Korea Laboratory Accreditation Scheme

CERTIFICATE OF ACCREDITATION

Korea Machinery & Metrology Systems Co., Ltd

Accreditation No. : KC08-229

Corporation Registration No. : 121111-0195222

Address of Laboratory : 102, 17-22, Cheomdangwagi-ro 208beon-gil, Buk-gu, Gwangju, Republic of Korea

Date of Initial Accreditation : November 12, 2008.

Validity of Accreditation : October 19, 2024. ~ October 18, 2028.

Scope of Accreditation : Attached Annex

Date of issue : September 04, 2024.

This calibration laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to Joint ISO-ILAC-IAF Communiqué).

CHIN CHONGWOOK

Head

Korea Laboratory Accreditation Scheme

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017 & KS Q ISO/IEC 17025:2017

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CALIBRATION

Valid To : August. 18, 2028.

Accreditation No : KC08-229

In recognition of the successful completion of the KOLAS evaluation process,
accreditation is granted to this laboratory to perform the following calibrations

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
102. Linear dimension			103. Angle			106. Various dimensional		
10201	Balls	N	10311	Plate/square/electric levels	N	10601	Caliper gauges inside/Outside/ Gear tooth calipers	Y
10206	Dial/cylinder gauge testers	Y	10317	Sine bars/plates/tables/centers	N			
10207	Doctor blades	N	10318	Squareness testers,	N			
10209	End bars	N	10319	Cylindrical squares	N	10603	Cylinder/bore gauges	Y
10210	Extensometers, linear displacement transducers	Y	10320	Precision squares,Squsres	N	10604	Depth gauges, Depth micrometers	Y
			104. Form					
			10401	Form testers	Y	10605	Dial/digital gauges	Y
10211	Filler gauges	N	10404	Optical flats	N	10608	Grind gauges	Y
10212	Film applicators	N	10405	Optical parallels	N	10609	Micro indicators, Test indicators	Y
10213	Gap gauges	N	10406	Parallel blocks	N			
10214	Gauge blocks, by comparison	N	10407	Precision surface plates	Y	10610	Micrometer heads	Y
10216	Height gauges/ measuring machines	Y	10409	Roundness measurement	Y	10611	3-points micrometers	Y
			10410	Form standard specimens	N	10612	Inside Micrometers	Y
10220	Standard measuring machines	Y	10412	Straight edges	N	10613	Outside Micrometers	Y
			10413	Straight rules	N	10617	Standard sieves	N
10223	Electronic micrometers	Y	10415	Test bars	N	10620	Welding gauges	N
10224	Height micrometers, Riser blocks	N	105. Complex geometry			201. Mass		
			10501	Base gauges for electric bulb	N	20102	Auto-hopper scale balances	Y
10225	Laser scan micrometers	Y	10502	Bench centers	N	20103	Auto-packer scale balances	Y
10227	Standard tape rules, Peripheral gauges	N	10503	Contact coordinate measuring machines	Y	20105	Counter beam balances	Y
						20107	Dial swing scale balances	Y
10228	Cylindrical plug/pin gauges, Thread measuring wire gauges	N	10504	Non-contact coordinate measuring machines	Y	20108	Direct reading balances	Y
						20109	Electric balances	Y
10229	Radius gauges	N	10505	Gauge block accessories	N	20112	Platform scale balances	Y
10230	Cyilindrical ring gauges	N	10511	Measuring microscopes, Profile projectors	Y	20113	Spring scale balances	Y
10232	Step gauges	N				20114	Trip balances	Y
10233	Taper type feeler gauges	N	10512	Micro measuring microscopes	Y	20116	Weights	Y
10234	Ultrasonic thickness gauges	Y	10514	Taper plug gauges	N	202. Force		
10235	Ultrasonic/ coating thickness specimens	N	10515	Taper ring gauges	N	20203	Tension/compression testing machines	Y
			10517	Stylus type roughness	Y			
10236	Coating thickness testers	Y	10525	Thread plug gauges	N	20204	Push-pull gauges	Y
10237	Torque arms	N	10526	Taper thread plug gauges	N	203. Torque		
10238	Width measuring specimens	N	10527	Thread ring gauges	N	20302	Torque measuring devices	N
103. Angle			10529	V-blocks and box blocks	N	20303	Torque wrenchs/drivers	Y
10304	Bevel protractors	N						

Field Code	Item of Calibration	on-site
204. Pressure		
20402	Manometers	N
20403	Pneumatic pressure ballances	N
20404	Hydraulic pressure ballances	N
20406	Absolut pressure gauges	N
20407	Blood pressure gauges	N
20408	Compound pressure gauges	Y
20409	Differential pressure gauges	Y
20411	Gauges pressure gauges	Y
20412	Pressure transducers/ transmitters	Y
20413	Dial type vacuum gauges	Y
206. Volume		
20601	Volumetric glasswares	N
20602	Pycnometers	N
20605	Concrete air contant meters	N
20606	Piston type volume meters	N
207. Density		
20704	Salinity meters	N
20707	Chloride meters	N
210. Hardness		
21001	Brinell hardness testers	Y
21002	Rockwell hardness testers	Y
21003	Shore hardness testers	Y
21004	Vickers hardness testers	Y
21005	Durometer hardness testers	N
21006	Leeb hardness testers	Y
301. Time/frequency		
30102	Frequency standards	N
30103	General frequency sources	Y
30104	Frequency meters/counters	Y
30105	Time interval sources	Y
30106	Time interval meters/ Stop watches/Timers	Y
302. Velocity & revolution		
30201	Standard RPM generators	Y
30202	Contact type tachometers	Y
30203	Photo tachometers/ stroboscopes	Y
401. DC voltage & current		
40101	DC ammeters	Y
40103	DC voltage/current calibrators	Y
40104	Electrical temperature calibrators(Sensor	Y
40105	DC current shunts	Y
40106	Galvanometers/null detectors	Y
40108	DC power supplies	Y
40110	DC voltage dividers	Y
40112	DC voltmeters	Y
402. Resistance, capacitance and inductance		
40205	Earth testers	Y
40210	Insulation testers	Y
40213	Resistance bridges/ similar instruments	Y
40214	Resistance meters	Y
40215	Resistors	Y
40217	Impedance bridges/LCR meters	Y
403. AC voltage, current & power		
40301	AC ammeters	Y
40302	Clamp ammeters/voltmeters	Y
40303	AC voltage/current calibrators	Y
40305	AC current shunts	Y
40310	Power factor meters	Y
40311	AC power meters	Y
40312	AC power supplies	Y
40313	Puncture/safety testers	Y
40314	Power recorders	Y
40318	AC voltmeters	Y
404. Other DC & LF measurements		
40401	LF amplifiers	Y
40402	DC/LF attenuators	Y
40403	Multimeter calibrators	Y
40404	Oscilloscope calibrators	Y
40407	Audio distortion analyzers/ meters	Y
40408	LF filters	Y
40409	LF/Audio signal analyzers	Y
40410	Line frequency meters	Y
40411	Function generators	Y
40412	Genescopes	Y
40413	AC/DC high voltage voltmeters	Y
40414	LF impulse generators	Y
40416	Leakage current testers	Y
40417	Electronic AC/DC loads	Y
40418	Modulation meters	Y
40419	Analogue/Digital multimeters	Y
40420	Noise meters	Y
40421	Oscilloscopes	Y
40422	LF phase meters	Y
40423	Random wave generators	Y
40424	Voltage/Current recorders	Y
40425	Relay test sets	Y
40426	LF signal generators	Y
40429	Sweep generators	Y
40430	Signal transducers	Y
40432	Transistor curve tracers	Y
40433	Waveform analyzers	Y
40434	AC/DC high voltage generators	Y
40435	AC/DC high voltage probes	Y
501. Contact thermomtry		
50101	Temperature generators; ovens, furnaces, isothermal liquid baths ice-point baths, ,dry-block calibrators	Y
50102	Temperature indicators/ recorders/controllers, temperature calibrators	Y
50103	Glass thermometers; liquid-in-glass, Beckmann	N
50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	Y
50105	Thermal expansion thermometers; bimetal, gas or liquid type	Y
50106	Thermomecoules; noble metal, base metal, pure metal, special type, etc.	Y
50107	Temperature transducers	Y
502. Non contact thermomtry		
50204	Standard radiation thermometers	N
50205	Thermal image apparatus	N
50206	Blackbody furnaces	N
503. Humidity		
50302	Relative humidity hygrometers; polimer thinfilm, hair, etc.	N
50303	Psychrometers; Assmann ventilated, PRT type, etc.	N
50304	Temperature humidity Recorders; Hygrothermograph, etc.	N
50305	Transducers; relative humidity	N
50306	Humidity generators; two-pressure,two-temperature, flow mixing humidity gererator, constant temperature and humidity chamber, etc.	Y
601. Sound in air		
60106	Sound level meters	Y
901. Chemical analysis		
90103	Gas analyzers	Y

Note

1. This laboratory provides calibration services in permanent standard laboratory and at on-site.

2. Laboratory conducts on-site calibration should meet requirements of KOLAS-SR-007.

3. On-site calibration is allowed to items with marking 'Y', not allowed to items with marking 'N'.

4. Measurement uncertainty normally is quoted as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of k=2. It expresses the lowest uncertainty of measurement that can be provided by accredited calbration laboratories in normal conditions.

5.Due to the calibration environment such as reference standards or customers' facilities, it is note that uncertainty of measurement on a calibration certificate may be expressed larger than measurement uncertainty on scope of accreditation in general.

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Balls	10201	(0.3 ~ 50) mm	0.48 µm	Gauge blocks /KIQI-10201
Dial/cylinder gauge testers	10206	(0 ~ 100) mm	0.33 µm	Gauge blocks /KIQI-10206
Doctor blades	10207	(0 ~ 10) mm	1.2 µm	Electronic micrometers /KIQI-10207
End bars	10209	(25 ~ 1 000) mm	$\sqrt{(0.7\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10209
Extensometers, linear displacement transducers	10210	(0 ~ 500) mm	$\sqrt{(0.14\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10210
Filler gauges	10211	(0.03 ~ 10) mm	1.1 µm	Micro indicators /KIQI-10211
Film applicators	10212	(0 ~ 10) mm	1.2 µm	Electronic micrometers /KIQI-10212
Gap gauges	10213	(5 ~ 200) mm	$\sqrt{(0.4\ \mu m)^2+(4.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10213
Gauge blocks, by comparison	10214	(0.5 ~ 100) mm	$\sqrt{(79\ nm)^2+(1.3\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10214
Height gauges/measuring machines	10216	(0 ~ 1 500) mm	$\sqrt{(0.9\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10216
Standard measuring machines	10220	(0 ~ 500) mm	$\sqrt{(0.4\ \mu m)^2+(4.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10220
Electronic micrometers	10223	(0 ~ 10) mm	0.08 µm	Gauge blocks /KIQI-10223
Height micrometers, Riser blocks	10224			Gauge blocks /KIQI-10224
Block		(0 ~ 610) mm	$\sqrt{(0.7\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	
Head		(0 ~ 25) mm	0.73 µm	
Riser blocks		(0 ~ 600) mm	$\sqrt{(0.7\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	
Laser scan micrometers	10225	(0 ~ 100) mm	0.8 µm	Standard pin gauges /KIQI-10225
Standard tape rules, Peripheral gauges	10227	(0 ~ 50) m	$\sqrt{(0.38\ mm)^2+(8.0\times10^{-6}\times l_0)^2}$	Standard rules /KIQI-10227
Cylindrical plug/pin gauges Thread measuring wire gauges	10228	(0.1 ~ 200) mm	0.8 µm	Gauge blocks /KIQI-10228
Radius gauges	10229	(0.4 ~ 100) mm	1.6 µm	Gauge blocks /KIQI-10290
Cyilindrical ring gauges	10230	(3 ~ 200) mm	$\sqrt{(0.4\ \mu m)^2+(5.0\times10^{-6}\times D_0)^2}$	Gauge blocks /KIQI-10230
Step gauges	10232	(0 ~ 1 010) mm	$\sqrt{(0.7\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10232
Taper type feeler gauges	10233	(0 ~ 50) mm	1.5 µm	Non-contact coordinate measuring machines
Ultrasonic thickness gauges	10234	(0 ~ 100) mm	6.4 µm	Gauge blocks /KIQI-10234
Thickness specimens	10235			Gauge blocks /KIQI-10235
Coating		(0 ~ 8) mm	0.5 µm	
Ultrasonic		(0 ~ 100) mm	2.3 µm	
Coating thickness testers	10236	(0 ~ 8) mm	4.1 µm	Standard specimen /KIQI-10236

102. Linear dimension

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Torque arms	10237			Contact coordinate measuring machines Standard measuring machines /KIQI-10237
Torque arms		(0 ~ 1 000) mm	$\sqrt{(0.7\ \mu m)^2+(4.0\times10^{-6}\times l_0)^2}$	
Wire		(0 ~ 5) mm	0.5 μm	
Width measuring specimens	10238	(0 ~ 300) mm	$\sqrt{(1.2\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	Standard measuring machines /KIQI-10238

103. Angle

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Bevel protractors	10304			Angle gauge blocks /KIQI-10304
Angle accuracy		(0 ~ 90)°	1.5′	
Angle of accessory		(0 ~ 90)°	2.2′	
Plate/square/electric levels	10311			Level comparator /KIQI-10311
Scale accuracy		±1 000″	1.6″	
Floor plan		(0 ~ 500) mm	1.8 μm	
Side perpendicularity		(0 ~ 500) mm	2.2 μm	
Sine bars/plates/tables/centers	10317			Standard measuring machines /KIQI-10317
Center distance		(100 ~ 300) mm	1.4 μm	
Floor plan		(100 ~ 300) mm	0.8 μm	
Parallelism		(100 ~ 300) mm	0.8 μm	
Squareness testers, right angle testers	10318	(0 ~ 500) mm	1.8 μm	Precision squares /KIQI-10318
Cylindrical squares	10319	(0 ~ 500) mm	2.0 μm	Precision squares /KIQI-10319
Precision squares	10320			Squareness testers, right angle testers /KIQI-10320
Perpendicularity		(0 ~ 500) mm	2.2 μm	
Parallelism		(0 ~ 500) mm	0.8 μm	

