U_{rel}=0.1\%$		
		AC Current		(1~20)A, (50Hz)	$U_{rel}=0.5\%$		
		Power Factor		0~1	$U=0.002$		
		Time		(1~8)s	$U=0.2s$		
32	*Welding Power Source of AC Electric Welding Machine	AC Current	C.S. for the power supply of AC/DC electric welder JJF(Jin) 02	(10~1000)A, 50Hz	$U_{rel}=0.2\%$		
		AC Voltage		(10~400)V, 50Hz	$U_{rel}=0.2\%$		
33	DC Standard Resistors	Resistance	V.R. of DC Standard Resistors JJG 166	(1~10) Ω	$U_{rel}=0.008\%$		
				10 Ω ~ 1M Ω	$U_{rel}=0.003\%$		
				(1~10)M Ω	$U_{rel}=0.02\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
34	Electromechanical Meters for Measuring Alternating-current Electrical Energy	Electric Energy	V.R. of Electromechanical Meters for Measuring Alternating-current Electrical Energy JJG 307	Single-phase: (0.1~100) A, 220V, $\cos \phi = 1.0$	$U_{rel} = 0.1\%$		
				Single-phase: (0.1~100) A, 220V, $\cos \phi = 0.5L$	$U_{rel} = 0.12\%$		
				Single-phase: (0.1~100) A, 220V, $\cos \phi = 0.8C$	$U_{rel} = 0.12\%$		
				Three-phase Balance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 1.0$	$U_{rel} = 0.1\%$		
				Three-phase Balance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 0.5L$	$U_{rel} = 0.12\%$		
				Three-phase Balance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 0.8C$	$U_{rel} = 0.12\%$		
				Three-phase Unbalance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 1.0$	$U_{rel} = 0.15\%$		
				Three-phase Unbalance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 0.5L$	$U_{rel} = 0.2\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
35	Electrical Meters for Measuring Alternating-current Electrical Energy	Electric Energy	V.R. of Electrical Meters for Measuring Alternating-current Electrical Energy JJG 596	Single-phase: (0.1~100) A, 220V, $\cos \phi = 1.0$	$U_{rel} = 0.07\%$		
				Single-phase: (0.1~100) A, 220V, $\cos \phi = 0.5L$	$U_{rel} = 0.09\%$		
				Single-phase: (0.1~100) A, 220V, $\cos \phi = 0.8C$	$U_{rel} = 0.09\%$		
				Three-phase Balance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 1.0$	$U_{rel} = 0.07\%$		
				Three-phase Balance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 0.5L$	$U_{rel} = 0.09\%$		
				Three-phase Balance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 0.8C$	$U_{rel} = 0.09\%$		
				Three-phase Unbalance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 1.0$	$U_{rel} = 0.08\%$		
				Three-phase Unbalance Load: $3 \times (0.1 \sim 100)$ A, $3 \times (57.7 \sim 380)$ V, $\cos \phi = 0.5L$	$U_{rel} = 0.1\%$		
36	*Clamp leakage	DC Current	V.R. of Clamp Ammeters for	1mA~20A	$U_{rel} = 0.2\%$		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	ammeter		Measurement of Leakage Currents JJG (Ji) 3007	20A~60A	$U_{rel}=0.3\%$		
		AC Current		1mA~20A,(50Hz~400Hz)	$U_{rel}=0.2\%$		
				20A~60A,(50Hz)	$U_{rel}=0.4\%$		
37	*AC/DC digital high-voltage meter	DC voltage	V.R. of AC/DC Digital High Voltage Meters JJG (Yue) 041	(1~15) kV	$U_{rel}=0.8\%$		
		AC Voltage		(1~15) kV,(45Hz~65Hz)	$U_{rel}=0.8\%$		
38	*Variable frequency electricity analyzer	Voltage	C.S. of Variable Frequency Electric Quantity Analyzer JJF 1559	(0.1~1000)V,(45Hz~65Hz)	$U_{rel}=0.08\%$		
		Current		(0.1~100)A,(45Hz~65Hz)	$U_{rel}=0.08\%$		
				(100~1000)A,(45Hz~65Hz)	$U_{rel}=0.5\%$		
				Power	1W~10kW,(45Hz~65Hz)		
		Phase		0° ~360° ,(45Hz~65Hz)	$U=0.03^{\circ}$		
39	*Multi parameter data acquisition instrument	DC Voltage	C.S. for Multi-Parameters Data Acquisition Instrument JJF (TX) 041	(10~100)mV	$U=1.1\times 10^{-5}U_x+0.34\mu V$		
				100mV~1V	$U=9\times 10^{-6}U_x+0.43\mu V$		
				(1~10)V	$U=9.2\times 10^{-6}U_x+0.43\mu V$		
				(10~1000)V	$U=1.2\times 10^{-5}U_x+27\mu V$		
		DC Current		10 μ A~1mA	$U=2.8\times 10^{-5}I_x+0.58nA$		
				(1~10)mA	$U=2.8\times 10^{-5}I_x+5.8nA$		
				(10~100)mA	$U=4.0\times 10^{-5}I_x+0.6\mu A$		



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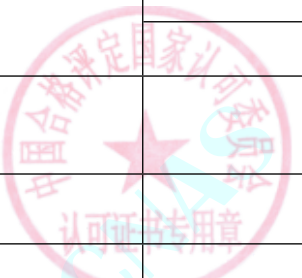
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				100mA~1A	$U=1.2 \times 10^{-4} I_x + 13 \mu A$		
				(1~2.2)A	$U=3.5 \times 10^{-4} I_x + 62 \mu A$		
				(2.2~10)A	$U=7.1 \times 10^{-4} I_x + 0.62mA$		
				(10~20)A	$U=4 \times 10^{-4} I_x + 0.8mA$		
		Resistance		(0.1~10) Ω	$U=9 \times 10^{-4} R_x + 11m\Omega$		
				10 Ω ~ 100k Ω	$U=6.0 \times 10^{-5} R_x + 2.6m\Omega$		
				(100~330)k Ω	$U=1.4 \times 10^{-4} R_x + 6.9\Omega$		
				330k Ω ~ 1M Ω	$U=2 \times 10^{-4} R_x + 75\Omega$		
				(1~3)M Ω	$U=1.8 \times 10^{-4} R_x + 0.12k\Omega$		
				(3~10)M Ω	$U=7 \times 10^{-4} R_x + 0.8k\Omega$		
				(10~30)M Ω	$U=1.2 \times 10^{-3} R_x + 0.67k\Omega$		
				(30~100)M Ω	$U=5.8 \times 10^{-3} R_x + 6.4k\Omega$		
		AC Voltage		(10~100)mV, (45Hz~1kHz)	$U=7.6 \times 10^{-5} U_x + 2.5 \mu V$		
				(10~100)mV, (1kHz~20kHz)	$U=1.6 \times 10^{-4} U_x + 2.4 \mu V$		
				(10~100)mV, (20kHz~50kHz)	$U=3.4 \times 10^{-4} U_x + 2.4 \mu V$		
				100mV~1V, (45Hz~10kHz)	$U=1.6 \times 10^{-4} U_x + 24 \mu V$		
				100mV~1V, (10kHz~20kHz)	$U=1.6 \times 10^{-4} U_x + 26 \mu V$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
			ilac-M	100mV~1V, (20kHz~50kHz)	$U=3.4\times 10^{-4}U_x+28\text{ }\mu\text{ V}$			
				(1~10)V, (45Hz~20kHz)	$U=1.6\times 10^{-4}U_x+0.24\text{mV}$			
				(1~10)V, (20kHz~50kHz)	$U=3.4\times 10^{-4}U_x+0.28\text{mV}$			
				(10~100)V, (45Hz~1kHz)	$U=2.3\times 10^{-4}U_x+2.6\text{mV}$			
				(100~1000)V, (45Hz~1kHz)	$U=4.6\times 10^{-4}U_x+22\text{mV}$			
		AC Current		0.1mA~30mA, (45Hz~1kHz)	$U=5.8\times 10^{-3}I_x+36\text{nA}$			
				30mA~100mA, (45Hz~1kHz)	$U=1.7\times 10^{-3}I_x+5.7\text{ }\mu\text{ A}$			
				100mA~10A, (45Hz~1kHz)	$U=4\times 10^{-4}I_x+36.5\text{ }\mu\text{ A}$			
				(10~20)A, (50Hz~400Hz)	$U=4\times 10^{-3}I_x+4.5\text{mA}$			
		Temperature		TC(J、K、N-type): (-200~1300)℃	$U=0.1\text{ }^{\circ}\text{C}$			
		Frequency		10Hz~500kHz	$U=0.006\%$			
40	*High-voltage Divider at Power Frequency	Voltage Division Ratio	V.R. of High-voltage Verification Regulation of High-voltage JJG 496	(1~50)kV/(1~750)V,(45Hz~65Hz)	$U_{\text{rel}}=0.8\%$			
41	*Equipotential tester	Resistance	C.S. for Equipotential Testers JJF (Ji) 3022	1 mΩ , 10 mΩ ~3kΩ	$U_{\text{rel}}=0.11\%$			
42	*Medical Leakage Current Testers	Leakage current	V.R. of Medical Leakage Current Testers JJG 1188	AC:(0.1~0.3)mA,(45~60)Hz	$U=1.4\times 10^{-3}I_x+0.17\text{ }\mu\text{ A}$			



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date	
			V.R. of Leakage Current Tester JJG 843	AC:(0.3~3)mA,(45~60)Hz	$U=2.3 \times 10^{-3} I_x + 0.21 \mu A$			
				AC:(3~20)mA,(45~60)Hz	$U=2.2 \times 10^{-3} I_x + 2 \mu A$			
				DC:(0.01~20)mA	$U=2 \times 10^{-3} I_x + 13nA$			
		Input Resistance		(0.5~2)kΩ	$U=1.0 \Omega$			
		Impedance		(0.5~2)kΩ ,(10Hz~1MHz)	$U=3.0 \Omega$			
		Transmission impedance frequency response characteristics		(0~-60)dB,(10Hz~1kHz)	$U=0.05dB$			
				(0~-60)dB,(1kHz~1MHz)	$U=0.1dB$			
		Warning current		AC:(0.1~0.3)mA,(45~60)Hz	$U=1.4 \times 10^{-3} I_x + 0.17 \mu A$			
				AC:(0.3~3)mA,(45~60)Hz	$U=2.3 \times 10^{-3} I_x + 0.21 \mu A$			
				AC:(3~20)mA,(45~60)Hz	$U=2.2 \times 10^{-3} I_x + 2 \mu A$			
				DC:(0.01~20)mA	$U=2 \times 10^{-3} I_x + 13nA$			
		Testing voltage		(10~600)V,(45~60)Hz	$U_{rel}=0.3\%$			
43	*Leakage Current Testers	Leakage current	AC:(0.1~0.3)mA,(45~60)Hz	$U=1.4 \times 10^{-3} I_x + 0.17 \mu A$				
			AC:(0.3~3)mA,(45~60)Hz	$U=2.3 \times 10^{-3} I_x + 0.21 \mu A$				
			AC:(3~20)mA,(45~60)Hz	$U=2.2 \times 10^{-3} I_x + 2 \mu A$				



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				DC:(0.01~20)mA	$U=2\times 10^{-3}I_x+13\text{nA}$		
		Input Resistance		(0.5~2)kΩ	$U=1.0\Omega$		
		Impedance		(0.5~2)kΩ,(20Hz~1MHz)	$U=3.0\Omega$		
		Transmission impedance frequency response characteristics		(0.1~20)mA,(20Hz~1MHz)	$U_{\text{rel}}=0.5\%$		
		Testing voltage		(10~600)V,(45~60)Hz	$U_{\text{rel}}=0.3\%$		
44	*Arc welding and resistance welding	DC Voltage	C.S. for Arcwelding and resistance welding JJF(JX)1025	(1~1000)V	$U_{\text{rel}}=U_{\text{rel}}=0.1\%$		
		AC Voltage		(1~1000)V,(45~60)Hz	$U_{\text{rel}}=0.3\%$		
		DC Current		(1~1000) A	$U_{\text{rel}}=0.2\%$		
				(1000~3000) A	$U_{\text{rel}}=0.5\%$		
		AC Current		(1~1000)A,(45~60)Hz	$U_{\text{rel}}=0.2\%$		
				(1000~3000)A,(45~60)Hz	$U_{\text{rel}}=0.5\%$		
		Frequency		10Hz~200kHz	$U_{\text{rel}}=0.2\%$		
		Power		10W~10kW	$U_{\text{rel}}=0.5\%$		
		Time		(10~2000) ms	$U=0.2\text{ms}$		
				(2~600) s	$U_{\text{rel}}=0.02\%$		
	Electrode force	1N~2000kN	$U_{\text{rel}}=0.2\%$				



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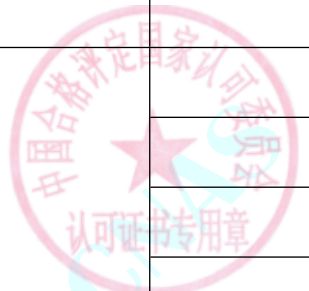
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Power factor		0.01~1	<i>U</i> =0.001		
45	*Motor Comprehensive Performance Tester	Insulation Voltage	C.S. of Motor Comprehensive Performance Tester JJF (Zhe) 1184	(0.1~5)kV	<i>U</i> _{rel} =1.2%		
		Insulation resistance		(1~10)M Ω	<i>U</i> _{rel} =0.25%		
				10M Ω ~ 100M Ω	<i>U</i> _{rel} =0.59%		
				100M Ω ~ 1G Ω	<i>U</i> _{rel} =1.2%		
		DC Voltage		(0.1~5)kV	<i>U</i> _{rel} =0.8%		
		AC Voltage		(0.1~5)kV, (50Hz、60Hz)	<i>U</i> _{rel} =0.8%		
		Breakdown Alarm DC Current		(1~200)mA	<i>U</i> _{rel} =0.8%		
		Breakdown Alarm AC Current		(1~200)mA, (50Hz、60Hz)	<i>U</i> _{rel} =0.8%		
		Time		(1~60)s	<i>U</i> _{rel} =1.2%		
		Resistance		10m Ω ,100m Ω	<i>U</i> _{rel} =0.02%		
				0.2 Ω ~2k Ω	<i>U</i> _{rel} =0.03%		
		Interturn impulse voltage		(0.5~5)kV	<i>U</i> _{rel} =2%		
		AC Current		(1~100)A, (45Hz~65Hz)	<i>U</i> _{rel} =0.08%		
AC Voltage	(1~750)V, (45Hz~65Hz)	<i>U</i> _{rel} =0.08%					



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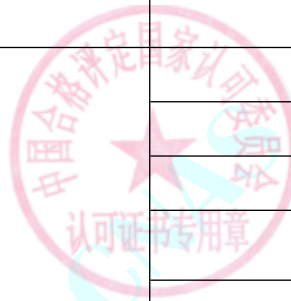
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		AC Power		1W~10kW, (45Hz~65Hz)	<i>U</i> _{rel} =0.07%		
		Frequency		45Hz~65Hz	<i>U</i> _{rel} =0.01%		
		Power Factor		0.1~1	<i>U</i> =0.002		
46	*DC Resistance Meters	Resistance	V.R. of DC Resistance Meters JJG 1205	1mΩ ~ 10kΩ	<i>U</i> _{rel} =0.15%		
		Current		(0.1~100)A	<i>U</i> _{rel} =0.15%		
47	*Loop Resistance Testers	Resistance	V.R. of Loop Resistance Testers JJG 1052	(1~10) μ Ω	<i>U</i> _{rel} =1.0%		
				10 μ Ω ~20mΩ	<i>U</i> _{rel} =0.12%		
		Current		(100~200)A	<i>U</i> _{rel} =0.2%		
48	*Zinc-oxide Arrester Testers	AC Voltage	C.S. for Zinc-oxide Arrester Testers JJF 2194	(10~250)V,(45Hz~65Hz)	<i>U</i> _{rel} =0.6%		
		AC Current		100 μ A~20mA,(45Hz~65Hz)	<i>U</i> =0.2% <i>I</i> _x +2 μ A		
		Phase angle		0° ~90°	<i>U</i> =0.3°		
49	*Industry Frequency Single-Phase Phase Meter	Phase	V.R. of Industry Frequency Single-Phase Phase Meter JJG440	0° ~360°	<i>U</i> =0.2°		
50	*Clamp Phase Volt-Ampere Meters	AC Voltage	C.S. for Clamp Phase Volt-Ampere Meters JJF 2227	(1~600)V,(45Hz~65Hz)	<i>U</i> _{rel} =0.15%		
		AC Current		10mA~100A,(45Hz~65Hz)	<i>U</i> _{rel} =0.15%		
				100A~600A,(45Hz~65Hz)	<i>U</i> _{rel} =0.25%		
		Phase		0° ~360°	<i>U</i> =0.1°		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Frequency		(45~65)Hz	$U_{rel}=0.05\%$		
51	*High Current Generator	AC Current	C.S. of High Current Generator JJF(JX)1037	(1~1000)A,(45Hz~65Hz)	$U_{rel}=0.2\%$		
				(1000~3000)A,(45Hz~65Hz)	$U_{rel}=0.25\%$		
6、Radio							
1	*Function Generator	Frequency	V.R. of Function Generators JJG840	10Hz~1kHz	$U_{rel}=2.4\times 10^{-5}$		
				1kHz~250MHz	$U_{rel}=2.1\times 10^{-7}$		
		Amplitude		10mV~55V, (1kHz)	$U_{rel}=0.3\%$		
		Rise Time		1ns~10 μ s	$U_{rel}=3.3\%$		
		Amplitude Flatness of Sine Wave Distortion		-3dB~3dB, (9kHz~250MHz)	$U=0.2\text{dB}$		
				0.03%~0.1%, (1kHz)	$U_{rel}=12\%$		
				0.1%~1%, (1kHz)	$U_{rel}=2.6\%$		
		Duty Cycle		5%~95%, (100Hz~10kHz)	$U_{rel}=1\%$		
2	*Impedance Analyzer(LCR Meter)	Capacitance	Calibration Specification for Impedance Analyzer(LCR Meter) JJF (Liao) 195	100pF~1nF, (1kHz)	$U_{rel}=0.12\%$		
				1nF~1 μ F, (1kHz)	$U_{rel}=0.07\%$		
				1 μ F~100 μ F, (100Hz)	$U_{rel}=0.07\%$		
		Inductance		10 μ H~100 μ H, (1kHz)	$U_{rel}=0.30\%$		
				100 μ H~1mH, (1kHz)	$U_{rel}=0.09\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Resistance	V.R. for digital oscilloscope GJB 7691	1mH~100mH, (1kHz)	$U_{rel}=0.04\%$		
				1 Ω ~10 Ω , (1kHz)	$U_{rel}=0.6\%$		
				10 Ω ~100 Ω , (1kHz)	$U_{rel}=0.12\%$		
		100 Ω ~10k Ω , (1kHz)		$U_{rel}=0.06\%$			
		AC Voltage		0.1V~2V, (100Hz~10kHz)	$U_{rel}=0.6\%$		
		Frequency		100Hz~5MHz	$U_{rel}=0.005\%$		
		DC Voltage		0.1V~2V	$U_{rel}=0.1\%$		
3	*Digital Oscilloscope	DC gain	V.R. for digital oscilloscope GJB 7691	1mV/div~20V/div	$U_{rel}=0.4\%$		
DC Bias	1mV/div~20V/div	$U_{rel}=0.5\%$					
Bandwidth	100kHz~1GHz,(5mV~2V)	$U_{rel}=5.0\%$					
Rise time	400ps~20ns	$U_{rel}=5.2\%$					
Overshoot	0.5%~30%	$U_{rel}=5\%$					
Time base	10ms	$U_{rel}=0.008\%$					
Trigger sensitivity	1mV~1V	$U_{rel}=3.4\%$					
Calibration signal amplitude	100mV~5V, (10Hz~300kHz)	$U_{rel}=0.2\%$					
Calibration signal frequency	100Hz~300kHz	$U_{rel}=1.0\times10^{-4}$					

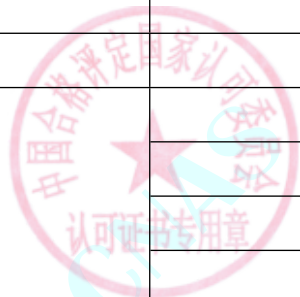


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Input Resistance		50 Ω 、 1.0M Ω	$U_{rel}=0.1\%$		
		Probe attenuation ratio		1:1 ~ 1:1000	$U_{rel}=0.2\%$		
4	*Analogue Oscilloscope	Amplitude of Voltage	V.R. of Analogue Oscilloscope JJG 262	10mV ~ 200V	$U_{rel}=1.1\%$		
		Δ t(time)		1ns ~ 5s	$U_{rel}=0.6\%$		
		Bandwidth		100kHz ~ 500MHz,(5mV ~ 5V)	$U_{rel}=5.0\%$		
		Rise time		700ps ~ 1 μ s	$U_{rel}=5.2\%$		
		Overshoot		0.5% ~ 30%	$U_{rel}=5\%$		
		Square wave calibration signal frequency		100Hz ~ 300kHz	$U_{rel}=1.0 \times 10^{-4}$		
		Square wave calibration signal amplitude		10mV ~ 5V, (100Hz ~ 300kHz)	$U_{rel}=0.2\%$		
		7、Time and frequency					
1	*Electronic time relay	Time	Calibration Specification for Time Delay Relays JJF1282	0.5s ~ 10s	$U=3\text{ms}$		
				10s ~ 60s	$U=6\text{ms}$		
				60s ~ 900s	$U=0.1\text{s}$		
				900s ~ 3600s	$U=0.4\text{s}$		
				3600s ~ 7200s	$U=0.6\text{s}$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
2	*Vibrating Wire Frequency Readouts	Frequency	C.S. for Vibrating Wire Frequency Readouts JJF 1401	(300~6000)Hz	$U_{rel}=4 \times 10^{-5}$		
3	*Stopwatch	Time	Calibration Specification for Stopwatches JJF2195	Electronic stopwatch: (1~3600)s	$U=0.01s$	Accredited only for Mechanical stopwatch and Electronic stopwatch	
				Electronic stopwatch: 1d	$U=0.3s$		
				Mechanical stopwatch: (1~1800)s	$U=0.1s$		
4	*Frequency Meters	Frequency	V.R. of Frequency Meters JJG 603	10Hz~100Hz	$U_{rel}=0.03\%$		
				100Hz~10kHz	$U_{rel}=0.005\%$		
5	*Charged Plate Monitor	Static voltage	C.S. for Charged Plate Monitor JJF(DZ)31003	$\pm(1 \sim 1000)V$	$U=0.1\%U_x+0.1V$		
		Static decay time		$(0.1 \sim 99.9)s$	$U=1.5\%t_x+0.05s$		
8、Optics							
1	*Clarity Test Equipment	Illuminance	C.S. for Clarity Test Equipment JJF1287	(1~4000) lx	$U_{rel}=10\%$		
		Time		(0.01~1500.00) s	$U=0.2s$		
2	*Standard Light Sources Box	Illuminance	C.S. for Standard Light Sources Boxes JJF(FZ) 055	(1~5000) lx	$U_{rel}=2.0\%$		
		Color temperature		(2500~6500) K	$U_{rel}=1.4\%$		
3	*Three with UV analyzer	UV Irradiance	C.S. for Tthree with UV analyzer JJF (滇) 12	365nm: (20~500) $\mu W/cm^2$	$U_{rel}=22\%$		
				254nm: (20~500) $\mu W/cm^2$	$U_{rel}=22\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
4	*Diffuse Transmission Visual Densitometer	transmission density	V. R. of Diffuse Transmission Visual Densitometer JJG 920	(0.00~5.00]	$U=(0.03\sim0.05)$		
5	*Abbe Refractometer	Refractive Index	V.R. of Abbe Refractometer JJG 625	$n_D: 1.3000\sim1.7000$	$U=7\times10^{-5}$		
		Average Dispersion		0.00700~0.02100	$U=8\times10^{-5}$		
6	*The Whiteness Meter	Whiteness	V.R. of the Whiteness Meter JJG 512	$R_{457}:0.0\sim100.0$	$U=1.7$		
7	*Colorimeters and Color Difference Meters	Chromatism	V.R. of Colorimeters and Color Difference Meters JJG 595	stimulus value Y:(5~90) Color coordinate x, y: Panchromatic Gamut	$U=1.8$		
				Color coordinate x, y: Panchromatic Gamut	$U=0.007$		
8	*Specular Gloss Meters	Gloss	V.R. of Specular Gloss Meters and Gloss Plates JJG 696	(3~100) GU	$U=1.2GU$	No working gloss plates; only measure angles of 20°, 60°, and 85°	
9	*Water Colorimeter	Water Color	C.S. for Water Colorimeters JJF 1689	Visual: (0~40) degrees	$U=6\text{degrees}$		
				Visual:[40~70]degrees	$U=11\text{degrees}$		
				Digital Display: (0~40) degrees	$U=0.9\text{degrees}$		
				Digital Display: [40~70]degrees	$U=1.3\text{degrees}$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
10	*Platinum-Cobalt Colorimeters	Platinum-Cobalt Colorimeters	C.S for Platinum-Cobalt Colorimeters JJF 1947	(1~500) 度	$U=8.6\%$		
11	Industrial Film Viewers	Luminance	C.S for Industrial Film Viewers JJF (XIN) 27	(0.1~1000000) cd/m ²	$U_{rel}=5.0\%$		
12	Illuminance Meter	Illuminance	Illuminance Meter JJG 245	(5~4000) lx	$U_{rel}=1.5\%$		
13	Raised road sign measuring instrument	Coefficient of Luminous Intensity	C.S. of Retroreflectometers JJF 1809	(100~1999)mcd · lx ⁻¹	$U_{rel}=6\%$		
14	Retroreflective line measuring instrument	Coefficient of Retroreflected luminance	C.S. of Retroreflectometers JJF 1809	(10~1999)mcd · m ⁻² · lx ⁻¹	$U_{rel}=12\%$		
9、Chemistry							
1	*Electrolytic Conductivity Meter	Conductance	V.R.of Eletrolytic Conductivity Meters JJG376	Electronic unit:(0.05~1) $\mu S \cdot cm^{-1}$	$U_{rel}=1.4\% \sim 0.2\%$		
				Electronic unit:(1~1 × 10 ⁵) $\mu S \cdot cm^{-1}$	$U_{rel}=0.2\% \sim 0.08\%$		
				Instrument :(100~2000) $\mu S \cdot cm^{-1}$	$U_{rel}=0.3\%$		
		Temperature		(0~60)°C	$U=0.1^{\circ}C$		
2	*Laboratory pH Meter	pH	V.R.of Laboratory pH Meters JJG119	Electric Unit:0~14	$U=0.01$		
				instrument:4~10	$U=0.02$		
		Potential		(-2000~+2000)mV	$U=0.8mV$		
		Temperature		(0~60)°C	$U=0.1^{\circ}C$		
3	*Mercury Analyzers	Limit of detection	V.R.of Mercury Analyzers JJG548	Absorption:≤1.0 ng	$U=0.4 ng$		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				Fluorescence :≤0.1 ng	U=0.04 ng		
4	*Liquid Chromatograph	Limit of detection	V.R.of Liquid Chromatographs JJG705	UV-VIS detector:≤5×10 ⁻⁸ g/mL	U _{rel} =5%		
				Fluorescence detector:≤5×10 ⁻⁹ g/mL	U _{rel} =5%		
				Differential refraction detector:≤5×10 ⁻⁶ g/mL	U _{rel} =7%		
				Evaporative light scattering detector:≤5×10 ⁻⁶ g/mL	U _{rel} =7%		
5	*Gas Chromatograph	Sensitivity	V.R.of Gas Chromatographs JJG700	TCD:≥800 mV•mL/mg	U _{rel} =6%		
		Limit of detection		FID:≤5×10 ⁻¹⁰ g/s	U _{rel} =6%		
				FPD:≤5×10 ⁻¹⁰ g/s(S),≤1×10 ⁻¹⁰ g/s(P)	U _{rel} =6%		
				ECD:≤5×10 ⁻¹² g/mL	U _{rel} =6%		
				NPD:≤5×10 ⁻¹² g/s(N),≤1×10 ⁻¹¹ g/s(P)	U _{rel} =6%		
6	*Gas Chromatography-Mass Spectrometer	Signal-to-noise ratio	C.S.for Gas Chromatography-Mass Spectrometries JJF1164	EI ⁺ :≥10:1(SQ、ITQ、QQQ);≥50:1 (TOF、Orbitrap)	U _{rel} =15%		
				CI ⁺ :≥10:1(SQ、ITQ)	U _{rel} =15%		
				CI ⁻ :≥10:1(SQ、ITQ)	U _{rel} =15%		
7	*Liquid Chromatography-Mass Spectrometer	Signal-to-noise ratio	C.S.for Liquid Chromatography-Mass Spectrometers JJF1317	ESI ⁺ :≥30:1(QQQ);≥10:1 (SQ、ITQ)	U _{rel} =11%		
				ESI ⁻ :≥10:1 (QQQ、SQ、ITQ)	U _{rel} =11%		



