

CERTIFICATE OF ACCREDITATION

Korea Cal-Tech Center Co., Ltd.

Accreditation No. : KC03-170

Corporation Registration No. : 194211-0064014

Address of Laboratory : 97, Chasang-ro 150beon-gil, Uichang-gu, Changwon-si, Gyeongsangnam-do,
Republic of Korea

Date of Initial Accreditation : December. 24, 2003.

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

Scope of Accreditation : Attached Annex

Date of issue : June. 26, 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

KCT CO.,LTD.

97, Chasang-ro 150beon-gil, Uichang-gu, Changwon-si, Gyeongsangnam-do, Republic of Korea

Phone : 055-238-9941, Fax : 055-238-9942, e-mail : ctcmk@chol.com

CALIBRATION

Valid To : Oct. 18. 2028.

Accreditation No : KC03-170

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			104. Form			10604	Depth gauges, depth micrometers	Y
10206	Dial/cylinder gauge testers	N	10401	Form testers	Y	10605	Dial/digital gauges	Y
10209	End bars	N	10404	Optical flats	N	10609	Micro indicators, test indicators	Y
10210	Extensometers, linear displacement transducers	Y	10405	Optical parallels	N	10610	Micrometer heads	N
			10406	Parallel blocks	N	10611	3-point micrometers	Y
10211	Filler gauges	N	10407	Precision surface plates	Y	10612	Inside micrometers	Y
10213	Gap gauges	N	10409	Roundness measurement instruments	Y	10613	Outside micrometers	Y
10214	Gauge blocks,by comparison	N				10617	Standard sieves	N
10216	Height gauges/measuring machines	Y	10412	Straight edges	N	10620	Welding gauges	N
10220	Standard measuring machines	Y	10413	Straight rules	N	201. Mass		
10223	Electronic micrometers	N	105. Complex geometry			20105	Counter beam balances	Y
10224	Height micrometers, riser blocks	N	10502	Bench centers	Y	20107	Dial swing scale balances	N
10227	Standard tape rules, peripheral gauges	N	10503	Contact coordinate measuring machines	Y	20109	Electric balances	Y
						20112	Platform scale balances	Y
10228	Cylindrical plug/pin gauges, thread measuring wire gauges	N	10504	Non-contact coordinate measuring machines	Y	20113	Spring scale balances	Y
						20114	Trip balances	Y
10229	Radius gauges	N	10511	Measuring microscopes, profile projectors	Y	20116	Weights	N
10230	Cylindrical ring gauges	N				202. Force		
10232	Step gauges	N	10514	Taper plug gauges	N	20203	Tension/compression testing machines	N
10233	Taper thickness gauges	N	10517	Stylus type roughness testers	Y			
10234	Ultrasonic thickness gauges	Y	10519	Roughness standard / comparison specimens	N	20204	Dial swing scale balances	N
10235	Ultrasonic/coating thickness specimens	N				203. Torque		
			10525	Thread plug gauges	N	20303	Torque wrenches/drivers	N
10236	Coating thickness testers	Y	10526	Taper thread plug gauges	N	204. Pressure		
103. Angle			10527	Thread ring gauges	N	20402	Manometers	N
10304	Bevel protractors	N	10529	V-blocks, box blocks	N	20406	Absolute pressure gauges	N
10311	Plate/square/electric levels	N	106. Various dimensional			20408	Compound pressure gauges	Y
10318	Squareness testers	N	10601	Inside/outside/gear tooth calipers, caliper gauges	Y	20409	Differential pressure gauges	Y
10319	Cylindrical squares	N				20411	Gauge pressure gauges	Y
10320	Precision squares	N	10603	Cylinder/bore gauges	Y	20412	Pressure transducers/transmitters	N

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
204. Pressure			403. AC voltage, current & power			501. Contact thermometry		
20413	Dial type vacuum gauges	Y	40312	AC power supplies	Y	50105	Thermal expansion thermometers; bimetal, gas or liquid type	Y
210. Hardness			40313	Puncture/safety testers	Y			
21001	Brinell hardness testers	Y	40314	Power recorders	Y	50106	Thermomecoules: base metal	Y
21002	Rockwell hardness testers	Y	40318	AC voltmeters	Y	503. Humidity		
21003	Shore hardness testers	Y	404. Other DC & LF measurements			50302	Relative humidity hygrometers; polimer thinfilm, hair, etc.	N
21004	Vickers hardness testers	Y	40410	Line frequency meters	Y			
21005	Durometer hardness testers	N	40411	Function generators	Y	50304	Thermal expansion thermometers; bimetal, gas or liquid type	N
21006	Leeb hardness testers	N	40416	Leakage current testers	Y			
401. DC voltage & current			40417	Electronic AC/DC loads	Y	50306	Humidity generators; two-pressure, two-temperature,flow mixing humidity gererator, constant temperature and humidity chamber, etc.	Y
40101	DC ammeters	Y	40419	Analogue/digital multimeters	Y			
40103	DC voltage/current calibrators	Y	40421	Oscilloscopes	Y			
40105	DC current shunts	Y	40424	Voltage/current recorders	Y			
40108	DC power supplies	Y	40425	Relay test sets	Y			
40112	DC voltmeters	Y	40426	LF signal generators	Y			
402. Resistance, capacitance and inductance			501. Contact thermometry					
40205	Earth testers	Y	50101	Temperature generators: ovens, furnaces, isothermal liquid baths,ice-point baths, dry-block alibrators	Y			
40210	Insulation testers	Y						
40214	Resistance meters	Y						
40215	Resistors	Y						
40217	Impedance bridges/LCR meters	Y	50102	Temperature indicators/ recorders/controllers, temperature calibrators	Y			
403. AC voltage, current & power								
40301	AC ammeters	Y	50103	Glass thermometers: liquid -in-glass, Beckmann	N			
40302	Clamp ammeters/voltmeters	Y						
40303	AC voltage/current calibrators	Y	50104	Resistance thermometers: SPRT, IPRT, thermistors,etc.	Y			
40305	AC current shunts	Y						
40310	Power factor meters	Y						
40311	AC power meters	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 calibration 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.
Dial/cylinder gauge testers	10206	(0 ~ 100) mm	$\sqrt{(0.20 \mu m)^2 + (2.8 \times 10^{-6} \times l_0)^2}$	Gauge Blocks, Electronic micrometers / KCT-CI-10206
End bars	10209	(25 ~ 500) mm (500 ~ 1 000) mm (1 000 ~ 1 500) mm	$\sqrt{(0.6 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$ $\sqrt{(0.6 \mu m)^2 + (3.0 \times 10^{-6} \times l_0)^2}$ $\sqrt{(1.3 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$	Gauge Blocks, Electronic micrometers / KCT-CI-10209
Extensometers, linear displacement transducers	10210	(0 ~ 500) mm	$\sqrt{(0.7 \mu m)^2 + (3.4 \times 10^{-6} \times l_0)^2}$	Gauge blocks / KCT-CI-10210
Filler gauges	10211	(0 ~ 5) mm	0.23 μm	Standard measuring machines / KCT-CI-10211
Gap gauges	10213	(3 ~ 300) mm	$\sqrt{(2.4 \mu m)^2 + (2.7 \times 10^{-6} \times l_0)^2}$	Height micrometers / KCT-CI-10213
Gauge blocks,by comparison	10214	(0.5 ~ 100) mm	$\sqrt{(75 nm)^2 + (1.2 \times 10^{-6} \times l_0)^2}$	Gauge Blocks, Gauge block comparators / KCT-CI-10214
Height gauges/measuring machines	10216	(0 ~ 1 000) mm (1 000 ~ 1 500) mm	$\sqrt{(0.9 \mu m)^2 + (3.0 \times 10^{-6} \times l_0)^2}$ $\sqrt{(1.5 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$	Gauge blocks / KCT-CI-10216
Standard measuring machines	10220	(0 ~ 1 000) mm	$\sqrt{(0.14 \mu m)^2 + (3.0 \times 10^{-6} \times l_0)^2}$	Gauge blocks / KCT-CI-10220
Electronic micrometers	10223	± 10 mm	0.15 μm	Gauge blocks / KCT-CI-10223
Height micrometers,Riser blocks Block Head Riser blocks Parallelism	10224	(0 ~ 600) mm (0 ~ 30) mm (0 ~ 600) mm	$\sqrt{(1.0 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$ $\sqrt{(1.1 \mu m)^2 + (2.8 \times 10^{-6} \times l_0)^2}$ $\sqrt{(0.9 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$ 1.0 μm	Gauge Blocks, Electronic micrometers / KCT-CI-10224
Standard tape rules, peripheral gauges	10227	(0 ~ 10) m (10 ~ 30) m (30 ~ 50) m	$\sqrt{(0.18 mm)^2 + (8 \times 10^{-6} \times l_0)^2}$ $\sqrt{(0.29 mm)^2 + (8 \times 10^{-6} \times l_0)^2}$ $\sqrt{(0.36 mm)^2 + (8 \times 10^{-6} \times l_0)^2}$	Standard tape rules / KCT-CI-10227
Cylindrical plug/pin gauges, thread measuring wire gauges	10228	(\varnothing 0.1 ~ \varnothing 200) mm (\varnothing 0.1 ~ \varnothing 3.5) mm	$\sqrt{(0.26 \mu m)^2 + (4.1 \times 10^{-6} \times l_0)^2}$ $\sqrt{(0.26 \mu m)^2 + (4.1 \times 10^{-6} \times l_0)^2}$	Standard measuring machines / KCT-CI-10228
Radius gauges	10229	(0.1 ~ 100) mm	2.2 μm	Measuring microscopes / KCT-CI-10229
Cylindrical ring gauges	10230	(\varnothing 3 ~ \varnothing 200) mm	$\sqrt{(0.46 \mu m)^2 + (4.0 \times 10^{-6} \times l_0)^2}$	Standard measuring machines / KCT-CI-10230
Step gauges	10232	(0 ~ 1 510) mm	$\sqrt{(1.3 \mu m)^2 + (3.0 \times 10^{-6} \times l_0)^2}$	Gauge blocks / KCT-CI-10232
Taper thickness gauges	10233	(0 ~ 100) mm	1.4 μm	Measuring microscopes / KCT-CI-10233
Ultrasonic thickness gauges	10234	(0 ~ 200) mm	2.4 μm	Ultrasonic specimen / KCT-CI-10234
Ultrasonic/coating thickness specimens Coating Ultrasonic	10235	(0 ~ 15) mm (0 ~ 200) mm	0.36 μm $\sqrt{(1.0 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$	Gauge Blocks, Electronic micrometers / KCT-CI-10235
Coating thickness testers	10236	(0 ~ 1.5) mm	1.3 μm	Thickness specimens / KCT-CI-10236