104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Form testers	10401			Gauge blocks /KIQI-10401
Height		(0 ~ 100) mm	0.6 μm	
Length		(0 ~ 200) mm	0.6 μm	
Angle		(0 ~ 60) °	1′	
Optical flats	10404	(0 ~ 60) mm	0.10 μm	Optical flat /KIQI-10404
Optical parallels	10405			Optical flat /KIQI-10405
Floor plan		(0 ~ 30) mm	0.10 μm	
Parallelism		(0 ~ 30) mm	0.10 μm	
Parallel blocks	10406			Electronic micrometers /KIQI-10406
Floor plan		(0 ~ 1 500) mm	1.5 μm	
Parallelism		(0 ~ 1 500) mm	1.5 μm	
The height difference between		(0 ~ 1 500) mm	2.1 μm	

104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Precision surface plates	10407			Electric level
Cross length		(0 ~ 3 000) mm	2.8 μm	/KIQI-10407
Roundness measurement instruments	10409			Roundness standard specimen/KIQI-10409
Detector accuracy		(0 ~ 50) μm	0.50 μm	
Rotational accuracy of spindle		(0 ~ 300) μm	0.04 μm	
Form standard specimens	10410			Contact coordinate measuring machines
Height		(0 ~ 50) mm	0.8 μm	/KIQI-10410
Length		(0 ~ 100) mm	0.8 μm	
Radius		(0 ~ 10) mm	0.8 μm	
Angle		(0 ~ 45)°	7″	
Straight edges	10412			Electronic
Straightness		(0 ~ 1 500) mm	1.6 μm	micrometers
Parallelism		(0 ~ 1 500) mm	1.6 μm	/KIQI-10412
Straight rules	10413	(0 ~ 3 000) mm	$\sqrt{(0.06\ \text{mm})^2+(8.0\times10^{-6}\times l_0)^2}$	Standard rules /KIQI-10413
Test bars	10415			Standard measuring
Roundness		(0 ~ 500) mm	0.6 μm	machines
Cylindrical diagram		(0 ~ 500) mm	0.8 μm	/KIQI-10415
Runout		(0 ~ 500) mm	1.4 μm	
Angle		(0 ~ 30)°	2.2″	

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Base gauges for electric bulb	10501			Standard measuring
Pass, stop inner diameter		(5 ~ 40) mm	1.6 μm	machines
Thread inner diameter		(5 ~ 40) mm	2.0 μm	/KIQI-10501
Pitch		(0.5 ~ 5) mm	1.6 μm	
Bench centers	10502			Test bars
Parallelism between centers		(0 ~ 400) mm	2.2 μm	/KIQI-10502
Floor plan of bed		(0 ~ 400) mm	1.6 μm	
Height difference between both centers		(0 ~ 400) mm	2.2 μm	
Contact coordinate measuring machines	10503			Gauge blocks /KIQI-10503
Axis accuracy		(0 ~ 1 500 mm)	$\sqrt{(0.7\ \mu\text{m})^2+(3.0\times10^{-6}\times l_0)^2}$	
Volumatric accuracy		(0 ~ 1 500 mm)	$\sqrt{(0.7\ \mu\text{m})^2+(3.0\times10^{-6}\times l_0)^2}$	
Non-contact coordinate measuring machines	10504			Standard scale /KIQI-10504
Axis accuracy		(0 ~ 500) mm	$\sqrt{(0.6\ \mu\text{m})^2+(3.0\times10^{-6}\times l_0)^2}$	
Squreness		(0 ~ 500) mm	$\sqrt{(0.6\ \mu\text{m})^2+(3.0\times10^{-6}\times l_0)^2}$	
Perpendicularity		(0 ~ 150) mm	2.2 μm	

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Gauge block accessories	10505			Gauge blocks Gauge block comparators /KIQI-10505
Round type jaw		(0 ~ 20) mm	0.25 μm	
Parallel jaw (A type)		(0 ~ 20) mm	0.25 μm	
Parallel jaw (B type)		(0 ~ 20) mm	0.07 μm	
Scriber point		(0 ~ 20) mm	0.07 μm	
Base block		(0 ~ 50) mm	0.75 μm	
Measuring microscopes, Profile projectors	10511			Standard scale /KIQI-10511
Axis accuracy		(0 ~ 300) mm	1.1 μm	
Squreness		(0 ~ 150) mm	2.1 μm	
Magnification error		×2 ~ ×100	5.4×10^{-2}	
Angle division accuracy		(0 ~ 360)°	1.2′	
Micro measuring microscopes	10512	(0 ~ 20) mm	1.1 μm	Standard scale /KIQI-10512
Taper plug gauges	10514			Standard measuring machines /KIQI-10514
Small end diameter		(1 ~ 200) mm	1.2 μm	
Large end diameter		(1 ~ 200) mm	1.4 μm	
Height		(1 ~ 200) mm	1.2 μm	
Angle		(0 ~ 90)°	1.2″	
Taper ring gauges	10515			Standard measuring machines /KIQI-10515
Small end diameter		(3 ~ 200) mm	0.6 μm	
Large end diameter		(3 ~ 200) mm	0.8 μm	
Angle		(0 ~ 90)°	2.2″	
Stylus type roughness tester	10517			Roughness standard specimen/KIQI-10517
Ra		(0 ~ 20) μm	0.08 μm	
Rz		(0 ~ 50) μm	0.15 μm	
Step height		(0.1 ~ 200) μm	0.06 μm	
Thread plug gauges	10525			Standard measuring machines /KIQI-10525
Outside diameter		(1 ~ 200) mm	0.8 μm	
Pitch circle diameter		(1 ~ 200) mm	2.5 μm	
Pitch		(0.2 ~ 5) mm	1.3 μm	
Angle/2		(0 ~ 45)°	1′	
Taper thread plug gauges	10526			Standard measuring machines /KIQI-10526
Outside diameter		(1 ~ 200) mm	2.0 μm	
Pitch circle diameter		(1 ~ 200) mm	2.6 μm	
Pitch		(0.2 ~ 5) mm	1.3 μm	
Gauge length		(1 ~ 100) mm	2.6 μm	
Angle/2		(0 ~ 45)°	1.2′	
Thread ring gauges	10527			Standard measuring machines /KIQI-10527
Inside diameter		(5 ~ 100) mm	1.7 μm	
Pitch circle diameter		(5 ~ 100) mm	1.6 μm	
Pitch		(0.5 ~ 5) mm	0.8 μm	

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
V-blocks, box blocks	10529			Electronic micrometers
Flatness		(0 ~ 300) mm	2.0 μm	/KIQI-10529
Parallelism		(0 ~ 300) mm	2.0 μm	
The height difference between two blocks		(0 ~ 300) mm	2.0 μm	

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Inside/outside/gear tooth calipers, caliper gauges	10601			Gauge blocks /KIQI-10601
Inside/Out side/Gear tooth calipers		(0 ~ 2 000) mm	$\sqrt{(8.7\ \mu m)^2+(5.0\times10^{-6}\times l_0)^2}$	
Cailiper gauges	10601	(0 ~ 200) mm	7.2 μm	
Cylinder/Bore gauges	10603	(0 ~ 800) mm	0.7 μm	Dial gauge tester /KIQI-10603
Depth gauges, Depth micrometers	10604	(0 ~ 1 000) mm	$\sqrt{(0.8\ \mu m)^2+(3.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10604
Dial/digital gauges	10605	(0 ~ 100) mm	0.7 μm	Dial gauge tester /KIQI-10605
Grind gauges	10608	(0 ~ 1) mm		Electronic micrometers /KIQI-10608
The depth of the slope			1.5 μm	
Straightness			1.3 μm	
Micro indicators, Test indicators	10609	(0 ~ 5) mm	0.7 μm	Dial gauge tester /KIQI-10609
Micrometer heads	10610	(0 ~ 50) mm	0.8 μm	Gauge blocks /KIQI-10610
3-points micrometers	10611	(0 ~ 200) mm	1.2 μm	Cylindrical ring gauges /KIQI-10611
Inside Micrometers	10612	(5 ~ 2 000) mm	$\sqrt{(0.8\ \mu m)^2+(5.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10612
Outside Micrometers	10613	(0 ~ 2 000) mm	$\sqrt{(0.9\ \mu m)^2+(5.0\times10^{-6}\times l_0)^2}$	Gauge blocks /KIQI-10613
Standard sieves	10617			Non-contact coordinate measuring machines /KIQI-10617
Wire diameter		(0 ~ 10) mm	2.8 μm	
Wire cloth size		(0 ~ 150) mm	5.4 μm	
Welding gauges	10620			Gauge blocks,
Height and depth		(0 ~ 100) mm	0.2 mm	Non-contact
Ruler		(0 ~ 100) mm	0.2 mm	coordinate
Neck thickness		(0 ~ 20) mm	0.2 mm	measuring machines
Angle		(0 ~ 90) °	0.3°	/KIQI-10620
Tapered Gap Gauge Scale		(0 ~ 100) mm	0.2 mm	

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201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Auto-hopper scale balances	20102	(0 ~ 20) kg	10 g	Weights /KIQI-20102
		(20 ~ 200) kg	21 g	
		(200 ~ 500) kg	52 g	
		(500 ~ 1 000) kg	0.11 kg	
		(1 000 ~ 2 000) kg	0.23 kg	
		(2 000 ~ 5 000) kg	0.52 kg	
Auto-packer scale balances	20103	(0 ~ 1) kg	0.1 g	Weights
		(1 ~ 20) kg	2.0 g	/KIQI-20103
		(20 ~ 100) kg	10 g	
Counter beam balances	20105	(0 ~ 311) g	10 mg	Weights
		(311 ~ 2 610) g	91 mg	/KIQI-20105
		(2.61 ~ 20) kg	0.91 g	
Dial swing scale balances	20107			Weights
		(1 ~ 10) kg	1.0 g	/KIQI-20107
		(10 ~ 50) kg	10 g	
		(50 ~ 100) kg	20 g	
		(100 ~ 500) kg	0.19 kg	
		(500 ~ 1 000) kg	0.48 kg	
Direct reading balances	20108	(0 ~ 30) g	46 µg	Weights
		(30 ~ 210) g	0.12 mg	/KIQI-20108
		(210 ~ 1 000) g	0.54 mg	
Electric balances	20109	(0 ~ 52) g	93 µg	Weights
		(52 ~ 210) g	0.23 mg	/KIQI-20109
		(210 ~ 1 000) g	1.3 mg	
		(1 ~ 5) kg	6.4 mg	
		(5 ~ 20) kg	32 mg	
		(20 ~ 50) kg	98 mg	
		(50 ~ 100) kg	2.9 g	
		(100 ~ 200) kg	6.6 g	
		(200 ~ 500) kg	14 g	
		(500 ~ 1 000) kg	30 g	
		(1 000 ~ 2 000) kg	0.15 kg	
		(2 000 ~ 5 000) kg	0.28 kg	
		(5 000 ~ 30 000) kg	7.1 kg	
		(30 000 ~ 50 000) kg	9.1 kg	
Platform scale balances	20112	(0 ~ 5) kg	0.93 g	Weights
		(5 ~ 20) kg	2.7 g	/KIQI-20112

201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Platform scale balances	20112	(20 ~ 200) kg	46 g	Weights /KIQI-20112
		(200 ~ 1 000) kg	0.42 kg	
		(1 000 ~ 2 000) kg	0.91 kg	
		(2 000 ~ 5 000) kg	1.9 kg	
Spring scale balances	20113	(0 ~ 5) kg	9.1 g	Weights /KIQI-20113
		(5 ~ 20) kg	18 g	
		(20 ~ 100) kg	46 g	
Trip balances	20114	(1 ~ 200) g	10 mg	Weights /KIQI-20114
		(200 ~ 500) g	30 mg	
		(500 ~ 1 000) g	91 mg	
		(1 000 ~ 2 000) g	0.17 g	
		(2 000 ~ 5 000) g	0.41 g	
Weights	20116	(1 mg ~ 20 kg)	F_1 Grade	Weights /KIQI-20116
		1 mg	5 µg	
		2 mg	5 µg	
		5 mg	5 µg	
		10 mg	5 µg	
		20 mg	5 µg	
		50 mg	7 µg	
		100 mg	7 µg	
		200 mg	7 µg	
		500 mg	9 µg	
		1 g	11 µg	
		2 g	14 µg	
		5 g	17 µg	
		10 g	20 µg	
		20 g	26 µg	
		50 g	0.04 mg	
		100 g	0.06 mg	
		200 g	0.18 mg	
		500 g	0.3 mg	
		1 kg	1.2 mg	
		2 kg	1.5 mg	
		5 kg	2.8 mg	
		10 kg	12 mg	
		20 kg	15 mg	
		(1 000 kg)	M_3 Grade	
		1 000 kg	53 g	

202. Force

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Tension/compression testing machines	20203			Electrical force measuring devices /KIQI-20203
Tension		(2 ~ 5) kN	1.5×10^{-3}	
		(5 ~ 10) kN	1.5×10^{-3}	
		(10 ~ 20) kN	1.5×10^{-3}	
		(20 ~ 50) kN	1.6×10^{-3}	
Compression		(2 ~ 5) kN	1.4×10^{-3}	
		(5 ~ 10) kN	1.5×10^{-3}	
		(10 ~ 20) kN	1.4×10^{-3}	
		(20 ~ 50) kN	1.5×10^{-3}	
		(50 ~ 100) kN	1.7×10^{-3}	
		(100 ~ 200) kN	1.6×10^{-3}	
		(200 ~ 500) kN	1.7×10^{-3}	
		(500 ~ 1 000) kN	1.9×10^{-3}	
		(1 ~ 2) MN	1.8×10^{-3}	
Push-pull gauges	20204	(0 ~ 1 000) N	1.1×10^{-3}	Weights /KIQI-20204