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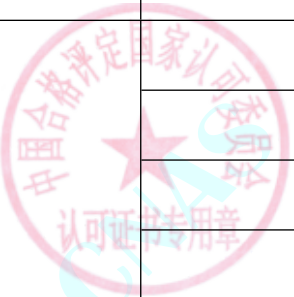
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				APCI ⁺ : ≥30:1(QQQ); ≥10:1(SQ、ITQ)	$U_{rel}=11\%$		
8	*Atomic Absorption Spectrophotometer	Limit of detection	V.R.of Atomic Absorption Spectrophotometers JJG694	Cu: ≤0.020 μg/mL Cd: ≤4pg	$U=0.004 \mu\text{g/mL}$ $U=0.3 \text{ pg}$		
9	*Uv-vis spectrophotometry	Wavelength	V.R.of Ultraviolet, Visible, Near-Infrared Spectrophotometers JJG178	(190~900)nm	$U=(0.4\sim1.1)\text{nm}$		
		Transmittance		5%~40%	$U=0.3\%$		
10	*Ion Chromatograph	Limit of detection	V.R.of Ion Chromatographs JJG823	Electrical conductivity detector: ≤0.02 μg/mL Uv-vis detector: ≤0.02 μg/mL Electrochemical detector: ≤0.02 μg/mL	$U_{rel}=5\%$ $U_{rel}=5\%$ $U_{rel}=5\%$		
11	*Total Organic Carbon Analyzer	Concentration	V.R.of Total Organic Carbon Analyzer JJG821	(0.1~1000)mg/L	$U_{rel}=2\%$		
12	*Thermogravimetric Moisture Meters	Moisture Content	V.R. of Thermogravimetric Moisture Meters JJG658	95%	$U=0.2\%$		
		Mass		1mg~35g	$U=0.5\text{mg}$		
				35g~250g	$U=0.8\text{mg}$		
13	*Ionometer	pX	V.R of Laboratory Ion Meters JJG757	Electricity meter: 0~14 Instrument: 2~4	$U=0.01$ $U=0.02$		
		Potential		(-2000~+2000) mV	$U=0.8\text{mV}$		
		Temperature		(0~60)°C	$U=0.1^\circ\text{C}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
14	*Potentiometric titrator	Potential	V.R. of Automatic Potentiometric titrators JJG814	(-2000~+2000) mV	$U=0.8\text{mV}$		
		concentration		0.1mol/L	$U_{\text{rel}}=0.74\%$		
		capacity		(2~100)mL	$U=(0.002\sim0.05)\text{mL}$		
15	*Fourier Transform Infrared Spectrometer	Wave number	C.S. for Fourier Transform Infrared Spectrometers JJF1319	(4000~400) cm^{-1}	$U=0.6\text{cm}^{-1}$		
16	*On-line pH meter	pH	C.S. for On-line pH meters JJF1547	Electric Unit:0~14	$U=0.01$		
				Instrument:4~10	$U=0.02$		
		Potential		(-2000~+2000) mV	$U=0.8\text{mV}$		
		Temperature		(0~60) $^{\circ}\text{C}$	$U=0.1^{\circ}\text{C}$		
17	*Atomic fluorescence spectrophotometer	Limit of detection	V.R. of Atomic Fluorescence Spectrophotometer JJG939	As: $\leq 0.4\text{ng}$	$U=0.02\text{ng}$		
				Sb: $\leq 0.4\text{ng}$	$U=0.02\text{ng}$		
18	*Automatic Polarimeter	Specific rotation	V. R. of Polarimeter and Polarimetric Saccharimeter JJG536	(-45~45) $^{\circ}$	$U=0.008^{\circ}$		
19	*Emission Spectrometer	Limit of detection	V.R. of Emission Spectrometer JJG 768	ICP Spectrometer Zn: $\leq 0.01\text{mg/L}$	$U=0.002\text{mg/L}$		
				ICP Spectrometer Ni: $\leq 0.03\text{mg/L}$	$U=0.006\text{mg/L}$		
				ICP Spectrometer Mn: $\leq 0.005\text{mg/L}$	$U=0.002\text{mg/L}$		
				ICP Spectrometer Cr: $\leq 0.02\text{mg/L}$	$U=0.003\text{mg/L}$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				ICP Spectrometer Cu: $\leq 0.02\text{mg/L}$	$U=0.003\text{mg/L}$		
				ICP Spectrometer Ba: $\leq 0.005\text{mg/L}$	$U=0.004\text{mg/L}$		
				Direct Reading Spectrometer C: $\leq 0.02\%$	$U=0.0019\%$		
				Direct Reading Spectrometer Si: $\leq 0.02\%$	$U=0.0020\%$		
				Direct Reading Spectrometer Mn: $\leq 0.02\%$	$U=0.0012\%$		
				Direct Reading Spectrometer Cr: $\leq 0.01\%$	$U=0.0012\%$		
				Direct Reading Spectrometer Ni: $\leq 0.02\%$	$U=0.0020\%$		
				Direct Reading Spectrometer V: $\leq 0.01\%$	$U=0.0004\%$		
20	*Analyzers for Oil Content in Water	Concentration	V.R. of Analyzers for Oil Content in Water JJG 950	(0.1~10)mg/L	$U_{\text{rel}}=6\%$		
				(10~100)mg/L	$U_{\text{rel}}=5\%$		
21	*Turbidimeter	Turbidity	V.R. of Turbidimeters JJG 880	(1~400)NTU	$U_{\text{rel}}=3.2\%$		
22	*Melting-point Measurement Instrument	Melting-point	V.R. of Melting-point Measurement Instruments JJG 701	(40~300)°C	$U=0.26^\circ\text{C}$		
23	*Instrument for KF Coulometry Titration	Mass	V.R. of Instrument for KF Coulometry Titration JJG 1044	(10~5000) μg	$U_{\text{rel}}=3\%$		
24	*Static Light Scattering Particle	Particle size	C.S. for Static Light Scattering Particle Size	(1~5) μm	$U_{\text{rel}}=5.6\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
	Size Analyzers		Analyzers JJF 1211	(5~100) μm	$U_{\text{rel}}=7\%$		
25	*Open/Closed Cup Flash Point Testers	Temperature	C.S. for Open/Closed Cup Flash Point Testers JJF 1384	Open Cup Flash Point:(80~200)°C	$U=7.2^\circ\text{C}$		
				Open Cup Flash Point:(200~300)°C	$U=9.2^\circ\text{C}$		
				Closed Cup Flash Point:(40~110)°C	$U=4.8^\circ\text{C}$		
				Closed Cup Flash Point:(110~200)°C	$U=6.2^\circ\text{C}$		
26	*Total Suspended Particulates Sampler	Flow	V.R. of Total Suspended Particulates Sampler JJG 943	(0.05~1.2)m ³ /min	$U_{\text{rel}}=2\%$		
		Time		(0.1~3600)s	$U=0.3\text{s}$		
		Temperature		(0~50)°C	$U=0.6^\circ\text{C}$		
		Atmospheric pressure		(87~106)kPa	$U=0.3\text{kPa}$		
		Length		(10~150)mm	$U=0.05\text{mm}$		
27	*Alarmer Detectors of Combustible Gas	Concentration	V.R. of Alarmer Detectors of Combustible Gas JJG 693	(10~60)%LEL	$U_{\text{rel}}=3\%$	Calibrate only isobutane, propane, methane, hydrogen, and acetylene.	
				(1~10000) $\mu\text{mol/mol}$	$U_{\text{rel}}=3\%$		
28	*Carbon Monoxide Detectors	Concentration	V.R. of Carbon Monoxide Detectors JJG 915	(10~2000) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.0\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
29	*Volatile Organic Compounds Photo Ionization Detectors	Concentration	C.S. for Volatile Organic Compounds Photo Ionization Detectors JJF 1172	(10~2000) μ mol/mol	$U_{rel}=3\%$		
30	*Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer	Concentration	V.R. of Carbon Monoxide and Carbon Dioxide Infrared Gas Analyzer JJG 635	CO:(10~1000) μ mol/mol	$U_{rel}=3\%$		
				CO:(1000~10000) μ mol/mol	$U_{rel}=2\%$		
				CO ₂ :1.0%~10.0%	$U_{rel}=3\%$		
				CO ₂ :0.05%~1.00%	$U_{rel}=2\%$		
31	*Electrochemical Oxygen Meter	Concentration	V.R. of Electrochemical Oxygen Meter JJG 365	1%~85%	$U_{rel}=1\%$		
32	*Sulfur Hydrogen Gas Detectors	Concentration	V.R. of Sulfur Hydrogen Gas Detectors JJG 695	(1~500) μ mol/mol	$U_{rel}=2.3\%$		
33	*Flue Gas Analyzers	Concentration	V.R. of Flue Gas Analyzers JJG 968	CO:(50~1000) μ mol/mol	$U_{rel}=2\%$		
				O ₂ :1%~30%	$U_{rel}=1\%$		
				NO:(50~1000) μ mol/mol	$U_{rel}=2\%$		
				SO ₂ :(0.1~1000) μ mol/mol	$U_{rel}=2\%$		
34	*Ammonia Gas Detector	Concentration	V.R. of Ammonia Gas Detectors JJG 1105	(1~1000) μ mol/mol	$U_{rel}=3\%$		
35	*Dust Sampler	Flow	V.R. of Dust Sampler JJG 520	(1~150)L/min	$U_{rel}=2\%$		
		time		(0~300)s	$U=0.1s$		
		Volume		(1~1800)L	$U_{rel}=2\%$		



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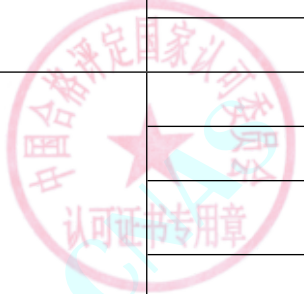
№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
36	*Air Sampler	Flow	V.R. of Air Sampler JJG 956	(0.1~6)L/min	$U_{rel}=2\%$		
		Time		(0.1~3600)s	$U=0.2s$		
		Temperature		(0~50)°C	$U=0.6^{\circ}C$		
37	Rotational Viscometers	Dynamic Viscosity	V.R. of Rotational Viscometers JJG 1002	(2~50)mPa·s	$U_{rel}=1.8\%$		
				(50~1000)mPa·s	$U_{rel}=1.9\%$		
				(1000~2×10 ⁴)mPa·s	$U_{rel}=1.9\%$		
				(2×10 ⁴ ~1×10 ⁵)mPa·s	$U_{rel}=2.0\%$		
38	*Samplers for Stack Dust	Flow	V.R. of Samplers for Stack Dust JJG 680	(1~100)L/min	$U_{rel}=1.8\%$		
		time		(1~600)s	$U=0.1s$		
		temperature		(0~300)°C	$U=0.6^{\circ}C$		
		Pressure		(-50~50)kPa	$U=0.5\%FS$		
39	Flow cup Viscometer	Time	V.R. of Flow cup Viscometers JJG 743	(5~150)s	$U_{rel}=1.0\%$		
40	*Flame Photometer	Detection Limit	V.R. of Flame Photometer JJG 630	K: ≤0.004mmol/L	$U=0.001mmol/L$		
				Na: ≤0.008mmol/L	$U=0.002mmol/L$		
41	*Karl Fischer Volumetric Titrators for Water Content	Water content	V.R. of Karl Fischer Volumetric Titrators for Water Content JJG 1154	0.1%~5%	$U_{rel}=2\%$	Calibrate only the automatic	
42	*Carbon-Sulfur Analyzers	Concentration	V.R. of Carbon-sulfur Analyzers JJG 395	C:0.030%~0.500%	$U=0.004\%$		
				C:0.500%~1.000%	$U=0.006\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				C:1.00%~4.00%	U=0.02%	high-speed carbon sulfur analyzer	
				S:0.003%~0.010%	U=0.0004%		
				S:0.010%~0.050%	U=0.003%		
				S:0.050%~0.500%	U=0.004%		
43	Direct Reading Calcuim Analyzer	Concentration	C.S. for Direct Reading Calcuim Analyzer JJF (Min) 1075	5%~100%	U=1%		
		Potential		(-2000~+2000)mV	U=0.8mV		
44	Dissolved Oxygen Meter	Density	V.R. of Dissolved Oxygen Meters JJG 291	(5~12)mg/L	U=0.10mg/L		
		Temperature		(0~60)°C	U=0.1°C		
45	Airborne Particle Counter	Concentration	C.S. for Airborne Particle Counter JJF 1190	(1000~100000)/28.3L	U _{rel} =14%		
		Flow		(0.5~100) L/min	U _{rel} =2%		
		Time		(0~600)s	U=0.2s		
46	*Bomb Calorimeter	Heat	V.R. of Bomb Calorimeter JJG 672	(26000~27000) J/g	U=37 J/g		
47	*Particulate Analyzer	Particle Count	C.S. for Particulate Analyzer JJF 1290	(1000~3000) grain/mL	U _{rel} =5.2%		
		Volume		(0.1~50) mL	U _{rel} =0.3%		
48	*Thermogravimetr ic Analyzer	Mass	V.R. of Thermogravimetric Analyzers JJG 1135	1mg~5mg	U=0.03mg		
				5mg~20mg	U _{rel} =0.2%		
		Temperature		curie point: (150~ 800) °C	U _{rel} =0.8%		
				melting point: (150~ 450) °C	U _{rel} =0.8%		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
49	*The Differential Scanning Calorimeter	Temperature	V.R. of the Differential Scanning Calorimeter JJG 936	(150~450) °C	$U= (0.6\sim1.0) ^\circ\text{C}$		
		Heat		(25~110)J/g	$U_{\text{rel}}=1.5\%$		
		heating rate		(2~20) °C/min	$U_{\text{rel}}=0.1\%$		
50	*Quadrupole Inductively Coupled Plasma Mass Spectrometer	Detection Limit	C.S. for Quadrupole Inductively Coupled Plasma Mass Spectrometer JJF 1159	Be: $\leq 30\text{ng/L}$	$U_{\text{rel}}=6.0\%$		
				In: $\leq 10\text{ng/L}$	$U_{\text{rel}}=6.0\%$		
				Bi: $\leq 10\text{ng/L}$	$U_{\text{rel}}=6.0\%$		
51	*Liquid Chromatograph-Atomic Fluorescence Spectrometer	Minimum Detection	V.R. of Liquid Chromatograph-Atomic Fluorescence Spectrometers JJG 1151	As (V) : $< 1.0\text{ng}$	$U_{\text{rel}}=7\%$		
				MMA: $< 0.7\text{ng}$	$U_{\text{rel}}=7\%$		
				DMA: $< 0.7\text{ng}$	$U_{\text{rel}}=7\%$		
52	*Gel Permeation Chromatographs	Molecular Weight	V.R. of Gel Permeation Chromatographs JJG 342	Organic Phase: 1kg/mol~0.7Mg/mol	$U_{\text{rel}}=4\%$		
				Water Phase: 1kg/mol~0.2Mg/mol	$U_{\text{rel}}=8\%$		
53	*Chemical Oxygen Demand (COD) Meter	Concentration	V.R. of Chemical Oxygen Demand (COD) Meters JJG 975	A: (45~1000) mg/L	$U_{\text{rel}}=2.4\%$		
				B: (45~1000) mg/L	$U_{\text{rel}}=2.6\%$		
		Temperature		A: (100~200) °C	$U=0.8^\circ\text{C}$		
		Time		(0~3600) s	$U=0.2\text{s}$		
54	*Water Quality On-line Analyzer of Total Phosphorus and	Concentration	V.R. of Water Quality On-line Analyzer of Total Phosphorus and Total Nitrogen JJG 1094	Total Phosphorus: (0.1~0.5) mg/L	$U=0.01\text{mg/L}$		
				Total Phosphorus: (0.5~500)mg/L	$U_{\text{rel}}=1.8\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Total Nitrogen			Total Nitrogen: (0.4~2) mg/L	$U=0.03\text{mg/L}$		
				Total Nitrogen: (2~500)mg/L	$U_{\text{rel}}=2.2\%$		
55	*Silicate Analyzers	concentration	C.S.for Silicate Analyzers JJF 1539	(10~100) $\mu\text{g/L}$	$U=1.0\mu\text{g/L}$		
				(100~2000) $\mu\text{g/L}$	$U=0.4\%\text{FS}\sim 1.2\%\text{FS}$		
56	*Phosphate Analyzers	concentration	C.S.for Phosphate Analyzers JJF 1567	(1~1000) mg/L	$U_{\text{rel}}=1.2\%$		
57	*Residual Chlorine Meters	Concentration	C.S.for Residual Chlorine Meters JJF 1609	Free residual chlorine: (0.5~50) mg/L	$U_{\text{rel}}=2.6\%$		
				Total residual chlorine: (0.5~50) mg/L	$U_{\text{rel}}=2.4\%$		
58	Wood Moisture Content Measuring Meters	Moisture Content	V.R. of Wood Moisture Content Measuring Meters JJG 986	6%~28%	$U=0.4\%$		
59	Routine Capillary Viscometers	Viscosity	V.R. of Routine Capillary Viscometers JJG 155	(1~50) $\text{mm}^2\cdot\text{s}^{-1}$	$U_{\text{rel}}=0.4\%\sim 0.7\%$		
				(50~50000) $\text{mm}^2\cdot\text{s}^{-1}$	$U_{\text{rel}}=0.7\%\sim 1.2\%$		
60	Znpler Viscosimeter	Time	V.R. of Znpler Viscosimeter JJG 742	(50~52) s	$U_{\text{rel}}=1.2\%$		
61	*Micro Oxygen Analyzer	Concentration	V.R. of Micro Oxygen Analyzers JJG 945	(2~850) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.2\%$		
62	*Zirconia Oxygen Analyzers	Concentration	V.R. of Zirconia Oxygen Analyzers JJG 535	4%~90%	$U_{\text{rel}}=1.2\%$		
63	*Sulfur Dioxide Gas Detector	Concentration	V.R. of Sulfur Dioxide Gas Detectors JJG 551	Alarm Detectors: (2~850) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.6\%$		
64	*Hydrogen Chloride Alarm Detector	Concentration	C.S. for Hydrogen Chloride Gas Detectors and Alarms JJF 1888	(2~85) $\mu\text{mol/mol}$	$U_{\text{rel}}=3.3\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
65	*Chlorine Alarm Detectors	Concentration	C.S.for Chlorine Alarm Detectors JJF 1433	(2~85) μmol/mol	U _{rel} =2.2%		
66	*Alarmer Detector of Benzene	Concentration	C.S.for Alarmer Detectors of Benzene JJF 1674	(2~85) μmol/mol	U _{rel} =3%		
67	*Elemental Analyzers	Content	C.S.for Elemental Analyzers JJF 1321	kjeldahl nitrogen:47%	U _{rel} =1.3%		
				Petroleum Products S:(1~5000)mg/L	U _{rel} =2.5%		
				Steel O:0.002%~0.005%	U _{rel} =8%		
				Steel N:0.02%~0.06%	U _{rel} =7%		
				Steel H:(0.9~20)×10 ⁻⁶	U _{rel} =9%		
68	*Industrial Analyzers	Quality	V.R. of Industrial Analyzers JJG 1140	1g	U=0.2mg		
				107℃	U=0.5℃		
				815℃	U=0.9℃		
				900℃	U=0.9℃		
		Ash Content		7%~15%	U=0.14%		
				15%~30%	U=0.19%		
				30%~40%	U=0.22%		
		Volatile Content		6%~20%	U=0.23%		
				20%~40%	U=0.33%		
69	*Osmometers	Concentration	V.R. of Osmometers JJG 1089	(100~400)mOsmol/kg	U=2.0mOsmol/kg		
				(400~700)mOsmol/kg	U _{rel} =0.5%		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
70	Induction Salinometer	Salinity	V.R. of Induction Salinometer JJG 392	2~42	$U=0.004$		
		Temperature		(5~50) °C	$U=0.2^{\circ}\text{C}$		
71	Electrode Salinometer	Salinity	V.R. of Electrode Salinometer JJG 761	2~42	$U=0.004$		
72	*Oxygen Alarm Detectors for Mining	concentration	V.R. of Oxygen Alarm Detectors for Mining JJG 1087	5%~25%	$U_{\text{rel}}=1.2\%$		
73	*Detectors of Mining Carbon Monoxide	concentration	V.R. of Detectors of Mining Carbon Monoxide JJG 1093	(20~1500) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.2\%$		
74	*Pour Point and Cloud Point Testers of Petroleum Product	Pour Point	C.S. for Pour Point and Cloud Point Testers of Petroleum Products JJF 1869	(-55~-2) °C	$U=4.5^{\circ}\text{C}$		
		Cloud Point		(-25~-0.5) °C	$U=2.2^{\circ}\text{C}$		
75	*Water Activity Meter	water activity	V.R. of Water Activity Meters JJG (Yue) 052	0.4~1	$U=0.005\sim0.007$		
		Temperature		(0~50) °C	$U=0.2^{\circ}\text{C}$		
76	*Octane Number Meter	Octane Number	C.S. for Research Octane Number Meters JJF (Su) 107	(90~95) RON	$U=1.2 \text{ RON}$		
		Rotating speed		(100~1000) r/min	$U_{\text{rel}}=0.2\%$		
77	*Hand Saccharimeter (content-meter) and Hand Refractometer	Content	V.R. of Hand Saccharimeter (content-meter) and Hand Refractometer JJG 820	Sugar degree: 5%~60%	$U=0.21\%$	Hand Saccharimeter (content-meter): Accredited only for instruments with scale intervals of	