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 Angle of Accuracy Angle of Accessories	10304	(0 ~ ±90)° (0 ~ 90)°	1.1' 2.2'	Angle gauge block, Measuring microscopes / KCT-CI-10304
Plate/square/electric levels Angle Flatness Squareness	10311	±(0 ~ 1)° (100 ~ 300) mm (100 ~ 300) mm	0.7" 1.1 μm 2.4 μm	Precision surface plates, Electronic micrometers, Level Comparators, Squareness tester / KCT-CI-10311
Squareness testers	10318	(5 ~ 500) mm	2.0 μm	Cylindrical squares / KCT-CI-10318
Cylindrical squares	10319	(5 ~ 500) mm	2.4 μm	Squareness tester / KCT-CI-10319
Precision squares Squares Precision squares Squareness Parallelism Straightness	10320	(5 ~ 450) mm (0 ~ 400) mm	$\sqrt{(2.1 \mu\text{m})^2 + (3.1 \times 10^{-6} \times l_0)^2}$ $\sqrt{(2.1 \mu\text{m})^2 + (3.1 \times 10^{-6} \times l_0)^2}$ 1.1 μm 2.7 μm	Squareness tester, Precision surface plates, Electronic micrometers / / KCT-CI-10320

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 Vertical direction accuracy Cross direction accuracy Angle	10401	(0 ~ 20) mm (0 ~ 50) mm (1 ~ 45)°	0.09 μm 1.6 μm 0.8°	Form standard specimens / KCT-CI-10401
Optical flats	10404	(10 ~ 60) mm	0.06 μm	Optical flat / KCT-CI-10404
Optical parallels Flatness Parallelism	10405	(10 ~ 50) mm	0.10 μm 0.08 μm	Optical flat, Gauge block comparators / KCT-CI-10405
Parallel blocks Flatness Parallelism Difference of height between parallel block 1 and 2	10406	(0 ~ 1 500) mm	1.1 μm 1.1 μm 1.3 μm	Precision surface plates, Electronic micrometers / KCT-CI-10406
Precision surface plates	10407	(900 ~ 10 000) cm ² (10 000 ~ 40 000) cm ² (40 000 ~ 90 000) cm ²	1.4 μm 2.1 μm 2.8 μm	Electric levels / KCT-CI-10407
Roundness measurement instruments Detector accuracy Rotation accuracy of circumference direction Rotation accuracy of shaft direction	10409	(0 ~ 100) μm 360° 360°	0.60 μm 0.017 μm 0.020 μm	Roundness standard specimens / KCT-CI-10409
Straight edges Straightness Parallelism	10412	(0 ~ 1 500) mm	2.5 μm 2.4 μm	Electronic micrometer / KCT-CI-10412
Straight rules	10413	(0 ~ 3 000) mm	$\sqrt{(0.06 \text{ mm})^2 + (8 \times 10^{-6} \times l_0)^2}$	Standard tape rules / KCT-CI-10413

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Bench centers Paralleism of both centers Difference of both centers Flatness of bed	10502	(0 ~ 250) mm	1.9 μm 1.8 μm 1.7 μm	Electronic micrometer, Test bar / KCT-CI-10502
Contact coordinate measuring machines Detector, space accuracy Volumetric accuracy Straightness Squareness	10503	(0 ~ 1 000) mm (0 ~ 1 000) mm (0 ~ 500) mm (0 ~ 500) mm	$\sqrt{(1.3 \mu m)^2 + (4.0 \times 10^{-6} \times l_0)^2}$ $\sqrt{(1.3 \mu m)^2 + (4.0 \times 10^{-6} \times l_0)^2}$ 3.0 μm 1.4"	Step gauges, Precision squares / KCT-CI-10503
Non-contact coordinate measuring machines X, Y axis indication accuracy Squareness	10504	(0 ~ 300) mm (0 ~ 150) mm	$\sqrt{(0.51 \mu m)^2 + (2.1 \times 10^{-6} \times l_0)^2}$ 2.9 μm	Standard tape rules / KCT-CI-10504
Measuring microscopes, profile projectors Measuring microscopes X, Y axis indication accuracy Squareness Profile projectors X, Y axis indication accuracy Squareness Magnification Error Rotation Angle of Projection Surface Angle of the crosshairs on the projection plane	10511	(0 ~ 300) mm (0 ~ 150) mm (0 ~ 300) mm (0 ~ 150) mm (×2 ~ ×100) (0 ~ 360)° (0 ~ 360)°	$\sqrt{(0.51 \mu m)^2 + (2.1 \times 10^{-6} \times l_0)^2}$ 2.9 μm $\sqrt{(1.3 \mu m)^2 + (2.1 \times 10^{-6} \times l_0)^2}$ 2.9 μm 0.016 % 1.1" 0.5"	Standard tape rules, Precision squares / KCT-CI-10511
Taper plug gauges Small end diameter Big end diameter Taper angle Height	10514	(Ø 3 ~ Ø 200) mm (Ø 3 ~ Ø 200) mm (0 ~ 90)° (0 ~ 200) mm	$\sqrt{(0.8 \mu m)^2 + (8.2 \times 10^{-6} \times l_0)^2}$ $\sqrt{(1.6 \mu m)^2 + (7.7 \times 10^{-6} \times l_0)^2}$ 6" $\sqrt{(1.4 \mu m)^2 + (3.0 \times 10^{-6} \times l_0)^2}$	Gauge blocks, Pin gauges Standard measuring machines, / KCT-CI-10514
Stylus type roughness testers Ra Ra Rz H	10517	(0 ~ 1) μm (1 ~ 4) μm (0 ~ 20) μm (0 ~ 20) μm	0.011 μm 0.042 μm 0.033 μm 0.05 μm	Roughness standard specimen Gauge blocks / KCT-CI-10517
Roughness standard/comparison specimens Ra Rz	10519	(0 ~ 10) μm (0 ~ 30) μm	0.053 μm 0.17 μm	Roughness standard specimens, Stylus type roughness testers / KCT-CI-10519
Thread plug gauges Effective diameter Outside diameter Pitch Half angle	10525	(0 ~ 200) mm (0 ~ 200) mm (0.25 ~ 10) mm (0 ~ 45)°	$\sqrt{(2.0 \mu m)^2 + (4.1 \times 10^{-6} \times l_0)^2}$ $\sqrt{(0.4 \mu m)^2 + (4.0 \times 10^{-6} \times l_0)^2}$ 1.7 μm 0.7"	Standard measuring machine, Form tester / KCT-CI-10525
Taper thread plug gauges Effective diameter Outside diameter Pitch Half angle	10526	(0 ~ 50) mm (0 ~ 50) mm (0 ~ 50) mm (0 ~ 5) mm	$\sqrt{(1.4 \mu m)^2 + (14.5 \times 10^{-6} \times l_0)^2}$ $\sqrt{(4.8 \mu m)^2 + (23.4 \times 10^{-6} \times l_0)^2}$ $\sqrt{(2.1 \mu m)^2 + (3.0 \times 10^{-6} \times l_0)^2}$ 1.8 μm	Standard measuring machine, Form tester / KCT-CI-10526

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Outside micrometers Micrometers, outside Micrometers, V-anvil	10613	(0 ~ 25) mm (25 ~ 500) mm (500 ~ 2 000) mm (5 ~ 85) mm	$\sqrt{(0.10 \mu m)^2 + (2.8 \times 10^{-6} \times l_0)^2}$ $\sqrt{(0.91 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$ $\sqrt{(2.5 \mu m)^2 + (2.9 \times 10^{-6} \times l_0)^2}$ $\sqrt{(1.8 \mu m)^2 + (4.8 \times 10^{-6} \times l_0)^2}$	Gauge blocks, Optical flats Plug gauges / KCT-CI-10613
Standard sieves Standard rope Sieve opening Wire rod diameter Standard plate body Diameter of hole Distance of hole center	10617	(Ø 0.01 ~ Ø 10) mm (0.01 ~ 100) mm (Ø 0.01 ~ Ø 100) mm (0.01 ~ 100) mm	3.4 µm 5.9 µm 5.0 µm 4.8 µm	Measuring microscopes / KCT-CI-10617
Welding gauges Height and Depth Ruler Angle	10620	(0 ~ 100) mm (0 ~ 100) mm (0 ~ 90)°	0.09 mm 0.05 mm 0.13°	Measuring microscopes / KCT-CI-10620

201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Counter beam balances	20105	(0 ~ 500) g (500 ~ 3 000) g (3 ~ 20) kg	7.6 mg 76 mg 0.76 g	Weights / KCT-CI-20105
Dial swing scale balances	20107	(0 ~ 10) kg (10 ~ 20) kg (20 ~ 50) kg (50 ~ 100) kg (100 ~ 300) kg (300 ~ 500) kg	5.3 g 11 g 21 g 53 g 0.11 kg 0.21 kg	Weights / KCT-CI-20107
Electric balances	20109	(0 ~ 20) g (20 ~ 50) g (50 ~ 200) g (0.2 ~ 1) kg (1 ~ 2) kg (2 ~ 10) kg (10 ~ 30) kg (30 ~ 60) kg (60 ~ 100) kg (100 ~ 200) kg (200 ~ 500) kg	58 µg 0.11 mg 0.15 mg 0.86 mg 1.7 mg 8.8 mg 20 mg 0.14 g 0.94 g 14 g 31 g	Weights / KCT-CI-20109
Platform scale balances	20112	(0 ~ 10) kg (10 ~ 20) kg (20 ~ 50) kg (50 ~ 100) kg (100 ~ 200) kg (200 ~ 500) kg	0.91 g 1.8 g 18 g 46 g 92 g 0.18 kg	Weights / KCT-CI-20112

201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Spring scale balances	20113	(0 ~ 1) kg (1 ~ 2) kg (2 ~ 5) kg (5 ~ 10) kg (10 ~ 20) kg (20 ~ 50) kg (50 ~ 100) kg	0.91 g 1.8 g 3.8 g 9.1 g 18 g 38 g 91 g	Weights / KCT-CI-20113
Trip balances	20114	(0 ~ 200) g (200 ~ 500) g (0.5 ~ 1) kg (1 ~ 2) kg (2 ~ 5) kg	15 mg 73 mg 0.15 g 0.29 g 0.73 g	Weights / KCT-CI-20114
Weights	20116	F1 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg 20 kg	2.2 µg 2.2 µg 2.2 µg 2.6 µg 3.2 µg 4.1 µg 5.1 µg 6.1 µg 8.1 µg 9.1 µg 13 µg 15 µg 18 µg 24 µg 32 µg 0.10 mg 0.13 mg 0.26 mg 0.50 mg 1.2 mg 5.2 mg 6.6 mg 12 mg	Weights, Electric balance / KCT-CI-20116

