

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

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CALIBRATION

Valid to : Dec. 3, 2025

Accreditation No. : KC05-193 (1/22)

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			10412	Straight edges	N	20112	Platform scale balances	Y
10201	Balls	N	105. Complex geometry			20113	Spring scale balances	Y
10206	Dial/Cylinder gauge testers	N	10502	Bench centers	N	20114	Trip balances	Y
10209	End bars	N	10503	Contact coordinate measuring machines	Y	20116	Weights	Y
10210	Extensometer, linear displacement transducers	Y				202. Force		
10211	Filler gauges	Y	10504	Non-contact coordinate measuring machines	Y	20203	Tension/Compression testing machines	Y
10213	Gap gauges	N	10511	Measuring microscopes, Profile projectors	Y	20204	Push-pull gauges	N
10214	Gauge blocks, by comparison	N				204. Pressure		
10216	Height gauges/ measuring machines	Y	10512	Micro measuring microscopes	Y	20404	Hydraulic pressure ballances	N
10220	Standard measuring machines	Y	10514	Taper plug gauges	N	20406	Absolute pressure gauges	Y
10223	Electronic micrometers	N				20407	Blood pressure gauges	N
10224	Height micrometers, Riser blocks	N	10517	Stylus type roughness testers	Y	20408	Compound pressure gauges	Y
10228	Cylindrical plug/pin gauges, Thread measuring wire gauges	N				20409	Differential pressure gauges	Y
10229	Radius gauges	N	10525	Thread plug gauges	N	20411	Gauge pressure gauges	Y
10230	Cylindrical ring gauges	N	10526	Taper thread plug gauges	N	20412	Pressure transducers/ transmitters	Y
10232	Step gauges	N	10527	Thread ring gauges	N			
10233	Taper thickness gauges	N	10529	V-blocks, Box block	N	20413	Dial type vacuum gauges	Y
10234	Ultrasonic thickness gauges	Y	106. Various dimensional			210. Hardness		
10235	Ultrasonic/coating thickness specimens	N	10601	Inside/Outside/Gear tooth calipers, Caliper gauges	Y	21001	Brinell Hardness Testers	Y
10236	Coating thickness testers	Y	10603	Cylinder/Bore gauges	Y	21002	Rockwell Hardness Testers	Y
103. Angle			10604	Depth gauges, Depth micrometers	Y	21003	Shore Hardness Testers	Y
10238	Squareness testers, right angle testers	N				21004	Vickers Hardness Testers	Y
10304	Bevel protractors	Y	10605	Dial/Digital gauges	Y	21005	Durometer hardness testers	N
10311	Plate/square/electric levels	N	10609			301. Time/frequency		
10318	Squareness testers, right angle testers	N	10610	Micro indicators, Test indicators	Y	30104	Frequency meters/counters	Y
10319	Cylindrical squares	N	10611	Micrometer heads	Y	30106	Time interval meters/ Stop watches/Timers	N
10320	Precision squares	N	10612	3-point micrometers	Y			
104. Form			10613	Inside micrometers	Y	30202	Contact type tachometers	Y
10401	Form testers	Y	10617	Outside micrometers	Y	30203	Photo tachometers/ stroboscopes	Y
10404	Optical flats	N	10620	Standard sieves	N	401. DC volatage & current		
10405	Optical parallels	N	201. Mass			40101	DC ammmeters	Y
10407	Precision surface plates	Y	20102	Auto-hopper scale balances	Y	40103	DC voltage/current calibrators	N
10409	Roundness measurement instruments	Y	20105	Counter beam balances	Y			
			20107	Dial swing scale balances	Y	40104	Electrical temperature calibrators	N
			20108	Direct reading balances	Y			
			20109	Electric balances	Y			

Accreditation No. : KC05-193 (2/22)

Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site	Field Code	Item of Calibration	on-site
40105	DC current shunts	N	50104	Resistance thermometers; SPRT, IPRT, thermistors, etc.	N			
40108	DC power supplies	Y						
40112	DC voltmeters	Y	50105	Thermal expansion thermometers: bimetal, gas or liquid type	N			
402. Resistance, Capacitance and Inductance								
40205	Earth testers	Y	50106	Thermomecoules: noble metal, base metal, pure metal, special type, etc.	N			
40210	Insulation testers	Y						
40213	Resistance bridges & Similar instruments	Y						
			50107	Temperature transducers	N			
40214	Resistance meters	Y	502. Non contact thermometry					
40215	Resistors	N	50204	Standard radiation thermometers	N			
403. AC voltage, current & power			50206	Blackbody furnaces	N			
40301	AC ammeters	Y	503. Humidity					
40302	Clamp ammeters/voltmeters	Y	50302	Relative humidity hygrometers: polimer thinfilm, hair, etc.	N			
40303	AC voltage/current calibrators	N						
40310	Power factor meters	Y	50303	Psychrometers; Assmann ventilated, PRT type, etc.	N			
40311	AC power meters	Y						
40312	AC power supplies	Y	50304	Temperature humidity recorders: Hygrothermograph, etc	N			
40313	Puncture/safety testers	Y						
40314	Power recorders	Y	50306	Humidity generators: two-pressure, two-temperature, flow mixing humidity gererator, constant temperature and humidity chamber, etc.	Y			
40318	AC voltmeters	Y						
404. Other DC & LF Measurements								
40416	Leakage current testers	Y						
40417	Electronic AC/DC loads	Y						
40419	Analogue/digital multimeters	Y						
40421	Oscilloscopes	Y						
40424	Volt/Current recorders	Y						
40425	Relay test sets	Y						
501. Contact thermometry								
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						

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.
Balls	10201	(0 ~ 100) mm	$\sqrt{0.40^2+0.005^2} \times I_0^2 \mu\text{m}$	Standard measuring machines/ C&M-CI-0157
Dial/Cylinder gauge testers	10206	(0 ~ 100) mm	$\sqrt{0.19^2+0.007^2} \times I_0^2 \mu\text{m}$	Gauge Blocks/KML-CAL-L15
End bars	10209	(0 ~ 500) mm (500 ~ 1 000) mm (1 000 ~ 1 800) mm	$\sqrt{0.98^2+0.003^2} \times I_0^2 \mu\text{m}$ $\sqrt{2.0^2+0.003^2} \times I_0^2 \mu\text{m}$ $\sqrt{2.6^2+0.003^2} \times I_0^2 \mu\text{m}$	Gauge Blocks/C&M-CI-0114
Extensometers, linear displacement transducers	10210	(0 ~ 500) mm	$\sqrt{1.4^2+0.009^2} \times I_0^2 \mu\text{m}$	Gauge blocks/KML-CAL-L21
Filler gauges	10211	(0.01 ~ 10) mm	1.3 μm	Digital Gauge/KML-CAL-L23
Gap gauges	10213	(1 ~ 200) mm	$\sqrt{4.0^2+0.001^2} \times I_0^2 \mu\text{m}$	Height micrometer/KML-CAL-L24
Gauge blocks, by comparison	10214	(0.5 ~ 100) mm	$\sqrt{81^2+1.2^2} \times I_0^2 \text{nm}$	Gauge Blocks/KML-CAL-L01
Height gauges/measuring machines	10216	(0 ~ 1 000) mm (1 000 ~ 1 500) mm	$\sqrt{2.1^2+0.003^2} \times I_0^2 \mu\text{m}$ $\sqrt{9.2^2+0.003^2} \times I_0^2 \mu\text{m}$	Gauge Blocks/C&M-CI-0116
Standard measuring machines	10220	(0 ~ 500) mm (500 ~ 1 000) mm (1 000 ~ 2 000) mm	$\sqrt{0.38^2+0.003^2} \times I_0^2 \mu\text{m}$ $\sqrt{1.0^2+0.003^2} \times I_0^2 \mu\text{m}$ $\sqrt{2.3^2+0.003^2} \times I_0^2 \mu\text{m}$	Gauge blocks/C&M-CI-0117
Electronic micrometers	10223	(0 ~ 2) mm	0.24 μm	Gauge Blocks/KML-CAL-L16
Height micrometers, riser blocks block head	10224	(0 ~ 610) mm (0 ~ 30) mm	$\sqrt{2.6^2+0.001^2} \times I_0^2 \mu\text{m}$ 2.6 μm	Gauge Blocks/KML-CAL-L17
Cylindrical plug/pin gauges, Thread measuring wire gauges Cylindrical plug/pin gauges Thread measuring wire gauges	10228	(0 ~ 200) mm (0 ~ 5.0) mm	$\sqrt{0.42^2+0.004^2} \times I_0^2 \mu\text{m}$ 0.41 μm	Standard measuring machines, Gauge blocks/C&M-CI-0126 Standard measuring machines, Gauge blocks/C&M-CI-0151
Radius gauges	10229	(0.1 ~ 50) mm	2.0 μm	Non-contact coordinate measuring machine/KML-CAL-L25
Cylindrical ring gauges	10230	(2 ~ 250) mm	$\sqrt{0.42^2+0.004^2} \times I_0^2 \mu\text{m}$	Standard measuring machines, Gauge blocks/C&M-CI-0127
Step gauges	10232	(0 ~ 1 050) mm	$\sqrt{1.1^2+0.003^2} \times I_0^2 \mu\text{m}$	Gauge blocks//C&M-CI-0121
Taper thickness gauges	10233	(1 ~ 60) mm	6 μm	Non-contact coordinate measuring machine/KML-CAL-L26
Ultrasonic thickness gauges	10234	(0 ~ 500) mm	$\sqrt{6.0^2+0.007^2} \times I_0^2 \mu\text{m}$	thickness specimens/KML-CAL-L20
Ultrasonic/coating thickness specimens coating thickness specimens Ultrasonic thickness specimens	10235	(10 ~ 500) μm (0.5 ~ 2) mm (0.5 ~ 500) mm	0.42 μm 1.2 μm $\sqrt{1.1^2+0.002^2} \times I_0^2 \mu\text{m}$	Electronic micrometer, Gauge Blocks/ KML-CAL-L27 KML-CAL-L28
Coating thickness testers	10236	(0 ~ 0.5) mm (0.5 ~ 1.5) mm	0.8 μm 1.5 μm	thickness specimens/ KML-CAL-L19