203. Torque

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Torque measuring devices	20302	(0.01 ~ 0.1) N·m	7.9×10^{-3}	Deadweight type torquen standards /KIQI-20302
		(0.1 ~ 1) N·m	3.3×10^{-3}	
		(1 ~ 10) N·m	1.4×10^{-3}	
		(10 ~ 100) N·m	3.9×10^{-4}	
		(100 ~ 200) N·m	6.8×10^{-4}	
		(200 ~ 500) N·m	3.4×10^{-4}	
		(500 ~ 2 000) N·m	1.7×10^{-4}	
Torque wrenches/ drivers	20303	(0.6 ~ 6) N·m	7.6×10^{-3}	Torque testers, electrical /KIQI-20303
		(6 ~ 10) N·m	6.1×10^{-3}	
		(10 ~ 20) N·m	3.8×10^{-3}	
		(20 ~ 50) N·m	4.4×10^{-3}	
		(50 ~ 100) N·m	4.4×10^{-3}	
		(100 ~ 200) N·m	3.8×10^{-3}	
		(200 ~ 500) N·m	6.5×10^{-3}	
		(500 ~ 1 000) N·m	7.1×10^{-3}	

204. Pressure

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Manometers	20402	(0 ~ 15) kPa	3.9×10^{-3}	Pressuregenerators/controllers, Pneumaticpressureballances/KIQI-20402
		(15 ~ 200) kPa	2.9×10^{-3}	

204. Pressure

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Pneumatic pressure ballances	20403	(0 ~ 7.0) MPa	9.0×10^{-5}	Pneumatic pressure ballances/KIQI-20403
Hydraulic pressure ballances	20404	(0 ~ 100) MPa	9.0×10^{-5}	Hydraulic pressure ballances /KIQI-20404
Absolut pressure gauges	20406	(0 ~ 7.0) MPa	2.0×10^{-4}	Pressuregenerators/controllers /KIQI-20406
Blood pressure gauges	20407	(0 ~ 40) kPa	7.5×10^{-4}	Pressuregenerators/controllers /KIQI-20407
Compound pressure gauges	20408	(-0.098 ~ 7.0) MPa	1.8×10^{-4}	Pressuregenerators/controllers /KIQI-20408
Differential pressure gauges	20409	(0 ~ 15) kPa (0.015 ~ 7.0) MPa	2.7×10^{-4} 9.0×10^{-5}	Pressuregenerators/controllers, Pneumaticpressureballances /KIQI-20409
Gauge pressure gauges	20411	(0 ~ 15) kPa (0.015 ~ 100) MPa	2.7×10^{-4} 9.0×10^{-5}	Pressuregenerators/controllers, Pneumaticpressureballances,Hydraulic pressure ballances /KIQI-20411
Pressure transducers / transmitters	20412	(0 ~ 15) kPa (0.015 ~ 100) MPa	2.0×10^{-4} 1.4×10^{-4}	Pressuregenerators/controllers, Pneumaticpressureballances,Hydraulic pressure ballances /KIQI-20412
Dial type vacuum gauges	20413	(-98 ~ 0) kPa	5.8×10^{-3}	Pressuregenerators/controllers /KIQI-20413

206. Valume

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Volumetric glasswares	20601	(0 ~ 1) mL (1 ~ 2) mL (2 ~ 10) mL (10 ~ 20) mL (20 ~ 50) mL (50 ~ 100) mL (100 ~ 250) mL (250 ~ 500) mL (500 ~ 1 000) mL (1 000 ~ 2 000) mL	1.3 µL 2.3 µL 7.4 µL 15 µL 30 µL 27 µL 55 µL 0.13 mL 0.17 mL 0.28 mL	Weights /KIQI-20601
Pycnometers	20602	(0 ~ 100) mL (100 ~ 200) mL (200 ~ 500) mL	20 µL 39 µL 71 µL	Weights /KIQI-20602

206. Valume

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Concrete air contant meters	20605	(0 ~ 7 500) mL (0 ~ 10) %	0.15 %	Weights /KIQI-20605
Piston type volume meters	20606	(0 ~ 0.01) mL (0.01 ~ 0.02) mL (0.02 ~ 0.1) mL (0.1 ~ 0.2) mL (0.2 ~ 1) mL (1 ~ 2) mL (2 ~ 5) mL (5 ~ 10) mL	0.14 μL 0.15 μL 0.26 μL 0.58 μL 1.2 μL 2.4 μL 9.2 μL 15 μL	Weights /KIQI-20606

207. Density

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Salinity meters	20704	(0 ~ 1.5) % (1.5 ~ 15) % (15 ~ 30) %	4.6×10^{-3} % 3.9×10^{-2} % 6.2×10^{-2} %	Standard solution /KIQI-20704
Chloride meters	20707	(0 ~ 0.1) % (0.1 ~ 1.5) %	1.2×10^{-3} % 5.8×10^{-3} %	Standard solution /KIQI-20707

210. Hardness

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Brinell hardness testers	21001	(100 ~ 250) HBW 10/3000 (250 ~ 500) HBW 10/3000	2.7 HBW 10/3000 4.5 HBW 10/3000	Hardness test blocks, brinell/KIQI-21001
Rockwell hardness testers	21002	(20 ~ 100) HRBW (20 ~ 70) HRC	0.9 HRBW 0.6 HRC	Hardness test blocks, rockwell/KIQI-21002
Shore hardness testers	21003	(20 ~ 100) HS	1.6 HS	Hardness test blocks, Shore/KIQI-21003
Vickers hardness testers	21004	(5 ~ 300) HV 0.2 (300 ~ 650) HV 0.2 (650 ~ 850) HV 0.2 (5 ~ 300) HV 10 (300 ~ 650) HV 10 (650 ~ 850) HV 30	6 HV 0.2 11 HV 0.2 19 HV 0.2 2.9 HV 10 5.3 HV 10 9.7 HV 30	Hardness test blocks, vickers/KIQI-21004
Durometer hardness testers	21005	(0 ~ 100) HDA (0 ~ 100) HDD	0.58 HDA 0.58 HDD	Durometer hardness calibrator/KIQI-21005
Leeb hardness testers	20106	500 HLD below (500 ~ 700) HLD 700 HLD above	4.7 HLD 4.7 HLD 4.7 HLD	Hardness test blocks, Leeb/KIQI-21006

301. Time/frequency

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Frequency standards	30102	(0.1 ~ 10) MHz	5.9×10^{-12}	GPS Receiver Frequency Counter /KIQI-30102
General frequency sources Timebase	30103	(0.1 ~ 10) MHz	5.9×10^{-12}	GPS Receiver Frequency Counter /KIQI-30103
Frequency meters/counters Time Base Frequency	30104	(0.1 ~ 10) MHz 1 Hz ~ 1 GHz	5.9×10^{-12} 7.0×10^{-7}	GPS Receiver Frequency Counter /KIQI-30104
Time interval sources period time interval	30105	(0.1 ~ 10) MHz 10 ns ~ 5 s	5.9×10^{-12} 5.8×10^{-6}	GPS Receiver Frequency Counter /KIQI-30105
Time interval meters/ Stop watches/Timers Stop watch Timer	30106	1 ms ~ 24 h (1 ~ 100) s (100 ~ 1 000) s (1 000 ~ 10 000) s	1.4×10^{-7} 6.4 ms 64 ms 0.64 s	GPS Receiver Stop Watch Calibrator /KIQI-30106

302. Velocity&revolution

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Standard RPM generators	30201	(6 ~ 60) min^{-1} (60 ~ 600) min^{-1} (600 ~ 6 000) min^{-1} (6 000 ~ 30 000) min^{-1} (30 000 ~ 60 000) min^{-1} (60 000 ~ 90 000) min^{-1}	1.2 min^{-1} 0.058 min^{-1} 0.58 min^{-1} 0.61 min^{-1} 4.9 min^{-1} 7.0 min^{-1}	GPS Receiver tachometer /KIQI-30201
Contact-type tachometers	30202	(6 ~ 900) min^{-1} (900 ~ 4 000) min^{-1}	0.059 min^{-1} 0.085 min^{-1}	R.P.M Calibrator /KIQI-30202
Photo tachometers /stroboscopes Photo tachometers Stroboscopes	30203	(6 ~ 9 000) min^{-1} (9 000 ~ 90 000) min^{-1} (90 000 ~ 120 000) min^{-1} (6 ~ 9 000) min^{-1} (9 000 ~ 90 000) min^{-1} (90 000 ~ 120 000) min^{-1}	0.058 min^{-1} 0.062 min^{-1} 0.62 min^{-1} 0.058 min^{-1} 0.062 min^{-1} 0.62 min^{-1}	R.P.M Calibrator Photo detector /KIQI-30203

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401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC ammeters	40101			Meter Calibrator,
DC Current		(0 ~ 10) μA	93 nA	Amplifier
		(10 ~ 100) μA	9.9×10^{-4}	/KIQI-40101
		(0.1 ~ 1) mA	1.6×10^{-4}	
		(1 ~ 10) mA	6.9×10^{-5}	
		(10 ~ 100) mA	8.0×10^{-5}	
		(0.1 ~ 1) A	1.3×10^{-4}	
		(1 ~ 10) A	2.6×10^{-4}	
		(10 ~ 100) A	4.6×10^{-4}	
DC voltage/current calibrators	40103			DMM, Current Shunt
DC voltage		(0 ~ 10) mV	1.2 μV	/KIQI-40103
		(10 ~ 100) mV	5.2×10^{-5}	
		(0.1 ~ 10) V	1.4×10^{-5}	
		(10 ~ 100) V	9.4×10^{-6}	
		(100 ~ 1 000) V	1.1×10^{-5}	
DC current		(0 ~ 10) μA	7.8 nA	
		(10 ~ 100) μA	6.6×10^{-4}	
		(0.1 ~ 1) mA	7.2×10^{-5}	
		(1 ~ 10) mA	4.9×10^{-5}	
		(10 ~ 100) mA	7.5×10^{-5}	
		(0.1 ~ 1) A	2.2×10^{-4}	
		(1 ~ 10) A	4.7×10^{-4}	
		(10 ~ 100) A	1.3×10^{-3}	
Electrical temperature	40104			Meter Calibrator,
calibrators(Sensor Exclusion)				DMM /KIQI-40104
(Measure)				
R-Type		(0 ~ 10.506) mV	2.6 μV	
		(10.506 ~ 17.451) mV	1.2×10^{-4}	
		(17.451 ~ 21.003) mV	6.9×10^{-5}	
S-Type		(0 ~ 9.587) mV	3.0 μV	
		(9.587 ~ 15.582) mV	1.3×10^{-4}	
		(15.582 ~ 18.609) mV	7.7×10^{-5}	
K-Type		(-6.404 ~ 24.905) mV	2.7×10^{-4}	
		(24.905 ~ 54.819) mV	5.2×10^{-5}	
N-Type		(-4.313 ~ 16.748) mV	2.6×10^{-4}	
		(16.748 ~ 36.256) mV	8.4×10^{-5}	
		(36.256 ~ 47.513) mV	4.1×10^{-5}	

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401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electrical temperature calibrators(Sensor Exclusion)	40104			Meter Calibrator, DMM /KIQI-40104
(Measure)				
E-Type		(0 ~ 37.005) mV	2.1 μV	
		(37.005 ~ 61.017) mV	3.5×10^{-5}	
		(61.017 ~ 76.373) mV	2.5×10^{-5}	
J-Type		(-7.890 ~ 33.102) mV	2.1×10^{-4}	
		(33.102 ~ 69.553) mV	3.9×10^{-5}	
T-Type		(-6.180 ~ 4.279) mV	3.3×10^{-4}	
		(4.279 ~ 20.872) mV	2.6×10^{-4}	
B-Type		(0 ~ 4.834) mV	0.43 μV	
		(4.834 ~ 10.099) mV	2.5×10^{-4}	
		(10.099 ~ 13.820) mV	1.2×10^{-4}	
DC voltage		(0 ~ 100) mV	75 μV	
		(0.1 ~ 10) V	2.0×10^{-5}	
		(10 ~ 100) V	1.3×10^{-5}	
		(100 ~ 300) V	4.3×10^{-5}	
DC current		(0 ~ 1) mA	0.69 μA	
		(1 ~ 10) mA	9.5×10^{-5}	
		(10 ~ 100) mA	1.1×10^{-4}	
Resistance		(0 ~ 1) Ω	0.15 mΩ	
		(1 ~ 10) Ω	6.7×10^{-5}	
		(10 ~ 100) Ω	6.2×10^{-5}	
Resistance		(0.1 ~ 10) kΩ	6.0×10^{-5}	
		(10 ~ 100) kΩ	6.1×10^{-5}	
(Source)				
R-Type		(0 ~ 10.506) mV	3.6 μV	
		(10.506 ~ 17.451) mV	1.6×10^{-4}	
		(17.451 ~ 21.003) mV	9.2×10^{-5}	
S-Type		(0 ~ 9.587) mV	3.8 μV	
		(9.587 ~ 15.582) mV	1.7×10^{-4}	
		(15.582 ~ 18.609) mV	9.6×10^{-5}	
K-Type		(-6.404 ~ 24.905) mV	3.7×10^{-4}	
		(24.905 ~ 54.819) mV	6.4×10^{-5}	
N-Type		(-4.313 ~ 16.748) mV	3.7×10^{-4}	
		(16.748 ~ 36.256) mV	1.0×10^{-4}	
		(36.256 ~ 47.513) mV	4.7×10^{-5}	
E-Type		(0 ~ 37.005) mV	2.8 μV	
		(37.005 ~ 61.017) mV	4.1×10^{-5}	
		(61.017 ~ 76.373) mV	2.6×10^{-5}	