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			Load cell, Weights / KCT-CI-20203
Tension		(1 ~ 50) N	7.9×10^{-4}	
Tension		(50 ~ 500) N	7.9×10^{-4}	
Tension		(0.5 ~ 1) KN	1.3×10^{-3}	
Tension		(1 ~ 2) KN	1.4×10^{-3}	
Tension		(2 ~ 5) KN	1.4×10^{-3}	
Tension		(5 ~ 10) KN	1.5×10^{-3}	
compression		(1 ~ 50) N	7.9×10^{-4}	
compression		(50 ~ 500) N	7.9×10^{-4}	
compression		(0.5 ~ 1) KN	1.4×10^{-3}	
compression		(1 ~ 2) KN	1.5×10^{-3}	
compression		(2 ~ 5) KN	1.4×10^{-3}	
compression		(5 ~ 10) KN	1.5×10^{-3}	
compression		(10 ~ 20) KN	1.4×10^{-3}	
compression		(20 ~ 50) KN	1.7×10^{-3}	
compression		(50 ~ 100) KN	1.5×10^{-3}	
compression		(100 ~ 200) KN	1.6×10^{-3}	
compression		(200 ~ 500) KN	1.5×10^{-3}	
compression		(500 ~ 1 000) KN	1.9×10^{-3}	
compression		(1 000 ~ 3 000) KN	1.6×10^{-3}	
Push-Pull Gauges	20204	(5 ~ 1 000) N	1.3×10^{-3}	Weights / KCT-CI-20203

203. Torque

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Torque wrenches / Torque drivers	20303			Torque cell / KCT-CI-20303
		(0.1 ~ 1) N.m	9.8×10^{-3}	
		(1 ~ 5) N.m	4.4×10^{-3}	
		(5 ~ 10) N.m	1.3×10^{-2}	
		(10 ~ 50) N.m	5.8×10^{-3}	
		(50 ~ 100) N.m	6.2×10^{-3}	
		(100 ~ 250) N.m	4.2×10^{-3}	
		(250 ~ 500) N.m	5.6×10^{-3}	
		(500 ~ 1 000) N.m	6.5×10^{-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			Digital Manometer Air Dead Weight Tester / KCT-CI-20402
		(0 ~ 14) kPa	8.8×10^{-4}	
		(14 ~ 200) kPa	1.6×10^{-3}	
Absolute pressure gauges	20406			Digital Manometer / KCT-CI-20406
		(5 ~ 200) kPa abs.	2.1×10^{-4}	
		(0.2 ~ 7) MPa abs.	1.6×10^{-4}	
Compound pressure gauges	20408			Digital Manometer / KCT-CI-20408
		(-95 ~ 1 000) kPa	1.5×10^{-4}	
		(1 ~ 7) MPa	1.4×10^{-4}	

204. Pressure				
Differential pressure gauges	20409	(0 ~ 14) kPa (14 ~ 700) kPa (0.7 ~ 7) MPa	1.6×10^{-4} 7.5×10^{-5} 7.1×10^{-5}	Digital Manometer Air Dead Weight Tester / KCT-CI-20409
Gauge pressure gauges Air pressure Oil pressure	20411	(0 ~ 14) kPa (14 ~ 700) kPa (0.7 ~ 7) MPa (7 ~ 200) MPa	1.6×10^{-4} 7.5×10^{-5} 7.1×10^{-5} 7.3×10^{-5}	Digital Manometer Air Dead Weight Tester Oil Dead Weight Tester / KCT-CI-20411
Pressure transducers/transmitters	20412	(5 ~ 200) kPa abs. (0.2 ~ 7) MPa abs. (0 ~ 700) kPa (0.7 ~ 7) MPa (7 ~ 200) MPa (-95 ~ 0) kPa	3.6×10^{-4} 3.8×10^{-4} 2.6×10^{-4} 2.6×10^{-4} 2.6×10^{-4} 2.8×10^{-4}	Air Dead Weight Tester Oil Dead Weight Tester DC POWER SUPPLY, DIGITAL MUTIMETER / KCT-CI-20412
Dial type vacuum gauges	20413	(-95 ~ 0) kPa	2.0×10^{-4}	Digital Manometer / KCT-CI-20413

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 ~ 200) HBW 10/3 000 (200 ~ 400) HBW 10/3 000	2.8 HBW 10/3 000 4.0 HBW 10/3 000	Hardness test blocks / KCT-CI-21001
Rockwell hardness testers	21002	(20 ~ 70) HRC (20 ~ 100) HRBW (10 ~ 94) HR15N (10 ~ 94) HR30N	0.34 HRC 0.63 HRBW 0.67 HR15N 0.67 HR30N	Hardness test blocks / KCT-CI-21002
Shore hardness testers	21003	(25 ~ 100) HS	1.0 HS	Hardness test blocks / KCT-CI-21003
Vickers hardness testers Test Weight : (0.1 ~ 9.8) N Test Weight : (9.8 ~ 294.2) N	21004	≤ 225 HV 0.2 (400 ~ 600) HV 0.2 ≥ 700 HV 0.2 ≤ 225 HV 10 (400 ~ 600) HV 10 ≥ 700 HV 10	3.4 HV 0.2 12 HV 0.2 14 HV 0.2 2.7 HV 10 7.0 HV 10 10 HV 10	Hardness test blocks / KCT-CI-21004
Durometer hardness testers	21005	(0 ~ 100) HDA (0 ~ 100) HDD	0.3 HDA 0.3 HDD	DUROMETER CALIBRATOR, Gauge blocks / KCT-CI-21005
Leeb hardness testers	21006	≤ 500 HLD (500 ~ 700) HLD ≥ 700 HLD	4.5 HLD 4.5 HLD 4.5 HLD	Hardness test blocks / KCT-CI-21006

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 DC Current	40101	(0 ~ 100) μ A (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 2) A (2 ~ 3) A (3 ~ 4) A (4 ~ 5) A (5 ~ 6) A (6 ~ 7) A (7 ~ 8) A (8 ~ 9) A (9 ~ 10) A	41 nA 0.18 μ A 1.5 μ A 15 μ A 0.28 mA 0.93 mA 2.4 mA 2.9 mA 3.5 mA 4.1 mA 4.7 mA 5.2 mA 5.8 mA 6.4 mA	Meter Calibrator / KCT-CI-40101
DC voltage/current calibrators DC Voltage DC Current	40103	(0 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (0 ~ 100) μ A (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A	1.6 μ V 9.7 μ V 86 μ V 1.1 mV 12 mV 12 nA 46 nA 0.50 μ A 8.8 μ A 0.26 mA 5.9 mA	Multimeter / KCT-CI-40103 / KCT-CI-40103
DC current shunts Resistance	40105	(0.1 ~ 1) m Ω (1 ~ 10) m Ω (10 ~ 100) m Ω (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω	0.22 $\mu\Omega$ 2.5 $\mu\Omega$ 28 $\mu\Omega$ 0.15 m Ω 1.5 m Ω 18 m Ω 0.41 Ω	Multimeter, Meter Calibrator Current Amplifier / KCT-CI-40105

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 power supplies	40108			Multimeter, Current shunts, Electronics load / KCT-CI-40108
DC Voltage		(0 ~ 1) V	62 μ V	
		(1 ~ 2) V	63 μ V	
		(2 ~ 3) V	67 μ V	
		(3 ~ 4) V	68 μ V	
		(4 ~ 5) V	71 μ V	
		(5 ~ 6) V	73 μ V	
		(6 ~ 7) V	77 μ V	
		(7 ~ 8) V	79 μ V	
		(8 ~ 9) V	84 μ V	
		(9 ~ 10) V	0.62 mV	
		(10 ~ 30) V	0.83 mV	
		(30 ~ 80) V	0.97 mV	
		(80 ~ 90) V	1.1 mV	
		(90 ~ 100) V	6.2 mV	
		(100 ~ 600) V	11 mV	
		(600 ~ 1 000) V	62 mV	
DC Current		(0 ~ 100) mA	14 μ A	
		(0.1 ~ 1) A	0.14 mA	
		(1 ~ 2) A	0.25 mA	
		(2 ~ 3) A	0.69 mA	
		(3 ~ 4) A	0.91 mA	
		(4 ~ 5) A	1.2 mA	
		(5 ~ 6) A	1.4 mA	
		(6 ~ 7) A	1.6 mA	
		(7 ~ 8) A	1.8 mA	
		(8 ~ 9) A	2.1 mA	
	(9 ~ 10) A	2.4 mA		
	(10 ~ 20) A	4.5 mA		
	(20 ~ 30) A	7.1 mA		
	(30 ~ 40) A	9.3 mA		

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 power supplies	40108			Multimeter, Current shunts, Electronics load / KCT-CI-40108
DC Current		(40 ~ 50) A	12 mA	
		(50 ~ 60) A	14 mA	
		(60 ~ 70) A	17 mA	
		(70 ~ 80) A	19 mA	
		(80 ~ 90) A	21 mA	
	(90 ~ 100) A	24 mA		

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 voltmeters DC Voltage	40112	(0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 2) V (2 ~ 3) V (3 ~ 4) V (4 ~ 5) V (5 ~ 6) V (6 ~ 7) V (7 ~ 8) V (8 ~ 9) V (9 ~ 10) V (10 ~ 100) V (100 ~ 500) V (500 ~ 700) V (700 ~ 1 000) V	1.5 μV 3.6 μV 16 μV 29 μV 43 μV 80 μV 94 μV 0.11 mV 0.13 mV 0.14 mV 0.15 mV 0.17 mV 2.3 mV 13 mV 17 mV 23 mV	Meter Calibrator / KCT-CI-40112

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 AC Voltage Resistance Earth Resistance	40205	60 Hz (1 ~ 10) V (10 ~ 100) V (100 ~ 300) V (300 ~ 500) V (500 ~ 700) V (700 ~ 1 000) V (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ 100 mΩ 300 mΩ 500 mΩ	2.6 mV 26 mV 93 mV 0.20 V 0.27 V 0.71 V 0.74 mΩ 6.2 mΩ 62 mΩ 0.62 Ω 6.2 Ω 62 Ω 1.2 mΩ 3.5 mΩ 6.0 mΩ	Meter Calibrator, Decade Resistance, Load Resistance / KCT-CI-40205