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Refractive index		1.3000~1.7000	$U=0.0003$	0.5, 1.0, and 2.0.	
78	*Determinators for Total Sulfur in Coal	Content	V.R. of Determinators for Total Sulfur in Coal JJG 1006	0.5%~1%	$U=0.04\%\sim0.09\%$		
				1%~4%	$U=0.07\%\sim0.12\%$		
				4%~6%	$U=0.09\%\sim0.15\%$		
		Temperature		(1100~1300)°C	$U=(0.5\sim1)^\circ\text{C}$		
79	*Total Hydrocarbon Methane and Non-Methane Total Hydrocarbon Analyzer	concentration	C.S. for Total Hydrocarbon Methane and Non-Methane Total Hydrocarbon Analyzers JJF(Ji)188	methane: (100~30000) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.1\%$		
80	*Ultraviolet Fluorescence Sulfur Analyzer	concentration	C.S. for Ultraviolet Fluorescence Sulfur Analyzers JJF 1685	(0.5~10)mg/L	$U_{\text{rel}}=3.2\%$		
				(10~100)mg/L	$U_{\text{rel}}=2.7\%$		
				(100~200)mg/L	$U_{\text{rel}}=2.6\%$		
				(200~1000)mg/L	$U_{\text{rel}}=2.5\%$		
				(1000~2000)mg/L	$U_{\text{rel}}=2.2\%$		
		Detection Limit		$\leq 0.2\text{mg/L}$	$U=0.03\text{mg/L}$		
81	*Sulfur X-ray Fluorescence Spectrometry Analyzers	Content	C.S for Sulfur X-ray Fluorescence Spectrometry Analyzers JJF 1952	(5~500)mg/kg	$U=1.1\text{mg/kg}$		
				0.05%~1.1%	$U_{\text{rel}}=3.1\%$		
		Detection Limit		$\leq 15\text{mg/kg}$	$U_{\text{rel}}=17\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
82	*Antibiotics Potency Analyzer	Length	C.S. for Antibiotics Potency Analyzers JJF 1614	Pipe-plate method: (16~22) mm	U=0.03mm	No working turbidity instrument	
83	*Oxygen Index Instrument	Oxygen Index	V.R. for Oxygen Index Instrument JJG(JG)16	18%~45%	U _{rel} =4.5%		
		Concentration		20%~50%	U _{rel} =2.1%		
84	*Carbon Dioxide Detecor	concentration	C.S. for Carbon Dioxide Detecors JJF (Ji) 66	0.15%~5%	U _{rel} =2%		
85	Capacitive and Resistive Grain Moisture Testers	Content	V.R. of Capacitive and Resistive Grain Moisture Testers JJG 891	8%~33%	U=0.3%		
86	*Flue Gas Samplers	Flow Capacity	V.R. of Flue Gas Samplers JJG 1169	(0.1~2.0)L/min	U _{rel} =1.8%		
		Time		(0.1~3600)s	U=0.2s		
		Temperature		(0~50)℃	U=0.6℃		
		Pressure		Atmospheric Pressure:(800~1060)hPa	U=0.3kPa		
				Inlet Pressure:(-50~50)kPa	U=0.5%FS		
87	*Thin Layer Chromatography Scanner	concentration	C.S. for Thin Layer Chromatography Scanners JJF 1712	(0.01~0.500) mg/mL	U=0.002mg/mL		
88	*Alkali Content Measuring Determinator	Electric Potential	C.S. for Alkali Content Measuring Determinator JJF (Min) 1109	(-2000~+2000)mV	U=0.7mV		
		concentration		(0.001~0.1)mol/L	U _{rel} =5%		
89	*Alarms and Detectors of Chloroethylene Gas	concentration	V.R. of Alarms and Detectors of Chloroethylene Gas JJG 1125	(1~100) μ mol/mol	U _{rel} =3%		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
90	*Ammonia-Nitrogen Automatic Analyzer	concentration	V.R. of Ammonia-Nitrogen Automatic Analyzers JJG 631	(0.1~100) mg/L	$U_{rel}=2.4\%$		
91	*C.S for Continuous Emission Monitoring Systems of Flue Gas Emitted from Stationary Source	Light absorption ratio	C.S for Continuous Emission Monitoring Systems of Flue Gas Emitted from Stationary Source JJF 1585	30%~80%	$U=0.7\%$	Calibration without working condition	
		Coaxiality		SO ₂ : (10~800) μ mol/mol	$U_{rel}=2.5\%$		
				NO: (200~850) μ mol/mol	$U_{rel}=2.1\%$		
				O ₂ : 5%~30%	$U_{rel}=2.0\%$		
		Pressure		(-3~3) kPa	$U=0.6\%FS$		
92	*Water Hardness Meters	Concentration	C.S for Water Hardness Meters JJF 1949	(1~4500)mg/L	$U_{rel}=2.5\%$		
		Temperature		(0~60) °C	$U=0.1^{\circ}C$		
93	*Gas Chromatographs with Sulfur Chemiluminescence Detector	Detection limit	C.S for Gas Chromatographs with Sulfur	≤ 10 pg/s	$U_{rel}=25\%$		
		Density	Chemiluminescence Detector JJF 1953	(1~100) μ mol/mol	$U_{rel}=2\% \sim 4\%$		
94	*On-line Automatic Determinators of Chemical Oxygen Demand(COD)	concentration	V. R. of On-line Automatic Determinators of Chemical Oxygen Demand(COD) JJG 1012	(16~1000) mg/L	$U_{rel}=(1.2 \sim 2.7) \%$		
95	*Copper Content Analyzer, Iron Content Analyzer	concentration	C.S for Analyzer of Copper Content and Iron Content JJF (Qian) 13	(1~200) μ g/L	$U_{rel}=(1.5 \sim 2.0) \%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
96	*Bromine Number and Bromine Index Meters	Bromine Number	C.S for Bromine Number and Bromine Index Meters JJF 1569	(10~110) g/100g	$U= (0.8\sim6.0)$ g/100g		
		Bromine Index		(10~600) mg/100g	$U= (1.2\sim32)$ mg/100g		
97	*Energy Dispersive X-Ray Fluorescence Spectrometers	Content	C.S for Energy Dispersive X-Ray Fluorescence Spectrometers JJF 2024	Cd,Pb,Cr,Hg:(0.1~1000)mg/kg	$U_{rel}=11\%\sim13\%$		
				Br:(0.1~1000)mg/kg	$U_{rel}=11\%$		
				Cr,Ni,Mo:(0.001~4.0)%	$U_{rel}=6\%$		
				C,Si,Mn:(0.001~4.0)%	$U_{rel}=6\%$		
				P:(0.001~0.05)%	$U_{rel}=18\%$		
				S,As:(0.001~0.1)%	$U_{rel}=11\%$		
				Cu,V:(0.001~0.5)%	$U_{rel}=8\%$		
98	*Colony Counters	Colony Count	C.S for Colony Counters JJF 1751	(20~300) CFU	$U_{rel}=1.8\%\sim2.8\%$		
99	*Diesel Cetane Number Test Machines	Cetane Number	C.S for Diesel Cetane Number Test Machines JJF (SH) 080	(20.0~80.0)CN	$U=2.7$ CN		
		Revolution Speed		(20~3000) r/min	$U_{rel}=0.5\%$		
100	*Nitrogen Detectors (Chemiluminescence Method) of Petroleum Products	Concentration	C.S for Nitrogen Detectors (Chemiluminescence Method) of Petroleum Products JJF (SH) 083	(1~2000.0) mg/L	$U_{rel}=1.1\%\sim4.8\%$		
		Temperature		(300~1100)°C	$U=2.3$ °C		
101	*Petroleum Products Coulomb Sulfur Analyzers	Concentration	C.S for Petroleum Products Coulomb Sulfur Analyzers JJF(Lu) 115	(1~10.0)mg/L	$U=0.3$ mg/L		
				(10.0~1000)mg/L	$U_{rel}=2.2\%$		

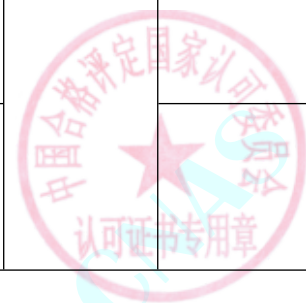


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
102	*Petroleum Products Coulomb Chlorine Analyzers	Concentration	C.S for Petroleum Products Coulomb Chlorine Analyzers JJF(Lu) 116	(1~10.0)mg/L	$U=0.3\text{mg/L}$		
				(10.0~1000)mg/L	$U_{\text{rel}}=2.6\%$		
103	*Basic Nitrogen Meters	Concentration	C.S for Basic Nitrogen Meters JJF(Lu) 114	(1~200) $\mu\text{g/g}$	$U_{\text{rel}}=3.2\%$		
		Capacity		(1.0~10.0)mL	$U=0.01\text{mL}$		
104	*MicroCarbon Residue Testers	Concentration	C.S for MicroCarbon Residue Testers JJF (SH) 056	1%~5%	$U=0.1\%$		
				5%~10%	$U_{\text{rel}}=5\%$		
		Temperature		(300~800) $^{\circ}\text{C}$	$U=0.9^{\circ}\text{C}$		
		Flow		(100~800) mL/min	$U_{\text{rel}}=2.0\%$		
105	*Automatic Atmospheric Distillation Testers	Temperature	C.S for Automatic Atmospheric Distillation Testers JJF 2065	CRM of Toluene for Distillation 50% Recovery Temperature:(100~120) $^{\circ}\text{C}$	$U=0.7^{\circ}\text{C}$		
				CRM of Synthetic Gasoline for Distillation 10% Evaporation Volume Recovery Temperature:(70~100) $^{\circ}\text{C}$	$U=1.3^{\circ}\text{C}$		
				CRM of Synthetic Gasoline for Distillation 50% Evaporation Volume Recovery Temperature:(90~120) $^{\circ}\text{C}$	$U=1.8^{\circ}\text{C}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
				CRM of Synthetic Gasoline for Distillation 90% Evaporation Volume Recovery Temperature:(120~200) °C	$U=2.7^{\circ}\text{C}$		
				CRM of Diesel for Distillation 10% Recovery Temperature:(170~230) °C	$U=2.2^{\circ}\text{C}$		
				CRM of Diesel for Distillation 50% Recovery Temperature:(250~290) °C	$U=1.2^{\circ}\text{C}$		
				CRM of Diesel for Distillation 90% Recovery Temperature:(290~350) °C	$U=3.0^{\circ}\text{C}$		
106	*Evaporation Loss of Lubricating Oil Testers (Noack Method)	Content	C.S for Evaporation Loss of Lubricating Oil Testers (Noack Method) JJF (SH) 084	10%~16%	$U=1.1\% \sim 1.8\%$		
107	*Salt Content Meters	Concentration	C.S for Salt Content Meters JJF(Lu) 118	(1~10)mg/L (10~10000)mg/L	$U=(0.03 \sim 0.1)\text{mg/L}$ $U_{\text{rel}}=2\%$		



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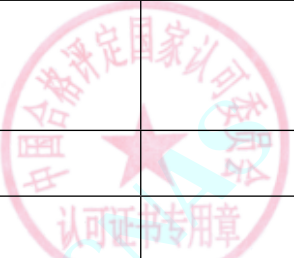
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
108	*Alarmer Detector of Sulfur Hexafluoride	Concentration	C.S for the Alarmer Detector of Sulfur Hexafluoride JJF1263	(1~1000) μ mol/mol	$U_{rel}=2\% \sim 3\%$		
109	*Extrusion Plastometers	Melt Flow Rate	Verification Regulation of Extrusion Plastometers JJG 878	Polyethylene: (1~3)g/10min	$U=0.17\text{g}/10\text{min}$		
				Polyethylene: (3~5)g/10min	$U=0.32\text{g}/10\text{min}$		
				Polyethylene: (5~8)g/10min	$U=0.42\text{g}/10\text{min}$		
				Polypropylene: (1~3)g/10min	$U=0.20\text{g}/10\text{min}$		
				Polypropylene: (3~5)g/10min	$U=0.26\text{g}/10\text{min}$		
				Polypropylene: (2~5)cm ³ /10min	$U=0.39\text{cm}^3/10\text{min}$		
				Polypropylene: (5~10)cm ³ /10min	$U=0.52\text{cm}^3/10\text{min}$		
				Polypropylene: (10~30)cm ³ /10min	$U=1.2\text{cm}^3/10\text{min}$		
110	*Airborne Microbe Sampler	Flow	C.S of Airborne Microbe Sampler JJF(Shan)053	(0.1~200) L/min	$U_{rel}=1.3\%$		
		Time		(0.1~600) s	$U=0.2\text{s}$		
111	*Acid Number Testers	Acid Number	C.S for Acid Number Testers JJF(Jin) 3030	(0.05~0.1) mg/g	$U=0.007\text{mg/g}$		
				(0.1~3) mg/g	$U_{rel}=2\% \sim 4\%$		
112	*Digital Refractometers	Refractive index	Calibration specification of Digital Refractometers and Digital Content-meters JJF (Zhe) 1207	1.3000~1.7000	$U=0.0003$		
		Temperature		(0~50) $^{\circ}\text{C}$	$U=0.08^{\circ}\text{C}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
113	*Automatic Ash Determination Equipment	Ash	Calibration Specification for Automatic Ash Determination Equipment JJF 2217	5%~40%	$U=0.77\%\sim 1.4\%$		
		mass		(0~500) g	$U=0.0002\text{g}\sim 0.0004\text{g}$		
114	*Total Organic Carbon Analyzer With Conductivity Measurement	Concentration	V.R.of Total Organic Carbon Analyzer With Conductivity Measurement JJG(Zhe)98	(0.2~2.5) mg/L	$U_{\text{rel}}=3.0\%$		
115	*Nitric Oxide and Nitrogen Dioxide Gas Detectors	Concentration	C.S for Nitric Oxide and Nitrogen Dioxide Gas Detectors JJG(Ji)111	NO: (2~850) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.5\%$		
				NO ₂ : (2~850) $\mu\text{mol/mol}$	$U_{\text{rel}}=2.5\%$		
116	*Kinematic Viscosity Tester	Viscosity	C.S for Kinematic Viscosity Tester JJF1274	(1~60000) mm^2/s	$U_{\text{rel}}=0.75\%$		
		Temperature		(20~100) $^{\circ}\text{C}$	$U=0.01^{\circ}\text{C}$		
		Measuring the ball constant		(0.001~100) mm^2/s^2	$U=0.00054\text{mm}^2/\text{s}^2$		
117	*Online automatic monitoring instrument for permanganate index	Concentration	C.S for On-line Automatic Monitors of Permanganate Index JJF 1875	(0.5~5.0)mg/L	$U=0.050\text{mg/L}$		
				(5~20.0)mg/L	$U_{\text{rel}}=4\%$		
118	*Mine hydrogen sulfide gas detector	Concentration	Verification Regulation of Hydrogen Sulfide Gas Detectors for Mining JJG 1161	(10~500) $\mu\text{mol/mol}$	$U_{\text{rel}}=3\%$		
119	*Ammonia Nitrogen Analyzer	concentration	C.S for Ammonia-nitrogen Meters JJF 2289	(0.1~100) mg/L	$U_{\text{rel}}=2.5\%$		
120	*Epoxy Ethane Gas Detector	Concentration	C.S for Gas Detectors of Ethylene Oxide JJF 2288	(2~80) $\mu\text{mol/mol}$	$U_{\text{rel}}=3\%$		



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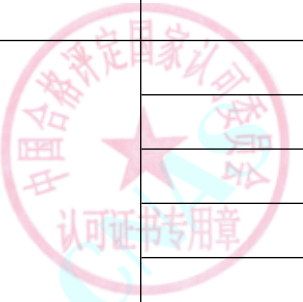
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
121	*Mine carbon dioxide gas detection and alarm device	Concentration	C.S for Carbon Dioxide Gas Detectors and Alarms for Mining JJF 2114	0.5%~4.5%	$U=0.03\%\sim 0.09\%$		
10、Special measuring instruments for textile and leather							
1	*Crock meter	Length	C.S.for Corlour Fastness to Friction Testers JJF (FZ) 027	Displacement: (100~110)mm	$U=0.5\text{mm}$		
				Diameter: (10~30) mm	$U=0.04\text{mm}$		
		Rev- Speed		(57~63) r/min	$U=1\text{r/min}$		
		Force		(9~11)N	$U_{\text{rel}}=0.5\%$		
2	*Colour Fastness to Perspiration Testers	Mass	C.S.for Colour Fastness to Perspiration Testers JJF (FZ) 028	(4240~5400)g	$U=1\text{g}$		
3	*Tester of Wash Fastness	Temperature	C.S.for Corlour Fastness to Washing Testers JJF(FZ)026	(0~100)°C	$U=0.6^{\circ}\text{C}$		
		Rotate Speed		(30~50) r/min	$U=1\text{r/min}$		
		Time		(0~3600)s	$U=2\text{s}$		
		Length		(0~300)mm	$U=0.03\text{mm}$		
4	*Rotary roller mill	Length	C.S. for Rotating Cylindrical Drum Abrasion Machine JJF (Min) 1067	(150~400) mm	$U=0.06\text{mm}$		
		Force value		(9.8~10.2) N, (4.9~5.1) N	$U=0.05\text{N}$		
		Revolution Speed		(39~49)r/min	$U=1\text{r/min}$		
		Time		(100~150) s	$U=0.3\text{s}$		
		Angle		(2~4) °	$U=4'$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
5	*Wrap Reeles	Length	C.S. for Wrap Reelers JJF(FZ)019	(30~50) mm	$U=0.03\text{mm}$		
				(50~1005) mm	$U=0.3\text{mm}$		
		Force value		(10~200)cN	$U_{\text{rel}}=1.5\%$		
		Speed		(30~250) r/min	$U=1.4\text{r/min}$		
6	*Fabric Thickness Instruments	Force value	C.S. for Fabric Thickness Instruments JJF(FZ)020	(50~500)cN	$U_{\text{rel}}=0.3\%$		
		Time		(10~30) s	$U=0.3\text{s}$		
		Area		(100~10000) cm ²	$U_{\text{rel}}=0.2\%$		
		Length		thickness: (0~10) mm	$U=0.002\text{mm}$		
7	*Scorch and Sublimation Tester	6/5000 Time	C.S. for Scorch and Sublimation Tester JJF(FZ)029	(0~20) min	$U=0.3\text{s}$		
		Force value		(12~20) N	$U=0.4\text{N}$		
		Length		(0~120) mm	$U=0.04\text{mm}$		
		Temperature		(5~300) °C	$U=1^{\circ}\text{C}$		
8	*Circle Sample Cutters	area	C.S. for Circle Sample Cutters JJF (FZ) 061	(10~200) cm ²	$U_{\text{rel}}=0.3\%$		
9	*Vertical Combustion Tester	Length	C.S. for Vertical Combustion Tester JJF(FZ) 068	(9.5~42)mm	$U=0.03\text{mm}$		
				(42~770)mm	$U=0.3\text{mm}$		
		Mass		(48~470)g	$U=0.05\text{g}$		
		Time		(1~300) s	$U=0.3\text{s}$		
		Angle		(24~26) °	$U=0.2^{\circ}$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Speed		(35~55)mm/s	U=1.4mm/s		
10	*Traveling Counting Glasses	Length	C.S. for Traveling Counting Glasses JJF(FZ)023	(0~50) mm	U=0.04mm		
11	*Akron Abrasion Machine	Angle	C.S. for Rubber Akron Abrasion Machine JJF (SH) 039	(14.5~15.5) ° , (24.5~25.5) °	U=0.06°		
		Force		(26.5~26.9) N	U=0.04N		
		Rotating speed		(30~80) r/min	U=0.2r/min		
12	*Thickness of Geosynthetics Determinator	Length	C.S. for the Thickness of Geosynthetics Determinator JJF(Min)1125	(0.5~50) mm	U=0.01mm		
13	*Unconfined Thickness Measurement Instrument	Area	V.R. of Unconfined Thickness Measurement Instrument JJG(JT)177	(50~2000) mm ²	U=3mm ²		
		Strength		(1~500) cN	U _{rel} =0.12%		
		Time		(5~30) s	U=0.2s		
		Length		(0~10) mm	U=0.01mm		
14	*Fibre Strength Tester	Length	C.S. for Fibre Strength Tester JJF (FZ) 016	(0~200) mm	U=0.03mm		
		Force		(0.1~200) cN	U _{rel} =0.3%		
		Speed		(1~200) mm/min	U _{rel} =1.0%		
15	*Textiles Horizontal Burning Rate Testers	Time	C.S. for Textiles Horizontal Burning Rate Testers JJF (FZ) 094	(0~20) s	U=0.3s		
		Length		(0~1) mm	U=0.01mm		
				(5~30) mm	U=0.06mm		
				(30~350) mm	U=0.3mm		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
11、Special measuring instruments for motor vehicles							
1	*Wheel Dynamic Balancers	Minimum residual imbalance	C.S. for Wheel Dynamic Balancers JJF 1151	(0.1~200)g	$U=2.6g$		
		Separation ratio		0.01~0.125	$U=0.05$		
		beat		(0.01~12.7)mm	$U=0.02mm$		
		length		(0.1~500)mm	$U=0.04mm$		
		phase		(0~360)°	$U=2^{\circ}$		
2	Tire Tread Depth Gauges	Length	C.S. for Tire Tread Depth Gauges JJF 1477	(0~100)mm	$U=0.01mm$		
3	*Tire Pressure Monitoring Systems(TPMS)	Pressure	C. S. for Tire Pressure Monitoring Systems(TPMS) JJF 1813	(100~1400)kPa	$U=0.2\%FS$		
		Time		(0~1)h	$U=0.3s$		
4	*Oil Consumption Meters of Mass Method	Mass	C. S. for Oil Consumption Meters of Mass Method JJF 1670	(10~2000)g	$U_{rel}=0.02\%$		
12、Special measuring instruments for meteorology and ocean							
1	Portable 3-cup Anemometers	Wind speed	V. R. of Portable 3-cup Anemometers JJG 431	(0.2~1)m/s	$U_{rel}=3.0\%$		
				(1~5)m/s	$U_{rel}=1.5\%$		
				(5~30)m/s	$U_{rel}=1.0\%$		
2	Thermo-anemoscopes	Wind speed	C.S for Thermo-anemoscopes JJF1939	(0.2~1)m/s	$U_{rel}=3.0\%$		
				(1~5)m/s	$U_{rel}=1.5\%$		
				(5~30)m/s	$U_{rel}=1.0\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
3	Bucket Thermometers	Temperature	V.R. of Bucket Thermometers JJG 289	(-5~40) °C	$U=0.06^{\circ}\text{C}$		
4	Magnetoelectricity Wind Sensor for Wind Farm	Wind speed	C. S. for Magnetoelectricity Wind Sensor for Wind Farm JJF 1431	(5~10)m/s	$U_{\text{rel}}=1.5\%$		
				(10~25)m/s	$U_{\text{rel}}=1.0\%$		
5	Wind Direction and Wind Speed Sensor of Automatic Meteorological Station	Wind speed	V.R. of Wind Direction and Wind Speed Sensor of Automatic Meteorological Station JJG (QX) 004	(2~5) m/s	$U_{\text{rel}}=1.5\%$		
				(5~30) m/s	$U_{\text{rel}}=1.0\%$		
		Wind direction		(0~360) °	$U=1.1^{\circ}$		
6	Contact Anemorumbometer	Wind speed	V. R. of Contact Anemorumbometer JJG 613	(0.2~1) m/s	$U_{\text{rel}}=3.0\%$		
				(1~5) m/s	$U_{\text{rel}}=1.5\%$		
				(5~30) m/s	$U_{\text{rel}}=1.0\%$		
		Wind direction		(0~360) °	$U=1.4^{\circ}$		
7	Fanning Mill Anemometers	Wind speed	C.S. for Fanning Mill Anemometers JJF 1971	(0.1~30) m/s	$U_{\text{rel}}=(1.0\sim3.0)\%$		
8	Ultrasonic Anemometers	Wind speed	C.S. for Ultrasonic Anemometers JJF 1934	(0.2~1) m/s	$U_{\text{rel}}=3.0\%$		
				(1~5) m/s	$U_{\text{rel}}=1.5\%$		
				(5~30) m/s	$U_{\text{rel}}=1.0\%$		
		Wind direction		(0~360) °	$U=(0.1\sim0.3)^{\circ}$		
9	Cup Wind Speed Transducers of Automatic Weather	Wind speed	C.S. for Cup Wind Speed Transducers of Automatic Weather JJF 1935	(2~5) m/s	$U_{\text{rel}}=1.5\%$		
				(5~30) m/s	$U_{\text{rel}}=1.0\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
10	Wind Direction Sensors of Automatic Meteorological	Wind direction	V.R.of Wind Direction Sensors of Automatic Meteorological JJG 1211	(0~360) °	$U=1.1^{\circ}$		
11	Anemometers Used in Marine Field	Wind speed	V.R.of Anemometers Used in Marine Field JJG 1167	(2~5) m/s	$U_{rel}=1.5\%$		
		Wind direction		(5~30) m/s (0~360) °	$U_{rel}=1.0\%$ $U=1.1^{\circ}$		
12	Wind Speed Transmitters	Wind speed	C.S.for Wind Speed Transmitters JJF (JI) 252	(0.2~1) m/s	$U_{rel}=3.0\%$		
				(1~5) m/s	$U_{rel}=1.5\%$		
				(5~20) m/s	$U_{rel}=1.0\%$		
13	Portable Induction Anemometers	Wind speed	V.R.of Portable Induction Anemometers JJG 515	(2~5) m/s	$U_{rel}=1.5\%$		
				(5~30) m/s	$U_{rel}=1.0\%$		
		Wind direction		(0~360) °	$U=1.4^{\circ}$		
14	Meteorological glass liquid thermometer	Temperature	V.R.of Meteorological glass liquid thermometer JJG 207	(-60~80) °C	$U=0.04^{\circ}\text{C}$		
13、Special measuring instruments for papermaking and paper							
1	*Bursting Strength Testers for Paper (Board)	Pressure	C.S. for Bursting Strength Testers for Paper (Board) JJF 1811	(0~6000) kPa	$U=0.1\%FS$		
14、Special measuring instruments for medicine							
1	*ELISA Analytical Instrument	Wavelength	V.R. of ELISA Analytical Instruments JJG 861	(405~620)nm	$U=1\text{nm}$	Only calibrate the wavelength	