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401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electrical temperature calibrators(Sensor Exclusion)	40104			Meter Calibrator, DMM /KIQI-40104
(Source)				
J-Type		(-7.890 ~ 33.102) mV	2.8×10^{-4}	
		(33.102 ~ 69.553) mV	4.5×10^{-5}	
T-Type		(-6.180 ~ 4.279) mV	4.4×10^{-4}	
		(4.279 ~ 20.872) mV	3.7×10^{-4}	
B-Type		(0 ~ 4.834) mV	6.3 μV	
		(4.834 ~ 10.099) mV	3.3×10^{-4}	
		(10.099 ~ 13.820) mV	1.6×10^{-4}	
DC voltage		(0 ~ 10) mV	6.0 μV	
		(10 ~ 100) mV	1.2×10^{-4}	
		(0.1 ~ 1) V	1.5×10^{-5}	
		(1 ~ 10) V	6.9×10^{-6}	
		(10 ~ 100) V	8.3×10^{-6}	
DC current		(0 ~ 1) mA	0.59 μA	
		(1 ~ 10) mA	7.6×10^{-5}	
		(10 ~ 100) mA	7.5×10^{-5}	
Resistance		(0 ~ 1) Ω	0.59 mΩ	
		(0.001 ~ 100) kΩ	5.9×10^{-5}	
DC current shunts	40105			Meter Calibrator,
DC shunt		(0 ~ 100) mΩ	47 μΩ	Amplifier, DMM
		(0.1 ~ 1) Ω	1.3×10^{-4}	/KIQI-40105
		(1 ~ 10) Ω	8.1×10^{-5}	
		(10 ~ 100) Ω	7.2×10^{-5}	
		(100 ~ 1 000) Ω	1.6×10^{-4}	
Galvanometers/null detectors	40106			Meter Calibrator,
DC voltage		(0 ~ 1 000) V	3.4 V	/KIQI-40106
DC power supplies	40108			DMM, Current Shunt
DC voltage		±(0 ~ 100) mV	88 μV	/KIQI-40108
		±(0.1 ~ 10) V	6.9×10^{-6}	
		±(10 ~ 100) V	8.3×10^{-6}	
		±(100 ~ 1 000) V	8.4×10^{-6}	
DC current		±(0 ~ 100) μA	20 nA	
		±(0.1 ~ 10) mA	1.2×10^{-4}	
		±(0.01 ~ 1) A	1.2×10^{-4}	
		±(1 ~ 10) A	3.5×10^{-4}	
		±(10 ~ 100) A	6.0×10^{-4}	
		±(100 ~ 400) A	1.2×10^{-3}	

Accreditation No. : KC08-229

401. DC voltage & current

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC voltage dividers	40110			Meter Calibrator, DMM,high voltage probe
Ratio				
(1 ~ 1 000) V		(100 : 1)	0.081	KIQI-40110
(1 ~ 10) kV		(1 000 : 1)	0.13	
DC voltmeters	40112			Meter Calibrator,
DC voltage		(0 ~ 10) mV	7.1 μV	/KIQI-40112
		(10 ~ 100) mV	7.9×10^{-5}	
		(0.1 ~ 1) V	1.7×10^{-5}	
		(1 ~ 10) V	9.5×10^{-6}	
		(10 ~ 100) V	1.1×10^{-5}	
		(100 ~ 1 000) V	1.2×10^{-5}	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Earth testers	40205			Meter Calibrator,
Resistance		(0 ~ 100) mΩ	67 μΩ	STD Resistor
		(0.1 ~ 10) Ω	6.8×10^{-4}	/KIQI-40205
		(10 ~ 100) Ω	6.4×10^{-4}	
		(0.1 ~ 100) kΩ	6.6×10^{-4}	
AC Voltage		(60 Hz)		
		(0.1 ~ 1) V	6.8×10^{-4}	
		(1 ~ 10) V	6.5×10^{-4}	
		(10 ~ 100) V	6.3×10^{-4}	
		(100 ~ 1 000) V	6.6×10^{-4}	
Insulation testers	40210			High Voltage Meter
DC output voltage		(0 ~ 1 000) V	68 mV	Decade Resistor,
		(1 ~ 10) kV	6.6×10^{-3}	Meter Calibrator,
AC voltage		(60 Hz)		DMM /KIQI-40210
		(1 ~ 1 000) V	6.7×10^{-4}	
Resistance		(0 ~ 10) MΩ	14 kΩ	
		(0.01 ~ 10) GΩ	1.2×10^{-2}	
		(10 ~ 1 000) GΩ	3.5×10^{-2}	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistance bridges/ Similar instruments	40213			DMM, STD Resistor /KIQI-40213
Resistance(Rheostat Arm)		(0 ~ 100) mΩ	42 μΩ	
		(0.1 ~ 1) Ω	8.3×10^{-5}	
		(0.001 ~ 10) kΩ	6.9×10^{-5}	
Resistance(Ratio Arm)		×0.001	6.8×10^{-5}	
		×0.01	5.9×10^{-5}	
		×0.1	5.9×10^{-5}	
		×1	5.9×10^{-5}	
		×10	5.9×10^{-5}	
		×100	6.3×10^{-5}	
		×1 000	6.3×10^{-5}	
Resistance meters	40214			STD Resistor /KIQI-40214
Resistance		(0 ~ 1) mΩ	88 nΩ	
		(1 ~ 100) mΩ	9.1×10^{-5}	
		(0.1 ~ 1) Ω	8.8×10^{-5}	
		(1 ~ 100) Ω	6.7×10^{-5}	
		(0.1 ~ 10) kΩ	7.0×10^{-5}	
		(10 ~ 100) kΩ	6.8×10^{-5}	
		(0.1 ~ 1) MΩ	7.0×10^{-5}	
		(1 ~ 10) MΩ	7.1×10^{-5}	
Resistors	40215			Meter Calibrator, DMM /KIQI-40215
Resistance		(0 ~ 10) mΩ	14 μΩ	
		(10 ~ 100) mΩ	1.4×10^{-4}	
		(0.1 ~ 1) Ω	1.6×10^{-4}	
		(1 ~ 10) Ω	9.5×10^{-5}	
		(10 ~ 100) Ω	1.4×10^{-6}	
		(0.1 ~ 1) kΩ	1.1×10^{-5}	
		(1 ~ 100) kΩ	1.2×10^{-5}	
		(0.1 ~ 1) MΩ	1.4×10^{-5}	
		(1 ~ 10) MΩ	1.5×10^{-5}	
		(10 ~ 100) MΩ	6.5×10^{-5}	
		(100 ~ 1 000) MΩ	7.1×10^{-4}	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Impedance bridges/LCR meters	40217			STD. Resistors,
Inductance		(1 kHz)		STD. Capacitors,
		1 mH	1.2×10^{-3}	STD. Inductors
		10 mH	1.2×10^{-3}	/KIQI-40217
		100 mH	1.2×10^{-3}	
		1 H	1.2×10^{-3}	
Capacitance		(1 kHz)		
		1 pF	4.0×10^{-4}	
		10 pF	2.5×10^{-4}	
		100 pF	2.5×10^{-4}	
		1 000 pF	2.5×10^{-4}	
Resistance		(1 kHz)		
		1 Ω	1.4×10^{-5}	
		10 Ω	1.4×10^{-5}	
		100 Ω	1.4×10^{-5}	
		1 kΩ	2.5×10^{-5}	
		10 kΩ	1.4×10^{-5}	
		100 kΩ	1.4×10^{-5}	
		1 MΩ	2.5×10^{-5}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC ammeters	40301			Meter Calibrator,
AC Current		(60 Hz ~ 1 kHz)		Amplifier
		(1 ~ 10) mA	5.6×10^{-4}	/KIQI-40301
		(10 ~ 100) mA	2.2×10^{-4}	
		(0.1 ~ 1) A	7.6×10^{-4}	
		(1 ~ 100) A	4.1×10^{-3}	
		(5 kHz)		
		(1 ~ 10) mA	1.3×10^{-3}	
		(0.01 ~ 1) A	1.2×10^{-3}	
		(10 kHz)		
		(1 ~ 10) mA	2.9×10^{-3}	
		(10 ~ 100) mA	2.8×10^{-3}	
		(0.1 ~ 1) A	1.1×10^{-2}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeters/voltmeters	40302			Meter Calibrator,
DC current		(1 ~ 10) mA	2.5×10^{-3}	Amplifier
		(0.01 ~ 1) A	2.4×10^{-3}	Current Coil,
		(1 ~ 10) A	2.5×10^{-3}	STD. Resistors,
		(10 ~ 100) A	2.7×10^{-3}	/KIQI-40302
		(100 ~ 1 000) A	2.8×10^{-3}	
		(1 000 ~ 2 500) A	2.6×10^{-3}	
DC voltage		(0 ~ 100) mV	65 μV	
		(0.1 ~ 1) V	6.2×10^{-4}	
		(1 ~ 1 000) V	6.4×10^{-4}	
AC current		(60 Hz)		
		(1 ~ 100) mA	2.5×10^{-3}	
		(0.1 ~ 1) A	2.6×10^{-3}	
		(1 ~ 10) A	3.1×10^{-3}	
		(10 ~ 500) A	4.9×10^{-3}	
		(500 ~ 1 000) A	4.8×10^{-3}	
		(1 000 ~ 2 000) A	4.7×10^{-3}	
		(2 000 ~ 2 500) A	4.8×10^{-3}	
AC voltage		(60 Hz)		
		(10 ~ 100) mV	1.0×10^{-3}	
		(0.1 ~ 1) V	6.8×10^{-4}	
		(1 ~ 100) V	6.5×10^{-4}	
		(100 ~ 1 000) V	6.6×10^{-4}	
Resistance		10 Ω	6.2×10^{-4}	
		(0.01 ~ 10) kΩ	6.4×10^{-4}	
		(0.01 ~ 10) MΩ	6.2×10^{-4}	
AC voltage/current calibrators	40303			DMM, Current Shunt
AC voltage		(40 Hz)		/KIQI-40303
		(10 ~ 100) mV	5.2×10^{-4}	
		(0.1 ~ 1) V	2.0×10^{-4}	
		(1 ~ 1 000) V	1.6×10^{-4}	
		(1 kHz)		
		(10 ~ 100) mV	3.3×10^{-4}	
		(0.1 ~ 1) V	1.8×10^{-4}	
		(1 ~ 100) V	1.2×10^{-4}	
		(100 ~ 1 000) V	1.5×10^{-4}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC voltage/current calibrators	40303			DMM, Current Shunt
AC current		(40 Hz)		/KIQI-40303
		(0.1 ~ 1) mA	5.1×10^{-4}	
		(1 ~ 100) mA	5.0×10^{-4}	
		(0.1 ~ 1) A	8.6×10^{-4}	
		(1 kHz)		
		(0.1 ~ 1) mA	5.1×10^{-4}	
		(1 ~ 100) mA	5.0×10^{-4}	
		(0.1 ~ 1) A	8.6×10^{-4}	
		(1 ~ 100) A	1.8×10^{-3}	
AC current shunts	40305			Meter Calibrator,
AC shunt		(1 kHz)		Amplifier, DMM
		1 mΩ	2.8×10^{-3}	/KIQI-40305
		10 mΩ	2.9×10^{-3}	
		100 mΩ	7.8×10^{-4}	
		1 Ω	2.7×10^{-4}	
		10 Ω	2.7×10^{-4}	
		100 Ω	5.9×10^{-4}	
		1 000 Ω	6.5×10^{-4}	
Power factor meters	40310			Power Calibrator
Power factor		(60 Hz)		/KIQI-40310
(lag,lead)		0.1	2.4×10^{-2}	
		0.2	1.2×10^{-2}	
		0.3	7.7×10^{-3}	
		0.4	5.5×10^{-3}	
		0.5	4.2×10^{-3}	
		0.6	3.3×10^{-3}	
		0.7	2.7×10^{-3}	
		0.8	2.1×10^{-3}	
		0.9	1.7×10^{-3}	
		1	1.2×10^{-3}	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC power meters	40311			Power Calibrator,
AC voltage		(60 Hz)		Current Coil
		(1 ~ 100) V	2.9×10^{-4}	/KIQI-40311
		(100 ~ 1 000) V	3.9×10^{-4}	
AC current		(60 Hz)		
		(1 ~ 10) mA	1.7×10^{-3}	
		(10 ~ 100) mA	8.8×10^{-4}	
		(0.1 ~ 1) A	1.2×10^{-3}	
		(1 ~ 10) A	1.6×10^{-3}	
		(10 ~ 100) A	2.0×10^{-3}	
		(100 ~ 1 000) A	1.2×10^{-3}	
AC wattage		(60 Hz)		
		(1 ~ 10) W	1.1×10^{-3}	
		(10 ~ 100) W	1.4×10^{-3}	
		(0.1 ~ 4.8) kW	1.2×10^{-3}	
		(4.8 ~ 120) kW	1.3×10^{-3}	
		(120 ~ 240) kW	2.7×10^{-3}	
		(60 Hz)		
		0.1	2.4×10^{-2}	
		0.2	1.2×10^{-2}	
		0.3	7.7×10^{-3}	
		0.4	5.5×10^{-3}	
		0.5	4.2×10^{-3}	
		0.6	3.3×10^{-3}	
		0.7	2.7×10^{-3}	
		0.8	2.1×10^{-3}	
		0.9	1.7×10^{-3}	
		1	1.2×10^{-3}	
AC power supplies	40312			DMM, Current Shunt
AC voltage		(1 kHz)		/KIQI-40312
		(1 ~ 100) V	5.9×10^{-4}	
		(100 ~ 1 000) V	6.0×10^{-4}	
AC current		(1 kHz)		
		(1 ~ 100) mA	1.4×10^{-3}	
		(0.1 ~ 10) A	1.7×10^{-3}	
		(10 ~ 20) A	1.5×10^{-3}	
Puncture/safety testers	40313			Cutoff current
DC voltage		10 V	7.1×10^{-4}	Calibrator, DMM,
		(10 ~ 100) V	7.2×10^{-4}	High Voltage Meter,
		(100 ~ 500) V	1.4×10^{-3}	kV Meter/KIQI-40313