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.		
Insulation testers	40210	DC Voltage	(1 ~ 10) V	6.2 mV	Meter Calibrator, Multimeter, Time Tester, Decade Resistance / KCT-CI-40210	
			(10 ~ 100) V	62 mV		
			(100 ~ 500) V	63 mV		
			(500 ~ 1 000) V	0.62 V		
		AC Voltage	60 Hz	(1 ~ 10) V		6.6 mV
			(10 ~ 100) V			66 mV
			(100 ~ 500) V			0.20 V
			(500 ~ 1 000) V			0.71 V
		Insulation Voltage	(1 ~ 10) V	(1 ~ 10) V		6.2 mV
				(10 ~ 100) V		62 mV
				(100 ~ 500) V		62 mV
				(500 ~ 1 000) V		0.62 V
				(1 ~ 2) kV		14 V
				(2 ~ 3) kV		20 V
				(3 ~ 4) kV		26 V
				(4 ~ 5) kV		32 V
				(5 ~ 6) kV		38 V
				(6 ~ 7) kV		43 V
				(7 ~ 8) kV		49 V
				(8 ~ 9) kV		55 V
		Insulation Resistance	(0.1 ~ 1) MΩ	(0.1 ~ 1) MΩ		0.63 kΩ
				(1 ~ 10) MΩ		6.9 kΩ
				(10 ~ 100) MΩ		70 kΩ
				(0.1 ~ 1) GΩ		1.4 MΩ
				(1 ~ 10) GΩ		14 MΩ
				(10 ~ 100) GΩ		0.14 GΩ
				(0.1 ~ 1) TΩ		1.8 GΩ
				Time		(0.1 ~ 1) s
(1 ~ 10) s	8.2 ms					
(10 ~ 100) s	61 ms					
(100 ~ 1 000) s	0.59 s					

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 meters Resistance	40214	1 mΩ 10 mΩ 100 mΩ 1 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ 1 MΩ 10 MΩ 100 MΩ	91 nΩ 0.67 μΩ 6.7 μΩ 30 μΩ 0.15 mΩ 1.4 mΩ 14 mΩ 0.14 Ω 1.4 Ω 20 Ω 0.26 kΩ 2.7 kΩ	Standard Resistance Set / KCT-CI-40214
Resistors Resistance	40215	10 mΩ (10 ~ 100) mΩ (100 ~ 1 000) mΩ (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω (1 ~ 10) kΩ (10 ~ 100) kΩ (100 ~ 1 000) kΩ (1 ~ 10) MΩ (10 ~ 100) MΩ (100 ~ 1 000) MΩ	14 μΩ 22 μΩ 0.19 mΩ 1.5 mΩ 1.1 mΩ 11 mΩ 0.11 Ω 1.2 Ω 13 Ω 0.36 kΩ 26 kΩ 1.8 MΩ	Multimeter, Meter Calibrator / KCT-CI-40215
Impedance bridges/LCR meters Inductance Capacitance Resistance	40217	(1 kHz) 1 mH 10 mH 100 mH 1 H (1 kHz) 1 nF 10 nF 100 nF 1 μF (1 kHz) 1 Ω 10 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ	0.27 μH 2.7 μH 27 μH 0.27 mH 0.12 pF 1.3 pF 14 pF 0.24 nF 30 μΩ 0.15 mΩ 1.4 mΩ 14 mΩ 0.14 Ω 1.4 Ω	Standard Inductor Set, Standard Capacitor Set, Standard Resistor Set / KCT-CI-40217

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 / KCT-CI-40301
AC Current		(30 ~ 100) μ A		
		60 Hz	0.27 μ A	
		60 Hz ~ 1 kHz	0.27 μ A	
		1 kHz ~ 5 kHz	0.53 μ A	
		5 kHz ~ 10 kHz	1.2 μ A	
		(0.1 ~ 1) mA		
		60 Hz	1.4 μ A	
		60 Hz ~ 1 kHz	1.4 μ A	
		1 kHz ~ 5 kHz	2.6 μ A	
		5 kHz ~ 10 kHz	6.2 μ A	
		(1 ~ 10) mA		
		60 Hz	7.0 μ A	
		60 Hz ~ 1 kHz	7.0 μ A	
		1 kHz ~ 5 kHz	12 μ A	
		5 kHz ~ 10 kHz	27 μ A	
		(10 ~ 100) mA		
		60 Hz	70 μ A	
		60 Hz ~ 1 kHz	70 μ A	
		1 kHz ~ 5 kHz	0.18 mA	
		5 kHz ~ 10 kHz	0.35 mA	
		(0.1 ~ 1) A		
		60 Hz	0.70 mA	
		60 Hz ~ 1 kHz	0.70 mA	
		1 kHz ~ 5 kHz	8.1 mA	
		5 kHz ~ 10 kHz	35 mA	
		(1 ~ 2) A		
		60 Hz	1.6 mA	
		60 Hz ~ 1 kHz	1.6 mA	
		(2 ~ 5) A		
		60 Hz	5.8 mA	
		60 Hz ~ 100 Hz	5.8 mA	
		100 Hz ~ 1 kHz	8.1 mA	
		(5 ~ 10) A		
		60 Hz	9.3 mA	
		60 Hz ~ 100 Hz	9.3 mA	
		100 Hz ~ 1 kHz	14 mA	

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, Current Amplifier, 25 Turn Coil, 50 Turn Coil / KCT-CI-40302
DC Voltage		(0 ~ 10) mV	1.6 μV	
		(10 ~ 100) mV	7.1 μV	
		(0.1 ~ 1) V	63 μV	
		(1 ~ 10) V	0.64 mV	
		(10 ~ 100) V	6.6 mV	
		(100 ~ 500) V	63 mV	
		(500 ~ 700) V	64 mV	
		(700 ~ 1 000) V	66 mV	
AC Voltage		(1 ~ 10) mV		
		60 Hz	9.6 μV	
		60 Hz ~ 1 kHz	9.6 μV	
		1 kHz ~ 10 kHz	9.6 μV	
		(10 ~ 100) mV		
		60 Hz	28 μV	
		60 Hz ~ 1 kHz	28 μV	
		1 kHz ~ 10 kHz	28 μV	
		(0.1 ~ 1) V		
		60 Hz	0.26 mV	
		60 Hz ~ 1 kHz	0.26 mV	
		1 kHz ~ 10 kHz	0.26 mV	
		(1 ~ 10) V		
		60 Hz	2.6 mV	
		60 Hz ~ 1 kHz	2.6 mV	
		1 kHz ~ 10 kHz	2.6 mV	
		(10 ~ 100) V		
		60 Hz	26 mV	
		60 Hz ~ 1 kHz	26 mV	
		1 kHz ~ 10 kHz	31 mV	
		(100 ~ 500) V		
		60 Hz	0.20 V	
		60 Hz ~ 1 kHz	0.20 V	
		(500 ~ 700) V		
		60 Hz	0.27 V	
		60 Hz ~ 1 kHz	0.27 V	
		(700 ~ 1 000) V		
		60 Hz	0.37 V	
		60 Hz ~ 1 kHz	0.37 V	

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, Current Amplifier, 25 Turn Coil, 50 Turn Coil / KCT-CI-40302
DC Current		(0 ~ 100) μ A	41 nA	
		(0.1 ~ 1) mA	0.19 μ A	
		(1 ~ 10) mA	1.6 μ A	
		(10 ~ 100) mA	16 μ A	
		(0.1 ~ 1) A	0.29 mA	
		(1 ~ 10) A	6.4 mA	
		(10 ~ 100) A	0.14 A	
		(100 ~ 500) A	0.62 A	
		(500 ~ 1 000) A	1.5 A	
		(1 000 ~ 1 500) A	2.1 A	
		(1 500 ~ 2 000) A	2.7 A	
		(2 000 ~ 2 500) A	3.4 A	
AC Current		60 Hz		
		(30 ~ 100) μ A	0.27 μ A	
		(0.1 ~ 1) mA	1.4 μ A	
		(1 ~ 10) mA	7.0 μ A	
		(10 ~ 100) mA	70 μ A	
		(0.1 ~ 1) A	0.70 mA	
		(1 ~ 10) A	9.3 mA	
		(10 ~ 100) A	0.19 A	
		(100 ~ 500) A	0.68 A	
		(500 ~ 1 000) A	1.6 A	
		(1 000 ~ 1 500) A	2.2 A	
		(1 500 ~ 2 000) A	2.9 A	
		(2 000 ~ 2 500) A	3.5 A	
		(2 500 ~ 3 000) A	4.1 A	
		(3 000 ~ 3 500) A	4.7 A	
		(3 500 ~ 4 000) A	5.3 A	
		(4 000 ~ 4 500) A	6.0 A	
		(4 500 ~ 5 000) A	6.7 A	
Resistance		(1 ~ 10) Ω	0.78 m Ω	
		(10 ~ 100) Ω	7.0 m Ω	
		(0.1 ~ 1) k Ω	70 m Ω	
		(1 ~ 10) k Ω	0.70 Ω	
		(10 ~ 100) k Ω	7.0 Ω	
		(0.1 ~ 1) M Ω	73 Ω	
		(1 ~ 10) M Ω	1.7 k Ω	
		(10 ~ 100) M Ω	61 k Ω	

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	(10 ~ 100) mV		Multimeter / KCT-CI-40303
AC Voltage		50 Hz	25 μ V	
		50 Hz ~ 1 kHz	23 μ V	
		(0.1 ~ 1) V		
		50 Hz	0.16 mV	
		50 Hz ~ 1 kHz	0.14 mV	
		(1 ~ 10) V		
		50 Hz	1.6 mV	
		50 Hz ~ 1 kHz	1.4 mV	
		(10 ~ 100) V		
		50 Hz	16 mV	
		50 Hz ~ 1 kHz	15 mV	
		(100 ~ 1 000) V		
		50 Hz	0.19 V	
		50 Hz ~ 1 kHz	0.19 V	
AC Current		50 Hz		
		(30 ~ 100) μ A	84 nA	
		(0.1 ~ 1) mA	0.61 μ A	
		(1 ~ 10) mA	6.1 μ A	
		(10 ~ 100) mA	60 μ A	
		(0.1 ~ 1) A	1.1 mA	
		(1 ~ 10) A	13 mA	
		50 Hz ~ 1 kHz		
		(30 ~ 100) μ A	84 nA	
	(0.1 ~ 1) mA	0.61 μ A		
	(1 ~ 10) mA	6.1 μ A		
	(10 ~ 100) mA	60 μ A		
	(0.1 ~ 1) A	1.1 mA		
	(1 ~ 10) A	13 mA		

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 current shunts Resistance	40305	60 Hz (0.1 ~ 1) mΩ (1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω	 3.2 μΩ 15 μΩ 74 μΩ 0.74 mΩ 7.4 mΩ 0.14 Ω 2.7 Ω	Multimeter, Meter Calibrator Current Amplifier / KCT-CI-40305
Power factor meters Power Factor	40310	(Lead, Lag) (P.F : 1) (P.F : 0.9) (P.F : 0.8) (P.F : 0.7) (P.F : 0.6) (P.F : 0.5) (P.F : 0.4) (P.F : 0.3) (P.F : 0.2) (P.F : 0.1)	 0.000 86 0.001 3 0.001 8 0.002 3 0.002 9 0.003 6 0.004 7 0.006 5 0.010 0.021	Meter Calibrator / KCT-CI-40310
AC power meters DC Voltage AC Voltage	40311	(0 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 500) V (500 ~ 1 000) V (0.1 ~ 1) V 60 Hz 60 Hz ~ 1 kHz 1 kHz ~ 10 kHz 10 kHz ~ 100 kHz (1 ~ 10) V 60 Hz 60 Hz ~ 1 kHz 1 kHz ~ 10 kHz 10 kHz ~ 100 kHz	 63 μV 0.64 mV 6.6 mV 63 mV 66 mV 0.26 mV 0.26 mV 0.26 mV 0.96 mV 2.6 mV 2.6 mV 2.6 mV 13 mV	Meter Calibrator / KCT-CI-40311