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Absorbance		0.2~1.6	U=0.01	indication error of Class III instruments	
2	*Sphygmomanometer	Pressure	V.R.of Sphygmomanometer JJG 270	(0~40)kPa	U=0.2kPa		
3	*Stiffness Testers of Needle Tubing	Force	C.S. for Stiffness Testers of Needle Tubing JJF 1466	(1~60)N	U=0.01N		
		Span		(1~60)mm	U=0.04mm		
		Loading Speed		(0.1~5)mm/min	U=0.02mm/min		
		Deflection		(0.01~0.65)mm	U=0.003mm		
4	*Table Friability Surveymenters	Rotational Speed	C.S. for Table Friability Surbeymenters JJF(Lu) 131	(20~200)r/min	U=0.3r/min		
		Number of Turns		100r	U _{rel} =0.5%		
		Length		155.5mm	U=0.05mm		
5	*Medical Centrifuges	Rotating Speed	C.S. for Medical Centrifuges JJF 2004	(20~60000)r/min	U _{rel} =0.2%		
		Time		(10~3600)s	U=0.5s		
		Temperature		(-40~80)℃	U=0.3℃		
6	*Dissolution Testers	Temperature	C.S.for Dissolution Testers JJF (Yu) 191	37℃	U=0.3℃		
		Rotating Speed		50r/min、100r/min、200r/min	U _{rel} =0.6%		
		Time		1800s	U _{rel} =0.4%		
15、Special measuring instruments for chemical industry							



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
1	*Rubber disk swing vulcanizer	torque	V.R.of rubber disk oscillating vulcanizer JJG (H) 101	(0.1~20) Nm	$U_{rel}=0.4\%$		
		Length		(5~200) mm	$U=0.04\text{mm}$		
		Temperature		(room temperature~250) °C	$U=0.2^{\circ}\text{C}$		
		Force value		(10.5~11.5) kN	$U_{rel}=0.2\%$		
		Angle		(0~5.5) °	$U=4'$		
2	measuring sand content in drilling fluids	capacity	Calibration method of equipment for measuring sand content in drilling fluids SY/T6816	(0.1~1) mL	$U=0.02\text{mL}$		
				(1~6) mL	$U=0.06\text{mL}$		
				(6~120) mL	$U=0.25\text{mL}$		
		Length		(0~110) μm	$U=3\text{ μm}$		
3	*Low temperature impact test device	mass	Verification procedure for test equipment of rubber plastic wire and cable--Part2: Low temperature impact test device JB/T4278.2	(0.5~1500)g	$U=0.2\text{g}$		
		Length		(10~200)mm	$U=0.04\text{mm}$		
4	*Rebound Resilience Machinefor vulcanized Rubber	Quality	C.S. for Rebound Resilience Machinefor vulcanized Rubber JJF (SH) 038	(56~350)g	$U=0.1\text{g}$		
		Length		(0~2)m	$U=0.1\text{mm}$		
		Force value		(50~600) N	$U_{rel}=0.15\%$		
5	*Rubber Parallel Plate (Willams) Plastometer	Force value	V.R. of Rubber Parallel Plate (Willams) Plastometer JJG (HG) 107	(20~200) N	$U=0.1\text{N}$		
		Length		(0~10) mm	$U=0.01\text{mm}$		
		Time		(0~200) s	$U=0.5\text{s}$		

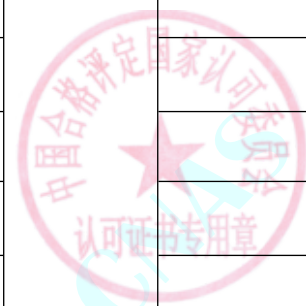


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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Temperature		(room temperature~200) °C	$U=0.4^{\circ}\text{C}$		
		Degree of parallelism		(0~1)mm	$U=5\text{ }\mu\text{m}$		
6	*Experimental Daylight Presses	Temperature	C.S. for Experimental Daylight Presses JJF (SH) 015	(room temperature~300) °C	$U=0.3^{\circ}\text{C}$		
		Degree of parallelism		(0~1)mm	$U=5\text{ }\mu\text{m}$		
		Time		(0~3600) s	$U=0.2\text{s}$		
7	*Film Adhesion Testers (Circle-drawing method)	Length	C.S. for Film Adhesion Testers (Circle-drawing method) JJF(SH)036	(0.01~40)mm	$U=0.03\text{mm}$		
8	*Film Return Tackiness Testers	Length	C.S. for Film Return Tackiness Testers JJF(Petrifaction)029	(9~12) mm	$U=0.03\text{mm}$		
		Quality		(495~505) g	$U=0.03\text{g}$		
9	*Coating Drying time Testers	Length	C.S. for Coating Drying time Testers JJF(Petrifaction)028	(10~12) mm	$U=0.03\text{mm}$		
		Quality		(195~205) g	$U=0.03\text{g}$		
10	Wet Film Thickness Gauges	Length	C.S. for Wet Film Thickness Gauges JJF1484	Comb Gauge:(5~100) μm	$U=1.1\text{ }\mu\text{m}$		
				Comb Gauge:(100~3000) μm	$U=1.1\text{ }\mu\text{m}$		
				Wheel Gauge:(5~125) μm	$U=1.1\text{ }\mu\text{m}$		
				Wheel Gauge:(125~250) μm	$U=1.1\text{ }\mu\text{m}$		
				Wheel Gauge:(250~1500) μm	$U=1.1\text{ }\mu\text{m}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
11	*Film hardness of pencil Scratch Test	Mass	V.R.for Film hardness of pencil Scratch Test	50g、100g、200g、500g、1000g	$U=0.06g$		
		Angle	JJG(Hua)012	(44~46)°	$U=0.3^{\circ}$		
12	*Tester for Tyre Strength and Bead Unseating Resistance	Force value	C.S. for Tester for Tyre Strength and Bead Unseating Resistance JJF 1194	(0.5~100)kN	$U_{rel}=0.15\%$		
		Length		(0~500)mm	$U=0.5mm$		
		Speed		(45~55)mm/min	$U=0.5mm/min$		
13	*Drum Tester for Tyre Endurance and High Speed Test	Force value	C.S. for Drum Tester for Tyre Endurance and High Speed Test JJF 1195	(0.5~60) kN	$U_{rel}=0.15\%$		
		Length		(1500~2000)mm	$U=2mm$		
		Time		(0~300)s	$U=0.5s$		
		Speed		(30~320)km/h	$U_{rel}=0.3\%$		
14	*Abrasion Tester for Paint Films	Rotating speed	V.R.of Abrasion Tester for Paint Films JJG (JT) 125	(58~62)r/min	$U=2r/min$		
		Length		(0~300) mm	$U=0.05mm$		
		Mass		(0.5~1000) g	$U=0.02g$		
		Hardness		(45~55) HD	$U=1.2HD$		
		Force		(5~15) N	$U_{rel}=0.2\%$		
15	*coating flexibility testers	Length	C.S. for Coating Flexibility Testers JJF (SH) 006	Shaft thickness: (0~4) mm	$U=0.04mm$		
				Shaft diameter: (3~16) mm	$U=0.004mm$		
16	*Falling Ball Tester for Resilient Modulus	Radius of curvature	V.R. of Falling Ball Tester for Resilient Modulus JJG (JT) 151	(115~125)mm	$U=1mm$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Mass		1.4kg、19kg	$U=1.5g$		
		Modulus of resilience		(0.1~100)%	$U_{rel}=2.5\%$		
17	*Paint Film Scrub Resistance Testers	Length	C.S.for Paint Film Scrub Resistance Testers JJF (SH) 001	(0~340) mm	$U=0.4mm$		
		Mass		(440~460) g	$U=0.4g$		
		Frequency		(35~39) times/min	$U=1\text{times/min}$		
		Force		(150~230) N	$U_{rel}=1.0\%$		
18	*Putty Film Flexibility Testers	Length	C.S.for Putty Film Flexibility Testers JJF (SH) 003	Shaft diameter: 50mm、100mm Shaft length: 80mm	$U=0.03mm$ $U=0.03mm$		
19	*Film Impact Tester	Mass	C.S. for Film Impact Testers JJF(SH) 002	1000g、2000g	$U=0.2g$		
		Length		Catheter scale: (0~50) cm	$U=0.2cm$		
				Punch diameter: (0~10) mm	$U=0.003mm$		
				Groove diameter: (0~20) mm	$U=0.05mm$		
				Impact depth: (0~5) mm	$U=0.02mm$		
20	*Low temperature brittleness testing machine	Temperature	Low temperature brittleness testing machine calibration method T/HBJLXH 007	(-80~0) °C	$U=0.06^{\circ}C$		
		Length		(0~50) mm	$U=0.04mm$		
21	*Coating Bend Testers (Cylindrical Mandrel)	Length	C.S. for Coating Bend Testers (Cylindrical Mandrel) JJF(SH) 035	(2~32)mm	$U=0.03mm$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
22	*Water Transport Engineering—Instrument for Testing Coating Adhesion	Force value	V.R.of Water Transport Engineering—Instrument for Testing Coating Adhesion JJF（JT）147	(1～10)kN	$U_{rel}=0.3\%$		
		Length		(0～300)mm	$U=0.03\text{mm}$		
23	*Pencil Hardness Testers	Mass	C.S.for Pencil Hardness Testers JJF(SH) 007	500g、750g、765g、1000g	$U=1\text{g}$		
		Angle		(44～46) °	$U=0.12^{\circ}$		
24	*Heat Distortion and Vicat Softening Temperature Apparatus	Temperature	Calibration Specification for Heat Distortion and Vicat Softening Temperature Apparatus JJF（MENG）055	(25～300)℃	$U=0.4^{\circ}\text{C}$		
		Deformation amount		(0.5～20) mm	$U=0.03\text{mm}$		
		heating rate		(1～150) °C/h	$U=0.2^{\circ}\text{C/h}$		
		quality		(0.5～5000) g	$U=0.06\text{g}$		
25	Rubber Die	Length	C.S.for Rubber Die JJF(SH)127	(0～200)mm	$U=3\text{ }\mu\text{m}$		
		Angle		(0～180)°	$U=0.3^{\circ}$		
		Hardness		(50～70)HRC	$U=2\text{HRC}$		
		Roughness		R_a (0.012～6.3) μm	$U_{rel}=7.7\%$		
26	Paint Film Scribes	Length	Calibration Specification for Paint Film Scribes JJF 2163	1mm、2mm、3mm	$U=3\text{ }\mu\text{m}$		
		Angle		30°	$U=0.2^{\circ}$		
16、Special measuring instruments for building and traffic							
1	*Test Sieves	Length	C.S.for Test Sieves JJF1175	(0.04～5) mm	$U=3\text{ }\mu\text{m}$		
				(5～125)mm	$U=0.04\text{mm}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
2	*determination specific surface air permeability apparatus	Length	V.R.for determination specific surface area of air permeability apparatus JJG (JC)107	(0~300)mm	$U=(0.03\sim0.05)\text{mm}$		
		volume		(0.1~2)cm ³	$U=0.004\text{cm}^3$		
		time		(1~100)s	$U=0.2\text{s}$		
3	Concrete Crack Width and Depth Measuring Instruments	Length	C.S. for Concrete Crack width and Depth Measuring Instrument JJF 1334	Crack width: (0.01~ 6)mm	$U=0.01\text{mm}$		
				Fracture depth: (20~ 400)mm	$U=3\text{mm}$		
				Width standard plate: (0~10)mm	$U=1\ \mu\text{m}$		
				depth standard block: (20~500)mm	$U=0.3\text{mm}$		
4	*Steel Bar Tarnish Measuring Instruments	Voltage	C.S.for Steel Bar Tarnish Measuring Instruments JJF1341	Voltage Output: (0.02~10)V	$U_{\text{rel}}=0.1\%$		
				Voltage Input: (0.02~ 10)V	$U_{\text{rel}}=0.15\%$		
		current		(0.01~1) A	$U_{\text{rel}}=0.1\%$		
5	Rebound Test Hammer	Rate setting of steel anvil	V.R. of Rebound Test Hammer JJG817	72~90	$U=1$		
		length		(15~145)mm	$U=0.04\text{mm}$		
		force		(0.1~1)N	$U=0.07\text{N}$		
		stiffness		(55~1200)N/m	$U=8\text{N/m}$		
6	*Apparatus to Determine Chloride Coulomb Electric Flux of Concrete	Voltage	C.S. for Apparatus to Determine Chloride Coulomb Electric Flux and Rapid Chloride Migration Coefficient of Concrete JJF	(10~100) V	$U=0.03\text{V}$		
		Current		(1~500) mA	$U=0.02\text{mA}$		
		Temperature		(5~95)°C	$U=0.08^\circ\text{C}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Time	(Min) 1053	(1~3600) s	$U=0.4s$		
7	*Rapid Measuring Instrument for Chloride Ion of Concrete	concentration	V.R. of Rapid Measuring Instrument for Chloride Ion of Concrete JJG (JT) 134	(0.001~0.100) mol/L	$U_{rel}=1.6\%$		
		potential		(0.01~2)mV	$U=0.1mV$		
8	*Needle and Flake Gages	Length	C.S. for Needle and Flake Gages JJF 1593	Size: (0~300) mm	$U=0.06mm$		
		Flatness		(0.02~1) mm	$U=0.02mm$		
9	*Sand filling instrument	Length	V.R. of sand filling instrument JJG (JT) 120	(0~500)mm	$U=0.06mm$		
10	*Asphalt Centrifugal Extractor	Revolution Speed	V.R. of Asphalt Centrifugal Extractor JJG(JT)132	(500~20000)r/min	$U_{rel}=0.3\%$		
		Length		(0.02~0.2)mm	$U=3\mu m$		
11	*Sand Equivalent Tester	Frequency	V.R. of Sand Equivalent Tester JJG(JT) 137	(170~190) min ⁻¹	$U=1min^{-1}$		
		length		Oscillation distance:(202~204)mm	$U=0.2mm$		
				Other dimensions:(0~500)mm	$U=0.06mm$		
				Scale:(0.1~6)mm	$U_{rel}=0.4\%$		
		Time		(20~40)s	$U=0.4s$		
		quality		(900~1100)g	$U=0.2g$		
12	*Cement mortar and concrete wear resistance test machine	Force value	V.R. of abrasion resistance testing machine for cement mortar and concrete JJG(JT) 097	(200~500)N	$U_{rel}=0.3\%$		
		Revolution Speed		(10~1000)r/min	$U_{rel}=0.5\%$		
		Length		(25~150)mm	$U=0.05mm$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
				(0.5~25)mm	U=0.005mm		
13	*Reinforced Concrete Covermeter and Floorslab Thickness Tester	Length	C.S. for Reinforced Concrete Covermeter and Floorslab Thickness Tester JJF 1224	(8~750) mm	U=0.7mm		
14	Determining Expansion of Le Chatelier Needles	Length	V.R. of Le Chatelier Tester for Determining Expansion of Le Chatelier Needles JJG(JT) 093	size: (0~300) mm	U=0.05mm		
		Mass		Scale: (0.1~6)mm	U _{rel} =0.4%		
				(299~301) g	U=0.03g		
15	Apparatus for Concrete Slump Test	Length	C.S. for Apparatus for Concrete Slump Test JJF (Zhe) 1093	(0.02~1) mm	U=0.06mm		
				(1~10) mm	U=0.006mm		
				(10~350) mm	U=0.06mm		
				(350~700) mm	U=0.3mm		
16	*Asphalt standard viscometer	Length	V.R. of Standard Viscometer of Bituminous Materials JJG(JT) 055	else size: (2~100)mm	U=0.04mm		
				flow hole diameter (2~11) mm	U=0.004mm		
		Temperature		(0~100) °C	U=0.05 °C		
17	*Bituminous Materials' Determining Ductility	Length	V.R. of Bituminous Materials' Determining Ductility JJG(JT) 023	(0~150)mm	U=0.04mm		
				(150~2000)mm	U=0.2mm		
		Temperature		(0~50) °C	U=0.1 °C		
		Speed		(5~55)mm/min	U _{rel} =0.4%		
18	*Compaction	Length	V.R. of Compaction	Gap: (2~2.5) mm	U=0.1mm		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Instrument of Soil	Mass	Instrument of Soil JJG(JT) 058,C.S.for Compaction	Drop height: (200~700) mm	U=0.3mm		
			Instrument of Soil JJG(Shan) 031	Hammer base diameter: (40~160) mm	U=0.05mm		
				(2000~5000) g	U=0.2g		
				(15~16) kg	U=0.6g		
				(35~36) kg	U=0.02kg		
19	*Automated Rut-Depth Measuring System	Length	V.R. of Automated Rut-Depth Measuring System JJG(JT) 051	(0.5~400) mm	U=0.2mm		
20	*Eight wheel continuous pavement roughness measuring instrument	Length	V.R. of Eight-wheel Continuous Vialog JJG(JT) 024	Static indication:(5~40)mm	U=0.3mm	Only perform static calibration	
				Calculation distance:(1~100)m	U=0.1m		
21	Concrete consistency meter	quality	Calibration Specification for Consistency Testing Instrument for Concrete Mixing JJF(Su) 50	(2~35) kg	U= (2~20) g		
		Length		(1~500) mm	U=(0.03~0.15)mm		
		amplitude		(0.4~0.6) mm	U=0.02mm		
		Frequency		(40~60) Hz	U=0.5Hz		
22	*Mortar layering Tester	Length	C.S. of Mortar layering Tester JJF(XIANG)36	(0~300) mm	U=0.06mm		
23	*Concrete penetration resistance tester	Length	V.R. of Concrete Penetration Resistance Tester JJG (JT) 095	Needle diameter(5.04~12.30)mm	U=0.003mm		
				Other dimensions(23.0~160.6)mm	U=0.04mm		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Force value		(100~1200)N	$U_{rel}=0.5\%$		
24	*Benkelman beam pavement deflectometer	Length	V.R. of Benkelman Beam Pavement Deflectometer JJG (JT) 025	Dial gauge: (0~10) mm	$U=0.004\text{mm}$		
				Probe dimensions: (0~300) mm	$U=0.05\text{mm}$		
				Measurement error: (0.1~3) mm	$U=0.01\text{mm}$		
				Lever arm ratio: (2:1)	$U_{rel}=0.24\%$		
				Deflection: (0~0.1) mm	$U=0.01\text{mm}$		
25	*Vibrating Table of Concrete Test	Frequency	C.S. of Vibrating Table of Concrete Test JJF(SHAN)076	(40~60)Hz	$U=0.06\text{Hz}$		
		Amplitude		(0.1~1)mm	$U=0.009\text{ mm}$		
26	*Asphalt mixture rutting test machine	Length	C.S. for Asphalt Mixture Rut-depth Testing Instrument JJF (Zhe) 1094	(0~30)mm	$U=0.004\text{mm}$		
				(30~205)mm	$U=0.05\text{mm}$		
				(205~240)mm	$U=0.5\text{mm}$		
		Temperature		(59~61)°C	$U=0.3^{\circ}\text{C}$		
		Frequency		(41~43)min ⁻¹	$U=0.3\text{min}^{-1}$		
		pressure		(0.65~0.75)MPa	$U=0.01\text{MPa}$		
27	*Asphalt mixture Marshall compaction instrument	Length	V.R. of Asphalt Mixture's Marshall Compaction Test Apparatus JJG(JT) 065	Elevation: (400~500)mm	$U=0.2\text{mm}$		
				Other dimensions: (10~200)mm	$U=0.05\text{mm}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		quality		(4~11)kg	U=2g		
		Frequency		(55~65)min ⁻¹	U=2min ⁻¹		
28	*Bitumen Toughness and Tenacity Testing Machine	Length	V.R. of Bitumen Toughness and Tenacity Testing Machine JJG(JT) 118	Displacement:(0.1~50)mm Sample container size:(30~60)mm	U _{rel} =0.2% U=0.03mm		
		Force value		(0.2~2)kN	U _{rel} =0.2%		
		Stretching speed		(450~550)mm/min	U=2mm/min		
29	*Jolting Table for Compacting Mortars Specimen	Time	C.S for Jolting Table for Compacting Mortars Specimen JJF(JC)124	(58~62)s	U=0.3s		
		Quality		(12~13)kg	U=0.03kg		
30	*Concrete PressureBleeding Measuring Instrument	Length	C.S. for Concrete Pressure Bleeding Measuring Instrument JJF (SHAN) 066	(120~130) mm	U=0.007mm		
				(190~210) mm	U=0.06mm		
		pressure		(0~60)MPa	U=0.1%FS		
31	*Mixer for Cement Paste	Revolution Speed	C.S for Mixer for Cement Paste JJF(JC) 104	(50~300) r/min	U=0.2r/min		
		Time		(10~300)s	U=0.3s		
		Length		L:(1~3)mm	U=0.07mm		
				Φ:(4~7)mm	U=0.3mm		
32	*Losangeles abrasion tester	Revolution Speed	V.R.of Los Angeles Testing Machine JJG(JT) 108	(28~35) r/min	U=0.5r/min		
		Mass		(50~6000) g	U=1.2g		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Length		Roller size (80~720) mm	$U=0.3\text{mm}$		
				Steel ball diameter (44.8~48.8) mm	$U=0.06\text{mm}$		
33	Diagonal measuring ruler	Length	C.S. for Construction Quality Tester Sets JJF 1110	(0.1~2)m	$U=0.1\text{mm}$		
34	*Marshall stability tester	Force value	V.R. of Marshall test machine for bituminous mixtures JJG (JT) 066	(1~100)kN	$U_{\text{rel}}=0.2\%$		
		Length		(0.5~17)mm	$U=0.02\text{mm}$		
		Rate		(40~60)mm/min	$U=0.5\text{mm/min}$		
35	Wedge feeler	Length	C.S. for Wedge-Shape Filler Gauges JJF 1548	Type I and type II: (0~60) mm	$U=0.015\text{mm}$		
				Digital display:(0~40)mm	$U=0.01\text{mm}$		
36	100 grid	Length	C.S. for Construction Quality Tester Sets JJF 1110	(100~300)mm	$U=0.3\text{mm}$		
37	Slope ruler	angle	C.S. for Construction Quality Tester Sets JJF 1110	(49~51)mm/m	$U=0.15\text{mm/m}$		
38	*Mechanical Sieve Shaker	Frequency	Calibrating Code for Mechanical Sieve Shaker SL 411	(140~290) min^{-1}	$U=3\text{min}^{-1}$		
		Length		(10~15)mm	$U=0.5\text{mm}$		
39	Pendulum friction coefficient tester	quality	V.R. of Pendulum Friction Tester JJG (JT) 053	(10~1600)g	$U=0.7\text{g}$		
		Length		(400~600)mm	$U=0.5\text{mm}$		
				(3~78)mm	$U=0.05\text{mm}$		
		hardness		(45~65)HA	$U=1.5\text{HA}$		
		Force value		(21.7~22.7)N	$U=0.03\text{N}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		coefficient of kinetic friction		(5~80)BPN	$U=0.8\text{BPN}$		
40	*Waterproof Roll Material Impervious Instrument	pressure	C.S. for Waterproof Roll Material Impervious Instrument JJF (JIN) 03	(0.01~0.6)MPa	$U=0.4\%\text{FS}$		
41	Flow Time Tester for Fine Aggregate	Length	V.R. of Flow Time Tester for Fine Aggregate JJG(JT) 109	(10~150)mm	$U=0.1\text{mm}$		
		Angle		(55~65)°	$U=0.2^\circ$		
42	Le Chatelier Flask for Determining Density of Hydraulic Cement	Capacity	V.R. of Le Chatelier Flask for Determining Density of Hydraulic Cement JJG(JT) 092	(1~24)mL	$U=0.02\text{mL}$		
43	*Rapid Freezing and Thawing Test Machine for Concrete	Temperature	C.S. of Rapid Freezing and Thawing Test Machine for Concrete JJF (JIN) 45	(-18~5) °C	$U=0.3^\circ\text{C}$		
		time		(0~150) min	$U=0.4\text{min}$		
44	*Apparatus for Normal Consistency and Setting Time of Cement Paste	Mass	C.S. for Nonmetal Building Materials Plastic Limit Measuring Instruments JJF1090, V.R. of Apparatus for Normal Consistency and Setting Time of Cement Paste JJG (JT) 050	(295~305)g	$U=0.1\text{g}$		
		Length		Diameter: (1~11)mm	$U=0.01\text{mm}$		
				Other sizes: (0~85)mm	$U=0.04\text{mm}$		
				Scale Range: S: (0~70)mm	$U=0.1\text{mm}$		
				Scale Range: P: (20~35)%	$U=0.02\%$		
		Angle		(40~50)°	$U=0.07^\circ$		
45	*Mortar Consistency	Mass	C.S. for Nonmetal Building Materials Plastic Limit	(295~305)g	$U=0.1\text{g}$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Meters	Length	Measuring Instruments JJF 1090, V.R. of Mortar Consistency Meters JJG (JT) 204	Indicated value: (0~150)mm	U=0.1mm		
				Other sizes: (0~200)mm	U=0.04mm		
		Angle		(29~31)°	U=0.07°		
46	Penetration tester for mortar strength	Force value	C.S. for Instrument of Testing Mortar-strength by Penetration Resistance Method JJF 1372	(780~820)N	U=3N		
		Length		(3~50)mm	U=0.05mm		
47	*Asphalt penetration tester	Quality	C.S for Apparatus for Determining Penetration of Bituminous Materials JJF 1208	(1~200) g	U=0.02g		
		Length		Diameter: (0.1 ~ 5) mm	U=0.003mm		
				(0 ~ 60) mm	U=0.02mm		
		Temperature		(0 ~ 50) °C	U=0.06°C		
		Angle		(8~10) °	U=0.1°		
48	*Soil liquid and plastic limit tester	Quality	V.R of Liquid & Plastic Limit Gauge JJG(JT) 069	(70~105)g	U=0.02g		
		Length		(25~55)mm	U=0.03mm		
		Displacement		(0.5~25)mm	U=0.003mm		
		Time		(4~6)s	U=0.16s		
		Angle		(25~35) °	U=0.06°		
49	*Apparatus to Measure Water Permeability of Concrete	pressure	C.S. for Apparatus to Measure Water Permeability of Concrete JJF 1812	(0~4) MPa	U=0.2%FS		
50	*Cement mortar mixer	Revolution Speed	V.R. for cement mortars mixer JJG (JC) 102	(10~300)r/min	U=2r/min		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Time		(10~200)s	$U=0.4s$		
51	*Flow Table for Determine Cement Mortar Fluidity	Length	V.R. of Flow Table for Determine Cement Mortar Fluidity JJG (JT) 096	(9~300)mm	$U=0.05mm$		
		quality		(4~5)kg	$U=20g$		
		time		(20~30)s	$U=0.3s$		
52	Dynamic Elastic Modulus Measurement Instruments	Frequency	C.S. for Dynamic Elastic Modulus Measurement Instruments JJF 1373	(1000~4000) Hz	$U_{rel}=0.35\%$		
		Dynamic elastic modulus		(0.1~100) GPa	$U_{rel}=0.7\%$		
53	Test-tube for Determining Density of Asphalt	Length	V.R. of Test-tube for Determining Density of Asphalt JJG (JT) 119	(0.5~75)mm	$U=0.05mm$		
		quality		(20~40)g	$U=1.3mg$		
		capacity		(10~35)mL	$U=0.1mL$		
54	*Cement Fineness Negative Pressure Screen Analyzer	Revolution Speed	C.S. for Cement Fineness Negative Pressure Screen Analyzer JJF 1827	(20~40)r/min	$U=0.5r/min$		
		Pressure		(-100~0)hPa	$U=1hPa$		
55	*Cement mortar vibrating table	Displacement	C.S. for Cement Mortar Vibration Compaction Equipment JJF1867	(0.7~0.8)mm	$U=0.013mm$		
		Frequency		(45~55)Hz	$U=0.6Hz$		
		Time		(0~130)s	$U=0.4s$		
		Length		(0.1~300)mm	$U=0.05mm$		
		Quality		(1~7)kg	$U=1.2g$		
56	*Pavement Texture Depth Manual Sanding Device	Length	V.R. of Pavement Texture Depth Manual Sanding Device JJG(JT) 117	(1~85)mm	$U=0.04mm$		
				Ra:(0.012~50) μm	$U_{rel}=6.8\%$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
57	*The Emulsified Bitumen Stability Test-tube	Length	V.R. of The Emulsified Bitumen Stability Test-tube JJG(JT)116	(10~65)mm	$U=0.04\text{mm}$		
				(170~180)mm	$U=0.06\text{mm}$		
				(280~350)mm	$U=0.6\text{mm}$		
58	*Measurer for Flexibility of Retroreflective Sheeting	Length	V.R. of Measurer for Flexibility of Retroreflective Sheeting JJG(JT) 098	(3~5)mm	$U=0.04\text{mm}$		
59	*Drop Test Machine for Cement Sacks	Length	V.R. of Drop Test Machine for Cement Sacks JJG(Meng) 013	(80~1500)mm	$U=0.6\text{mm}$		
				(8~15)mm	$U=0.1\text{mm}$		
60	*Concrete Shrinkage Dilatometer	Length	C.S. for Concrete Shrinkage Dilatometer JJF(JI)139	Length of standard rod: (98~550) mm	$U=5\text{ }\mu\text{m}$		
				Comprehensive indication error: (0~550) mm	$U=3\text{ }\mu\text{m}$		
61	*The No-pick-up Time Tester for Road Marking Paint	Length	V.R. of The No-pick-up Time Tester for Road Marking Paint JJG(JT)126	(200~250)mm	$U=0.15\text{mm}$		
				(6~10)mm	$U=0.3\text{mm}$		
		Mass		(15~16)kg	$U=2\text{g}$		
		Hardness		(60~80)HA	$U=1.2\text{HA}$		
62	Static Cone Penetrometers	Force	C.S. for Static Cone Penetrometers JJF 1439	(1~80)kN	$U_{\text{rel}}=0.5\%$	Except for pore pressure	
		Length		(1~220)mm	$U=0.1\text{mm}$		
		Angle		(59~61)°	$U=0.2^\circ$		
63	*Load Wheel Tester for Asphalt Emulsion Slurry	Frequency	V.R. of Load Wheel Tester for Asphalt Emulsion Slurry Mixture JJG(JT) 091	(40~48)min ⁻¹	$U=0.8\text{min}^{-1}$		
		Length		(0.1~385)mm	$U=0.06\text{mm}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
64	*Cohesion Tester for Asphalt Emulsion Slurry Mixture	Mass	V.R. of Cohesion Tester for Asphalt Emulsion Slurry Mixture JJG(JT) 089	(56.0~57.5)kg	$U=0.15\text{kg}$		
		Hardness		(0~100)HA	$U=1.4\text{HA}$		
		Length		(5~70)mm	$U=0.05\text{mm}$		
		Twisting force		(1~5)Nm	$U=0.1\text{Nm}$		
65	*Asphalt Mixture's Mixing Machine	Force	V.R. of Asphalt Mixture's Mixing Machine JJG(JT) 064	(120~130)N	$U=0.3\text{N}$		
		Hardness		(55~65)HA	$U=1.4\text{HA}$		
		Revolution Speed		(35~85)r/min	$U_{\text{rel}}=0.3\%$		
		Time		(1~999)s	$U=0.8\text{s}$		
		Temperature		(20~250)°C	$U=0.6^{\circ}\text{C}$		
66	*Wet Track Abrasion Tester for Asphalt Emulsion Slurry Mixture	Coaxiality	V.R. of Wet Track Abrasion Tester for Asphalt Emulsion Slurry Mixture JJG(JT) 090	(8~22)L	$U=0.03\text{L}$		
		Heating rate		(5~15)°C/min	$U_{\text{rel}}=0.6\%$		
		Length		(5~300)mm	$U=0.05\text{mm}$		
		Mass		(2~3)kg	$U=0.3\text{g}$		
67	*Measurer for Resistance to Impact of Raised Pavement Markers	Revolution Speed	V.R. of Measurer for Resistance to Impact of Raised Pavement Markers JJG(JT) 080	(55~145)r/min	$U=0.3\text{r/min}$		
		Hardness		(50~70)HA	$U=1.4\text{HA}$		
68	*Measurer for Impact Resistance	Length	V.R. of Measurer for Impact Resistance of Retroreflective	(0~1500)mm	$U=0.7\text{mm}$		
		Mass		(1030~1050)g	$U=0.2\text{g}$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	of Retroreflective Sheeting	Mass	Sheeting JJG(JT) 084	(400~500)g	$U=0.2g$		
69	*Testing Machines of Resistance to Internal Pressure of Plastics Pipe	Pressure	C.S. for Testing Machines of Resistance to Internal Pressure of Plastics Pipe JJF 1628	(0.01~10)MPa	$U=0.1\%FS$		
70	*California bearing ratio instrument	Force	V.R. of California Bearing Ratio Instrument JJG(JT) 106	(0.1~300) kN	$U_{rel}=0.2\%$		
		Mass		(1245~1255) g	$U=0.2g$		
		Length		(49~151) mm	$U=0.06mm$		
		Speed		(0.1~1.25) mm/min	$U=0.01 mm/min$		
		Hardness		(40~45) HRC	$U=2HRC$		
71	*Testing Apparatus for Asphalt Content by Burning Method	Time	V.R. of Testing Apparatus for Asphalt Content by Burning Method JJG(JT) 072	(30~1800) s	$U=0.3s$		
		Mass		(100~5000)g	$U=0.02g$		
		Temperature		(500~1000)°C	$U=1.5^{\circ}C$		
72	*Tester for Separating Emulsified Bitumen Particle Ions	Length	V.R. of Tester for Separating Emulsified Bitumen Particle Ions JJG(JT) 115	(0~105)mm	$U=0.04mm$		
		Voltage		(5~7)V	$U=0.1V$		
		Time		(100~300)s	$U=0.3s$		
73	*Laboratorial vibratory compactor	Mass	V.R. of Laboratorial Vibratory Compactor JJG(JT)121	(1.5~5.6)kg	$U=1g$		
				(149~151)kg	$U=0.2kg$		
		length		(15~401)mm	$U=0.06mm$		
		Frequency		(1~50)Hz	$U_{rel}=0.2\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
74	*Apparatus for Softening Point of Bitumen	Heating rate	V.R. of Apparatus for Softening Point of Bitumen	(4~6) °C/min	U=0.2°C/min		
		Mass	JJG (JT) 057	(3~4) g	U=0.02g		
		Capacity		(800~1000) mL	U=11mL		
		Length		(0~200) mm	U=0.04mm		
		Temperature		(0~200) °C	U=0.3°C		
75	*Measurer for Liner Removal Performance of Retroreflective Sheeting	Mass	V.R. of Measurer for Liner Removal Performance of Retroreflective Sheeting	(6.5~6.7)kg	U=1.8g		
		Length	JJG(JT)085	(10~160)mm	U=0.04mm		
76	Verticality Measuring Ruler	Angle	C.S. for Construction Quality Tester Sets JJF 1110	(0~30)mm/2m	U=0.15mm/2m		
		Straightness		(0~0.5)mm/2m	U=0.02mm/2m		
77	Inside and Outside Right Angle Measuring Ruler	Angle	C.S. for Construction Quality Tester Sets JJF 1110	(0~10)mm/150mm	U=0.2mm/150mm		
		Straightness		(0~0.1)mm/150mm	U=0.02mm/150mm		
		Parallelism		(0~0.15)mm/150mm	U=0.04mm/150mm		
78	*Consistency Tester for Asphalt Emulsion Slurry Mixture	Length	V.R. of Consistency Tester for Asphalt Emulsion Slurry Mixture JJG (JT) 114	(0~240)mm	U=0.05mm		
79	*Drop Test Machine for Packages	Angle	V.R. of Drop Test Machine for Packages JJG (YUE) 045	(0~90) °	U=0.5°		
		Length		(0~2000) mm	U=2mm		
80	*Impermeability testing instrument of geomembranes	Length	Calibrating code for impermeability testing instrument of	(2~4) mm	U=0.03mm		
				(150~500) mm	U=0.5mm		