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Puncture/safety testers	40313			Cutoff current
DC voltage		(0.5 ~ 5) kV	1.1×10^{-2}	Calibrator, DMM,
		(5 ~ 10) kV	8.5×10^{-3}	High Voltage Meter,
		(10 ~ 100) kV	1.3×10^{-2}	kV Meter/KIQI-40313
DC current		(0.5 ~ 1) mA	6.6×10^{-3}	
		(1 ~ 2) mA	6.1×10^{-3}	
		(2 ~ 5) mA	6.0×10^{-3}	
		(5 ~ 10) mA	6.1×10^{-3}	
AC voltage		(60 Hz)		
		(10 ~ 100) V	7.3×10^{-4}	
		(100 ~ 500) V	1.5×10^{-3}	
		(0.5 ~ 5) kV	2.9×10^{-2}	
		(5 ~ 10) kV	1.8×10^{-2}	
		(10 ~ 100) kV	1.7×10^{-2}	
AC current		(60 Hz)		
		(0.5 ~ 1) mA	6.4×10^{-3}	
		(1 ~ 2) mA	7.0×10^{-3}	
		(2 ~ 5) mA	6.5×10^{-3}	
		(5 ~ 20) mA	7.0×10^{-3}	
		(20 ~ 50) mA	3.5×10^{-3}	
		(50 ~ 100) mA	1.4×10^{-3}	
Power recorders	40314			Power Calibrator
AC Wattage		(60) Hz		/KIQI-40314
		(1 ~ 10) W	1.1×10^{-2}	
		(10 ~ 100) W	1.4×10^{-3}	
		(0.1 ~ 4.8) kW	1.2×10^{-3}	
AC voltmeters	40318			Meter Calibrator
AC voltage		(60 Hz ~ 1 kHz)		/KIQI-40318
		10 mV	9.3×10^{-4}	
		(10 ~ 100) mV	2.3×10^{-4}	
		(0.1 ~ 10) V	1.1×10^{-4}	
		(10 ~ 1 000) V	1.2×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF amplifiers	40401			Meter Calibrator
Gain(DC)		(0 ~ 100) mV	1.8 μV	DMM
		(0.1 ~ 1) V	1.2×10^{-5}	/KIQI-40401
		(1 ~ 10) V	1.1×10^{-5}	
		(10 ~ 100) V	1.3×10^{-5}	
		(100 ~ 1 000) V	1.4×10^{-5}	
Gain(low frequency)		(40 Hz)		
		100 mV	3.6×10^{-4}	
		(0.1 ~ 10) V	2.3×10^{-4}	
		(10 ~ 100) V	2.2×10^{-4}	
		(100 ~ 1 000) V	4.4×10^{-4}	
		40 Hz ~ 1 kHz		
		100 mV	2.8×10^{-4}	
		(0.1 ~ 10) V	1.4×10^{-4}	
		(10 ~ 100) V	1.5×10^{-4}	
		(100 ~ 1 000) V	1.6×10^{-4}	
		1 kHz ~ 10 kHz		
		100 mV	2.9×10^{-4}	
		(0.1 ~ 10) V	1.6×10^{-4}	
		(10 ~ 100) V	1.5×10^{-4}	
		10 kHz ~ 20 kHz		
		100 mV	4.6×10^{-4}	
		(0.1 ~ 100) V	2.7×10^{-4}	
		20 kHz ~ 50 kHz		
		100 mV	1.0×10^{-3}	
		(0.1 ~ 10) V	7.3×10^{-4}	
		(10 ~ 100) V	7.6×10^{-4}	
		50 kHz ~ 100 kHz		
		100 mV	1.6×10^{-3}	
		(0.1 ~ 1) V	7.9×10^{-4}	
		(1 ~ 10) V	7.7×10^{-4}	
		(10 ~ 100) V	9.3×10^{-4}	
DC/LF attenuators	40402			DMM
Attenuation(voltage)		(40 Hz)		True RMS Voltmeter
		(20 ~ -50) dB	0.059 dB	/KIQI-40402
		-(50 ~ 60) dB	0.070 dB	
		(40 Hz ~ 10 kHz)		
		(20 ~ -50) dB	0.059 dB	
		(-50 ~ -60) dB	0.070 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC/LF attenuators	40402			DMM
Attenuation(voltage)				True RMS Voltmeter
		(10 kHz ~ 20 kHz)		/KIQI-40402
		(20 ~ -40) dB	0.059 dB	
		(-40 ~ -50) dB	0.063 dB	
		(-50 ~ -60) dB	0.094 dB	
		(20 kHz ~ 50 kHz)		
		(20 ~ -30) dB	0.059 dB	
		(-30 ~ -40) dB	0.063 dB	
		(-40 ~ -50) dB	0.084 dB	
		(-50 ~ -60) dB	0.19 dB	
		(50 kHz ~ 100 kHz)		
		(20 ~ -20) dB	0.059 dB	
		(-20 ~ -40) dB	0.063 dB	
		(-40 ~ -50) dB	0.085 dB	
		(-50 ~ -60) dB	0.20 dB	
Multimeter calibrators	40403			DMM
DC voltage(±)		(0 ~ 100) mV	0.88 μV	Current shunt
		(0.1 ~ 10) V	3.8×10^{-6}	/KIQI-40403
		(10 ~ 100) V	6.0×10^{-6}	
		(100 ~ 1 000) V	6.1×10^{-6}	
DC current(±)		(0 ~ 10) mA	0.23 μV	
		(10 ~ 100) mA	4.6×10^{-5}	
		(0.1 ~ 1) A	1.9×10^{-4}	
		(1 ~ 10) A	4.2×10^{-4}	
		(10 ~ 100) A	6.1×10^{-4}	
Resistance		(0 ~ 1) Ω	16 μΩ	
		(1 ~ 10) Ω	1.1×10^{-5}	
		(10 ~ 100) Ω	8.6×10^{-6}	
		(0.1 ~ 100) kΩ	8.2×10^{-6}	
		(0.1 ~ 1) MΩ	9.5×10^{-6}	
		(1 ~ 10) MΩ	2.1×10^{-5}	
		(10 ~ 100) MΩ	1.4×10^{-4}	
		(0.1 ~ 1) GΩ	1.3×10^{-3}	
AC voltage		(40 Hz)		
		1 mV ~ 100 mV	2.2×10^{-4}	
		100 mV ~ 1 000 V	1.3×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Multimeter calibrators	40403			DMM
AC voltage		(40 Hz ~ 1 kHz)		Current shunt
		1 mV ~ 100 mV	2.0×10^{-4}	/KIQI-40403
		100 mV ~ 1 000 V	1.3×10^{-4}	
		(1 kHz ~ 10 kHz)		
		1 mV ~ 100 mV	2.2×10^{-4}	
		100 mV ~ 1 000 V	1.3×10^{-4}	
		(10 kHz ~ 20 kHz)		
		1 mV ~ 100 mV	4.2×10^{-4}	
		100 mV ~ 1 000 V	2.8×10^{-4}	
		(20 kHz ~ 50 kHz)		
		1 mV ~ 100 mV	9.4×10^{-4}	
		100 mV ~ 100 V	7.1×10^{-4}	
		(50 kHz ~ 100 kHz)		
		1 mV ~ 100 mV	1.2×10^{-3}	
		100 mV ~ 100 V	7.2×10^{-4}	
AC current		(40 Hz ~ 1 kHz)		
		(1 ~ 100) μA	1.8×10^{-3}	
		(0.1 ~ 100) mA	4.8×10^{-4}	
		(0.1 ~ 1) A	8.6×10^{-4}	
		(1 ~ 10) A	1.2×10^{-3}	
		(10 ~ 100) A	1.4×10^{-3}	
		(1 kHz ~ 10 kHz)		
		(1 ~ 100) μA	1.6×10^{-2}	
		(0.1 ~ 1) mA	1.7×10^{-3}	
		(1 ~ 10) mA	1.5×10^{-3}	
		(10 ~ 100) mA	1.2×10^{-3}	
		(0.1 ~ 1) A	6.3×10^{-3}	
Oscilloscope calibrators	40404			DMM
DC voltage(±)		(0 ~ 10) mV	0.82 μV	Frequency counter
		(10 ~ 100) mV	1.2×10^{-5}	Oscilloscope
		(0.1 ~ 10) V	8.0×10^{-6}	/KIQI-40404
		(10 ~ 100) V	9.3×10^{-6}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscope calibrators	40404			DMM
AC voltage		40 Hz		Frequency counter
		(10 ~ 100) mV	5.3×10^{-4}	Oscilloscope
		(0.1 ~ 1) V	2.2×10^{-4}	/KIQI-40404
		(1 ~ 100) V	1.2×10^{-4}	
		(40 Hz ~ 1 kHz)		
		(10 ~ 100) mV	3.4×10^{-4}	
		(0.1 ~ 1) V	2.0×10^{-4}	
		(1 ~ 100) V	1.2×10^{-4}	
		(1 kHz ~ 10 kHz)		
		(10 ~ 100) mV	5.3×10^{-4}	
		(0.1 ~ 1) V	1.2×10^{-4}	
		(1 ~ 100) V	1.2×10^{-4}	
Signal generator level		(600 mV)		
		50 kHz ~ 10 MHz	3.3×10^{-2}	
		10 MHz ~ 2 GHz	3.7×10^{-2}	
Time		1 ns ~ 1 s	7.3×10^{-6}	
		1 s ~ 5 s	2.2×10^{-6}	
Audio distortion analyzers/ meters	40407			Meter Calibrator Audio distortion
Input DC voltage		(0 ~ 1) mV	0.96 μV	analyzer
		(0.001 ~ 100) V	7.1×10^{-4}	/KIQI-40407
		(100 ~ 1 000) V	7.1×10^{-5}	
Input AC voltage		(10 Hz)		
		(1 ~ 10) mV	1.4×10^{-3}	
		(10 ~ 100) mV	9.8×10^{-4}	
		(0.1 ~ 100) V	9.2×10^{-4}	
		(10 Hz ~ 40 Hz)		
		(1 ~ 10) mV	1.1×10^{-3}	
		(10 ~ 100) mV	7.7×10^{-4}	
		(0.1 ~ 100) V	7.3×10^{-4}	
		(40 Hz ~ 1 kHz)		
		(1 ~ 10) mV	1.1×10^{-3}	
		(10 ~ 100) mV	7.3×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		(100 ~ 1 000) V	1.2×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Audio distortion analyzers/ meters	40407			Meter Calibrator Audio distortion analyzer /KIQI-40407
Input AC voltage		(1 kHz ~ 20 kHz)		
		(1 ~ 10) mV	1.1×10^{-3}	
		(10 ~ 100) mV	7.3×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		(20 kHz ~ 50 kHz)		
		(1 ~ 10) mV	1.4×10^{-3}	
		(10 ~ 100) mV	8.2×10^{-4}	
		(0.1 ~ 10) V	7.2×10^{-4}	
		(10 ~ 100) V	7.5×10^{-4}	
		(50 kHz ~ 100 kHz)		
		(1 ~ 10) mV	1.9×10^{-3}	
		(10 ~ 100) mV	1.3×10^{-3}	
		(0.1 ~ 10) V	7.8×10^{-4}	
		(10 ~ 100) V	9.2×10^{-4}	
Input flatness(voltage)		(0.1 ~ 10) V		
		40 Hz	7.3×10^{-4}	
		40 Hz ~ 50 kHz	7.2×10^{-4}	
		50 kHz ~ 100 kHz	7.6×10^{-4}	
Input flatness(level)		(-10 ~ 10) dB		
		40 Hz ~ 100 kHz	0.006 4 dB	
Attenuator		(40 Hz)		
		(20 ~ -20) dB	0.006 1 dB	
		(-20 ~ -30) dB	0.006 5 dB	
		(-30 ~ -40) dB	0.007 3 dB	
		(-40 ~ -50) dB	0.014 dB	
		(-50 ~ -60) dB	0.044 dB	
		(40 Hz ~ 20 kHz)		
		(20 ~ -30) dB	0.005 9 dB	
		(-30 ~ -40) dB	0.007 3 dB	
		(-40 ~ -50) dB	0.014 dB	
		(-50 ~ -60) dB	0.044 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Audio distortion analyzers/ meters	40407			Meter Calibrator Audio distortion analyzer /KIQI-40407
Attenuator		(20 kHz ~ 50 kHz)		
		(20 ~ -30) dB	0.006 0 dB	
		(-30 ~ -40) dB	0.007 3 dB	
		(-40 ~ -50) dB	0.014 dB	
		(-50 ~ -60) dB	0.045 dB	
		(50 kHz ~ 100 kHz)		
		(20 ~ -20) dB	0.006 5 dB	
		(-20 ~ -40) dB	0.008 5 dB	
		(-40 ~ -50) dB	0.019 dB	
		(-50 ~ -60) dB	0.062 dB	
Distortion		(40 Hz ~ 100 kHz)		
		(0.1 ~ 316.2) %	5.8×10^{-2}	
LF filters	40408			Signal analyzer, Signal generator KIQI-40408
Filter characteristics				
Low pass filter		10 Hz	1.4×10^{-3}	
Hi pass filter		20 Hz ~ 100 Hz	1.8×10^{-4}	
Band pass filter		100 Hz ~ 100 kHz	1.7×10^{-4}	
Band Rejection filter		100 kHz ~ 1 MHz	7.4×10^{-5}	