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			Meter Calibrator / KCT-CI-40311		
AC Voltage		(10 ~ 100) V				
		60 Hz	26 mV			
		60 Hz ~ 1 kHz	26 mV			
		1 kHz ~ 10 kHz	31 mV			
		(100 ~ 500) V				
		60 Hz	0.19 V			
		60 Hz ~ 1 kHz	0.19 V			
		(500 ~ 1 000) V				
		60 Hz	0.37 V			
		60 Hz ~ 1 kHz	0.37 V			
		DC Current		(0 ~ 1) mA	0.19 μA	
				(1 ~ 10) mA	1.6 μA	
(10 ~ 100) mA	16 μA					
(0.1 ~ 1) A	0.29 mA					
(1 ~ 5) A	3.5 mA					
(5 ~ 10) A	6.4 mA					
(10 ~ 20) A	24 mA					
AC Current				(0.1 ~ 1) mA		
		60 Hz	1.4 μA			
		60 Hz ~ 1 kHz	1.4 μA			
		1 kHz ~ 5 kHz	2.6 μA			
		5 kHz ~ 10 kHz	6.2 μA			
		(1 ~ 10) mA				
		60 Hz	7.0 μA			
		60 Hz ~ 1 kHz	7.0 μA			
		1 kHz ~ 5 kHz	12 μA			
		5 kHz ~ 10 kHz	27 μA			
		(10 ~ 100) mA				
		60 Hz	70 μA			
		60 Hz ~ 1 kHz	70 μA			
		1 kHz ~ 5 kHz	0.18 mA			
		5 kHz ~ 10 kHz	0.35 mA			
		(0.1 ~ 1) A				
		60 Hz	0.70 mA			
		60 Hz ~ 1 kHz	0.70 mA			
		1 kHz ~ 5 kHz	8.1 mA			
		5 kHz ~ 10 kHz	35 mA			

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			Meter Calibrator / KCT-CI-40311
AC Current		(1 ~ 5) A		
		60 Hz	5.8 mA	
		60 Hz ~ 100 Hz	5.8 mA	
		100 Hz ~ 1 kHz	8.1 mA	
		(5 ~ 10) A		
		60 Hz	9.3 mA	
		60 Hz ~ 100 Hz	9.3 mA	
		100 Hz ~ 1 kHz	14 mA	
		(10 ~ 20) A		
		60 Hz	34 mA	
		60 Hz ~ 100 Hz	34 mA	
		100 Hz ~ 1 kHz	41 mA	
AC Wattage		(Lead, Lag)		
120 V, 0.5 A, 60 Hz, (P.F : 1)		60 W	53 mW	
(P.F : 0.9)		54 W	72 mW	
(P.F : 0.8)		48 W	85 mW	
(P.F : 0.7)		42 W	95 mW	
(P.F : 0.6)		36 W	0.11 W	
(P.F : 0.5)		30 W	0.11 W	
(P.F : 0.4)		24 W	0.12 W	
(P.F : 0.3)		18 W	0.12 W	
(P.F : 0.2)		12 W	0.12 W	
(P.F : 0.1)		6 W	0.13 W	
120 V, 1 A, 60 Hz, (P.F : 1)		120 W	93 mW	
(P.F : 0.9)		108 W	0.14 W	
(P.F : 0.8)		96 W	0.17 W	
(P.F : 0.7)		84 W	0.19 W	
(P.F : 0.6)		72 W	0.21 W	
(P.F : 0.5)		60 W	0.22 W	
(P.F : 0.4)		48 W	0.23 W	
(P.F : 0.3)		36 W	0.24 W	
(P.F : 0.2)		24 W	0.24 W	
(P.F : 0.1)		12 W	0.25 W	

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			Meter Calibrator / KCT-CI-40311
AC Wattage		(Lead, Lag)		
120 V, 5 A, 60 Hz, (P.F : 1)		600 W	0.72 W	
(P.F : 0.9)		540 W	0.85 W	
(P.F : 0.8)		480 W	0.94 W	
(P.F : 0.7)		420 W	1.1 W	
(P.F : 0.6)		360 W	1.1 W	
(P.F : 0.5)		300 W	1.2 W	
(P.F : 0.4)		240 W	1.2 W	
(P.F : 0.3)		180 W	1.2 W	
(P.F : 0.2)		120 W	1.3 W	
(P.F : 0.1)		60 W	1.3 W	
120 V, 10 A, 60 Hz, (P.F : 1)		1 200 W	1.2 W	
(P.F : 0.9)		1 080 W	1.6 W	
(P.F : 0.8)		960 W	1.8 W	
(P.F : 0.7)		840 W	2.0 W	
(P.F : 0.6)		720 W	2.1 W	
(P.F : 0.5)		600 W	2.2 W	
(P.F : 0.4)		480 W	2.3 W	
(P.F : 0.3)		360 W	2.4 W	
(P.F : 0.2)		240 W	2.5 W	
(P.F : 0.1)		120 W	2.5 W	
120 V, 20 A, 60 Hz, (P.F : 1)		2 400 W	4.1 W	
(P.F : 0.9)		2 160 W	4.3 W	
(P.F : 0.8)		1 920 W	4.4 W	
(P.F : 0.7)		1 680 W	4.5 W	
(P.F : 0.6)		1 440 W	4.6 W	
(P.F : 0.5)		1 200 W	4.7 W	
(P.F : 0.4)		960 W	4.8 W	
(P.F : 0.3)		720 W	4.8 W	
(P.F : 0.2)		480 W	4.9 W	
(P.F : 0.1)		240 W	4.9 W	
240 V, 0.5 A, 60 Hz, (P.F : 1)		120 W	0.11 W	
(P.F : 0.9)		108 W	0.15 W	
(P.F : 0.8)		96 W	0.17 W	
(P.F : 0.7)		84 W	0.19 W	
(P.F : 0.6)		72 W	0.21 W	
(P.F : 0.5)		60 W	0.22 W	
(P.F : 0.4)		48 W	0.23 W	
(P.F : 0.3)		36 W	0.24 W	
(P.F : 0.2)		24 W	0.24 W	
(P.F : 0.1)		12 W	0.25 W	

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			Meter Calibrator / KCT-CI-40311
AC Wattage		(Lead, Lag)		
240 V, 1 A, 60 Hz, (P.F : 1)		240 W	0.18 W	
(P.F : 0.9)		216 W	0.27 W	
(P.F : 0.8)		192 W	0.33 W	
(P.F : 0.7)		168 W	0.37 W	
(P.F : 0.6)		144 W	0.41 W	
(P.F : 0.5)		120 W	0.44 W	
(P.F : 0.4)		96 W	0.46 W	
(P.F : 0.3)		72 W	0.47 W	
(P.F : 0.2)		48 W	0.48 W	
(P.F : 0.1)		24 W	0.49 W	
240 V, 5 A, 60 Hz, (P.F : 1)		1 200 W	1.5 W	
(P.F : 0.9)		1 080 W	1.7 W	
(P.F : 0.8)		960 W	1.9 W	
(P.F : 0.7)		840 W	2.1 W	
(P.F : 0.6)		720 W	2.2 W	
(P.F : 0.5)		600 W	2.3 W	
(P.F : 0.4)		480 W	2.3 W	
(P.F : 0.3)		360 W	2.4 W	
(P.F : 0.2)		240 W	2.4 W	
(P.F : 0.1)		120 W	2.5 W	
240 V, 10 A, 60 Hz, (P.F : 1)		2 400 W	2.4 W	
(P.F : 0.9)		2 160 W	3.0 W	
(P.F : 0.8)		1 920 W	3.5 W	
(P.F : 0.7)		1 680 W	3.9 W	
(P.F : 0.6)		1 440 W	4.2 W	
(P.F : 0.5)		1 200 W	4.4 W	
(P.F : 0.4)		960 W	4.6 W	
(P.F : 0.3)		720 W	4.7 W	
(P.F : 0.2)		480 W	4.8 W	
(P.F : 0.1)		240 W	4.9 W	

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			Meter Calibrator / KCT-CI-40311
AC Wattage		(Lead, Lag)		
240 V, 20 A, 60 Hz, (P.F : 1)		4 800 W	8.2 W	
(P.F : 0.9)		4 320 W	8.5 W	
(P.F : 0.8)		3 840 W	8.8 W	
(P.F : 0.7)		3 360 W	9.0 W	
(P.F : 0.6)		2 880 W	9.2 W	
(P.F : 0.5)		2 400 W	9.4 W	
(P.F : 0.4)		1 920 W	9.5 W	
(P.F : 0.3)		1 440 W	9.6 W	
(P.F : 0.2)		960 W	9.7 W	
(P.F : 0.1)		480 W	9.8 W	
Power Factor		(Lead, Lag)		
		(P.F : 1)	0.000 86	
		(P.F : 0.9)	0.001 3	
		(P.F : 0.8)	0.001 8	
		(P.F : 0.7)	0.002 3	
		(P.F : 0.6)	0.002 9	
		(P.F : 0.5)	0.003 6	
		(P.F : 0.4)	0.004 7	
		(P.F : 0.3)	0.006 5	
		(P.F : 0.2)	0.010	
		(P.F : 0.1)	0.021	

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 supplies	40312	60 Hz		Multimeter, Electronics load Current shunts, Frequency counter / KCT-CI-40312
AC Voltage		(0.1 ~ 1) V	0.14 mV	
		(1 ~ 10) V	1.4 mV	
		(10 ~ 100) V	15 mV	
		(100 ~ 200) V	84 mV	
		(200 ~ 300) V	0.11 V	
		(300 ~ 400) V	0.12 V	
		(400 ~ 500) V	0.13 V	
		(500 ~ 600) V	0.14 V	
		(600 ~ 700) V	0.15 V	
		(700 ~ 800) V	0.16 V	
		(800 ~ 900) V	0.17 V	
		(900 ~ 1 000) V	0.19 V	
AC Current		60 Hz		
		(0.1 ~ 1) A	1.4 mA	
		(1 ~ 2) A	2.6 mA	
		(2 ~ 3) A	4.3 mA	
		(3 ~ 4) A	5.5 mA	
		(4 ~ 5) A	6.7 mA	
		(5 ~ 6) A	8.0 mA	
		(6 ~ 7) A	9.3 mA	
		(7 ~ 8) A	11 mA	
		(8 ~ 9) A	12 mA	
		(9 ~ 10) A	14 mA	
Frequency		50 Hz	0.62 mHz	
		(50 ~ 100) Hz	6.2 mHz	
		(0.1 ~ 1) kHz	62 mHz	