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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		pressure	geomenmbraes SL 408	(0~3) MPa	$U=0.2\%FS$		
81	*Normal permeability testing instrument of geotextiles	Area	Calibrating code for normal permeability testing instrument of geotextiles SL 405	(20~200) cm ²	$U=0.5cm^2$		
		Length		(300~1000) mm	$U=0.5mm$		
82	Measuring Instrument for Cement Bright Degumming Equipment	Acceleration	V.R. of Measuring Instrument for Cement Bright Degumming Equipment JJG 974	(2~100)m/s ²	$U_{rel}=3.5\%$		
		Frequency		(20~1000)Hz	$U_{rel}=0.3\%$		
		Displacement		(0.1~3)mm	$U_{rel}=0.5\%$		
		Rotating speed		(20~1000)r/min	$U_{rel}=0.1\%$		
		Time		(10~300)s	$U=0.3s$		
83	Rebound Test Hammer Calibrators	Force	V.R. of Rebound Test Hammer Calibrators JJG (ZHE) 135	(0.2~1)N	$U=0.03N$		
				(1~200)N	$U_{rel}=0.1\%$		
		Hardness		(55~65)HRC	$U=1.8HRC$		
		Quality		Steel anvil quality:(15~50)kg	$U=0.03kg$		
				Mass weight :(1~3)kg	$U=26mg$		
		Length		Length:(0~300)mm	$U=0.05mm$		
				Displacement :(0~200)mm	$U=4\mu m$		
		Time		(0~950)s	$U=0.4s$		
84	Blaine Permeability	Specific surface area	C.S. for Blaine Permeability JJF(JC)171	(3000~4500)cm ² /g	$U=12\text{ cm}^2/g$		
85	*Cement Length	Length	C.S. for Cement Length	(150~550)mm	$U=6\mu m$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	Comparator		Comparator JJF (Su) 217	(0~13)mm	$U=2 \mu m$		
86	*Pavement Material Strength Tester	Strength	C.S. for Pavement Material Strength Tester JJF(SHAN) 0073	(0.2~1000)kN	$U_{rel}=0.2\%$		
		Speed		(0.1~60)mm/min	$U_{rel}=0.6\%$		
		Length		(0~360)°	$U=3 \mu m$		
87	*Portable Drawing Instruments Used in Building	Strength	C.S. for Portable Drawing Instruments Used in Building JJF (JC) 142	20N~1000kN	$U_{rel}=0.2\%$		
88	*Methylene Blue Mixer	Rotating speed	C.S. for Methylene Blue Mixer JJF (GUI) 82	(200~800)r/min	$U_{rel}=0.2\%$		
		Length		(60~90)mm	$U=0.04mm$		
		Time		(0.1~3600)s	$U_{rel}=0.5\%$		
89	*Single Burning Item Test of Building Materials and Products	Total heat release quantity	C.S. for Single Burning Item Test of Building Materials and Products JJF(JC) 167	(30~50) MJ/kg	$U=1.6MJ/kg$		
		Produce smoke		(100~150) m ² /kg	$U=7.5 m^2/kg$		
90	*Flammability Test Equipment of Building Materials	Length	C.S. for Flammability Test Equipment of Building Materials JJF(JC) 168	(0~30) mm	$U=0.3mm$		
		Temperature		(0~1000) °C	$U=15^{\circ}C$		
91	*Thermal Insulating Properties of the Doors and Windows Detection Device	Temperature	C.S. for Thermal Insulating Properties of the Doors and Windows Detection Device JJF (JING) 66	(-20~20) °C	$U=0.2^{\circ}C$		
		Humidity		10%RH~30%RH	$U=1.6\%RH$		
		Power		(10~1200) W	$U_{rel}=0.2\%$		
92	*Mud Density Meters	Density	V.R. of Mud Density Meters JJG 1045	(0.7~3) g/cm ³	$U=0.003g/cm^3$		



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93	*Anti perforation instrument	Length	Calibration method of anti perforation instrument T/HBJLXH 014	(0~25) mm	U=0.004mm		
				(25~50) mm	U=0.05mm		
		Mass		(0~500) g	U=0.06g		
94	*Ball pressure tester	Length	Calibration method of ball pressure tester T/HBJLXH 011	(4~6) mm	U=0.004mm		
				(40~120) mm	U=0.05mm		
		Force value		20N	U=0.01N		
95	*Geotextile water permeability tester	Length	Calibration Method of Geotextile water permeability tester T/HBJLXH 002	Inside diameter: (45~55) mm	U=0.03mm		
				Length: (0~600) mm	U=0.2mm		
		Time		(0~100) s	U=0.3s		
96	*Vacuum Water Absorption Instrument	Pressure	Calibration method for Vacuum water absorption instrument T/HBJLXH 001	(-100~0) kPa	U=0.2%FS		
		Time		(0~120) s	U=0.4s		
97	*Free calcium oxide analyzer	Temperature	Calibration Method of Free calcium oxide analyzer T/HBJLXH 003	(0~100) °C	U=0.2°C		
		heating rate		(0~70) °C/min	U=1.2°C/min		
98	*Cutting Ring	Length	V.R. of Cutting Ring JJG(JT)194	Diameter:(0~110)mm	U=0.05mm		
				Height: (2~65) mm	U=0.010mm		
				Thickness: (1.5~2.3) mm	U=0.010mm		
		Angle		(10~15)°	U=0.06°		
99	*Mortar Setting Time Meter	length	C.S for Mortar Setting Time Meter JJF(Ji)197	(0~150)mm	U=0.04mm		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date	
		force		(0.1~200)N	$U_{rel}=0.3\%$			
100	*Plate Loading Tester	Force	V.R. of Plate Loading Tester JJG (Ji) 056	10kN~1000kN	$U_{rel}=0.3\%$			
101	*Steel Bar Bending Testing Equipment	Angle	C.S for Steel Bar Bending Testing Equipment JJF(Jin)106	horizontal type:(0.1~360)°	$U=0.4^{\circ}$			
				vertical type:(0.1~360)°	$U=0.4^{\circ}$			
		Length		horizontal type: (0~500) mm	$U=0.06\text{mm}$			
				vertical type: (5~700) mm	$U=0.03\text{mm}$			
102	*Aggregate Stone Impact Tester	Length	C.S for Aggregate Stone Impact Tester JJF (Wan) 93	(0~500)mm	$U=0.2\text{mm}$			
				(0~500)mm	$U=0.06\text{mm}$			
		quality		(13~15)kg	$U=2\text{g}$			
103	*Cement Concrete Mixers	Time	V.R. of Cement Concrete Mixers JJG(JT) 187	(20~300)s	$U=0.3\text{s}$			
		Revolution Speed		(20~300)r/min	$U=0.2\text{r/min}$			
104	*Flexibility Test Device of Plastic Bellows	Length	V.R. of Flexibility Test Device of Plastic Bellows JJG(JT) 164	(0~500)mm	$U=0.06\text{mm}$			
				(500~2000)mm	$U=2\text{mm}$			
		Angle		(0~360)°	$U=0.2^{\circ}$			
105	*Cone Dynamic Penetrometer	quality	V.R. of Cone Dynamic Penetrometer JJG(JT) 169	(1~200) kg	$U=0.1\text{kg}$			
		Length		(0~300)mm	$U=0.05\text{mm}$			
		Angle		(0~320)°	$U=4'$			



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
106	Mud sand content meter	Length	C.S. for Mud sand content meters JJF（JC）195	(0.045～0.105)mm	<i>U</i> =2 μ m		
		Capacity		(0～260)mL	<i>U</i> =0.05mL		
107	Mud Viscosity Meter	Time	C.S. for Mud Viscosity Meter JJF（JC）194	(1～20)s	<i>U</i> =0.3s		
		Capacity		(198～505)mL	<i>U</i> =0.08mL		
108	Water Meter	Capacity	C.S. for Water Meter JJF(XIN)48	(100～250)mL	<i>U</i> =0.02mL		
109	Impact Elastic Wave-based Embedding Depth Measurement Apparatus for Steel Guard Rail Post	Length	V.R. of Impact Elastic Wave-based Embedding Depth Measurement Apparatus for Steel Guard Rail Post JJG(JT) 173	(0～5000)mm	<i>U</i> =1mm		
110	*Low Temperature Flexible Testers	Length	C.S. for Low Temperature Flexible Testers JJF(Ning)36	(18～52)mm	<i>U</i> =0.04mm		
		Angle		(300～400)mm/min	<i>U</i> =2mm/min		
		Temperature		(-50～20)℃	<i>U</i> =0.2℃		
111	*Triaxial Apparatus	Force	V. R. of Triaxial Apparatus JJG（JT）181	20N～60kN	<i>U</i> _{rel} =0.2%		
		Pressure		(0～3.5) MPa	<i>U</i> =0.2%FS		
		displacement		(0～100) mm	<i>U</i> =0.002mm		
112	*Unconfined Compression Strength Tester	Force	V. R. of Unconfined Compression Strength Tester JJG（JT）182	20N～20kN	<i>U</i> _{rel} =0.2%		
		displacement		Axial displacement: (0～100) mm	<i>U</i> =0.01mm		
				Radial displacemen: (0～0.8) mm	<i>U</i> =0.02mm		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
		Angle		(0.8~2.4) mm/min	<i>U</i> _{rel} =0.3%		
113	*Strain-controlled Direct Shear Apparatus	Force	C.S. for Strain-controlled Direct Shear Apparatus JJF(Wan)122	20N~20kN	<i>U</i> _{rel} =0.2%		
		Length		Length: (0~20) mm	<i>U</i> =0.01mm		
				Diameter: (60~85) mm	<i>U</i> =0.04mm		
114	*Anchor Shank Tension Apparatus	Force	V.R. of Anchor Shank Tension Apparatus JJG (JT) 179	20N~2000kN	<i>U</i> _{rel} =0.2%		
115	*Compressive Fixture	Force	C.S. for Compressive Fixture of Cement Pressure Testing Machine and Force JJF (Xin) 64	(0.2~300) kN	<i>U</i> _{rel} =0.2%		
		Length		(10~50) mm	<i>U</i> =0.03mm		
116	*Crushing Value	Length	C.S for Crushing Value JJF (Gan) 026	(0~300) mm	<i>U</i> =0.05mm		
117	*Pressure Parameters for Anti-crazing Steamer for Glazed Ceramic Wall Tile	Pressure	C.S. for Pressure Parameters for Anti-crazing Steamer for Glazed Ceramic Wall Tile JJF 1963	(0~1) MPa	<i>U</i> =0.003MPa		
118	*Asphalt Wax Content Measuring Instrument	Length	V.R. of Asphalt Wax Content Measuring Instrument JJG(JT) 189	(5~100)mm	<i>U</i> =0.05mm		
				(10~16) μ m	<i>U</i> _{rel} =7.2%		
		Temperature		-20℃	<i>U</i> =0.1℃		
				550℃	<i>U</i> =1.5℃		
119	*Mixer of Mixing Mortars	Length	C.S. for Mixer of Mixing Mortars JJF 2094	(0~10) mm	<i>U</i> =0.03mm		
		Time		(0~100) s	<i>U</i> =0.3s		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Rotating speed		(50~300) r/min	$U_{rel}=0.2\%$		
120	*Retroreflective Sheeting Adhesion Testers	Mass	C.S. for Retroreflective Sheeting Adhesion Testers JJF 2010	(790~810)g	$U=0.20g$		
121	*Building Material Testing Machine of Constant loading speed	Force value	V. R. of Building Material Testing Machine of Constant Loading Speed JJG 1025	1kN~2MN	$U_{rel}=0.2\%$		
				(2~10) MN	$U_{rel}=0.4\%$		
		Loading speed		(0.01~50) kN/s	$U_{rel}=3.0\%$		
122	Carbonization Depth Measuring Instruments and Calipers	Length	C.S. for Carbonization Depth Measuring Instruments and Calipers JJF1721	Carbonization Depth Measuring Instruments:(0~8)mm	$U=0.08mm$		
				Carbonization Depth Measuring Calipers:(0~70)mm	$U=0.06mm$		
123	*Brick Calipers	Length	C.S. for Brick Calipers JJF (Zhe) 1109	Bending gauge: (-15~30)mm	$U=0.06mm$		
				Main gauge: (0~500)mm	$U=0.16mm$		
124	*Oedometers	Force value	C. S. for Oedometers JJF 1311	(0.1~12)kN	$U_{rel}=0.6\%$		
		Length		(0~200) mm	$U=0.006mm\sim0.05mm$		
125	*Moulds	Length	C.S. for Moulds JJF 1307	(0~600)mm	$U=0.1mm$		
126	Borehole Clinometers	Angle	C.S. for Borehole Clinometers JJF 1550	(-30~+30)°	$U=0.008\%FS$		
127	*Lever Pressure Instrument	Force	V. R. of Lever Pressure Instrument JJG (JT) 107	(0.02~10)kN	$U_{rel}=0.5\%$		
		Leverage Ratio		9:1~11:1	$U_{rel}=0.14\%$		