Note: In the Measurement uncertainty expressed by the formula, the unit of I_0 is mm

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	(0 ~ 90) °	0.72 ′	Angle gauge blocks/ C&M-CI-0158

103. Angle

Measured Quantity Instrument or Gauge	Field code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Plate/square/electric levels Accuracy Squareness Floor plan of base	10311	± 4 mm/m (0 ~ 300) mm (0 ~ 300) mm	3.3 μ m/m 8.4 μ m/m 1.1 μ m	level comparators Squareness testers Electronic micrometers/ C&M-CI-0159
Squareness testers, right angle testers	10318	(0 ~ 500) mm	$\sqrt{1.6^2+0.005 \ 0^2 \times I_0^2}$ μ m	Cylindrical squares Electronic micrometers/ C&M-CI-0160
Cylindrical squares	10319	(0 ~ 500) mm	$\sqrt{1.6^2+0.003 \ 0^2 \times I_0^2}$ μ m	Cylindrical squares Electronic micrometers/ C&M-CI-0161
Precision squares Squareness parallel	10320	(0 ~ 500) mm	1.6 μ m 2.1 μ m	Squareness testers Electronic micrometers/ C&M-CI-0162

Note: In the Measurement uncertainty expressed by the formula, the unit of I_0 is mm

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 Width (Z Axis) Length (X Axis) Angle	10401	(0 ~ 100) mm (0 ~ 50) mm (20 ~ 90) °	$\sqrt{0.12^2+0.005 \ 5^2 \times I_0^2}$ μ m 1.0 μ m 0.8 "	Gauge blocks, Pitch gauge, Cylindrical Plug, pin gauge/ C&M-CI-0131
Optical flats	10404	(0 ~ 60) mm	0.09 μ m	Optical flat, Monochromatic/ C&M-CI-0132
Optical parallels floor plan parallel	10405	(10 ~ 50) mm	0.09 μ m 0.12 μ m	Optical flats Gauge block comparators /C&M-CI-0169
Precision surface plates Width, Length	10407	(500 × 500) mm ² (1 000 × 1 000) mm ² (2 000 × 2 000) mm ² (3 000 × 3 000) mm ²	1.3 μ m 1.5 μ m 2.4 μ m 3.1 μ m	Electric level/C&M-CI-0134
Roundness measurement instruments Detector accuracy Circumference rotational accuracy of spindle Axial rotational accuracy of spindle	10409	(0 ~ 1 000) μ m (0 ~ 360) ° (0 ~ 360) °	0.40 μ m 0.02 μ m 0.02 μ m	Roundness standard specimen/ C&M-CI-0135
Straight edges Straightness parallel	10412	(0 ~ 500) mm (500 ~ 1 000) mm (1 000 ~ 1 500) mm (1 500 ~ 2 000) mm (0 ~ 500) mm (500 ~ 1 000) mm (1 000 ~ 1 500) mm (1 500 ~ 2 000) mm	1.3 μ m 2.0 μ m 2.6 μ m 3.6 μ m 1.3 μ m 2.0 μ m 3.0 μ m 3.9 μ m	Electric level, Electronic micrometer/ C&M-CI-0136