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			High Voltage Meter, Decade Resistance / KCT-CI-40313
DC Voltage		(0 ~ 0.1) kV	3.2 V	
		(0.1 ~ 0.5) kV	5.4 V	
		(0.5 ~ 1) kV	8.2 V	
		(1 ~ 2) kV	14 V	
		(2 ~ 3) kV	20 V	
		(3 ~ 4) kV	26 V	
		(4 ~ 5) kV	32 V	
		(5 ~ 6) kV	38 V	
		(6 ~ 7) kV	43 V	
		(7 ~ 8) kV	49 V	
		(8 ~ 9) kV	55 V	
		(9 ~ 10) kV	61 V	
AC Voltage		60 Hz		
		(0.01 ~ 0.1) kV	3.2 V	
		(0.1 ~ 0.5) kV	5.4 V	
		(0.5 ~ 1) kV	8.2 V	
		(1 ~ 2) kV	14 V	
		(2 ~ 3) kV	20 V	
		(3 ~ 4) kV	26 V	
		(4 ~ 5) kV	32 V	
		(5 ~ 6) kV	38 V	
		(6 ~ 7) kV	43 V	
		(7 ~ 8) kV	49 V	
		(8 ~ 9) kV	55 V	
		(9 ~ 10) kV	61 V	
DC Cutoff Current		(0 ~ 0.5) mA	4.3 μA	
		(0.5 ~ 1) mA	7.1 μA	
		(1 ~ 2) mA	13 μA	
		(2 ~ 5) mA	31 μA	
		(5 ~ 10) mA	71 μA	
		(10 ~ 20) mA	0.13 mA	
		(20 ~ 50) mA	0.31 mA	
		(50 ~ 100) mA	0.71 mA	

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	60 Hz		High Voltage Meter, Decade Resistance / KCT-CI-40313
AC Cutoff Current		(0.1 ~ 0.5) mA	4.3 μ A	
		(0.5 ~ 1) mA	7.1 μ A	
		(1 ~ 2) mA	13 μ A	
		(2 ~ 5) mA	31 μ A	
		(5 ~ 10) mA	71 μ A	
		(10 ~ 20) mA	0.14 mA	
		(20 ~ 50) mA	0.31 mA	
		(50 ~ 100) mA	0.71 mA	
Insulation Voltage		(0 ~ 0.1) kV	3.2 V	
		(0.1 ~ 0.5) kV	5.4 V	
		(0.5 ~ 1) kV	8.2 V	
		(1 ~ 2) kV	14 V	
		(2 ~ 3) kV	20 V	
		(3 ~ 4) kV	26 V	
		(4 ~ 5) kV	32 V	
		(5 ~ 6) kV	38 V	
		(6 ~ 7) kV	43 V	
		(7 ~ 8) kV	49 V	
Insulation Resistance		(0.1 ~ 1) M Ω	0.63 k Ω	
		(1 ~ 10) M Ω	6.9 k Ω	
		(10 ~ 100) M Ω	70 k Ω	
		(0.1 ~ 1) G Ω	1.4 M Ω	
		(1 ~ 10) G Ω	14 M Ω	
		(10 ~ 100) G Ω	0.14 G Ω	
		(0.1 ~ 1) T Ω	1.8 G Ω	
Bonding Resistance		100 m Ω	1.2 m Ω	
		300 m Ω	3.5 m Ω	
		500 m Ω	6.0 m Ω	
Time		(0.1 ~ 1) s	3.2 ms	
		(1 ~ 10) s	8.2 ms	
		(10 ~ 100) s	61 ms	
		(100 ~ 1 000) s	0.59 s	

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.
Power recorders	40314			Meter Calibrator
AC Wattage		(Lead, Lag)		/ KCT-CI-40314
120 V, 0.5 A, 60 Hz, (P.F : 1)		60 W	53 mW	
(P.F : 0.9)		54 W	72 mW	
(P.F : 0.8)		48 W	85 mW	
(P.F : 0.7)		42 W	95 mW	
(P.F : 0.6)		36 W	0.11 W	
(P.F : 0.5)		30 W	0.11 W	
(P.F : 0.4)		24 W	0.12 W	
(P.F : 0.3)		18 W	0.12 W	
(P.F : 0.2)		12 W	0.12 W	
(P.F : 0.1)		6 W	0.13 W	
120 V, 1 A, 60 Hz, (P.F : 1)		120 W	93 mW	
(P.F : 0.9)		108 W	0.14 W	
(P.F : 0.8)		96 W	0.17 W	
(P.F : 0.7)		84 W	0.19 W	
(P.F : 0.6)		72 W	0.21 W	
(P.F : 0.5)		60 W	0.22 W	
(P.F : 0.4)		48 W	0.23 W	
(P.F : 0.3)		36 W	0.24 W	
(P.F : 0.2)		24 W	0.24 W	
(P.F : 0.1)		12 W	0.25 W	
120 V, 5 A, 60 Hz, (P.F : 1)		600 W	0.72 W	
(P.F : 0.9)		540 W	0.85 W	
(P.F : 0.8)		480 W	0.94 W	
(P.F : 0.7)		420 W	1.1 W	
(P.F : 0.6)		360 W	1.1 W	
(P.F : 0.5)		300 W	1.2 W	
(P.F : 0.4)		240 W	1.2 W	
(P.F : 0.3)		180 W	1.2 W	
(P.F : 0.2)		120 W	1.3 W	
(P.F : 0.1)		60 W	1.3 W	

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.
Power recorders	40314			Meter Calibrator
AC Wattage		(Lead, Lag)		/ KCT-CI-40314
120 V, 10 A, 60 Hz, (P.F : 1)		1 200 W	1.2 W	
(P.F : 0.9)		1 080 W	1.6 W	
(P.F : 0.8)		960 W	1.8 W	
(P.F : 0.7)		840 W	2.0 W	
(P.F : 0.6)		720 W	2.1 W	
(P.F : 0.5)		600 W	2.2 W	
(P.F : 0.4)		480 W	2.3 W	
(P.F : 0.3)		360 W	2.4 W	
(P.F : 0.2)		240 W	2.5 W	
(P.F : 0.1)		120 W	2.5 W	
120 V, 20 A, 60 Hz, (P.F : 1)		2 400 W	4.1 W	
(P.F : 0.9)		2 160 W	4.3 W	
(P.F : 0.8)		1 920 W	4.4 W	
(P.F : 0.7)		1 680 W	4.5 W	
(P.F : 0.6)		1 440 W	4.6 W	
(P.F : 0.5)		1 200 W	4.7 W	
(P.F : 0.4)		960 W	4.8 W	
(P.F : 0.3)		720 W	4.8 W	
(P.F : 0.2)		480 W	4.9 W	
(P.F : 0.1)		240 W	4.9 W	
240 V, 0.5 A, 60 Hz, (P.F : 1)		120 W	0.11 W	
(P.F : 0.9)		108 W	0.15 W	
(P.F : 0.8)		96 W	0.17 W	
(P.F : 0.7)		84 W	0.19 W	
(P.F : 0.6)		72 W	0.21 W	
(P.F : 0.5)		60 W	0.22 W	
(P.F : 0.4)		48 W	0.23 W	
(P.F : 0.3)		36 W	0.24 W	
(P.F : 0.2)		24 W	0.24 W	
(P.F : 0.1)		12 W	0.25 W	

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.
Power recorders	40314			Meter Calibrator
AC Wattage		(Lead, Lag)		/ KCT-CI-40314
240 V, 1 A, 60 Hz, (P.F : 1)		240 W	0.18 W	
(P.F : 0.9)		216 W	0.27 W	
(P.F : 0.8)		192 W	0.33 W	
(P.F : 0.7)		168 W	0.37 W	
(P.F : 0.6)		144 W	0.41 W	
(P.F : 0.5)		120 W	0.44 W	
(P.F : 0.4)		96 W	0.46 W	
(P.F : 0.3)		72 W	0.47 W	
(P.F : 0.2)		48 W	0.48 W	
(P.F : 0.1)		24 W	0.49 W	
240 V, 5 A, 60 Hz, (P.F : 1)		1 200 W	1.5 W	
(P.F : 0.9)		1 080 W	1.7 W	
(P.F : 0.8)		960 W	1.9 W	
(P.F : 0.7)		840 W	2.1 W	
(P.F : 0.6)		720 W	2.2 W	
(P.F : 0.5)		600 W	2.3 W	
(P.F : 0.4)		480 W	2.3 W	
(P.F : 0.3)		360 W	2.4 W	
(P.F : 0.2)		240 W	2.4 W	
(P.F : 0.1)		120 W	2.5 W	
240 V, 10 A, 60 Hz, (P.F : 1)		2 400 W	2.4 W	
(P.F : 0.9)		2 160 W	3.0 W	
(P.F : 0.8)		1 920 W	3.5 W	
(P.F : 0.7)		1 680 W	3.9 W	
(P.F : 0.6)		1 440 W	4.2 W	
(P.F : 0.5)		1 200 W	4.4 W	
(P.F : 0.4)		960 W	4.6 W	
(P.F : 0.3)		720 W	4.7 W	
(P.F : 0.2)		480 W	4.8 W	
(P.F : 0.1)		240 W	4.9 W	
240 V, 20 A, 60 Hz, (P.F : 1)		4 800 W	8.2 W	
(P.F : 0.9)		4 320 W	8.5 W	
(P.F : 0.8)		3 840 W	8.8 W	
(P.F : 0.7)		3 360 W	9.0 W	
(P.F : 0.6)		2 880 W	9.2 W	
(P.F : 0.5)		2 400 W	9.4 W	
(P.F : 0.4)		1 920 W	9.5 W	
(P.F : 0.3)		1 440 W	9.6 W	
(P.F : 0.2)		960 W	9.7 W	
(P.F : 0.1)		480 W	9.8 W	

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 voltmeters AC Voltage	40318	(1 ~ 10) mV 60 Hz	9.6 μ V	Meter Calibrator / KCT-CI-40318
		60 Hz ~ 1 kHz	9.6 μ V	
		1 kHz ~ 10 kHz	9.6 μ V	
		10 kHz ~ 100 kHz	55 μ V	
		(10 ~ 100) mV 60 Hz	27 μ V	
		60 Hz ~ 1 kHz	27 μ V	
		1 kHz ~ 10 kHz	27 μ V	
		10 kHz ~ 100 kHz	0.14 mV	
		(0.1 ~ 1) V 60 Hz	0.25 mV	
		60 Hz ~ 1 kHz	0.25 mV	
		1 kHz ~ 10 kHz	0.25 mV	
		10 kHz ~ 100 kHz	0.96 mV	
		(1 ~ 10) V 60 Hz	2.5 mV	
		60 Hz ~ 1 kHz	2.5 mV	
		1 kHz ~ 10 kHz	2.5 mV	
		10 kHz ~ 100 kHz	13 mV	
		(10 ~ 100) V 60 Hz	25 mV	
		60 Hz ~ 1 kHz	25 mV	
		1 kHz ~ 10 kHz	31 mV	
		(100 ~ 500) V 60 Hz	0.19 V	
		60 Hz ~ 1 kHz	0.19 V	
		(500 ~ 700) V 60 Hz	0.26 V	
		60 Hz ~ 1 kHz	0.26 V	
		(700 ~ 1 000) V 60 Hz	0.37 V	
60 Hz ~ 1 kHz	0.37 V			
1 kHz ~ 10 kHz	0.37 V			