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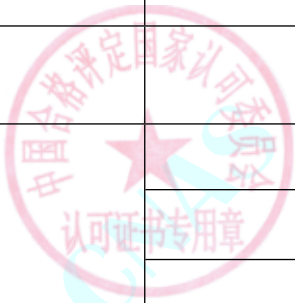
No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Length		(49.5~50.5)mm	U=0.06mm		
		Hardness		(35~50)HRC	U=2HRC		
128	Vibrating wire earth pressure cell	Pressure	C. S. for Vibrating wire earth pressure cell JJF(Su) 187	(0~10)MPa	U=0.2%FS		
		Temperature		(-25~60)°C	U=0.3°C		
129	*Concrete Slump Flow Meter	Length	C.S.for Consistency Testing Instrument for Concrete Mixing JJF (Su) 50	Circle diameter: (0~1600) mm	U=0.4mm		
				Thickness: (1~50) mm	U=0.04mm		
				Other sizes: (10~500) mm	U=(0.06~0.14)mm		
130	*Steel Wheel Wear Tester	Rotating speed	C.S.for Steel Wheel Wear Tester JJF (Ji) 239	(72~78)r/min	U=0.5 r/min		
		Length		(9~201)mm	U=0.05mm		
		Mass		(2~15)kg	U=2.0g		
		Flow rate		(90~110)g/100r	U=3.0g/100r		
				(1~10)L/min	U=0.005L/min		
131	*Pavement Texture Depth Electric Sand Paver	Length	V.R.of Pavement Texture Depth Electric Sand Paver JJG (JT) 198	Width:(49~51)mm	U=0.05mm		
				Scaleplate: (0~500)mm	U=0.4mm		
		Capacity		(49~51)mL	U=0.02mL		
132	*Electric Sand Bath Heating Devices	Temperature	C.S.for Electric Sand Bath Heating Devices JJF (JC) 222	(0~400)°C	U=0.3°C		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
133	*Rebar Gauge Punching Machine	Length	V.R.of Rebar Gauge Punching Machine JJG (JT) 158	(0～500) mm	U=0.06mm		
134	*Testing Devices of Physical Performanceof Building External Windows and Doors	Pressure	C.S.for Testing Devices of Physical Performance of Building External Windows and Doors JJF 2219	(-0.1～0.1) MPa	U=0.2%FS	The wind speed and flow rate parameters shall be calibrated separately.	
		Length		(0～50) mm	U=0.02mm		
135	*Direct Shear Drawing Tester for Geosynthetics	Speed	V.R.of Direct Shear DrawingTester for Geosynthetics JJG (JT) 213	(0.8～2.4) mm/min	U=0.02mm/min		
		Length		(0～100) mm	U=0.05mm		
		Force value		(1～100)kN	U _{rel} =0.2%		
136	*Concrete Air Content Meters	Capacity	C.S.for Concrete Air Content Meters JJF 2332	(6000～8000)mL	U=11mL		
		Air content		0.1%～8%	U=0.02%～0.1%		
		pressure		(0～0.25)MPa	U=0.0016MPa		
137	*Mortar Density Meters	Capacity	C.S.for Mortar Density Meters JJF (JC) 219	1L	U=3mL		
138	*Cement Compressive Fixture	Length	C.S.for Cement Compressive Fixture JJF (Gan) 048	(0～70) mm	U=0.03mm		
139	*Experimental Mortar Mixer	Rotating speed	C.S.for Experimental Mortar Mixer JJF (Meng) 097	(50～100) r/min	U _{rel} =0.2%		
		Length		Internal diameter:(300～400)mm	U=0.02mm		
				Depth:(200～300)mm	U=0.4mm		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Time		(0~180) s	U=0.2s		
140	*Rolling Forming Machine	Frequency	V.R.of Rolling Forming Machine JJF (JT) 200	(5~25) BPM	U=0.25BPM		
		Temperature		(0~100)℃	U=2℃		
		Length		(250~650) mm	U=0.4mm		
		Force		(5~50) kN	U _{rel} =0.6%		
141	*Boiling Testing Box	Time	V.R.of Boiling Testing Box JJF (JT) 193	(0~300) min	U=0.3min		
		Length		(50~600)mm	U=0.3mm		
				(0~50) mm	U=0.06mm		
		Temperature		(0~100)℃	U=1.5℃		
142	*Container	Length	V.R.of Container JJG (JT) 191	(0~500) mm	U=0.14mm		
		Capacity		(0.5~100)L	U _{rel} =0.3%		
143	*Concrete Resistivity Testers	Electrode spacing	C.S. for Concrete Resistivity Testers JJF 2230	(10~100) mm	U=0.03mm		
		Resistivity		(0.1~2000) kΩ cm	U _{rel} =0.5%		
144	*Temperature Parameters of Non-combustibility Testing Devices for Building Materials	Temperature	Calibration Specification for Temperature Parameters of Non-combustibility Testing Devices for Building Materials JJF 2334	(500~900)℃	U=1.0℃		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
145	*Apparatus of Steady Measurements of Thermal Conductivity	Thermal conductivity	Calibration Specification for Apparatus of Steady Measurements of Thermal Conductivity JJF 2220	(0.02~0.04) Wm ⁻¹ K ⁻¹	$U_{rel}=2.2\%$		
146	*Test Equipment for Horizontal and Vertical Combustion Experiments of Building Materials	Time	C.S. for Test Equipment for Horizontal and Vertical Combustion Experiments of Building Materials JJF (JC) 220	(0~300) s	$U=0.2s$		
147	*Test Apparatus for Theoretical Maximum Specific Gravity of Asphalt Mixtures	Pressure	C.S. for Test Apparatus for Theoretical Maximum Specific Gravity of Asphalt Mixtures JJF 2117	(0~110) kPa(abs)	$U=0.1kPa$		
		Time		(0~120) s	$U=2.0s$		
148	Road Quality Test Ruler	Length	Calibration Specification for Road Quality Test Ruler JJF (XIN) 67	(0~0.5) mm	$U=0.03mm$		
17、Special measuring instruments for electrical and electronic appliances							
1	*Elongation tester	Length	Verification procedure for test equipment of enamelled winding wire-Part 3:Elongation tester JB/T 4279.3	(100~205)mm	$U=0.05mm$		
				(205~1000)mm	$U=0.3mm$		
		Speed		(200~400)times / minute	$U=2mm/min$		
		Elongation		1%~50%	$U=0.35\%$		
2	*Coil Number Testing Instructing	Coil Number	C.S. for Coil Number Testing Instructing JJF(Zhe) 1065	(10~1000)Coil	$U=2Coil$		
				(1000~10000)Coil	$U_{rel}=0.3\%$		
3	*DC Electronic Loads	DC Voltage	C.S. for DC Electronic Loads JJF 1462	100mV~300V	$U_{rel}=0.05\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		DC Current	ilac-MRA CHINA NATIONAL ACCREDITATION SERVICE FOR COMPETENCY ASSESSMENT SCHEDULE OF ACCREDITATION CERTIFICATE Supervision & Promotion Service for Calibration	1mA~20A	$U_{rel}=0.08\%$		
				(20~100)A	$U_{rel}=0.1\%$		
		DC Power		(10~1200)W	$U_{rel}=0.1\%$		
		DC Resistance		1 Ω ~ 100 Ω	$U_{rel}=0.5\%$		
4	Electrostatic Discharge Simulators	Voltage	C.S.for Electrostatic Discharge Simulators JJF1397	(1~15)kV	$U_{rel}=2.0\%$		
		rise time		(0.6~1.2)ns	$U_{rel}=13\%$		
		Current		(1~30)A	$U_{rel}=6.0\%$		
5	*Copper Single Insulated Wire and Cable Vertical Burning Test Device	Length	Verification Procedure for Test Equipment of Rubber Plastic Wire and Cable - Part18: Copper Single Insulated Wire and Cable Vertical Burning Test Device JB/T 4278.18	(5~10)mm	$U=0.2\text{mm}$		
				(100~1200)mm	$U=2\text{mm}$		
		Angle		40° ~ 50°	$U=0.6^\circ$		
6	*Abrasion test device	Length	Verification procedure for test equipment of rubber plastic wire and cable--Part 4:Abrasion test device JB/T 4278.4	(10~200)mm	$U=0.05\text{mm}$		
		Speed		(35 ~ 45) times / min	$U=0.2\text{times / min}$		
		Mass		(400~2000)g	$U=0.15\text{g}$		
7	*Peeling tester	Mass	Verification procedure for test equipment of enamelled winding wire-Part 6:Peeling tester JB/T 4279.6	(2~20)kg	$U=5\text{g}$		
		Rotational Speed		(50~150)r/min	$U=0.5\text{r/min}$		
		Length		(490~510)mm	$U=0.5\text{mm}$		
8	*Single insulated wire and cable vertical burning	Length	Verification procedure for test equipment of rubber plastic wire and cable--Part	(5~10)mm	$U=0.03\text{mm}$		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
	test device		5: Single insulated wire and cable vertical burning test device JB/T 4278.5	(40~1500)mm	$U=2\text{mm}$		
		Angle		$40^{\circ} \sim 50^{\circ}$	$U=0.5^{\circ}$		
		Time		(40~60)s	$U=0.5\text{s}$		
9	*Smoke density test device	Length	Verification procedure for test equipment of rubber plastic wire and cable--	(100~3500)mm	$U=2\text{mm}$		
		Area	Part16: Smoke density test device JB/T 4278.16	(35~65) cm^2	$U=0.02\text{cm}^2$		
		DC Voltage		(11~13)V	$U=0.03\text{V}$		
		Flow		(3~20) m^3/min	$U_{\text{rel}}=4\%$		
		Optical Density		30%~80%	$U=2\%$		
10	*Bundle burning test device	Length	Verification procedure for test equipment of rubber plastic wire and cable--	(1~100) mm	$U=0.05\text{mm}$		
			Part15: Bundle burning test device JB/T 4278.15	(100~4500)mm	$U=2\text{mm}$		
		Time		(200~300)s	$U=0.5\text{s}$		
		Flow		(4~6) m^3/min	$U_{\text{rel}}=4\%$		
11	*Battery Internal Resistance Testers	DC Voltage	C.S. for Battery Internal Resistance Testers JJF 1620	(0.1~800)V	$U_{\text{rel}}=0.03\%$		
		Resistance		10m Ω ~ 100 Ω , (1kHz)	$U_{\text{rel}}=0.3\%$		
				100 Ω ~ 3k Ω , (1kHz)	$U_{\text{rel}}=0.06\%$		
12	*Insulation scrape abrasion test device	Length	Verification procedure for test equipment of rubber plastic wire and cable--	(0.1~5)mm	$U=3\mu\text{m}$		
			Part19: Insulation scrape abrasion test device JB/T 4278.19	(5~25)mm	$U=0.03\text{mm}$		
		DC Current		(0.1~5)mA	$U=0.03\text{mA}$		
		DC Voltage		(0.5~12)V	$U=0.15\text{V}$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Test Frequency		(10~60)n/min	U=1.3n/min		
		Mass		(50~1000)g	U=0.6g		
13	*Flexing test device	Length	Verification procedure for test equipment of rubber plastic wire and cable-- Part3: Flexing test device JB/T 4278.3	(10~300)mm	U=0.05mm		
				(500~2000)mm	U=2mm		
		Speed		(0.1~0.5)m/s	U=0.02m/s		
		AC Current		(1~30)A, (50Hz)	U=0.12A		
14	*Carbon black content test device	Mass		(50~8000)g	U=5g		
		Length		(10~100)mm	U=0.1mm		
				(300~1000)mm	U=2mm		
		Temperature		(200~650)°C	U=2.2°C		
15	*Low temperature bending test device	Rotational Speed	Verification procedure for test equipment of rubber plastic wire and cable-- Part11: Low temperature bending test device JB/T 4278.11	(5~13)r/min	U=0.1r/min		
		Length		(1~60)mm	U=0.03mm		
16	*Needle-flame Tester	Length	Calibration Specification for Needle-flame Tester JJF (Gui) 93	(0.4~50)mm	U=0.04mm		
		Time		1s~200s	U=0.2s		
		Temperature		100°C~700°C	U=1.0°C		
		Angle		0° ~180°	U=0.5°		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (<i>k</i> =2)	Note	Effective Date
17	*Impulse Voltage Testers for Winding Interturn	Voltage	Calibration Specification for Impulse Voltage Testers for Winding Interturn Insulation JJF 1691	(0.1~15)kV	<i>U</i> _{rel} =2%		
		Wave Front Time		(0.1~10)μs	<i>U</i> _{rel} =4.0%		
18	*Proof Tracking Index Tester	Time	C.S. for Proof Tracking Index Testers JJF(Zhe) 1087	(10~50) s	<i>U</i> =0.3s		
		AC Voltage		(100~600)V, (50Hz)	<i>U</i> _{rel} =0.3%		
		AC Current		(0.1~1) A, (50Hz)	<i>U</i> _{rel} =0.6%		
19	*Electric Spark Leak Detector	Voltage	C.S. for Electric Spark Leak Detector JJF(Lu)101	(0.1~20)kV	<i>U</i> _{rel} =2%		
20	*Charge & Discharge of Battery Tester	Voltage	C.S. for Charge & Discharge of Battery Tester JJF (JG) 108	(1~1000)V	<i>U</i> _{rel} =0.0012%		
		Current		10mA~1000A	<i>U</i> _{rel} =0.02%		
		Discharge Capacity		(0.1~1)Ah	<i>U</i> _{rel} =0.05%		
				(1~100)Ah	<i>U</i> _{rel} =0.1%		
				100Ah~1kAh	<i>U</i> _{rel} =0.2%		
		Rise Time		1 μ s~10ms	<i>U</i> _{rel} =0.3%		
		Power		10mW~10kW	<i>U</i> _{rel} =0.05%		
		Resistance		0.1 Ω ~1k Ω	<i>U</i> _{rel} =0.05%		
		Temperature		-20℃~100℃	<i>U</i> =0.05℃		
21	*Safety Pameter Tester	DC Voltage	C.S. for Safety Pameter Tester JJF(DZ) 0004	(0.1~6)kV	<i>U</i> _{rel} =0.8%		
		AC Voltage		(0.1~5)kV, (50Hz、60Hz)	<i>U</i> _{rel} =0.8%		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
		Breakdown Alarm DC Current		(0.5~50)mA	$U_{rel}=0.8\%$		
		Breakdown Alarm AC Current		(0.5~50)mA, (50Hz、60Hz)	$U_{rel}=0.8\%$		
		Time		(1~90)s	$U_{rel}=1.2\%$		
		Insulation Voltage		(0.1~5)kV	$U_{rel}=1.2\%$		
		Insulation resistance		100Ω~10MΩ	$U_{rel}=0.25\%$		
				10MΩ~100MΩ	$U_{rel}=0.59\%$		
				100MΩ~1GΩ	$U_{rel}=1.2\%$		
				1GΩ~10GΩ	$U_{rel}=2.4\%$		
				10GΩ~100GΩ	$U_{rel}=5.8\%$		
		Earth-Continuity Test Current		DC: (1~30)A	$U_{rel}=1.2\%$		
				AC: (1~30)A, (45Hz~65Hz)	$U_{rel}=1.5\%$		
		Earth-Continuity Resistance		DC: (10~400)mΩ	$U_{rel}=0.7\%$		
				AC: (10~400)mΩ, (45Hz~65Hz)	$U_{rel}=0.8\%$		
		Leakage Test Voltage		(10~300)V, (50Hz)	$U_{rel}=0.5\%$		
		Leakage Current		(0.05~10)mA, (50Hz)	$U_{rel}=0.8\%$		
22	*Spark Testers	DC Voltage	C.S. for Spark Testers JJF 2239	(0.1~50) kV	$U_{rel}=1.2\%$		



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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		AC Voltage		(0.1~50) kV (50Hz)	$U_{\text{rel}}=1.2\%$		
23	*Glow-wire Apparatus	Temperature	C.S. for Glow-wire Apparatus JJF(Gui) 77	960℃	$U=1.5^{\circ}\text{C}$		
		Length		(3~80)mm	$U=(0.005\sim0.03)\text{ mm}$		
		Time		(10~600)s	$U=0.4\text{ s}$		
		quality		(50~120)g	$U=0.01\text{ g}$		



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Name: Shandong Zhongzhun Testing Technology Co., Ltd.

Address: Building B, No.213, Huoju Road, High-Tech Development Zone, Weihai, Shandong, China

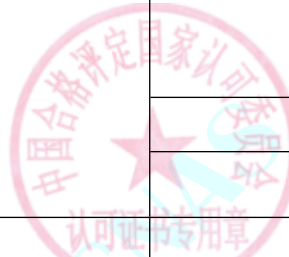
Registration No. CNAS L10994

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

Effective Date: 2026-07-27 Expiry Date: 2030-05-13

SCHEDULE 5 ACCREDITED CALIBRATION AND MEASUREMENT CAPABILITY SCOPE

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

No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty (k=2)	Note	Effective Date
measuring equipment							
2、 Thermology							
1	Heat Meters	Flow rate	V.R.of Heat Meters JJG 225	(DN50~DN200), (0.2~250) m³/h	U _{rel} =0.4%		
		Heat		Flow rate range: (0.2~250) m³/h, Temperature difference range: (2~175) K	U _{rel} =0.6%		
		Temperature		(0.1~95) °C	U=0.04°C		
		Temperature difference		(2~175) K	U=0.06°C		
1、 Mechanics							
1	Displacement Meters	Gas flow rate	V.R. of Gas Displacement Meters JJG 633,V.R. of	(DN10~DN300)(0.5~5000)m³/h	U _{rel} =0.6%		

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№	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
		Liquid flow rate	Liquid Positive Displacement Flowmeter JJG 667	(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		
2	Float Meter	Gas flow rate	V.R. of Float Meter JJG 257	(DN10~DN100)(0.5~1000)m ³ /h	$U_{rel}=0.6\%$		
		Liquid flow rate		(DN50~DN100)(0.2~100)m ³ /h	$U_{rel}=0.8\%$		
3	Goriolis Mass Flow Meters	Liquid flow rate	V.R. of Goriolis Mass Flow Meters JJG 1038	(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		
		Gas flow rate		(DN10~DN300)(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
4	Differential Pressure Flowmeters	Gas Flow	V.R. of Differential Pressure Flowmeters JJG 640	(DN10~DN300)(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
		Liquid flow		(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		
5	Thermal Mass Gas Flowmeters	Gas Flow	V.R. of Thermal Mass Gas Flowmeters JJG 1132	(DN10~DN300)(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
6	Wet Gas Meters	Gas Flow	C.S. for Wet Gas Meters JJF 1357	(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
7	Turbine Flowmeter	Gas Flow	V.R. of Turbine Flowmeter JJG 1037	(DN10~DN300)(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
		Liquid flow		(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		
8	Vortex-shedding Flowmeter	Gas Flow	V.R. of Vortex-shedding Flowmeter JJG 1029	(DN10~DN300)(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
		Liquid flow		(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		
9	Target Flowmeter	Gas Flow	V.R. of Target Flowmeter JJG 461	(DN10~DN300)(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
		Liquid flow		(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		



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No	Instrument	Measurand	Calibration Method	Range	Expanded Uncertainty ($k=2$)	Note	Effective Date
10	Vortex Precession Flowmeters	Gas Flow	V.R. of Vortex Precession Flowmeters JJG 1121	(DN10~DN300)(0.5~5000) m ³ /h	$U_{rel}=0.6\%$		
		Liquid flow		(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		
11	Electromagnetic Flowmeters	Liquid flow rate	V.R. of Electromagnetic Flowmeters JJG 1033	(DN50~DN300) (0.2~450)m ³ /h	$U_{rel}=0.3\%$	Quality method	
12	Ultrasonic Flowmeters	Gas flow rate	V.R. of Ultrasonic Flowmeters JJG 1030	(DN10~DN300)(0.5~5000)m ³ /h	$U_{rel}=0.6\%$		
		Liquid flow rate		(DN50~DN300) (0.2~450)m ³ /h	$U_{rel}=0.3\%$		
13	Cold Potable Water Meters	Liquid flow	V.R. of Cold Potable Water Meters JJG 162	(DN50~DN300)(0.2~450)m ³ /h	$U_{rel}=0.3\%$		
14	Orifice Flowmeters	Gas flow rate	C.S. for Orifice Flowmeters JJF 2033	(0.5~500)m ³ /h	$U_{rel}=0.42\%$		



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: 0631-3665665

Name: Shandong Zhongzhun Testing Technology Co., Ltd.
Address: B112-113, Innovation Building, Torch High-Tech Industrial Development Zone, Weihai, Shandong, China
Registration No. CNAS L10994
Accreditation Criteria: ISO/IEC 17025:2017 and relevant requirements of CNAS
Effective Date: 2026-07-27 Expiry Date: 2030-05-13