LF/Audio signal analyzers	40409			Meter Calibrator, Signal analyzer, Signal generator /KIQI-40409
Input DC voltage		(0 ~ 1) mV	0.96 μV	
		(1 ~ 100) mV	7.1×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		(100 ~ 1 000) V	7.1×10^{-5}	
Input AC voltage		(10 Hz)		
		(0 ~ 10) mV	14 μV	
		(10 ~ 100) mV	9.8×10^{-4}	
		(0.1 ~ 100) V	9.2×10^{-4}	
		(10 Hz ~ 40 Hz)		
		(1 ~ 10) mV	1.1×10^{-3}	
		(10 ~ 100) mV	7.7×10^{-4}	
		(0.1 ~ 100) V	7.3×10^{-4}	
		(40 Hz ~ 1 kHz)		
		(0 ~ 10) mV	11 μV	
		(10 ~ 100) mV	7.3×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		(100 ~ 1 000) V	1.2×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/Audio signal analyzers	40409			Meter Calibrator,
Input AC voltage		(1 kHz ~ 10 kHz)		Signal analyzer,
		(0 ~ 10) mV	11 μV	Signal generator
		(10 ~ 100) mV	7.3×10^{-4}	/KIQI-40409
		(0.1 ~ 100) V	7.1×10^{-4}	
		(10 kHz ~ 20 kHz)		
		(0 ~ 10) mV	11 μV	
		(10 ~ 100) mV	7.3×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		(20 kHz ~ 50 kHz)		
		(0 ~ 10) mV	14 μV	
		(10 ~ 100) mV	8.2×10^{-4}	
		(0.1 ~ 10) V	7.2×10^{-4}	
		(10 ~ 100) V	7.5×10^{-4}	
		(50 kHz ~ 100 kHz)		
		(0 ~ 10) mV	13 μV	
		(10 ~ 100) mV	7.8×10^{-4}	
		(0.1 ~ 10) V	7.7×10^{-4}	
		(10 ~ 100) V	9.1×10^{-4}	
Input flatness(voltage)		(0.1 ~ 10) V		
		40 Hz	2.0×10^{-4}	
		40 Hz ~ 20 kHz	1.1×10^{-4}	
		20 kHz ~ 50 kHz	1.6×10^{-4}	
		50 kHz ~ 100 kHz	3.0×10^{-4}	
Input flatness(level)		(10 dB)		
		40 Hz ~ 50 kHz	0.005 9 dB	
		50 kHz ~ 100 kHz	0.006 1 dB	
		(0 dB)		
		40 Hz ~ 20 kHz	0.005 8 dB	
		20 kHz ~ 100 kHz	0.006 4 dB	
		(-10 dB)		
		40 Hz ~ 50 kHz	0.005 9 dB	
		50 kHz ~ 100 kHz	0.006 4 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/Audio signal analyzers	40409			Meter Calibrator,
Attenuator		(40 Hz)		Signal analyzer,
		(20 ~ 0) dB	0.006 0 dB	Signal generator
		(0 ~ -10) dB	0.005 9 dB	/KIQI-40409
		(-10 ~ -20) dB	0.005 8 dB	
		(-20 ~ -30) dB	0.006 5 dB	
		(-30 ~ -40) dB	0.007 2 dB	
		(-40 ~ -50) dB	0.014 dB	
		(-50 ~ -60) dB	0.044 dB	
		(40 Hz ~ 20 kHz)		
		(20 ~ -30) dB	0.005 9 dB	
		(-30 ~ -40) dB	0.007 2 dB	
		(-40 ~ -50) dB	0.014 dB	
		(-50 ~ -60) dB	0.044 dB	
		(20 kHz ~ 50 kHz)		
		(20 ~ -30) dB	0.005 9 dB	
		(-30 ~ -40) dB	0.007 3 dB	
		(-40 ~ -50) dB	0.014 dB	
		(-50 ~ -60) dB	0.044 dB	
		(50 kHz ~ 100 kHz)		
		(20 ~ 10) dB	0.006 3 dB	
		(10 ~ -10) dB	0.006 4 dB	
		(-10 ~ -20) dB	0.006 2 dB	
		(-20 ~ -30) dB	0.007 9 dB	
		(-30 ~ -40) dB	0.008 4 dB	
		(-40 ~ -50) dB	0.019 dB	
		(-50 ~ -60) dB	0.061 dB	
Distortion		(40 Hz ~ 10 kHz)		
		0 dB	6.7×10^{-4}	
		(0 ~ -10) dB	6.0×10^{-4}	
		(-10 ~ -30) dB	5.9×10^{-4}	
		(-30 ~ -40) dB	6.0×10^{-4}	
		(-40 ~ -60) dB	6.1×10^{-4}	
Output DC voltage (offset)		(-100 ~ 100) V	5.8×10^{-5}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/Audio signal analyzers	40409			Meter Calibrator,
Output AC voltage		(40 Hz)		Signal analyzer,
		(10 ~ 100) mV	2.3×10^{-4}	Signal generator
		(0.1 ~ 100) V	1.4×10^{-4}	/KIQI-40409
		(40 Hz ~ 1 kHz)		
		(10 ~ 100) mV	2.1×10^{-4}	
		(0.1 ~ 100) V	1.3×10^{-4}	
		(1 kHz ~ 10 kHz)		
		(10 ~ 100) mV	2.3×10^{-4}	
		(0.1 ~ 100) V	1.4×10^{-4}	
		(10 kHz ~ 20 kHz)		
		(10 ~ 100) mV	4.2×10^{-4}	
		(0.1 ~ 100) V	2.6×10^{-4}	
		(20 kHz ~ 50 kHz)		
		(10 ~ 100) mV	9.5×10^{-4}	
		(0.1 ~ 100) V	1.2×10^{-3}	
		(50 kHz ~ 100 kHz)		
		(10 ~ 100) mV	1.2×10^{-3}	
		(0.1 ~ 10) V	7.2×10^{-4}	
		(10 ~ 100) V	7.3×10^{-4}	
Output attenuator(voltage)		40 Hz		
		(20 ~ -40) dB	0.058 dB	
		(-40 ~ -50) dB	0.059 dB	
		(-50 ~ -60) dB	0.070 dB	
		40 Hz ~ 1 kHz		
		(20 ~ -40) dB	0.058 dB	
		(-40 ~ -50) dB	0.058 dB	
		(-50 ~ -60) dB	0.062 dB	
		1 kHz ~ 10 kHz		
		(20 ~ -40) dB	0.058 dB	
		(-40 ~ -50) dB	0.059 dB	
		(-50 ~ -60) dB	0.070 dB	
		10 kHz ~ 20 kHz		
		(20 ~ -30) dB	0.058 dB	
		(-30 ~ -40) dB	0.059 dB	
		(-40 ~ -50) dB	0.062 dB	
		(-50 ~ -60) dB	0.094 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/Audio signal analyzers	40409			Meter Calibrator,
Output attenuator(voltage)		20 kHz ~ 50 kHz		Signal analyzer,
		(20 ~ -20) dB	0.058 dB	Signal generator
		(-20 ~ -30) dB	0.059 dB	/KIQI-40409
		(-30 ~ -40) dB	0.062 dB	
		(-40 ~ -50) dB	0.084 dB	
		(-50 ~ -60) dB	0.19 dB	
		50 kHz ~ 100 kHz		
		(20 ~ -10) dB	0.058 dB	
		(-10 ~ -20) dB	0.059 dB	
		(-20 ~ -30) dB	0.061 dB	
		(-30 ~ -40) dB	0.063 dB	
		(-40 ~ -50) dB	0.085 dB	
		(-50 ~ -60) dB	0.20 dB	
Output flatness(voltage)		(0 ~ 0.1) V		
		40 Hz	2.3×10^{-4}	
		40 Hz ~ 1 kHz	2.1×10^{-4}	
		1 kHz ~ 10 kHz	2.3×10^{-4}	
		10 kHz ~ 20 kHz	4.2×10^{-4}	
		20 kHz ~ 50 kHz	9.5×10^{-4}	
		50 kHz ~ 100 kHz	1.2×10^{-3}	
		(0.1 ~ 100) V		
		40 Hz	1.4×10^{-4}	
		40 Hz ~ 1 kHz	1.3×10^{-4}	
		1 kHz ~ 10 kHz	1.4×10^{-4}	
		10 kHz ~ 20 kHz	2.6×10^{-4}	
		20 kHz ~ 50 kHz	7.1×10^{-4}	
		50 kHz ~ 100 kHz	7.3×10^{-4}	
Output flatness(level)		(-10 ~ 10) dB		
		40 Hz ~ 100 kHz	0.058 dB	
Input frequency		10 Hz	1.5×10^{-4}	
		10 Hz ~ 100 Hz	3.2×10^{-5}	
		100 Hz ~ 1 kHz	7.1×10^{-4}	
		1 kHz ~ 10 kHz	7.7×10^{-5}	
		10 kHz ~ 100 kHz	3.2×10^{-5}	
		100 kHz ~ 1 MHz	6.5×10^{-5}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF/Audio signal analyzers	40409			Meter Calibrator,
Output frequency		1 Hz	7.1×10^{-7}	Signal analyzer,
		1 Hz ~ 1 GHz	5.8×10^{-7}	Signal generator
				/KIQI-40409
Line frequency meters	40410			Meter Calibrator
Frequency		(3 V)		/KIQI-40410
		10 Hz	1.2×10^{-3}	
		(10 ~ 1 000) Hz	6.8×10^{-4}	
Function generators	40411			GPS Receiver
DC voltage(±)		(-100 ~ 100) V	5.8×10^{-5}	RMS voltmeter
AC voltage		(40 Hz)		Frequency counter
		(10 ~ 100) mV	2.2×10^{-4}	Audio distortion
		(0.1 ~ 100) V	1.4×10^{-4}	analyzer
		(40 Hz ~ 1 kHz)		/KIQI-40411
		(10 ~ 100) mV	2.1×10^{-4}	
		(0.1 ~ 100) V	1.3×10^{-4}	
		(1 kHz ~ 10 kHz)		
		(10 ~ 100) mV	2.2×10^{-4}	
		(0.1 ~ 100) V	1.4×10^{-4}	
		(10 kHz ~ 20 kHz)		
		(10 ~ 100) mV	4.2×10^{-4}	
		(0.1 ~ 100) V	2.6×10^{-4}	
		(20 kHz ~ 50 kHz)		
		(10 ~ 100) mV	9.4×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		(50 kHz ~ 100 kHz)		
		(10 ~ 100) mV	1.2×10^{-3}	
		(0.1 ~ 100) V	7.2×10^{-4}	
Frequency		1 Hz	7.0×10^{-7}	
		1 Hz ~ 1 GHz	5.8×10^{-7}	
Attenuator(level)		40 Hz		
		(20 ~ -50) dB	0.058 dB	
		-(50 ~ 60) dB	0.069 dB	
		40 Hz ~ 10 kHz		
		(20 ~ -50) dB	0.059 dB	
		-(50 ~ 60) dB	0.069 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Function generators	40411			GPS Receiver
Attenuator(level)		10 kHz ~ 20 kHz		RMS voltmeter
		(20 ~ -30) dB	0.058 dB	Frequency counter
		-(30 ~ 40) dB	0.059 dB	Audio distortion
		-(40 ~ 50) dB	0.062 dB	analyzer
		-(50 ~ 60) dB	0.093 dB	/KIQI-40411
		20 kHz ~ 100 kHz		
		(20 ~ -20) dB	0.059 dB	
		-(20 ~ 30) dB	0.061 dB	
		-(30 ~ 40) dB	0.063 dB	
		-(40 ~ 50) dB	0.084 dB	
		-(50 ~ 60) dB	0.20 dB	
Frequency modulation		250 kHz ~ 10 MHz		
		1 kHz ~ 10 kHz	2.5×10^{-2}	
		10 kHz ~ 400 kHz	2.4×10^{-2}	
		10 MHz ~ 1 GHz		
		1 kHz ~ 10 kHz	1.3×10^{-2}	
		10 kHz ~ 400 kHz	1.2×10^{-2}	
Amplitude modulation		150 kHz ~ 10 MHz		
		(1 ~ 99) %	2.5×10^{-2}	
		10 MHz ~ 1 GHz		
		(1 ~ 99) %	1.3×10^{-2}	
Genescopes	40412			Oscilloscope
Gain				calibrator
		(0 ~ 10) V	0.13 V	/KIQI-40412
		(10 ~ 100) V	1.3×10^{-2}	
AC/DC high voltage voltmeters	40413			Higt Voltage Power
DC voltage		1 kV	6.1×10^{-2}	Supply/KIQI-40413
		(1 ~ 5) kV	6.1×10^{-2}	
		(5 ~ 10) kV	1.2×10^{-2}	
		(10 ~ 30) kV	6.1×10^{-3}	
		(30 ~ 60) kV	2.0×10^{-3}	
LF impulse generators	40414			Oscilloscope
Voltage		(0 ~ 20) kV	0.72 kV	High voltage probe
		-(0 ~ 20) kV	0.72 kV	/KIQI-40414