Note: In the Measurement uncertainty expressed by the formula, the unit of I_0 is mm

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 High difference Parallelity Bed, floor plan, parallelity	10502	(0 ~ 400) mm (0 ~ 400) mm (0 ~ 400) mm	1.2 μm 1.2 μm 0.9 μm	Test bars, Electronic micrometers/ C&M-CI-0145
Contact coordinate measuring machines X,Y,Z Axis Instructions accuracy, Space precision Straightness Squareness	10503	(0 ~ 1 000) mm (0 ~ 1 000) mm (0 ~ 500) mm	$\sqrt{0.70^2+0.002 \ 9^2 \times I_0^2}$ μm 2.2 μm	Step gauge,Gauge blocks, Straight edges,Squares/ C&M-CI-0137
Non-contact coordinate measuring machines X,Y Axis Instructions accuracy Squareness Straightness Angle	10504	(0 ~ 500) mm (0 ~ 500) mm (0 ~ 500) mm (0 ~ 90) °	$\sqrt{0.62^2+0.003 \ 0^2 \times I_0^2}$ μm 3.5 μm 2.1 μm 1.3 "	Standard scale,Straight edges, Squares/C&M-CI-0138
Measuring microscopes, Profile projectors Measuring microscopes Transfer accuracy Squareness Angle Profile projectors Transfer accuracy Magnification ratio error Squareness Angle divided accuracy	10511	(0 ~ 300) mm (0 ~ 300) mm (0 ~ 90) ° (0 ~ 300) mm (0 ~ 300) mm 0.03 % (0 ~ 300) mm	$\sqrt{0.76^2+0.002 \ 8^2 \times I_0^2}$ μm 3.4 μm 1.3 " $\sqrt{0.78^2+0.002 \ 8^2 \times I_0^2}$ μm 0.03 % 3.4 μm 1 ' 24 "	Standard scale, Electronic micrometer, Squares/C&M-CI-0139 Standard scale, Squares/C&M-CI-0140
Micro measuring microscopes	10512	(0 ~ 1) mm (1 ~ 10) mm	1.2 μm 11 μm	Standard scale /C&M-CI-0170
Taper plug gauges Angle External diameter Hieght External diameter	10514	(0 ~ 45) ° (0 ~ 200) mm (0 ~ 200) mm (0 ~ 200) mm	6.5 " 1.7 μm 1.4 μm 2.5 μm	Standard measuring machines, Height micrometers, Gauge blocks/C&M-CI-0155
Stylus type roughness testers Ra Rz H	10517	(0 ~ 10) μm (0 ~ 20) μm (0 ~ 10) μm	0.015 μm 0.044 μm 0.040 μm	Roughness standard specimens/C&M-CI-0146
Thread plug gauges External diameter Effective diameter Pitch Half angle of thread	10525	(0 ~ 150) mm (0 ~ 150) mm (0 ~ 10) mm (0 ~ 45) °	$\sqrt{0.54^2+0.004 \ 2^2 \times I_0^2}$ μm $\sqrt{2.0^2+0.004 \ 2^2 \times I_0^2}$ μm 1.4 μm 30 "	Standard measuring machines, Thread measuring wires, Profile projectors, Measuringmicroscopes, Form testers/C&M-CI-0148