SCHEDULE 3 ACCREDITED TESTING SCOPE

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
Electrical						
1、 General environmental test for electrical products						
1	Electric and electronic products	1	Cold	Environmental testing for electric and electronic products—Part 2: Test methods—Tests A: Cold GB/T 2423.1-2008	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minimum temperature :-40°C;Inter Size≤1000 mm×800mm×1000mm,Minimu	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		2	Dry heat	Environmental testing for electric and electronic products—Part 2: Test methods—Tests B: Dry heat GB/T 2423.2-2008	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximum temperature :150°C.	2026-07-27
		3	Damp heat,steady stat	Environmental testing—Part 2:Testing method—Test Cab:Damp heat,steady stat GB/T 2423.3-2016	Accredited only for Inter Size≤2000 mm×2000	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		4	Damp heat	Environmental testing for electric and electronic products— Part2:Test method —Test Db:Damp heat,cyclic(12h+12h cycle) GB/T 2423.4-2008	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size ≤1000 mm×800 mm×1000 mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		5	Shock	Environmental testing —Part 2: Test methods—Test Ea and guidance: Shock GB/T 2423.5-2019	Accredited only for Waveform: Half sine wave, Trapezoidal; Accelerated velocity ≤980 m/s²; Pulse width ≤30 ms	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		6	Change of temperature	Environmental testing —Part 2:Test methods—Test N:change of temperature GB/T 2423.22-2012	s. Accredited only for Test Na: Inter Size≤650mm×500mm×500mm,Temperature range: (-55~150) °C; Test Nb: Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C; Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤350mm×400mm×300mm,Temperature range: (-70~150) °C, Temperature change rate≤16°C/min.	
		7	Free fall	Environmental testing—Part 2:Test methods—Test Ec:Rough handling shocks,primarily for equipment-type specimens GB/T 2423.7-2018	Accredited only for Maximum drop height:1500 mm;Maximum load:80kg.	2026-07-27
		8	Vibration(sinusoidal)	Environmental testing-Part 2:Tests methods-Test Fc: Vibration(sinusoidal) GB/T 2423.10-2019	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s².	2026-07-27
		9	Composite temperature/humidity cyclic	Environmental testing — Part 2:Test methods-Test Z/AD:Composite temperature/humidity cyclic test GB/T 2423.34-2024	Accredited only for Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
2	Dedicated device	1	High temperature	Laboratory environmental test methods for military materiel—Part 3: High temperature test GJB 150.3A-2009	Accredited only for Inter Size≤2000mm×2000mm×2000mm	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	
		2	Low temperature	Laboratory environmental test methods for military materiel—Part 4: Low temperature test GJB 150.4A-2009	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minimum temperature : -40°C;Inter Size≤1000 mm×800mm×1000mm,Minimum temperature : -60°C;Inter Size≤350mm×400mm×300mm,M	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					inimum temperature : -70°C.	
		3	Temperature shock	Laboratory environmental test methods for military materiel— Part 5: Temperature shock test GJB 150.5A-2009	Accredited only for Inter Size≤650mm×500mm×500mm, Temperature range: (-55~150) °C	2026-07-27
		4	Damp heat	Laboratory environmental test methods for military materiel— Part 9: Damp heat test GJB 150.9A-2009	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size≤1000mm×800mm	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		5	Vibration	Laboratory environmental test methods for military materiel — Part 16:Vibration test GJB 150.16A-2009 7.3	Accredited only for Frequency range: (1~ 3000) Hz;Acceler ated velocity≤98 0m/s².	2026-07-27
		6	Transportation drop	Laboratory environmental test methods for military materiel — Part 18: Shock test GJB 150.18A-2009 7.2.4	Accredited only for Maximum drop height:1500 mm;Maxim um load:80kg.	2026-07-27
		7	Shock	Laboratory environmental test methods for military materiel — Part 18: Shock test GJB 150.18A-2009 7.2.1	Accredited only for Waveform:	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Half sine wave、Trapezoidal;Accelerated velocity≤980m/s ² ;Pulse width≤30ms.	
3	Road vehicles electrical and electronic equipment	1	Vibration	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 3:Mechanical loads GB/T 28046.3-2011 4.1	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27
		2	Mechanical shock	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 3:Mechanical loads GB/T 28046.3-2011 4.2	Accredited only for Waveform: Half sine wave、Trapezoidal;Accelerated velocity≤980m/s ² ;Pulse width≤30ms.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		3	Free fall	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 3:Mechanical loads GB/T 28046.3-2011 4.3	Accredited only for Maximum drop height:1500 mm;Maximum load:80kg.	2026-07-27
		4	Constant temperature	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 4:Climatic loads GB/T 28046.4-2011 5.1	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Temperature range: (-40~85) °C;Inter Size≤1000 mm×800mm×1000mm,Temperature range: (-60~150) °C;Inter Size≤350mm×400mm×300mm,T	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature range: (-70~150) °C.	
		5	Temperature ladder	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 4:Climatic loads GB/T 28046.4-2011 5.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm, Temperature range: (-40~85) °C; Inter Size≤1000 mm×800mm×1000mm, Temperature range: (-60~150) °C.	2026-07-27
		6	Temperature cycling	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 4:Climatic loads GB/T 28046.4-2011 5.3	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm, Temperature	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range: (-40~85) °C; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C; Inter Size≤350mm×400mm×300mm, Temperature range: (-70~150) °C; Temperature change rate≤16°C/min.	
		7	Wet and heat cycle	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 4:Climatic loads GB/T 28046.4-2011 5.6	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		8	Steady state hot and humid	Road vehicles—Environmental conditions and testing for electrical and electronic equipment—Part 4:Climatic loads GB/T 28046.4-2011 5.7	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (-40~85) °C,Humidit y	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range:(5~98) %RH;Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C,Humidity range:(15~98) %RH.	
4	Railway applications— Electronic equipments used on rail vehicles	1	Low temperature	Railway applications-Electronic equipment used on rolling stock GB/T 25119-2021 12.2.4	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Minimum temperature : -40°C; Inter Size≤1000mm×800mm×1000mm, Minimum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		2	High temperature	Railway applications-Electronic equipment used on rolling stock GB/T 25119-2021 12.2.5	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maxim um temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximu m temperature :150°C.	2026-07-27
		3	Alternating hot and humid	Railway applications-Electronic equipment used on rolling stock GB/T 25119-2021 12.2.6	Accredited only for Inter Size≤2000 mm×2000 mm×2000	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size≤1000 mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		4	Low temperature storage	Railway applications-Electronic equipment used on rolling stock GB/T 25119-2021 12.2.15	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm, Minimum temperature	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					:-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
5	Optics and photonics	1	Low temperature	Optics and photonics-Environmental test methods-Part 2:Cold, heat and humidity GB/T 12085.2-2022 5.2.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minim um temperature :-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤350mm×400mm×300mm, Minimum temperature : -70°C.	
		2	High temperature	Optics and photonics-Environmental test methods-Part 2: Cold, heat and humidity GB/T 12085.2-2022 5.2.3	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Maximum temperature : 85°C; Inter Size≤1000mm×800mm×1000mm, Maximum temperature : 150°C.	2026-07-27
		3	Damp heat	Optics and photonics-Environmental test methods-Part 2: Cold, heat and humidity GB/T 12085.2-2022 5.2.4	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size ≤ 1000 mm × 800 mm × 1000 mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		4	Temperature gradient	Optics and photonics-Environmental test methods-Part 2: Cold, heat and humidity GB/T 12085.2-2022 5.3.2	Accredited only for Inter Size ≤ 2000 mm × 2000 mm × 2000 mm, Temperature range: (-40~85)	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					°C;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C;Inter Size≤350m m×400mm ×300mm,T emperature range: (- 70~150) °C;Tempera ture change rate≤16°C/ min.	
		5	Temperature jump	Optics and photonics-Environmental test methods-Part 2:Cold, heat and humidity GB/T 12085.2-2022 5.3.3	Accredited only for Inter Size≤650m m×500mm ×500mm,T emperature range: (- 55~150) °C	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		6	Wet and heat cycle	Optics and photonics-Environmental test methods-Part 2: Cold, heat and humidity GB/T 12085.2-2022 5.3.4	Accredited only for Inter Size≤2000 mm×2000 mm, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size≤1000 mm×800 mm×1000 mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	2026-07-27
		7	Shock	Optics and photonics-Environmental test methods-Part 3: Mechanical stress GB/T 12085.3-2022 5.1	Accredited only for Waveform:	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Half sine wave、Trapezoidal; Accelerated velocity≤980m/s ² ; Pulse width≤30ms.	
		8	Impact	Optics and photonics-Environmental test methods-Part 3: Mechanical stress GB/T 12085.3-2022 5.2	Accredited only for Waveform: Half sine wave; Accelerated velocity≤980m/s ² ; Pulse width≤30ms.	2026-07-27
		9	Free fall	Optics and photonics-Environmental test methods-Part 3: Mechanical stress GB/T 12085.3-2022 5.4	Accredited only for Maximum drop height: 1500 mm; Maximum load: 80kg.	2026-07-27
		10	Sinusoidal vibration	Optics and photonics-Environmental test methods-Part 3: Mechanical stress GB/T 12085.3-2022 5.7	Accredited only for Frequency	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range: (1~3000) Hz; Accelerated velocity ≤ 980 m/s ² .	
		11		Optics and photonics-Environmental test methods-Part 3: Mechanical stress GB/T 12085.3-2022 5.8	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity ≤ 980 m/s ² .	2026-07-27
6	Electronic measuring instruments	1	Temperature	General specification for electronic measuring instruments GB/T 6587-2012 5.9.1	Accredited only for Inter Size ≤ 2000 mm × 2000 mm, Temperature range: (-40~85) °C; Inter Size ≤ 1000 mm × 800 mm × 1000 mm, Tempera	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					ture range: (-60~ 150) °C;Inter Size≤350m m×400mm ×300mm,T emperature range: (- 70~150) °C;Tempera ture change rate≤16°C/ min.	
		2	Humidity	General specification for electronic measuring instruments GB/T 6587-2012 5.9.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×800m m×1000m m, Tempera ture range: (-60~ 150) °C, Humidit y range:(15 ~98) %RH.	
		3	Vibration	General specification for electronic measuring instruments GB/T 6587-2012 5.9.3	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity≤980m/s².	2026-07-27
		4	Shock	General specification for electronic measuring instruments GB/T 6587-2012 5.9.4	Accredited only for Waveform: Half sine wave、Trapezoidal ;Accelerated velocity≤980m/s²;Pulse	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					width≤30m s.	
		5	Package and transport Free fall	General specification for electronic measuring instruments GB/T 6587-2012 5.10.2.2	Accredited only for Maximum drop height:1500 mm;Maxim um load:80kg.	2026-07-27
		6	Package and transport Vibration	General specification for electronic measuring instruments GB/T 6587-2012 5.10.2.1	Accredited only for Frequency range: (1~ 3000) Hz;Acceler ated velocity≤98 0m/s ² .	2026-07-27
7	Special communication equipment	1	Tempreature	General specifications for military communication equipment GJB 367A-2001 3.10.2.1,4.7.27,4.7.28	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C; Inter Size≤350mm×400mm×300mm, Temperature range: (-70~150) °C; Temperature change rate≤16°C/min.	
		2	Relative humidity	General specifications for military communication equipment GJB 367A-2001 3.10.2.2,4.7.29	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C, Humidity	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range:(5~98) %RH;Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C,Humidity range:(15~98) %RH.	
		3	Temperature shock	General specifications for military communication equipment GJB 367A-2001 3.10.2.4,4.7.31	Accredited only for Inter Size≤650mm×500mm×500mm, Temperature range: (-55~150) °C	2026-07-27
		4	Damp heat	General specifications for military communication equipment GJB 367A-2001 3.10.2.5.4.7.29	Accredited only for Inter Size≤2000mm×2000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		5	Shock	General specifications for military communication equipment GJB 367A-2001 3.10.3.2	Accredited only for Waveform: Half sine wave、 Trapezoidal ;Accelerate d	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					velocity $\leq 980\text{m/s}^2$;Pulse width $\leq 30\text{ms}$,Non shipborne and airborne equipment.	
		6	Drop	General specifications for military communication equipment GJB 367A-2001 3.10.3.3	Accredited only for Maximum drop height:1500 mm;Maximum load:80kg.	2026-07-27
		7	Vibration	General specifications for military communication equipment GJB 367A-2001 3.10.3.1	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity $\leq 980\text{m/s}^2$.	2026-07-27
		8	Package transport sinusoidal frequency conversion vibration	General specifications for military communication equipment GJB 367A-2001 4.7.54	Accredited only for Frequency range: (1~3000)	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Hz; Accelerated velocity $\leq 980 \text{ m/s}^2$.	
		9	Free fall of package transport	General specifications for military communication equipment GJB 367A-2001 4.7.55, 4.7.56, 4.7.57	Accredited only for Maximum drop height: 1500 mm; Maximum load: 80kg.	2026-07-27
8	Dedicated purpose computer	1	Temperature	General specification for military computer system GJB 322A-98 4.7.10.1	Accredited only for Inter Size $\leq 2000 \text{ mm} \times 2000 \text{ mm} \times 2000 \text{ mm}$, Temperature range: $(-40 \sim 85)^\circ\text{C}$; Inter Size $\leq 1000 \text{ mm} \times 800 \text{ mm} \times 1000 \text{ mm}$, Temperature range: $(-60 \sim 150)^\circ\text{C}$.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		2	Temperature shock	General specification for military computer system GJB 322A-98 4.7.10.1.3	Accredited only for Inter Size≤650mm×500mm×500mm, Temperature range: (-55~150) °C	2026-07-27
		3	Damp heat	General specification for military computer system GJB 322A-98 4.7.10.2	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size≤1000mm×800mm×1000mm, Temperature range:	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					(-60~150) °C, Humidity range: (15~98) %RH.	
		4	Free fall	General specification for military computer system GJB 322A-98 4.7.10.5	Accredited only for Maximum drop height: 1500 mm; Maximum load: 80kg.	2026-07-27
		5	Vibration	General specification for military computer system GJB 322A-98 4.7.10.3	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity ≤ 980 m/s ² .	2026-07-27
		6	Shock	General specification for military computer system GJB 322A-98 4.7.10.4	Accredited only for Waveform: Half sine wave, Trapezoidal	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					;Accelerate d velocity≤98 0m/s²;Pulse width≤30m s.	
9	Special elecronic test equipment	1	Tempreature	General specification for military electronic test equipment GJB 3947A-2009 4.6.5.1.3	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150)°C.	2026-07-27
		2	Humidity	General specification for military electronic test equipment GJB 3947A-2009 4.6.5.1.4	Accredited only for Inter Size≤2000 mm×2000 mm×2000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size ≤1000 mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		3	Mechanical shock	General specification for military electronic test equipment GJB 3947A-2009 4.6.5.4.1	Accredited only for Waveform: Half sine wave、Trapezoidal; Accelerated velocity ≤98	2026-07-27



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		№	Item/ Parameter			
					0m/s ² ;Pulse width≤30ms.	
		4	Vibration	General specification for military electronic test equipment GJB 3947A-2009 4.6.5.3.1,4.6.5.3.2	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27
		5	Transport drop	General specification for military electronic test equipment GJB 3947A-2009 4.6.5.4.2	Accredited only for Maximum drop height:1500mm;Maximum load:80kg.	2026-07-27
10	Electrical connectors	1	Steady state hot and humid	Test methods for electrical connectors GJB 1217A-2009 1002	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85)	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					°C,Humidity range:(5~98) %RH;Inter Size≤1000 mm×800mm×1000mm,Temperature range: (-60~150) °C,Humidity range:(15~98) %RH.	
		2	Alternating hot and humid	Test methods for electrical connectors GJB 1217A-2009 1002	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Temperature range: (-40~85) °C,Humidity range:(5~	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		3	Temperature shock	Test methods for electrical connectors GJB 1217A-2009 1003	Accredited only for Inter Size≤650m m×500mm ×500mm,T emperature range: (- 55~150) °C	2026-07-27
		4	Shock	Test methods for electrical connectors GJB 1217A-2009 2004	Accredited only for Waveform: Half sine wave、 Trapezoidal	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Accelerated velocity≤980m/s ² ;Pulse width≤30ms.	
		5	Vibration	Test methods for electrical connectors GJB 1217A-2009 2005	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27
11	Electronic and electrical component pasrts	1	Staedy state hot and humid	Test methods for electronic and electrical component pasrts GJB 360B-2009 103	Accredited only for Inter Size≤2000mm×2000mm, Temperature range: (-40~85) °C, Humidity range:(5~98) %RH;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		2	Temperature shock	Test methods for electronic and electrical component parts GJB 360B-2009 107.2	Accredited only for Inter Size≤650mm×500mm×500mm, Temperature range: (-55~150) °C	2026-07-27
		3	Life of high temperature	Test methods for electronic and electrical component parts GJB 360B-2009 108	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Maximum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	
		4	Shock	Test methods for electronic and electrical component parts GJB 360B-2009 213	Accredited only for Waveform: Half sine wave、Trapezoidal ;Accelerated velocity≤980m/s ² ;Pulse width≤30ms.	2026-07-27
		5	Vibration	Test methods for electronic and electrical component parts GJB 360B-2009 201,204,214	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
12	Compact embeded cameras	1	Lower temperature limit	Information technology—General specification for compact embeded cameras GB/T 36480-2018 7.8.1	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minim um temperature :-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	2026-07-27
		2	Upper temperature limit	Information technology—General specification for compact embeded cameras GB/T 36480-2018 7.8.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maxim um	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	
		3	Steady damp-heat	Information technology—General specification for compact embeded cameras GB/T 36480-2018 7.8.3	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Temperature range: (-40~85) °C,Humidity range:(5~98) %RH;Inter Size≤1000 mm×800mm×1000mm,Temperature range: (-60~	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					150) °C, Humidity range: (15 ~ 98) %RH.	
		4	Vibration	Information technology—General specification for compact embedded cameras GB/T 36480-2018 7.8.4	Accredited only for Frequency range: (1 ~ 3000) Hz; Accelerated velocity ≤ 980 m/s².	2026-07-27
		5	Transport package fell	Information technology—General specification for compact embedded cameras GB/T 36480-2018 7.8.5	Accredited only for Maximum drop height: 1500 mm; Maximum load: 80 kg.	2026-07-27
13	Automotive camera	1	Low temperature	Automotive camera QC/T 1128-2019 6.7.1.1	Accredited only for Inter Size ≤ 2000 mm × 2000 mm × 2000 mm, Minimum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					um temperature :-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		2	High temperature	Automotive camera QC/T 1128-2019 6.7.1.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maxim um temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximu m	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :150°C.	
		3	Temperature ladder	Automotive camera QC/T 1128-2019 6.7.1.3	Accredited only for Inter Size≤2000 mm×2000 mm, Temperature range: (-40~85) °C; Inter Size≤1000 mm×800mm×1000mm, Temperature range: (-60~150) °C.	2026-07-27
		4	Temperature cycling	Automotive camera QC/T 1128-2019 6.7.1.4	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm, Temperature range: (-40~85)	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					°C;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C;Inter Size≤350m m×400mm ×300mm,T emperature range: (- 70~150) °C;Tempera ture change rate≤16°C/ min.	
		5	Alternating high and low temperatures	Automotive camera QC/T 1128-2019 6.7.1.5	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C.	
		6	Wet and heat cycle	Automotive camera QC/T 1128-2019 6.7.2	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C, Humidity range:(5~98) %RH; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					y range:(15 ~98) %RH.	
		7	Mechanical shock	Automotive camera QC/T 1128-2019 6.6.2	Accredited only for Waveform: Half sine wave、 Trapezoidal ;Accelerate d velocity≤98 0m/s ² ;Pulse width≤30m s.	2026-07-27
		8	Free fall	Automotive camera QC/T 1128-2019 6.6.3	Accredited only for Maximum drop height:1500 mm;Maxim um load:80kg.	2026-07-27
		9	Durability	Automotive camera QC/T 1128-2019 6.10	Accredited only for Inter Size≤2000 mm×2000 mm×2000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm, Temperature range: (-40~85) °C; Inter Size ≤ 1000 mm × 800 mm × 1000 mm, Temperature range: (-60~150) °C; Inter Size ≤ 350 mm × 400 mm × 300 mm, Temperature range: (-70~150) °C.	
		10	Vibration	Automotive camera QC/T 1128-2019 6.6.1	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity ≤ 980 m/s ² .	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
14	Liquid crystal display devices	1	Vibration (sinusoidal)	Liquid crystal and solid-state display devices—Part 5:Environmental,endurance and mechanical test methods GB/T 18910.101-2021 5.4	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27
		2	Shock	Liquid crystal display devices-Part 10-1:Environmental,endurance and mechanical test methods-Mechanical GB/T 18910.101-2021 5.5	Accredited only for Waveform: Half sine wave、Trapezoidal ;Accelerated velocity≤980m/s ² ;Pulse width≤30ms.	2026-07-27
		3	Change of temperature	Liquid crystal display devices-Part 10-2:Environmental,endurance and mechanical test methods-Environmental and endurance GB/T 18910.102-2021 5.3	Accredited only for Inter Size≤2000mm×2000mm×2000mm,Temperature range: (-	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					40~85) °C;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C;Inter Size≤350m m×400mm ×300mm,T emperature range: (- 70~150) °C;Inter Size≤650m m×500mm ×500mm,T emperature range: (- 55~150) °C;Tempera ture change rate≤16°C/ min.	
		4	High temperature storage	Liquid crystal display devices-Part 10-2:Environmental,endurance and mechanical test methods-Environmental and endurance GB/T 18910.102-2021 5.4	Accredited only for Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤2000mm×2000mm,Maximum temperature :85°C;Inter Size≤1000mm×800mm×1000mm,Maximum temperature :150°C.	
		5	Low temperature storage	Liquid crystal display devices-Part 10-2:Environmental endurance and mechanical test methods-Environmental and endurance GB/T 18910.102-2021 5.5	Accredited only for Inter Size≤2000mm×2000mm,Minimum temperature : -40°C;Inter Size≤1000mm×800mm×1000mm,Minimum temperature : -60°C;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤350mm×400mm×300mm, Minimum temperature : -70°C.	
		6	Steady state hot and humid	Liquid crystal display devices-Part 10-2:Environmental,endurance and mechanical test methods-Environmental and endurance GB/T 18910.102-2021 5.7	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C, Humidity range:(5~98) %RH; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range:(15~98) %RH.	
		7	Wet and heat cycle	Liquid crystal display devices-Part 10-2:Environmental,endurance and mechanical test methods-Environmental and endurance GB/T 18910.102-2021 5.8	Accredited only for Inter Size≤2000mm×2000mm,Temperature range: (-40~85) °C,Humidity range:(5~98) %RH;Inter Size≤1000mm×800mm×1000mm,Temperature range: (-60~150) °C,Humidity range:(15~98) %RH.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		8	Compositetemperat ure/humidity cyclic test	Liquid crystal display devices-Part 10- 2:Environmental,endurance and mechanical test methods- Environmental and endurance GB/T 18910.102-2021 5.9	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	2026-07-27
15	Laptop microcomputer	1	Lower temperature	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.2	Accredited only for Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤2000mm×2000mm×2000mm,Minimum temperature:-40°C;Inter Size≤1000mm×800mm×1000mm,Minimum temperature:-60°C;Inter Size≤350mm×400mm×300mm,Minimum temperature:-70°C.	
		2	Upper temperature limit	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.3	Accredited only for Inter Size≤2000mm×2000mm×2000mm,Maximum temperature:85°C;Inter Size≤1000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×800m m×1000m m,Maximum temperature :150°C.	
		3	Steady damp-heat	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.4	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Temperature range: (-40~85) °C,Humidity range:(5~98) %RH;Inter Size≤1000 mm×800mm×1000mm,Temperature range: (-60~150) °C,Humidity	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range:(15~98) %RH.	
		4	Vibration	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.5	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity≤980m/s ² .	2026-07-27
		5	Shock	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.6	Accredited only for Waveform: Half sine wave、Trapezoidal; Accelerated velocity≤980m/s ² ; Pulse width≤30ms.	2026-07-27
		6	collision	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.7	Accredited only for Waveform: Half sine wave; Accelerated	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					velocity≤980m/s ² ;Pulse width≤30ms.	
		7	Free fall	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.8	Accredited only for Maximum drop height:1500mm;Maximum load:80kg.	2026-07-27
		8	Transport package fell	General specification for computer—Part 2:Laptop microcomputer GB/T 9813.2-2016 5.8.9	Accredited only for Maximum drop height:1500mm;Maximum load:80kg.	2026-07-27
16	Desktop microcomputer	1	Lower temperature	General specification for computer—Part 1:Desktop microcomputer GB/T 9813.1-2016 5.8.2	Accredited only for Inter Size≤2000mm×2000mm×2000mm,Minimum temperature : -40°C;Inter Size≤1000	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×800m m×1000m m,Minimu m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		2	Upper temperature limit	General specification for computer—Part 1:Desktop microcomputer GB/T 9813.1-2016 5.8.3	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maxim um temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximu m temperature :150°C.	2026-07-27
		3	Steady damp-heat	General specification for computer—Part 1:Desktop microcomputer GB/T 9813.1-2016 5.8.4	Accredited only for	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		4	Shock	General specification for computer—Part 1:Desktop microcomputer GB/T 9813.1-2016 5.8.6	Accredited only for Waveform: Half sine wave、	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Trapezoidal ;Accelerated velocity≤980m/s ² ;Pulse width≤30ms.	
		5	Transport package fell	General specification for computer—Part 1:Desktop microcomputer GB/T 9813.1-2016 5.8.8	Accredited only for Maximum drop height:1500 mm;Maximum load:80kg.	2026-07-27
		6	Vibration	General specification for computer—Part 1:Desktop microcomputer GB/T 9813.1-2016 5.8.5	Accredited only for Frequency range: (1~ 3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27
		7	collision	General specification for computer—Part 1:Desktop microcomputer GB/T 9813.1-2016 5.8.7	Accredited only for Waveform: Half sine wave;Accelerated	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					velocity≤980m/s²;Pulse width≤30ms.	
17	Desktop laser printers	1	Lower temperature	General specification for desktop laser printers GB/T 17540-2017 5.8.2	Accredited only for Inter Size≤2000mm×2000mm,Minimum temperature :-40°C;Inter Size≤1000mm×800mm×1000m,Minimum temperature :-60°C;Inter Size≤350mm×400mm×300mm,Minimum temperature :-70°C.	2026-07-27
		2	Upper temperature limit	General specification for desktop laser printers GB/T 17540-2017 5.8.3	Accredited only for Inter Size≤2000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×2000 mm×2000 mm,Maximum um temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximum m temperature :150°C.	
		3	Steady damp-heat	General specification for desktop laser printers GB/T 17540-2017 5.8.4	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		4	Shock	General specification for desktop laser printers GB/T 17540-2017 5.8.6	Accredited only for WWavefor m:Half sine wave、 Trapezoidal ;Accelerate d velocity≤98 0m/s²;Pulse width≤30m s.	2026-07-27
		5	Transport package fell	General specification for desktop laser printers GB/T 17540-2017 5.8.7	Accredited only for Maximum drop height:1500 mm;Maxim um load:80kg.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		6	Vibration	General specification for desktop laser printers GB/T 17540-2017 5.8.5	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity $\leq 980 \text{ m/s}^2$.	2026-07-27
18	Serial impact dot matrix printer	1	Low temperature	General specification of serial impact dot matrix printer GB/T 9314-2011 5.9.1.2	Accredited only for Inter Size $\leq 2000 \text{ mm} \times 2000 \text{ mm}$, Minimum temperature: -40°C ; Inter Size $\leq 1000 \text{ mm} \times 800 \text{ mm} \times 1000 \text{ mm}$, Minimum temperature: -60°C ; Inter Size $\leq 350 \text{ mm} \times 400 \text{ mm} \times 300 \text{ mm}$, Minimum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :-70°C.	
		2	High temperature	General specification of serial impact dot matrix printer GB/T 9314-2011 5.9.1.3	Accredited only for Inter Size≤2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	2026-07-27
		3	Steady damp-heat	General specification of serial impact dot matrix printer GB/T 9314-2011 5.9.1.4	Accredited only for Inter Size≤2000 mm×2000 mm,Temperature range: (-40~85) °C,Humidit	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		4	Shock	General specification of serial impact dot matrix printer GB/T 9314-2011 5.9.2.2	Accredited only for Waveform: Half sine wave、 Trapezoidal ;Accelerate d velocity≤98 0m/s ² ;Pulse width≤30m s.	2026-07-27
		5	Packaging drop	General specification of serial impact dot matrix printer GB/T 9314-2011 5.9.2.3	Accredited only for	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Maximum drop height:1500 mm;Maximum load:80kg.	
		6	Vibration	General specification of serial impact dot matrix printer GB/T 9314-2011 5.9.2.1	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27
19	Receipt printer for toll collection of highway	1	Low temperature	Receipt printer for toll collection of highway GB/T 24723-2009 6.7.1	Accredited only for Inter Size≤2000 mm×2000 mm,Minimum temperature : -40°C;Inter Size≤1000 mm×800mm×1000mm,Minimum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		2	High temperature	Receipt printer for toll collection of highway GB/T 24723-2009 6.7.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maxim um temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximu m temperature :150°C.	2026-07-27
		3	The temperature of alternating	Receipt printer for toll collection of highway GB/T 24723-2009 6.7.3	Accredited only for Inter Size≤2000 mm×2000 mm×2000	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm, Temperature range: (-40~85) °C; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C; Inter Size≤350mm×400mm×300mm, Temperature range: (-70~150) °C; Temperature change rate≤16°C/min.	
		4	Damp heat, steady stat	Receipt printer for toll collection of highway GB/T 24723-2009 6.7.4	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Tempe	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					perature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		5	Vibration	Receipt printer for toll collection of highway GB/T 24723-2009 6.7.5	Accredited only for Frequency range: (1~ 3000) Hz;Acceler ated velocity≤98 0m/s².	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
20	Desktop ink-jet printers	1	Lower temperature	General specification for desktop ink-jet printers GB/T 17974-2017 5.8.2	Accredited only for Inter Size≤2000 mm×2000 mm,Minimum temperature :-40°C;Inter Size≤1000 mm×800mm×1000mm,Minimum temperature :-60°C;Inter Size≤350mm×400mm,Minimum temperature :-70°C.	2026-07-27
		2	Upper temperature limit	General specification for desktop ink-jet printers GB/T 17974-2017 5.8.3	Accredited only for Inter Size≤2000 mm×2000 mm,Maximum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximum m temperature :150°C.	
		3	Steady damp-heat	General specification for desktop ink-jet printers GB/T 17974-2017 5.8.4	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Temperature range: (-40~85) °C,Humidity range:(5~98) %RH;Inter Size≤1000 mm×800m m×1000m m,Temperature range: (-60~	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					150) °C, Humidity range: (15 ~ 98) %RH.	
		4	Vibration	General specification for desktop ink-jet printers GB/T 17974-2017 5.8.5	Accredited only for Frequency range: (1 ~ 3000) Hz; Accelerated velocity ≤ 980 m/s².	2026-07-27
		5	Shock	General specification for desktop ink-jet printers GB/T 17974-2017 5.8.6	Accredited only for Waveform: Half sine wave, Trapezoidal; Accelerated velocity ≤ 980 m/s²; Pulse width ≤ 30 ms.	2026-07-27
		6	Transport package fell	General specification for desktop ink-jet printers GB/T 17974-2017 5.8.7	Accredited only for Maximum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					drop height:1500 mm;Maximum load:80kg.	
21	Line printer	1	Upper limit of operating temperature	General specification of line printer GB/T 9312-1988 5.8	Accredited only for Inter Size≤2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	2026-07-27
		2	Lower limit of operating temperature	General specification of line printer GB/T 9312-1988 5.9	Accredited only for Inter Size≤2000 mm×2000 mm,Minimum temperature	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					:-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		3	Low temperature storage	General specification of line printer GB/T 9312-1988 5.10	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minim um temperature :-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤350mm×400mm×300mm, Minimum temperature : -70°C.	
		4	High temperature storage	General specification of line printer GB/T 9312-1988 5.11	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Maximum temperature : 85°C; Inter Size≤1000mm×800mm×1000mm, Maximum temperature : 150°C.	2026-07-27
		5	Wet and heat storage	General specification of line printer GB/T 9312-1988 5.12	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size ≤1000 mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		6	Vibration	General specification of line printer GB/T 9312-1988 5.13	Accredited only for Waveform: Half sine wave; Accelerated velocity ≤980m/s².	2026-07-27
		7	Shock	General specification of line printer GB/T 9312-1988 5.14	Accredited only for Frequency	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range: (1~3000) Hz; Accelerated velocity $\leq 980 \text{ m/s}^2$; Pulse width $\leq 30 \text{ ms}$.	
22	Connector used in automobile wire harness and electrical device	1	Drop	Connector used in automobile wire harness and electrical device Part 1: Definition, test method and requirement QC/T 1067.1-2017 4.19	Accredited only for Maximum drop height: 1500 mm; Maximum load: 80 kg.	2026-07-27
		2	Thermal shock	Connector used in automobile wire harness and electrical device Part 1: Definition test method and requirement QC/T 1067.1-2017 4.29	Accredited only for Inter Size $\leq 650 \text{ mm} \times 500 \text{ mm} \times 500 \text{ mm}$, Temperature range: $(-55 \sim 150) ^\circ\text{C}$	2026-07-27
		3	Temperature humidity cycle	Connector used in automobile wire harness and electrical device Part 1: Definition, test method and requirement QC/T 1067.1-2017 4.30	Accredited only for Inter Size ≤ 2000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		4	Thermal ageing	Connector used in automobile wire harness and electrical device Part 1:Definition、 test method and requirement QC/T 1067.1- 2017 4.31	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maxim	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					um temperature :85°C;Inter Size≤1000 mm×800m m×1000m m,Maximu m temperature :150°C.	
23	General specification of power supply transformers and filter chokes	1	Change of temperature	Generic specification of power supply transformers and filter chokes for use in electronic equipment GB/T 15290-2012 4.25	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C;Inter Size≤350m	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					m×400mm ×300mm,T emperature range: (- 70~150) °C;Tempera ture change rate≤16°C/ min.	
		2	Low temperature	Generic specification of power supply transformers and filter chokes for use in electronic equipment GB/T 15290-2012 4.26	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minimum temperature :-40°C;Inter Size≤1000 mm×800mm×1000mm,Minimum temperature :-60°C;Inter Size≤350mm×400mm×300mm,Minimum	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					temperature :-70°C.	
		3	Damp heat	Generic specification of power supply transformers and filter chokes for use in electronic equipment GB/T 15290-2012 4.27	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		4	High temperature	General specification of power supply transformers and filter chokes for use in electronic equipment GB/T 15290-2012 4.28	Accredited only for Inter Size≤2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	2026-07-27
		5	Packaging drop	Generic specification of power supply transformers and filter chokes for use in electronic equipment GB/T 15290-2012 4.31	Accredited only for Maximum drop height:1500 mm;Maximum load:80kg.	2026-07-27
		6	Vibration	Generic specification of power supply transformers and filter chokes for use in electronic equipment GB/T 15290-2012 4.23	Accredited only for Frequency range: (1~3000)	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Hz;Accelerated velocity $\leq 80\text{m/s}^2$.	
		7	collision	Generic specification of power supply transformers and filter chokes for use in electronic equipment GB/T 15290-2012 4.24	Accredited only for Waveform: Half sine wave;Accelerated velocity $\leq 80\text{m/s}^2$;Pulse width $\leq 30\text{ms}$.	2026-07-27
24	Vehicle travelling data recorder	1	High temperature	Vehicle travelling data recorder GB/T 19056-2021 6.8.2	Accredited only for Inter Size $\leq 2000\text{mm} \times 2000\text{mm} \times 2000\text{mm}$,Maximum temperature : 85°C ;Inter Size $\leq 1000\text{mm} \times 800\text{mm} \times 1000\text{mm}$,Maximum temperature : 150°C .	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		2	High temperature storage	Vehicle travelling data recorder GB/T 19056-2021 6.8.3	Accredited only for Inter Size≤2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	2026-07-27
		3	Low temperature	Vehicle travelling data recorder GB/T 19056-2021 6.8.4	Accredited only for Inter Size≤2000 mm×2000 mm,Minimum temperature : -40°C;Inter Size≤1000 mm×800mm×1000mm,Minimum	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		4	Low temperature storage	Vehicle travelling data recorder GB/T 19056-2021 6.8.5	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minim um temperature :-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		5	Steady damp-heat	Vehicle travelling data recorder GB/T 19056-2021 6.8.6	:-70℃. Accredited only for Inter Size≤2000 mm×2000 mm, Temperature range: (-40~85) °C, Humidity range:(5~98) %RH; Inter Size≤1000 mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range:(15~98) %RH.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		6	Shock	Vehicle travelling data recorder GB/T 19056-2021 6.9.3	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity ≤ 980 m/s ² ; Pulse width ≤ 30 ms.	2026-07-27
		7	Vibration	Vehicle travelling data recorder GB/T 19056-2021 6.9.2	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity ≤ 980 m/s ² .	2026-07-27
25	Automotive plastic products	1	Heat-resisting	General test method for automotive plastic products QC/T 15-1992 5.1.4.1, 5.1.4.2	Accredited only for Inter Size ≤ 2000 mm × 2000 mm, Maximum temperature : 85°C; Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤1000mm×800mm×1000mm,Maximum temperature :150°C.	
		2	Cold-resistant	General test method for automotive plastic products QC/T 15-1992 5.1.4.3	Accredited only for Inter Size≤2000mm×2000mm×2000mm,Minimum temperature : -40°C;Inter Size≤1000mm×800mm×1000mm,Minimum temperature : -60°C;Inter Size≤350mm×400mm×300mm,Minimum temperature : -70°C.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		3	Alternating cold and hot	General test method for automotive plastic products QC/T 15-1992 5.1.4.4	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Temperature range: (-40～85) °C; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60～150) °C; Inter Size≤350mm×400mm×300mm, Temperature range: (-70～150) °C; Temperature change rate≤16°C/min.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		4	Moisture-proof	General test method for automotive plastic products QC/T 15-1992 5.4	Accredited only for Inter Size≤2000 mm×2000 mm, Temperature range: (-40~85) °C, Humidity range:(5~98) %RH; Inter Size≤1000 mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range:(15~98) %RH.	2026-07-27
		5	Vibration	General test method for automotive plastic products QC/T 15-1992 5.6	Accredited only for Frequency	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					range: (1~3000) Hz; Accelerated velocity $\leq 980 \text{ m/s}^2$.	
		6	Falling impact	General test method for automotive plastic products QC/T 15-1992 5.7.3.2	Accredited only for Maximum drop height: 1500 mm; Maximum load: 80kg.	2026-07-27
26	Railway applications-Rolling stock equipment	1	Shock	Railway applications-Rolling stock equipment-Shock and vibration tests GB/T 21563-2018 10	Accredited only for Waveform: Half sine wave、Trapezoidal; Accelerated velocity $\leq 980 \text{ m/s}^2$; Pulse width $\leq 30 \text{ ms}$.	2026-07-27
		2	Vibration	Railway applications-Rolling stock equipment-Shock and vibration tests GB/T 21563-2018 8,9	Accredited only for Frequency range: (1~	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					3000) Hz;Accelerated velocity≤980m/s².	
27	Semicondctor discrete devices	1	Moisture-proof	Test methods for semiconductor discrete devices GJB 128B-2021 1021	Accredited only for Inter Size≤2000mm×2000mm×2000mm,Temperature range: (-40~85) °C,Humidity range:(5~98) %RH;Inter Size≤1000mm×800mm×1000mm,Temperature range: (-60~150) °C,Humidity range:(15	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					~98) %RH.	
		2	Life of high temperature	Test methods for semiconductor discrete devices GJB 128B-2021 1032	Accredited only for Inter Size≤2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	2026-07-27
		3	Temperature cycling	Test methods for semiconductor discrete devices GJB 128B-2021 1051	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Temperature range: (-40~85) °C;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C; Inter Size≤350mm×400mm×300mm, Temperature range: (-70~150) °C; Temperature change rate≤16°C/min.	
		4	Shock	Test methods for semiconductor discrete devices GJB 128B-2021 2016	Accredited only for Accelerated velocity≤980m/s²; Pulse width≤30ms.	2026-07-27
		5	Vibration fatigue	Test methods for semiconductor discrete devices GJB 128B-2021 2046	Accredited only for Frequency range: (1~3000)	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		6	Sweep vibration	Test methods for semiconductor discrete devices GJB 128B-2021 2056	Hz; Accelerated velocity $\leq 980 \text{ m/s}^2$. Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity $\leq 980 \text{ m/s}^2$.	2026-07-27
28	Microelectronic device	1	Moisture-proof	Test methods and procedures for microelectronic device GJB 548C-2021 1004.1	Accredited only for Inter Size $\leq 2000 \text{ mm} \times 2000 \text{ mm}$, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size $\leq 1000 \text{ mm} \times 800 \text{ mm}$	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		2	Stable baking	Test methods and procedures for microelectronic device GJB 548C-2021 1008.1	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	2026-07-27
		3	Tempreature cycling	Test methods and procedures for microelectronic device GJB 548C-2021 1010.1	Accredited only for Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C; Inter Size≤350mm×400mm×300mm, Temperature range: (-70~150) °C; Temperature change rate≤16°C/min.	
		4	Mechanical shock	Test methods and procedures for microelectronic device GJB 548C-2021 2002.1	Accredited only for Waveform: Half sine	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					wave、 Trapezoidal ;Accelerate d velocity≤98 0m/s ² ;Puls e width≤30m s.	
		5	Vibration	Test methods and procedures for microelectronic device GJB 548C-2021 2005.1,2007,2026.1	Accredited only for Accelerated velocity≤98 0m/s ² .	2026-07-27
29	Flatbed scanner	1	Lower temperature	General specification for flatbed scanner GB/T 18788-2008 5.8.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minimum temperature : -40°C;Inter Size≤1000 mm×800mm×1000mm,Minimum temperature	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					:-60°C;Inter Size≤350mm×400mm×300mm,Minimum temperature:-70°C.	
		2	Upper temperature limit	General specification for flatbed scanner GB/T 18788-2008 5.8.3	Accredited only for Inter Size≤2000mm×2000mm×2000mm,Maximum temperature:85°C;Inter Size≤1000mm×800mm×1000mm,Maximum temperature:150°C.	2026-07-27
		3	Steady damp-heat	General specification for flatbed scanner GB/T 18788-2008 5.8.4	Accredited only for Inter Size≤2000mm×2000mm×2000mm, Tempe	2026-07-27