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.
Line frequency meters Frequency	40410	(1 ~ 10) Hz (10 ~ 100) Hz (0.1 ~ 1) kHz	0.61 mHz 6.1 mHz 62 mHz	Meter Calibrator, Function Generator / KCT-CI-40410
Function generators Frequency	40411	(1 ~ 10) Hz (10 ~ 100) Hz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz (10 ~ 100) MHz	21 μHz 0.21 mHz 2.1 mHz 21 mHz 0.21 Hz 2.1 Hz 21 Hz 0.21 kHz	Frequency counter, Multimeter, Oscilloscope / KCT-CI-40411
Function Gain & Linearity (Sine, Square, Ramp)		1 kHz (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V	23 μV 0.14 mV 1.4 mV	
Output Level		1 kHz (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 2) V (2 ~ 3) V (3 ~ 4) V (4 ~ 5) V (5 ~ 6) V (6 ~ 7) V (7 ~ 8) V (8 ~ 9) V (9 ~ 10) V	23 μV 0.14 mV 0.73 mV 0.78 mV 0.84 mV 0.90 mV 0.97 mV 1.1 mV 1.2 mV 1.2 mV 1.4 mV	
Frequency Response		(0.1 ~ 1) V 1 kHz 1 kHz ~ 100 kHz	0.63 mV 1.1 mV	
DC Offset		(±) (0 ~ 100) mV (0.1 ~ 1) V (1 ~ 5) V (5 ~ 10) V	6.3 μV 62 μV 71 μV 0.62 mV	
Rise Fall Time		(1 ~ 10) ns (10 ~ 100) ns (0.1 ~ 1) μs (1 ~ 10) μs	12 ps 0.12 ns 1.2 ns 12 ns	

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 / KCT-CI-40416
DC Voltage		(0 ~ 10) mV	6.3 μ V	
		(10 ~ 100) mV	62 μ V	
		(0.1 ~ 1) V	0.61 mV	
		(1 ~ 10) V	6.2 mV	
		(10 ~ 300) V	62 mV	
AC Voltage		1 kHz		
		(1 ~ 10) mV	12 μ V	
		(10 ~ 100) mV	67 μ V	
		(0.1 ~ 1) V	0.66 mV	
		(1 ~ 10) V	6.6 mV	
		(10 ~ 100) V	66 mV	
		(100 ~ 150) V	71 mV	
		(150 ~ 200) V	77 mV	
		(200 ~ 300) V	93 mV	
DC Current		(0 ~ 100) μ A	74 nA	
		(0.1 ~ 1) mA	0.64 μ A	
		(1 ~ 10) mA	6.3 μ A	
		(10 ~ 20) mA	6.7 μ A	
		(20 ~ 30) mA	7.2 μ A	
		(30 ~ 40) mA	9.9 μ A	
		(40 ~ 50) mA	11 μ A	
AC Current		1 kHz		
		(30 ~ 100) μ A	0.27 μ A	
		(0.1 ~ 1) mA	1.5 μ A	
		(1 ~ 10) mA	9.3 μ A	
		(10 ~ 20) mA	14 μ A	
		(20 ~ 30) mA	18 μ A	
		(30 ~ 40) mA	43 μ A	
		(40 ~ 50) mA	47 μ A	

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.
Electronic AC/DC loads	40417			Multimeter, Current shunts, DC Power Supply / KCT-CI-40417
DC Voltage		(0 ~ 1) V	63 μ V	
		(1 ~ 2) V	68 μ V	
		(2 ~ 3) V	74 μ V	
		(3 ~ 4) V	0.11 mV	
		(4 ~ 5) V	0.12 mV	
		(5 ~ 6) V	0.13 mV	
		(6 ~ 7) V	0.14 mV	
		(7 ~ 8) V	0.15 mV	
		(8 ~ 9) V	0.17 mV	
		(9 ~ 10) V	0.64 mV	
		(10 ~ 30) V	0.77 mV	
		(30 ~ 80) V	2.0 mV	
		(80 ~ 90) V	2.2 mV	
		(90 ~ 100) V	6.6 mV	
		(100 ~ 600) V	16 mV	
		(600 ~ 900) V	22 mV	
		(900 ~ 1 000) V	66 mV	
DC Current		(0 ~ 100) mA	14 μ A	
		(0.1 ~ 1) A	0.14 mA	
		(1 ~ 2) A	0.25 mA	
		(2 ~ 3) A	0.69 mA	
		(3 ~ 4) A	0.91 mA	
		(4 ~ 5) A	1.2 mA	
		(5 ~ 6) A	1.4 mA	
		(6 ~ 7) A	1.6 mA	
		(7 ~ 8) A	1.8 mA	
		(8 ~ 9) A	2.1 mA	
		(9 ~ 10) A	2.4 mA	
		(10 ~ 20) A	4.5 mA	
		(20 ~ 30) A	7.1 mA	
		(30 ~ 40) A	9.3 mA	
		(40 ~ 50) A	12 mA	
		(50 ~ 60) A	14 mA	
	(60 ~ 70) A	17 mA		
(70 ~ 80) A	19 mA			
(80 ~ 90) A	21 mA			
(90 ~ 100) A	24 mA			

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.
Electronic AC/DC loads	40417	(0.1 ~ 1) V		Multimeter, Current shunts, DC Power Supply / KCT-CI-40417
		60 Hz	0.66 mV	
DC Voltage		60 Hz ~ 1 kHz	0.66 mV	
		(1 ~ 10) V		
		60 Hz	6.6 mV	
		60 Hz ~ 1 kHz	6.6 mV	
		(10 ~ 100) V		
		60 Hz	66 mV	
		60 Hz ~ 1 kHz	66 mV	
		(100 ~ 1 000) V		
		60 Hz	0.71 V	
		60 Hz ~ 1 kHz	0.71 V	
AC Current		(10 ~ 100) mA		
		60 Hz	0.14 mA	
		60 Hz ~ 1 kHz	0.14 mA	
		(0.1 ~ 1) A		
		60 Hz	1.3 mA	
		60 Hz ~ 1 kHz	1.3 mA	
		(1 ~ 3) A		
		60 Hz	4.3 mA	
		60 Hz ~ 1 kHz	4.3 mA	
		(3 ~ 5) A		
		60 Hz	6.8 mA	
		60 Hz ~ 1 kHz	6.7 mA	
		(5 ~ 7) A		
		60 Hz	9.3 mA	
		60 Hz ~ 1 kHz	9.3 mA	
		(7 ~ 10) A		
		60 Hz	15 mA	
		60 Hz ~ 1 kHz	15 mA	

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	DC Voltage	(0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 2) V (2 ~ 3) V (3 ~ 4) V (4 ~ 5) V (5 ~ 6) V (6 ~ 7) V (7 ~ 8) V (8 ~ 9) V (9 ~ 10) V (10 ~ 100) V (100 ~ 500) V (500 ~ 700) V (700 ~ 1 000) V	1.5 μV 3.6 μV 16 μV 29 μV 43 μV 80 μV 94 μV 0.11 mV 0.13 mV 0.14 mV 0.15 mV 0.17 mV 2.3 mV 13 mV 17 mV 23 mV	Meter Calibrator, Standard Resistor Set / KCT-CI-40419
		AC Voltage	(1 ~ 10) mV 60 Hz 60 Hz ~ 1 kHz 1 kHz ~ 10 kHz 10 kHz ~ 100 kHz (10 ~ 100) mV 60 Hz 60 Hz ~ 1 kHz 1 kHz ~ 10 kHz 10 kHz ~ 100 kHz (0.1 ~ 1) V 60 Hz 60 Hz ~ 1 kHz 1 kHz ~ 10 kHz 10 kHz ~ 100 kHz (1 ~ 10) V 60 Hz 60 Hz ~ 1 kHz 1 kHz ~ 10 kHz 10 kHz ~ 100 kHz (10 ~ 100) V 60 Hz 60 Hz ~ 1 kHz 1 kHz ~ 10 kHz	9.6 μV 9.6 μV 9.6 μV 55 μV 27 μV 27 μV 27 μV 0.14 mV 0.25 mV 0.25 mV 0.25 mV 0.96 mV 2.5 mV 2.5 mV 2.5 mV 13 mV 25 mV 25 mV 31 mV	

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, Standard Resistor Set / KCT-CI-40419		
DC Voltage		(100 ~ 500) V				
		60 Hz	0.19 V			
		60 Hz ~ 1 kHz	0.19 V			
		(500 ~ 700) V				
		60 Hz	0.26 V			
		60 Hz ~ 1 kHz	0.26 V			
		(700 ~ 1 000) V				
		60 Hz	0.37 V			
		60 Hz ~ 1 kHz	0.37 V			
		1 kHz ~ 10 kHz	0.37 V			
		DC Current		(0 ~ 100) μ A	41 nA	
				(0.1 ~ 1) mA	0.18 μ A	
(1 ~ 10) mA	1.5 μ A					
(10 ~ 100) mA	15 μ A					
(0.1 ~ 1) A	0.28 mA					
(1 ~ 2) A	0.93 mA					
(2 ~ 3) A	1.4 mA					
(3 ~ 4) A	2.9 mA					
(4 ~ 5) A	3.5 mA					
(5 ~ 6) A	4.1 mA					
(6 ~ 7) A	4.7 mA					
(7 ~ 8) A	5.2 mA					
(8 ~ 9) A	5.8 mA					
(9 ~ 10) A	6.4 mA					
AC Current				(30 ~ 100) μ A		
		60 Hz	0.27 μ A			
		60 Hz ~ 1 kHz	0.27 μ A			
		1 kHz ~ 5 kHz	0.53 μ A			
		5 kHz ~ 10 kHz	1.2 μ A			
		(0.1 ~ 1) mA				
		60 Hz	1.4 μ A			
		60 Hz ~ 1 kHz	1.4 μ A			
		1 kHz ~ 5 kHz	2.6 μ A			
		5 kHz ~ 10 kHz	6.2 μ A			
		(1 ~ 10) mA				
		60 Hz	7.0 μ A			
		60 Hz ~ 1 kHz	7.0 μ A			
		1 kHz ~ 5 kHz	12 μ A			
		5 kHz ~ 10 kHz	27 μ A			