105. Complex geometry

Measured Quantity Instrument or Gauge	Field code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Taper thread plug gauges	10526			Standard measuring machines Thread measuring wires Profile projectors Measuring microscopes/ C&M-CI-0154
Small effective diameter		(0 ~ 100) mm	2.3 μm	
Large effective diameter		(0 ~ 100) mm	2.5 μm	
Small external diameter		(0 ~ 100) mm	1.4 μm	
Large external diameter		(0 ~ 100) mm	1.7 μm	
Pitch		(0.25 ~ 10) mm	1.2 μm	
Half angle of thread		(0 ~ 45) °	38 "	
Length of gage		(0 ~ 100) mm	1.3 μm	
Length of notch	(0 ~ 100) mm	1.3 μm		
Thread ring gauges	10527			Standard measuring machines Thread measuring balls Form testers 3-point micrometers/ C&M-CI-0153
Internal diameter		(4 ~ 150) mm	$\sqrt{1.7^2+0.007^2 \times I_0^2}$ μm	
Effective diameter		(4 ~ 150) mm	$\sqrt{1.4^2+0.007^2 \times I_0^2}$ μm	
Pitch	(0 ~ 10) mm	1.0 μm		
V-blocks, Box block	10529	(300 × 300) mm		Test bars Electronic micrometers/ C&M-CI-0152
Floor plan of base			2.1 μm	
If v floor plan			2.1 μm	
If base and v balance with dignity cylinder			2.2 μm	
If side and v balance with dignity cylinder			1.5 μm	
V about groove and base slope			2.2 μm	
The Reciprocal Difference of V- side Height for a pair of V- blocks			2.2 μm	
angle of side to bottom			2.7 μm	
parallel of the top surface to the bottom			2.1 μm	
Parallelness between the underside and the V side			2.2 μm	

Note: In the Measurement uncertainty expressed by the formula, the unit of I_0 is mm

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	(0 ~ 2 000) mm	$\sqrt{9.0^2+0.002^2 \times I_0^2}$ μm	Gauge Blocks/C&M-CI-0102
		(2 000 ~ 3 000) mm	$\sqrt{9.4^2+0.002^2 \times I_0^2}$ μm	
Caliper gauges-Outside		(0 ~ 200) mm	$\sqrt{4.2^2+0.003^2 \times I_0^2}$ μm	Gauge Blocks/C&M-CI-0101
Inside		(3 ~ 200) mm	$\sqrt{4.2^2+0.003^2 \times I_0^2}$ μm	
Cylinder/Bore gauges	10603	(0 ~ 1) mm	0.60 μm	Dial gauge tester/KML-CAL-L05
Depth gauges, Depth micrometers	10604			Gauge Blocks/KML-CAL-L06
Depth gauges		(0 ~ 30) mm	$\sqrt{1.3^2+0.003^2 \times I_0^2}$ μm	
		(30 ~ 300) mm	$\sqrt{5.9^2+0.003^2 \times I_0^2}$ μm	
Depth micrometers	(0 ~ 300) mm	$\sqrt{1.3^2+0.006^2 \times I_0^2}$ μm	Gauge Blocks/KML-CAL-L08	

106.Various dimensional

Measured Quantity Instrument or Gauge	Field code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Dial/Digital gauges	10605	(0 ~ 30) mm (30 ~ 60) mm (60 ~ 100) mm	$\sqrt{0.40^2+0.017^2 \times I_0^2}$ μm $\sqrt{0.72^2+0.017^2 \times I_0^2}$ μm $\sqrt{1.5^2+0.017^2 \times I_0^2}$ μm	Dial gauge tester, Gauge Blocks/ KML-CAL-L07
Micro indicators,Test indicators Micro indicators Test indicators	10609	(0 ~ 1) mm (0 ~ 2) mm	0.17 μm 0.62 μm	Dial gauge tester/KML-CAL-L13 Dial gauge tester/KML-CAL-L11
Micrometer heads	10610	(0 ~ 50) mm	$0.8^2+0.001^2 \times I_0^2$ μm	Gauge Blocks/KML-CAL-L29
3-point micrometers	10611	(2 ~ 100) mm (100 ~ 225) mm	$\sqrt{1.4^2+0.006^2 \times I_0^2}$ μm $\sqrt{1.7^2+0.006^2 \times I_0^2}$ μm	Ring gauges/C&M-CI-0107
Inside micrometers bar type Micrometers Inside micrometers	10612	(50 ~ 1 000) mm (5 ~ 300) mm	$\sqrt{2.6^2+0.006^2 \times I_0^2}$ μm $\sqrt{2.4^2+0.006^2 \times I_0^2}$ μm	Gauge Blocks/KML-CAL-L14 Gauge Blocks/KML-CAL-L09
Outside micrometers	10613	(0 ~ 100) mm (100 ~ 1 000) mm	$\sqrt{0.96^2+0.004^2 \times I_0^2}$ μm $\sqrt{1.7^2+0.006^2 \times I_0^2}$ μm	Gauge Blocks/KML-CAL-L10
Standard sieves Sieve opening Wire rod diameter	10617	(0 ~ 10) mm (0 ~ 130) mm	3.8 μm 5.6 μm	Non-contact coordinate measuring machine/ KML-CAL-L30
Welding gauges Height, Depth Scale Fillet Welding Height Taper thickness	10620	(0 ~ 50) mm (0 ~ 90) mm (0 ~ 20) mm (1 ~ 10) mm	0.2 mm 0.2 mm 0.2 mm 0.1 mm	Non-contact coordinate measuring machine/ Gauge Blocks/KML-CAL-L31