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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					perature range: (- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		4	Vibration	General specification for flatbed scanner GB/T 18788-2008 5.8.5	Accredited only for Frequency range: (1~ 3000) Hz;Acceler ated velocity≤98 0m/s².	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		5	Transport package fell	General specification for flatbed scanner GB/T 18788-2008 5.8.6	Accredited only for Maximum drop height:1500 mm;Maximum load:80kg.	2026-07-27
30	Toner cartridge formonochromatic laser printer	1		Information technology-General specification for toner cartridge formonochromatic laser printer GB/T 34988-2017 5.11.1	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Minimum temperature :-40°C;Inter Size≤1000 mm×800mm×1000mm,Minimum temperature :-60°C;Inter Size≤350mm×400mm×300mm,Minimum temperature :-70°C.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		2		Information technology-General specification for toner cartridge formonochromatic laser printer GB/T 34988-2017 5.11.2	Accredited only for Inter Size≤2000 mm×2000 mm,Maximum temperature :85°C;Inter Size≤1000 mm×800mm×1000mm,Maximum temperature :150°C.	2026-07-27
		3		Information technology-General specification for toner cartridge formonochromatic laser printer GB/T 34988-2017 5.11.3	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Temperature range: (-40~85) °C,Humidity range:(5~	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					98) %RH;Inter Size≤1000 mm×800m m×1000m m,Tempera ture range: (-60~ 150) °C,Humidit y range:(15 ~98) %RH.	
		4		Information technology-General specification for toner cartridge formonochromatic laser printer GB/T 34988-2017 5.11.4	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Tempe rature range:(- 40~85) °C,Humidit y range:(5~ 98) %RH;Inter Size≤1000	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					mm×800m m×1000m m, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		5		Information technology-General specification for toner cartridge for monochromatic laser printer GB/T 34988-2017 5.11.5	Accredited only for Frequency range: (1~3000) Hz; Accelerated velocity ≤ 980 m/s ² .	2026-07-27
		6		Information technology-General specification for toner cartridge for monochromatic laser printer GB/T 34988-2017 5.11.6	Accredited only for Maximum drop height: 1500 mm; Maximum load: 80 kg.	2026-07-27
31	Automatic telephone set	1		The specifications of automatic telephone set GB/T 15279-2002 5.19.1	Accredited only for	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Inter Size≤2000 mm×2000 mm×2000 mm,Minim um temperature :-40°C;Inter Size≤1000 mm×800m m×1000m m,Minimu m temperature :-60°C;Inter Size≤350m m×400mm ×300mm,M inimum temperature :-70°C.	
		2		The specifications of automatic telephone set GB/T15279-2002 5.19.2	Accredited only for Inter Size≤2000 mm×2000 mm×2000 mm,Maxim um temperature :85°C;Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤1000mm×800mm×1000mm,Maximum temperature:150°C.	
		3		The specifications of automatic telephone set GB/T15279-2002 5.19.3	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² .	2026-07-27
		4		The specifications of automatic telephone set GB/T15279-2002 5.19.4	Accredited only for Frequency range: (1~3000) Hz;Accelerated velocity≤980m/s ² ;Pulse width≤30ms.	2026-07-27
		5		The specifications of automatic telephone set GB/T15279-2002 5.19.5	Accredited only for Inter	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					Size≤2000mm×2000mm×2000mm, Temperature range: (-40~85) °C, Humidity range: (5~98) %RH; Inter Size≤1000mm×800mm×1000mm, Temperature range: (-60~150) °C, Humidity range: (15~98) %RH.	
		6		The specifications of automatic telephone set GB/T15279-2002 5.19.6	Accredited only for Maximum drop height: 1500mm; Maxim	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					um load:80kg.	
2、Electric safety tools and devices						
1	Hand chain blocks	1	No-load performance	Hand chain blocks JB/T 7334-2016 5.3		2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.1.3.2		2026-07-27
		2	Dynamic load performance (Static load)	Hand chain blocks JB/T 7334-2016 5.5	Accredited only for 300 kN or below.	2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.1.3.3	Accredited only for 300 kN or below.	2026-07-27
2	Chain lever hoists	1	No-load performance	Chain lever hoists JB/T 7335-2016 5.3		2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.1.3.2		2026-07-27
		2	Dynamic load performance (Static load)	Chain lever hoists JB/T 7335-2016 5.5	Accredited only for 300 kN or below.	2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.1.3.3	Accredited only for 300 kN or below.	2026-07-27
3	Hook (loop)	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.4.3.2	Accredited only for 300 kN or	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					below.	
4	shackle	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.5.3.2	Accredited only for 300 kN or below.	2026-07-27
5	Pulley	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.6.3.2	Accredited only for 300 kN or below.	2026-07-27
6	Steel wire rope (set)	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.7.3.2	Accredited only for 300 kN or below.	2026-07-27
7	fiber rope	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.8.3.2	Accredited only for 300 kN or below.	2026-07-27
8	sling	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 5.9.3.2	Accredited only for 300 kN or below.	2026-07-27
9	Ratchet tightener	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 6.1.3.2	Accredited only for 300 kN or below.	2026-07-27
10	Double hook tightener	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 6.2.3.2	Accredited only for 300 kN or below.	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
11	Mesh sleeve connector	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 6.3.3.2	Accredited only for 300 kN or below.	2026-07-27
12	rotary connector	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 6.4.3.2	Accredited only for 300 kN or below.	2026-07-27
13	Anti bending connector	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 6.5.3.2	Accredited only for 300 kN or below.	2026-07-27
14	Cable jammer	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 6.6.3.2	Accredited only for 300 kN or below.	2026-07-27
15	Safety belt	1	Static load	Preventive test code for electric safety tools and devices DL/T 1476-2023 5.1.2.3.1		2026-07-27
16	Connectors	1	Static load	Preventive test code for electric safety tools and devices DL/T 1476-2023 5.1.3		2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 7.16		2026-07-27
17	Safety Rope	1	Static load	Preventive test code for electric safety tools and devices DL/T 1476-2023 5.1.4		2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 7.15		2026-07-27
18	Buffer	1	Static load	Preventive test code for electric safety tools and devices DL/T 1476-2023 5.1.5		2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 7.14		2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
19	自锁器	1	no-load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 7.12.3.2		2026-07-27
		2	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 7.12.3.3		2026-07-27
				Preventive test code for electric safety tools and devices DL/T 1476-2023 5.1.7		2026-07-27
20	Insulation rope (insulation rope tools)	1	Static load	Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 7.1.3.3		2026-07-27
				Preventive test code for electric safety tools and devices DL/T 1476-2023 5.2.2.3.1		2026-07-27
21	Fall arrester	1	No-load operation	Electric power over operation anti fall device DL/T 1147-2025 5.2		2026-07-27
				Preventive test code for electric safety tools and devices DL/T 1476-2023 5.1.6	Test only: speed differential controller.	2026-07-27
				Preventive test code of small construction machines and tools for electrical engineering DL/T 1741-2017 7.13	Test only: speed differential controller.	2026-07-27
		2	Static load	Electric power over operation anti fall device DL/T 1147-2025 5.3		2026-07-27



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Name: Shandong Zhongzhun Testing Technology Co., Ltd.

Address: No.167, Huoju Road, High-Tech Development Zone, Weihai, Shandong, China

Registration No. CNAS L10994

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

Effective Date: 2026-07-27 Expiry Date: 2030-05-13

SCHEDULE 3 ACCREDITED TESTING SCOPE

№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
Electrical						
1、 Electric safety tools and devices						
1	Insulating glove	1	AC verification test	Live Working-gloves of insulating material GB/T 17622-2008 6.4.2.1		2026-07-27
		2	AC tolerance test	Live Working-gloves of insulating material GB/T 17622-2008 6.4.2.2		2026-07-27
				Preventive test code of electric safety tools and devices DL/T 1476-2023 5.3.1		2026-07-27
				Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 7.1		2026-07-27
2	Insulating rod	1	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.1	Accredited only for Voltage: (1.5～120) kV	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
				Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.1	Accredited only for Voltage: (1.5~120) kV	2026-07-27
3	Electric safePortable short-circuit ground wire	1	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.3	Accredited only for Voltage: (1.5~120) kV	2026-07-27
		2	DC resistance test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.3		2026-07-27
4	Electroscope	1	Operating voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.4.3.1	Accredited only for Voltage: (1.5~120) kV	2026-07-27
		2	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.4.3.2	Accredited only for Voltage: (1.5~120) kV	2026-07-27
5	Nuclear phase generator	1	Operating voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.5.3.1	Accredited only for Voltage: (1~120) kV	2026-07-27
		2	Power frequency withstand voltage	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.5.3.2	Accredited only for	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
			test		Voltage: (1.5~120) kV	
		3	Leakage current test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.5.3.4	Accredited only for Voltage: (1.5~120) kV	2026-07-27
6	Insulating cover	1	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.6	Accredited only for (1.5~120) kV	2026-07-27
7	Insulating clapboard	1	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.7	Accredited only for Voltage: (1.5~120) kV	2026-07-27
8	Insulating rope	1	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.2.3.2	Accredited only for Voltage: (1.5~120) kV	2026-07-27
				Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.5.2.2	Test only: Voltage: (1.5~120) kV	2026-07-27
9	Insulating clamp	1	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.2.8	Accredited only for Voltage:	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
					(1.5~120) kV	
10	Auxiliary type insulating footwear (boots)	1	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.3.2		2026-07-27
11	Insulating pad	1	Power frequency withstand voltage test (AC voltage certification test)	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.3.3	Accredited only for Voltage: (1.5~120) kV	2026-07-27
				Matting of insulating material for live working DL/T 853-2015 7.4.3.1	Accredited only for Voltage: (1.5~120) kV	2026-07-27
12	Insulation support, tension, boom	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.2	Test only: Voltage: (1.5~120) kV	2026-07-27
13	Insulated ladder	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.4	Test only: Voltage: (1.5~120) kV	2026-07-27
14	Insulating sleeve	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 7.2		2026-07-27
15	Insulating footwear (boots)	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 7.4		2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		2	Leakage current test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 7.4		2026-07-27
		3	Electrical insulation performance	Foot protection-Safety footwear GB 21148-2020 6.4.3		2026-07-27
16	Insulating blanket	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 7.6	Test only: Voltage: (1.5~120) kV	2026-07-27
17	Insulating pad	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 7.7	Test only: Voltage: (1.5~120) kV	2026-07-27
18	Personal security line	1	DC resistance test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.1.9.3.1		2026-07-27
		2	Power frequency withstand voltage test	Preventive test code of electric safety tools and devices DL/T 1476-2023 5.1.9.3.2		2026-07-27
19	Insulated ladder	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.6.2.2	Test only: Voltage: (1.5~120) kV	2026-07-27
20	Insulated pulley	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.7.2		2026-07-27
21	Insulated hand tools	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.8		2026-07-27
22	Insulated tensioner	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 5.10	Test only: Voltage: (1.5~120) kV	2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
23	Insulated safety helmet	1	Ac withstand voltage test	Preventive test code of tools, devices and equipment for live-working DL/T 976-2017 7.5		2026-07-27
Medical devices						
1、Disinfection and sterilization equipment						
1	Medical clean bench	1	Noise	Medical clean bench YY/T 1539-2025 6.4.2		2026-07-27
		2	Intensity of illumination	Medical clean bench YY/T 1539-2025 6.4.3		2026-07-27
		3	Vibration	Medical clean bench YY/T 1539-2025 6.4.4		2026-07-27
		4	Airflow velocity	Medical clean bench YY/T 1539-2025 6.4.6		2026-07-27
		5	Air flow pattern	Medical clean bench YY/T 1539-2025 6.4.7		2026-07-27
		6	Cleanliness	Medical clean bench YY/T 1539-2025 6.4.8		2026-07-27
2	Clean bench	1	Wind speed	Clean bench JG/T 292-2010 7.4.4.3		2026-07-27
		2	Air cleanliness	Clean bench JG/T 292-2010 7.4.4.6		2026-07-27
		3	Noise	Clean bench JG/T 292-2010 7.4.4.8		2026-07-27
		4	Intensity of illumination	Clean bench JG/T 292-2010 7.4.4.9		2026-07-27
		5	Vibration amplitude	Clean bench JG/T 292-2010 7.4.4.10		2026-07-27
		6	Air condition	Clean bench JG/T 292-2010 7.4.4.11		2026-07-27
3	Biological safety cabinets	1	Downflow velocity	Biological safety cabinets GB 41918-2022 6.3.7.2.1		2026-07-27



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№	Test Object	Item/Parameter		Standard or Method	Note	Effective Date
		№	Item/ Parameter			
		2	Inflow velocity	Biological safety cabinets GB 41918-2022 6.3.8.3.4		2026-07-27
		3	Noise	Biological safety cabinets GB 41918-2022 6.3.3		2026-07-27
		4	Intensity of illumination	Biological safety cabinets GB 41918-2022 6.3.4		2026-07-27
		5	Vibration	Biological safety cabinets GB 41918-2022 6.3.5		2026-07-27
		6	Airflow pattern	Biological safety cabinets GB 41918-2022 6.3.9		2026-07-27
Mechanical						
1、Measuring instrument (measuring equipment)						
1	Phase order table	1	Phase sequence	Electrical safety in low voltage distribution systems up to 1000V a.c. and 1500V d.c.—Equipment for testing, measuring or monitoring of protective measures—Part 7: Phase sequence GB/T 18216.7-2024 Appendix B	Phase sequence test	2026-07-27



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