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/Multimeters	40419			Meter Calibrator, Standard Resistor Set / KCT-CI-40419
AC Current		(10 ~ 100) mA		
		60 Hz	70 μA	
		60 Hz ~ 1 kHz	70 μA	
		1 kHz ~ 5 kHz	0.18 mA	
		5 kHz ~ 10 kHz	0.35 mA	
		(0.1 ~ 1) A		
		60 Hz	0.70 mA	
		60 Hz ~ 1 kHz	0.70 mA	
		1 kHz ~ 5 kHz	8.1 mA	
		5 kHz ~ 10 kHz	35 mA	
		(1 ~ 2) A		
		60 Hz	1.6 mA	
		60 Hz ~ 1 kHz	1.6 mA	
		(2 ~ 5) A		
		60 Hz	5.8 mA	
		60 Hz ~ 100 Hz	5.8 mA	
		100 Hz ~ 1 kHz	8.1 mA	
		(5 ~ 10) A		
		60 Hz	9.3 mA	
		60 Hz ~ 100 Hz	9.3 mA	
		100 Hz ~ 1 kHz	14 mA	
Resistance		1 Ω	30 μΩ	
		10 Ω	0.13 mΩ	
		100 Ω	1.2 mΩ	
		1 kΩ	12 mΩ	
		10 kΩ	0.12 Ω	
		100 kΩ	1.3 Ω	
		1 MΩ	19 Ω	
		10 MΩ	0.26 kΩ	
		100 MΩ	2.7 kΩ	

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	AC Voltage	1 kHz		Meter Calibrator, Multimeter Frequency counter / KCT-CI-40421
		(1 ~ 6) mV	54 μV		
		(6 ~ 12) mV	61 μV		
		(12 ~ 30) mV	82 μV		
		(30 ~ 60) mV	0.12 mV		
		(60 ~ 120) mV	0.21 mV		
		(120 ~ 300) mV	0.41 mV		
		(300 ~ 600) mV	0.75 mV		
		(0.6 ~ 1.2) V	1.6 mV		
		(1.2 ~ 3) V	3.6 mV		
		(3 ~ 6) V	7.1 mV		
		(6 ~ 12) V	16 mV		
		(12 ~ 30) V	36 mV		
		(30 ~ 60) V	70 mV		
		Time	(1 ~ 5) ns	0.62 ps	
		(5 ~ 50) ns	6.2 ps		
		(50 ~ 500) ns	62 ps		
		(0.5 ~ 5) μs	0.62 ns		
		(5 ~ 50) μs	6.2 ns		
		(50 ~ 500) μs	62 ns		
		(0.5 ~ 5) ms	0.62 μs		
		(5 ~ 50) ms	6.3 μs		
		(50 ~ 500) ms	63 μs		
		(0.5 ~ 5) s	0.64 ms		
		Bandwidth	(100 ~ 600) mV		
		50 kHz	15 mV		
		50 kHz ~ 100 MHz	28 mV		
		100 MHz ~ 300 MHz	32 mV		
		300 MHz ~ 600 MHz	46 mV		
		600 MHz ~ 1 000 MHz	53 mV		
		CAL Output Amplitude	1 kHz		
		(10 ~ 100) mV	35 μV		
		(0.1 ~ 0.5) V	0.20 mV		
		(0.5 ~ 1) V	0.22 mV		
		(1 ~ 5) V	1.6 mV		
		(5 ~ 10) V	1.8 mV		
		CAL Output Amplitude	100 Hz	6.2 mHz	
		(0.1 ~ 1) kHz	62 mHz		
		(1 ~ 10) kHz	0.62 Hz		

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.
Volt/Current recorders AC Voltage	40424	10 mV	1.6 μ V	Meter Calibrator / KCT-CI-40424
		(10 ~ 20) mV	1.8 μ V	
		(20 ~ 50) mV	6.6 μ V	
		(50 ~ 100) mV	7.1 μ V	
		(100 ~ 200) mV	8.5 μ V	
		(200 ~ 500) mV	62 μ V	
		(0.5 ~ 1) V	63 μ V	
		(1 ~ 2) V	68 μ V	
		(2 ~ 5) V	0.62 mV	
		(5 ~ 10) V	0.64 mV	
		(10 ~ 20) V	0.69 mV	
		(20 ~ 50) V	6.3 mV	
		(50 ~ 100) V	6.6 mV	

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.
Relay test sets	40425			Multimeter, Current shunts, Time Tester / KCT-CI-40425
DC Voltage		(0 ~ 1) V	62 μ V	
		(1 ~ 2) V	64 μ V	
		(2 ~ 3) V	67 μ V	
		(3 ~ 4) V	68 μ V	
		(4 ~ 5) V	71 μ V	
		(5 ~ 6) V	73 μ V	
		(6 ~ 7) V	77 μ V	
		(7 ~ 8) V	79 μ V	
		(8 ~ 9) V	84 μ V	
		(9 ~ 10) V	0.62 mV	
		(10 ~ 30) V	0.83 mV	
		(30 ~ 80) V	0.97 mV	
		(80 ~ 90) V	1.1 mV	
		(90 ~ 100) V	6.2 mV	
		(100 ~ 600) V	11 mV	
		(600 ~ 900) V	12 mV	
		(900 ~ 1 000) V	62 mV	
DC Current		(0 ~ 100) mA	14 μ A	
		(0.1 ~ 1) A	0.14 mA	
		(1 ~ 2) A	0.25 mA	
		(2 ~ 3) A	0.69 mA	
		(3 ~ 4) A	0.91 mA	
		(4 ~ 5) A	1.2 mA	
		(5 ~ 6) A	1.4 mA	
		(6 ~ 7) A	1.6 mA	
		(7 ~ 8) A	1.8 mA	
		(8 ~ 9) A	2.1 mA	
		(9 ~ 10) A	2.4 mA	
		(10 ~ 20) A	4.5 mA	
		(20 ~ 30) A	7.1 mA	
		(30 ~ 40) A	9.3 mA	
		(40 ~ 50) A	12 mA	
	(50 ~ 60) A	14 mA		
(60 ~ 70) A	17 mA			
(70 ~ 80) A	19 mA			
(80 ~ 90) A	21 mA			
(90 ~ 100) A	24 mA			

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.
Relay test sets	40425	1 kHz		Multimeter, Current shunts, Time Tester / KCT-CI-40425
AC Voltage		(0.1 ~ 1) V	0.14 mV	
		(1 ~ 2) V	0.64 mV	
		(2 ~ 3) V	0.78 mV	
		(3 ~ 4) V	0.84 mV	
		(4 ~ 5) V	0.90 mV	
		(5 ~ 6) V	0.97 mV	
		(6 ~ 7) V	1.1 mV	
		(7 ~ 8) V	1.2 mV	
		(8 ~ 9) V	1.2 mV	
		(9 ~ 10) V	1.4 mV	
		(10 ~ 20) V	7.3 mV	
		(20 ~ 30) V	8.6 mV	
		(30 ~ 50) V	9.7 mV	
		(50 ~ 60) V	11 mV	
		(60 ~ 80) V	12 mV	
		(80 ~ 90) V	13 mV	
		(90 ~ 100) V	15 mV	
		(100 ~ 200) V	84 mV	
		(200 ~ 400) V	0.12 V	
		(400 ~ 500) V	0.13 V	
		(500 ~ 600) V	0.14 V	
		(600 ~ 700) V	0.15 V	
		(700 ~ 800) V	0.16 V	
		(800 ~ 900) V	0.17 V	
		(900 ~ 1 000) V	0.19 V	
		1 kHz		
AC Current		(10 ~ 100) mA	0.12 mA	
		(0.1 ~ 1) A	1.3 mA	
		(1 ~ 2) A	2.6 mA	
		(2 ~ 3) A	4.2 mA	
		(3 ~ 4) A	5.5 mA	
		(4 ~ 5) A	6.7 mA	
		(5 ~ 6) A	8.0 mA	
		(6 ~ 7) A	9.3 mA	
		(7 ~ 8) A	11 mA	
		(8 ~ 9) A	12 mA	
		(9 ~ 10) A	14 mA	

501. Contact thermometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Temperature indicators/ recorders/controllers, temperature calibrators Exclude sensors Include sensors	50102	(-39 ~ 300) °C (300 ~ 1 100) °C (-39 ~ 300) °C (300 ~ 1 100) °C	0.11 °C 0.48 °C 0.060 °C 1.6 °C	SPRT, Noble metal thermocouple, Calibrator / KCT-CI-50102
Glass thermometers: liquid-in-glass, Beckmann Glass thermometers	50103	(-39 ~ 300) °C	0.040 °C	SPRT, / KCT-CI-50103
Resistance thermometers: SPRT, IPRT, thermistors,etc. Thermistors	50104	(-39 ~ 300) °C	0.054 °C	SPRT, / KCT-CI-50104
Thermal expansion thermometers: bimetal, gas or liquid type	50105	(-39 ~ 100) °C (100 ~ 200) °C (200 ~ 300) °C	0.27 °C 0.54 °C 1.4 °C	SPRT, / KCT-CI-50105
Thermomecoules: Base metal thermomecoules	50106	(-39 ~ 300) °C (300 ~ 1 100) °C	0.26 °C 1.2 °C	SPRT, Noble metal thermocouple, / KCT-CI-50106

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. Polymer thinfilm hygrometers (Temperature) (Relative humidity) Hair hygrometers (Temperature) (Relative humidity)	50302	(-40 ~ 99) °C (20 ~ 40) % R.H. (40 ~ 60) % R.H. (60 ~ 80) % R.H. (80 ~ 95) % R.H. (-20 ~ 50) °C (20 ~ 40) % R.H. (40 ~ 60) % R.H. (60 ~ 80) % R.H. (80 ~ 95) % R.H.	0.7 °C 1.7 % R.H. 2.1 % R.H. 2.5 % R.H. 2.8 % R.H. 0.8 °C 1.8 % R.H. 2.1 % R.H. 2.5 % R.H. 2.8 % R.H.	Dew point instruments / KCT-CI-50302
Temperature humidity recorders ; Hygrothermograph, etc. (Temperature) (Relative humidity)	50304	(-20 ~ 50) °C (20 ~ 40) % R.H. (40 ~ 60) % R.H. (60 ~ 80) % R.H. (80 ~ 95) % R.H.	0.8 °C 1.8 % R.H. 2.1 % R.H. 2.5 % R.H. 2.8 % R.H.	Dew point instruments / KCT-CI-50304

503. Humidity

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Humidity generators ; two-pressure, two-temperature, flow mixing humidity generator, constant temperature Constant Temperature and humidity chamber (Temperature) (Relative humidity)	50306	(-40 ~ 180) °C (20 ~ 40) % R.H. (40 ~ 60) % R.H. (60 ~ 95) % R.H.	0.69 °C 1.8 % R.H. 1.9 % R.H. 2.6 % R.H.	Dew point instruments / KCT-CI-50306