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Leakage current testers	40416			Meter Calibrator /KIQI-40416
DC current		(10 ~ 100) μA	1.3×10^{-3}	
		(0.1 ~ 100) mA	9.4×10^{-3}	
AC voltage		(1 kHz)		
		(1 ~ 1 000) V	6.3×10^{-3}	
AC current		(1 kHz)		
		100 μA	6.2×10^{-3}	
		(0.1 ~ 10) mA	5.9×10^{-3}	
		(10 ~ 100) mA	5.8×10^{-3}	
Electronic AC/DC loads	40417			Meter Calibrator, Amplifier, DMM, Current Shunt /KIQI-40417
DC voltage		(0.1 ~ 1) V	7.4×10^{-5}	
		(1 ~ 100) V	7.3×10^{-5}	
		(100 ~ 1 000) V	7.2×10^{-5}	
DC current		(10 ~ 100) mA	1.8×10^{-4}	
		(0.1 ~ 1) A	2.0×10^{-4}	
		(1 ~ 10) A	5.6×10^{-4}	
		(10 ~ 100) A	1.4×10^{-3}	
AC voltage		(60 Hz)		
		(0.1 ~ 1) V	2.3×10^{-4}	
		(1 ~ 1 000) V	1.2×10^{-4}	
AC current		(1 kHz)		
		(10 ~ 100) mA	1.3×10^{-3}	
		(0.1 ~ 10) A	1.5×10^{-3}	
		(10 ~ 100) A	2.4×10^{-3}	
Modulation meters	40418			Signal generator Modulation meter /KIQI-40418
Amplitude modulation		(0 ~ 100) %	1.9×10^{-2}	
Frequency modulation		(1 ~ 400) kHz	1.3×10^{-2}	
Phase modulation		(0 ~ 400) rad	3.6×10^{-2}	
Analogue/Digital multimeters	40419			Meter Calibrator, STD. Resistors, Amplifier /KIQI-40419
DC voltage		10 mV	7.9×10^{-5}	
		(10 ~ 100) mV	1.7×10^{-5}	
		(0.1 ~ 1) V	9.5×10^{-6}	
		(1 ~ 10) V	8.7×10^{-6}	
		(10 ~ 100) V	1.1×10^{-5}	
		(100 ~ 1 000) V	1.2×10^{-5}	
DC current		10 μA	9.9×10^{-4}	
		(10 ~ 100) μA	1.6×10^{-4}	
		(0.1 ~ 10) mA	6.9×10^{-5}	
		(10 ~ 100) mA	8.0×10^{-5}	
		(0.1 ~ 1) A	1.3×10^{-4}	
		(1 ~ 20) A	2.6×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Analogue/Digital multimeters	40419			Meter Calibrator,
AC voltage		(60 Hz ~ 1 kHz)		STD. Resistors,
		10 mV	7.1×10^{-4}	Amplifier /KIQI-40419
		(10 ~ 100) mV	2.3×10^{-4}	
		(0.1 ~ 10) V	1.1×10^{-4}	
		(10 ~ 1 000) V	1.2×10^{-4}	
		(1 ~ 50) kHz		
		10 mV	8.0×10^{-4}	
		(10 ~ 100) mV	2.3×10^{-4}	
		(0.1 ~ 10) V	1.1×10^{-4}	
		(10 ~ 100) V	1.2×10^{-4}	
		(50 ~ 100) kHz		
		10 mV	1.8×10^{-3}	
		(10 ~ 100) mV	1.3×10^{-3}	
		(0.1 ~ 1) V	3.9×10^{-4}	
		(1 ~ 10) V	3.5×10^{-4}	
		(10 ~ 100) V	6.8×10^{-4}	
AC current		(60 Hz ~ 1 kHz)		
		(10 ~ 100) μA	2.1×10^{-3}	
		(0.1 ~ 1) mA	6.3×10^{-4}	
		(1 ~ 100) mA	2.2×10^{-4}	
		(0.1 ~ 1) A	7.6×10^{-4}	
		(1 ~ 10) A	1.9×10^{-3}	
		(10 ~ 20) A	1.8×10^{-3}	
		(1 ~ 5) kHz		
		(10 ~ 100) μA	5.4×10^{-3}	
		(0.1 ~ 10) mA	1.3×10^{-3}	
		(0.01 ~ 1) A	1.2×10^{-3}	
		(5 ~ 10) kHz		
		(10 ~ 100) μA	1.2×10^{-2}	
		(0.1 ~ 10) mA	2.9×10^{-3}	
		(10 ~ 100) mA	2.8×10^{-3}	
		(0.1 ~ 1) A	1.1×10^{-2}	
Resistance		10 Ω	1.3×10^{-5}	
		(0.01 ~ 100) kΩ	1.2×10^{-5}	
		(0.1 ~ 1) MΩ	2.4×10^{-5}	
		(1 ~ 10) MΩ	2.5×10^{-5}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Noise meters	40420			Meter Calibrator
AC input level		(40 Hz ~ 50) kHz		Audio distortion
		(1 mV ~ 100 V)	3.0×10^{-3}	analyzer
		(50 ~ 100) kHz		/KIQI-40420
		(1 ~ 10) mV	3.1×10^{-3}	
		(0.01 ~ 100) V	3.0×10^{-3}	
Weighting test		(50 Hz ~ 5 kHz)	0.17 dB	
CCITT		(-63.0 ~ 1.0) dB		
CCIR/ARM		(32 Hz ~ 31.5 kHz)	0.16 dB	
		(-48.3 ~ 6.6) dB		
DIN/NOISE		(63 Hz ~ 31.5 kHz)	0.16 dB	
		(-31.6 ~ 8.4) dB		
JIS		(25 Hz ~ 16 kHz)	0.18 dB	
		(-44.6 ~ 1.2) dB		
Oscilloscopes	40421			Oscilloscope
Vertical axis		6 mV	8.5×10^{-3}	Calibrator
		(6 ~ 12) mV	6.6×10^{-3}	/KIQI-40421
		(12 ~ 30) mV	3.7×10^{-3}	
		(30 ~ 60) mV	1.8×10^{-3}	
		(60 ~ 120) mV	1.3×10^{-3}	
		(120 ~ 300) mV	2.1×10^{-3}	
		(300 ~ 600) mV	1.2×10^{-3}	
		(0.6 ~ 1.2) V	8.2×10^{-4}	
		(1.2 ~ 3) V	2.3×10^{-3}	
		(3 ~ 6) V	1.3×10^{-3}	
		(6 ~ 12) V	1.0×10^{-3}	
		(12 ~ 30) V	2.3×10^{-3}	
		(30 ~ 60) V	1.2×10^{-3}	
		(60 ~ 120) V	7.8×10^{-4}	
horizontal axis		2 ns	2.9×10^{-4}	
		(2 ~ 5) ns	1.2×10^{-3}	
		(5 ~ 10) ns	5.8×10^{-4}	
		(10 ~ 20) ns	2.9×10^{-4}	
		(20 ~ 50) ns	1.2×10^{-3}	
		(50 ~ 100) ns	5.8×10^{-4}	
		(100 ~ 200) ns	2.9×10^{-4}	
		(200 ~ 500) ns	1.2×10^{-3}	
		(0.5 ~ 1) μs	5.8×10^{-4}	
		(1 ~ 2) μs	2.9×10^{-4}	
		(2 ~ 5) μs	1.2×10^{-3}	
		(5 ~ 10) μs	5.8×10^{-4}	
		(10 ~ 20) μs	2.9×10^{-4}	
		(20 ~ 50) μs	1.2×10^{-3}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Oscilloscopes	40421			Oscilloscope
horizontal axis		(50 ~ 100) μs	5.8×10^{-4}	Calibrator
		(100 ~ 200) μs	2.9×10^{-4}	/KIQI-40421
		(200 ~ 500) μs	1.2×10^{-3}	
		(0.5 ~ 1) ms	5.8×10^{-4}	
		(1 ~ 2) ms	2.9×10^{-4}	
		(2 ~ 5) ms	1.2×10^{-3}	
		(5 ~ 10) ms	5.8×10^{-4}	
		(10 ~ 20) ms	2.9×10^{-4}	
		(20 ~ 50) ms	1.2×10^{-3}	
		(50 ~ 100) ms	5.8×10^{-4}	
		(100 ~ 200) ms	3.0×10^{-4}	
		(200 ~ 500) ms	1.2×10^{-3}	
		(0.5 ~ 1) s	5.8×10^{-4}	
		(1 ~ 2) s	3.0×10^{-4}	
		(2 ~ 5) s	1.2×10^{-3}	
Level Sine		50 kHz	3.2×10^{-2}	
		(0.05 ~ 100) MHz	5.2×10^{-2}	
		(100 ~ 200) MHz	5.7×10^{-2}	
		(200 ~ 600) MHz	7.7×10^{-2}	
LF phase meters	40422	60 Hz		Power Calibrator
Phase		(0 ~ 360)°	0.037°	/KIQI-40422
Random wave generators	40423			Meter Calibrator
Frequency		1 Hz ~ 100 MHz	5.8×10^{-6}	Audio distortion
DC voltage		(-100 ~ 100) V	5.8×10^{-5}	analyzer
				/KIQI-40423
AC voltage		40 Hz ~ 10 kHz		
		(10 ~ 100) mV	2.2×10^{-4}	
		(0.1 ~ 100) V	1.4×10^{-4}	
		10 kHz ~ 20 kHz		
		(10 ~ 100) mV	4.2×10^{-4}	
		(0.1 ~ 100) V	2.6×10^{-4}	
		20 kHz ~ 50 kHz		
		(10 ~ 100) mV	9.4×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		50 kHz ~ 100 kHz		
		(10 ~ 100) mV	1.2×10^{-3}	
		(0.1 ~ 100) V	7.2×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Random wave generators	40423			Meter Calibrator
Attenuator(level)		40 Hz		Audio distortion
		(20 ~ -40) dB	0.058 dB	analyzer
		-(40 ~ 50) dB	0.060 dB	/KIQI-40423
		-(50 ~ 60) dB	0.076 dB	
		40 Hz ~ 10 kHz		
		(20 ~ -40) dB	0.058 dB	
		-(40 ~ 50) dB	0.060 dB	
		-(50 ~ 60) dB	0.076 dB	
		10 kHz ~ 20 kHz		
		(20 ~ -40) dB	0.058 dB	
		-(40 ~ 50) dB	0.066 dB	
		-(50 ~ 60) dB	0.11 dB	
		20 kHz ~ 100 kHz		
		(20 ~ -20) dB	0.058 dB	
		-(20 ~ 40) dB	0.065 dB	
		-(40 ~ 50) dB	0.099 dB	
		-(50 ~ 60) dB	0.25 dB	
Volt/Current recorders	40424			Meter Calibrator,
DC voltage		(10 ~ 100) mV	1.1×10^{-4}	Amplifier
		(0.1 ~ 1) V	6.7×10^{-5}	/KIQI-40424
		(1 ~ 10) V	6.6×10^{-5}	
		(10 ~ 100) V	6.5×10^{-5}	
		(100 ~ 1 000) V	6.8×10^{-5}	
DC current		(10 ~ 100) μA	1.0×10^{-3}	
		(0.1 ~ 1) mA	1.7×10^{-4}	
		(1 ~ 100) mA	1.1×10^{-4}	
		(0.1 ~ 10) A	3.4×10^{-4}	
Relay test sets	40425			DMM, Current Shunt,
DC voltage		(1 ~ 1 000) V	5.9×10^{-4}	Oscilloscope,
DC current		100 mA	6.0×10^{-4}	/KIQI-40425
		(0.1 ~ 1) A	6.2×10^{-4}	
		(1 ~ 10) A	7.4×10^{-4}	
		(10 ~ 100) A	1.5×10^{-3}	
AC voltage		(1 kHz)		
		(1 ~ 1 000) V	6.0×10^{-4}	
AC current		40 Hz ~ 1 kHz		
		100 mA	7.8×10^{-4}	
		(0.1 ~ 1) A	1.1×10^{-3}	
		(1 ~ 10) A	1.9×10^{-3}	
		(10 ~ 100) A	2.5×10^{-3}	
Timer		(1 ~ 5) s	1.6×10^{-3}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF signal generators	40426			Meter Calibrator,
Frequency		1 Hz ~ 100 MHz	5.8×10^{-6}	Audio distortion
DC voltage(±)		(-100 ~ 100) V	5.8×10^{-5}	analyzer
				/KIQI-40426
AC voltage		40 Hz		
		(10 ~ 100) mV	2.2×10^{-4}	
		(0.1 ~ 100) V	1.4×10^{-4}	
		40 Hz ~ 1 kHz		
		(10 ~ 100) mV	2.1×10^{-4}	
		(0.1 ~ 100) V	1.3×10^{-4}	
		1 kHz ~ 10 kHz		
		(10 ~ 100) mV	2.2×10^{-4}	
		(0.1 ~ 100) V	1.4×10^{-4}	
		10 kHz ~ 20 kHz		
		(10 ~ 100) mV	4.2×10^{-4}	
		(0.1 ~ 100) V	2.6×10^{-4}	
		20 kHz ~ 50 kHz		
		(10 ~ 100) mV	9.4×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		50 kHz ~ 100 kHz		
		(10 ~ 100) mV	1.2×10^{-4}	
		(0.1 ~ 100) V	7.2×10^{-4}	
Flatness(level)		40 Hz ~ 100 kHz		
		(-10 ~ 10) dB	0.058 dB	
Attenuator(level)		40 Hz		
		(20 ~ -40) dB	0.058 dB	
		-(40 ~ 50) dB	0.060 dB	
		-(50 ~ 60) dB	0.076 dB	
		40 Hz ~ 1 kHz		
		(20 ~ -40) dB	0.058 dB	
		-(40 ~ 50) dB	0.059 dB	
		-(50 ~ 60) dB	0.065 dB	
		1 kHz ~ 10 kHz		
		(20 ~ -40) dB	0.058 dB	
		-(40 ~ 50) dB	0.060 dB	
		-(50 ~ 60) dB	0.076 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
LF signal generators	40426			Meter Calibrator,
Attenuator(level)		10 kHz ~ 20 kHz		Audio distortion
		(20 ~ -40) dB	0.058 dB	analyzer
		-(40 ~ 50) dB	0.066 dB	/KIQI-40426
		-(50 ~ 60) dB	0.11 dB	
		20 kHz ~ 50 kHz		
		(20 ~ -20) dB	0.058 dB	
		-(20 ~ 30) dB	0.060 dB	
		-(30 ~ 40) dB	0.064 dB	
		-(40 ~ 50) dB	0.097 dB	
		-(50 ~ 60) dB	0.24 dB	
		50 kHz ~ 100 kHz		
		(20 ~ -20) dB	0.058 dB	
		-(20 ~ 30) dB	0.062 dB	
		-(30 ~ 40) dB	0.065 dB	
		-(40 ~ 50) dB	0.099 dB	
		-(50 ~ 60) dB	0.25 dB	
Sweep generators	40429			Meter Calibrator,
Frequency		1 Hz ~ 100 MHz	5.8×10^{-6}	Audio distortion
DC voltage		(-100 ~ 100) V	5.8×10^{-5}	analyzer
AC voltage		40 Hz		/KIQI-40429
		(10 ~ 100) mV	2.2×10^{-4}	
		(0.1 ~ 100) V	1.4×10^{-4}	
		40 Hz ~ 20 kHz		
		(10 ~ 100) mV	4.2×10^{-4}	
		(0.1 ~ 100) V	2.6×10^{-4}	
		20 kHz ~ 50 kHz		
		(10 ~ 100) mV	9.4×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		50 kHz ~ 100 kHz		
		(10 ~ 100) mV	1.2×10^{-3}	
		(0.1 ~ 100) V	7.2×10^{-4}	
Attenuator(level)		40 Hz ~ 10 kHz		
		(20 ~ -40) dB	0.058 dB	
		-(40 ~ 50) dB	0.060 dB	
		-(50 ~ 60) dB	0.076 dB	
		10 kHz ~ 20 kHz		
		(20 ~ -40) dB	0.058 dB	
		-(40 ~ 50) dB	0.066 dB	
		-(50 ~ 60) dB	0.11 dB	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Sweep generators	40429			Meter Calibrator,
Attenuator(level)		20 kHz ~ 100 kHz		Audio distortion
		(20 ~ -20) dB	0.058 dB	analyzer
		-(20 ~ 40) dB	0.065 dB	/KIQI-40429
		-(40 ~ 50) dB	0.099 dB	
		-(50 ~ 60) dB	0.25 dB	
Signal transducers	40430			Meter Calibrator,
DC voltage		(0 ~ 10) mV	0.71 μV	DMM
		(10 ~ 100) mV	1.5×10^{-5}	/KIQI-40430
		(0.1 ~ 1) V	8.1×10^{-6}	
		(1 ~ 10) V	7.8×10^{-6}	
		(10 ~ 100) V	9.1×10^{-6}	
		(100 ~ 1 000) V	9.7×10^{-6}	
DC current		(0 ~ 100) μA	13 nA	
		(0.1 ~ 10) mA	5.9×10^{-5}	
		(10 ~ 100) mA	6.8×10^{-5}	
		(0.1 ~ 1) A	1.1×10^{-4}	
		(1 ~ 10) A	4.2×10^{-4}	
Transistor curve tracers	40432			Meter Calibrator,
Input DC voltage		(0 ~ 100) mV	1.6 μV	DMM
		(0.1 ~ 1 000) V	1.2×10^{-5}	/KIQI-40432
Output DC voltage		(0 ~ 1 000) V	59 mV	
Input current		(0 ~ 10) mA	0.59 μA	
		(10 ~ 100) mA	6.9×10^{-5}	
		(0.1 ~ 1) A	1.1×10^{-4}	
Output current		(0.1 ~ 10) mA	6.3×10^{-5}	
		(10 ~ 100) mA	7.4×10^{-5}	
		(0.1 ~ 1) A	2.0×10^{-4}	
Waveform analyzers	40433			Meter Calibrator,
Input DC voltage		(0 ~ 10) mV	1.0 μV	Signal analyzer
		(10 ~ 100) mV	7.2×10^{-5}	/KIQI-40433
		(0.1 ~ 100) V	7.1×10^{-5}	
		(100 ~ 300) V	2.7×10^{-5}	
Input AC voltage		40 Hz		
		(0 ~ 10) mV	0.11 μV	
		(10 ~ 100) mV	7.6×10^{-4}	
		(0.1 ~ 100) V	7.3×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveform analyzers	40433			Meter Calibrator,
Input AC voltage		50 Hz ~ 1 kHz		Signal analyzer
		(0 ~ 10) mV	10 μV	/KIQI-40433
		(10 ~ 100) mV	7.3×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		(100 ~ 300) V	2.8×10^{-4}	
		1 kHz ~ 20 kHz		
		(0 ~ 10) mV	10 μV	
		(10 ~ 100) mV	7.3×10^{-4}	
		(0.1 ~ 100) V	7.1×10^{-4}	
		20 kHz ~ 50 kHz		
		(0 ~ 10) mV	14 μV	
		(10 ~ 100) mV	8.2×10^{-4}	
		(0.1 ~ 1) V	7.2×10^{-4}	
		(1 ~ 10) V	7.2×10^{-4}	
		(10 ~ 100) V	7.5×10^{-4}	
		50 kHz ~ 100 kHz		
		(0 ~ 10) mV	19 μV	
		(10 ~ 100) mV	1.3×10^{-3}	
		(0.1 ~ 1) V	7.8×10^{-4}	
		(1 ~ 10) V	7.6×10^{-4}	
		(10 ~ 100) V	9.2×10^{-4}	
Input frequency		10 Hz	1.5×10^{-4}	
		10 Hz ~ 100 kHz	7.7×10^{-5}	
		100 kHz ~ 1 MHz	9.5×10^{-5}	
Output AC voltage		40 Hz		
		(10 ~ 100) mV	6.2×10^{-4}	
		(0.1 ~ 100) V	6.0×10^{-4}	
		40 Hz ~ 1 kHz		
		(10 ~ 100) mV	6.2×10^{-4}	
		(0.1 ~ 100) V	5.9×10^{-4}	
		1 kHz ~ 10 kHz		
		(10 ~ 100) mV	6.2×10^{-4}	
		(0.1 ~ 100) V	6.0×10^{-4}	
		10 kHz ~ 20 kHz		
		(10 ~ 100) mV	7.2×10^{-4}	
		(0.1 ~ 100) V	6.4×10^{-4}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Waveform analyzers	40433			Meter Calibrator,
Output AC voltage		20 kHz ~ 50 kHz		Signal analyzer
		(10 ~ 100) mV	1.1×10^{-3}	/KIQI-40433
		(0.1 ~ 100) V	9.2×10^{-4}	
		50 kHz ~ 100 kHz		
		(10 ~ 100) mV	1.3×10^{-3}	
		(0.1 ~ 100) V	9.2×10^{-4}	
Output frequency		10 Hz ~ 1 MHz	5.8×10^{-5}	
AC/DC high voltage generators	40434			DMM, kV Meter,
DC voltage		10 V	7.1×10^{-4}	High Voltage Meter
		(10 ~ 100) V	7.2×10^{-4}	/KIQI-40434
		(100 ~ 500) V	1.2×10^{-3}	
		(0.5 ~ 5) kV	1.0×10^{-2}	
		(5 ~ 10) kV	8.5×10^{-3}	
		(10 ~ 100) kV	1.2×10^{-2}	
DC current		(60 Hz)		
		(10 ~ 100) V	8.4×10^{-4}	
		(100 ~ 500) V	1.3×10^{-3}	
		(0.5 ~ 5) kV	2.9×10^{-2}	
		(5 ~ 10) kV	1.8×10^{-2}	
		(10 ~ 100) kV	1.6×10^{-2}	
AC/DC high voltage probes	40435			High voltage generator
DC voltage				Meter Calibrator,
(Multimeter Calibration)		(0 ~ 2) kV	8.4 V	DMM
		(2 ~ 4) kV	4.3×10^{-3}	/KIQI-40435
		(4 ~ 6) kV	4.2×10^{-3}	
		(6 ~ 8) kV	4.3×10^{-3}	
		(8 ~ 9) kV	4.2×10^{-3}	
		(9 ~ 10) kV	1.5×10^{-1}	
		(10 ~ 20) kV	7.5×10^{-2}	
		(20 ~ 30) kV	5.0×10^{-2}	
		(30 ~ 40) kV	3.8×10^{-2}	
		(40 ~ 50) kV	3.2×10^{-2}	
AC voltage		(60 Hz)		
		0.1 kV	1.5×10^{-4}	
		(0.1 ~ 1) kV	1.7×10^{-4}	
		(1 ~ 5) kV	1.2×10^{-2}	
		(5 ~ 20) kV	1.1×10^{-2}	

404. Other DC & LF Measurements

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC/DC high voltage probes	40435			High voltage generator
DC voltage				Meter Calibrator,
(Oscilloscope Calibration)		(0 ~ 0.1) kV	0.42 V	DMM
		(0.1 ~ 2) kV	4.2×10^{-3}	/KIQI-40435
		(2 ~ 4) kV	4.3×10^{-3}	
		(4 ~ 6) kV	4.2×10^{-3}	
		(6 ~ 8) kV	4.3×10^{-3}	
		(8 ~ 9) kV	4.2×10^{-3}	
		(9 ~ 10) kV	1.5×10^{-1}	
		(10 ~ 20) kV	7.5×10^{-2}	
		(20 ~ 30) kV	5.0×10^{-2}	
		(30 ~ 40) kV	3.8×10^{-2}	
		(40 ~ 50) kV	3.2×10^{-2}	
		(50 ~ 60) kV	2.7×10^{-2}	
AC voltage		(60 Hz)		
		0.1 kV	1.5×10^{-4}	
		(0.1 ~ 1) kV	1.7×10^{-4}	
		(1 ~ 5) kV	1.2×10^{-2}	
		(5 ~ 20) kV	1.1×10^{-2}	

501. Contact thermomtry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
(Temperature generators:	50101			SPRT
ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators)		(-90 ~ 300) ℃	0.68 ℃	/KIQI-50101
		(-196 ~ 200) ℃	0.10 ℃	
		(200 ~ 1 100) ℃	0.62 ℃	
ice-point baths		0 ℃	0.07 ℃	
Temperature indicators/ recorders/ controllers, temperature calivrators, etc	50102			SPRT /KIQI-50102
Sensor Inclusion		(-196 ~ 200) ℃	0.05 ℃	
		(200 ~ 1 100) ℃	1.9 ℃	
Sensor Except		(-196 ~ 600) ℃	0.07 ℃	
		(600 ~ 800) ℃	0.27 ℃	
		(800 ~ 1 000) ℃	0.29 ℃	
		(1 000 ~ 1 100) ℃	0.33 ℃	
Temperature calibrators		(-196 ~ 100) ℃	0.008 ℃	
		(100 ~ 300) ℃	0.010 ℃	
		(300 ~ 600) ℃	0.012 ℃	
		(600 ~ 1 100) ℃	0.10 ℃	

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501. Contact thermomtry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Glass thermometers; liquid-in-glass,Beckmann	50103	(-50 ~ 200) ℃	0.07 ℃	SPRT /KIQI-50103
Resistance thermometers; SPRT,IPRT, thermistors, etc.	50104	(-196 ~ 200) ℃	0.07 ℃	SPRT /KIQI50104
Thermal expansion thermometers; bimetal, gas or liquid type	50105	(-40 ~ 200) ℃	0.3 ℃	SPRT /KIQI-50105
Thermomecouples; noble metal, base metal, pure metal, special type, etc.	50106	(-196 ~ 200) ℃ (200 ~ 1 100) ℃	0.25 ℃ 1.7 ℃	Standard thermocouple /KIQI-50106
Temperature transducers	50107	(-196 ~ 200) ℃ (200 ~ 1 100) ℃	0.15 ℃ 2.1 ℃	SPRT /KIQI-50107

502. Non contact thermomtry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Standard radiation thermometers	50204	(0 ~ 100) ℃ (100 ~ 500) ℃ (500 ~ 1 000) ℃ (1 000 ~ 1 400) ℃	2.2 ℃ 2.6 ℃ 4.6 ℃ 4.3 ℃	Standard pyrometers /KIQI-50204
Thermal image apparatus	50205	(0 ~ 100) ℃ (100 ~ 500) ℃ (500 ~ 1 000) ℃ (1 000 ~ 1 400) ℃	1.8 ℃ 2.8 ℃ 4.5 ℃ 4.5 ℃	Standard pyrometers /KIQI-50205
Blackbody furnaces	50206	(0 ~ 100) ℃ (100 ~ 500) ℃ (500 ~ 1 000) ℃ (1 000 ~ 1 400) ℃	1.6 ℃ 1.8 ℃ 3.3 ℃ 5.3 ℃	Standard pyrometers /KIQI-50206

503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Relative humidity hygrometers; polimer thinfilm, hair etc.	50302	(-35 ~ 100) ℃ (10 ~ 30) % R.H. (30 ~ 50) % R.H. (50 ~ 80) % R.H. (80 ~ 95) % R.H.	1.0 ℃ 2.0 % R.H. 2.1 % R.H. 3.1 % R.H. 3.4 % R.H.	Dew Point Hygrometer /KIQI-50302
Psychrometers; Assmann ventilated, PRT type, etc.	50303	(10 ~ 30) % R.H. (30 ~ 50) % R.H. (50 ~ 80) % R.H. (80 ~ 95) % R.H.	1.4 % R.H. 1.3 % R.H. 2.0 % R.H. 2.7 % R.H.	Dew Point Hygrometer /KIQI-50303

503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Temperature humidity recorders; Hygrothermograph, etc.	50304	(-35 ~ 0) ℃ (0 ~ 50) ℃ (10 ~ 30) % R.H. (30 ~ 50) % R.H. (50 ~ 80) % R.H. (80 ~ 95) % R.H.	0.9 ℃ 0.7 ℃ 1.9 % R.H. 2.5 % R.H. 3.3 % R.H. 3.6 % R.H.	Dew Point Hygrometer /KIQI-50304
Transducers; dew-point /relative humidit relative humidit	50305	(10 ~ 95) % R.H.	3.3 % R.H.	Dew Point Hygrometer /KIQI-50305
Humidity generators; two-pressure,two-temperature, flow mixing humidity gererator, constant temperature and humidity chamber, etc. temperature and humidity chamber	50306	(-90 ~ 150) ℃ (10 ~ 50) % R.H. (50 ~ 70) % R.H. (70 ~ 95) % R.H.	1.1 ℃ 3.1 % R.H. 4.4 % R.H. 5.9 % R.H.	Dew Point Hygrometer /KIQI-50306

601. Sound in air

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Sound level meters	60106	31.5 Hz 63 Hz 125 Hz 250 Hz 500 Hz 1 kHz 2 kHz 4 kHz 8 kHz 12.5 kHz	0.5 dB 0.4 dB 0.3 dB 0.2 dB 0.2 dB 0.2 dB 0.2 dB 0.2 dB 0.4 dB 0.7 dB	Sound calibrator /KIQI-60106

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901. Chemical analysis

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Gas analyzers	90103			Standard Gas
Oxygen(O_2)		(0 ~ 22) cmol/mol	2.1×10^{-2}	/KIQP-90103
Carbon monoxide (CO)		(0 ~ 105) μmol/mol	3.0×10^{-2}	
Hydrogen sulfide(H_2S)		(0 ~ 27) μmol/mol	3.7×10^{-2}	
Methane(CH_4)		(0 ~ 2) cmol/mol	2.0×10^{-2}	
Carbon Dioxide(CO_2)		1 cmol/mol	0.03 cmol/mol	
Hydrogen(H_2)		2 cmol/mol	0.04 cmol/mol	