Note: In the Measurement uncertainty expressed by the formula, the unit of I_0 is mm

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 (20 ~ 100) kg (100 ~ 200) kg (200 ~ 500) kg (500 ~ 1 000) kg (1 000 ~ 2 000) kg (2 000 ~ 5 000) kg	1.0 g 10 g 20 g 50 g 0.12 kg 0.30 kg 1.0 kg	Weights/KML-CAL-M01
Counter beam balances	20105	(0 ~ 311) g (311 ~ 2 610) g (2 610 ~ 20 000) g	7.6 mg 76 mg 0.76 g	Weights/KML-CAL-M02

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 Tension Compression	20203	(0.000 1 ~ 1) kN	7.8×10^{-4}	Load cell, Weights/KML-CAL-F02
		(1 ~ 2) kN	1.8×10^{-3}	
		(2 ~ 5) kN	1.5×10^{-3}	
		(5 ~ 10) kN	1.5×10^{-3}	
		(10 ~ 20) kN	1.7×10^{-3}	
		(20 ~ 50) kN	1.9×10^{-3}	
		(0.000 1 ~ 1) kN	7.8×10^{-4}	
		(1 ~ 2) kN	1.4×10^{-3}	
		(2 ~ 5) kN	1.5×10^{-3}	
		(5 ~ 10) kN	1.9×10^{-3}	
		(10 ~ 20) kN	1.4×10^{-3}	
		(20 ~ 50) kN	1.9×10^{-3}	
		(50 ~ 100) kN	1.9×10^{-3}	
		(100 ~ 200) kN	1.8×10^{-3}	
		(200 ~ 500) kN	2.0×10^{-3}	
		(500 ~ 1 000) kN	1.9×10^{-3}	
(1 000 ~ 2 000) kN	2.2×10^{-3}			
(2 000 ~ 5 000) kN	2.8×10^{-3}			
Push-pull gauges	20204			Weights/KML-CAL-F01
Push		(0.000 1 ~ 2) kN	7.2×10^{-4}	
Pull		(0.000 1 ~ 2) kN	7.2×10^{-4}	

204. Pressure

Measured Quantity Instrument or Gauge	Field code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Hydraulic pressure ballances	20404	(2 ~ 200) MPa	1.0×10^{-4}	Hydraulic pressure ballances/KML-CAL-P01
Absolute pressure gauges	20406			
Barometer Dial, Digital, Recorders		(90 ~ 110) kPa	1.2×10^{-4}	Pressure Calibrator/KML-CAL-P02
		(0 ~ 350) kPa	2.0×10^{-4}	Pressure Calibrator/KML-CAL-P03
		(0.35 ~ 7) MPa	1.7×10^{-4}	
Blood pressure gauges	20407	(2 ~ 40) kPa	7.7×10^{-3}	Pressure Calibrator/KML-CAL-P04
Compound pressure gauges	20408	(-0.1 ~ 7) MPa	2.8×10^{-4}	Pressure Calibrator/KML-CAL-P05
Differential pressure gauges	20409	(0 ~ 15) kPa	5.6×10^{-4}	Pneumatic pressure ballances/ KML-CAL-P06
(0.015 ~ 7) MPa		1.1×10^{-4}		
Gauge pressure gauges	20411	(0 ~ 15) kPa	5.6×10^{-4}	Pneumatic & Hydraulic pressure ballances/ KML-CAL-P07
		(0.015 ~ 7) MPa	1.1×10^{-4}	
		(7 ~ 200) MPa	1.0×10^{-4}	

204. Pressure

Measured Quantity Instrument or Gauge	Field code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Pressure transducers/ transmitters	20412	(0 ~ 15) kPa (0.015 ~ 7) MPa (7 ~ 200) MPa (0 ~ 7) MPa abs. (-100 ~ 0) kPa	4.2×10^{-4} 2.0×10^{-4} 1.6×10^{-4} 2.2×10^{-4} 3.0×10^{-4}	Pneumatic & Hydraulic pressure ballances/ KML-CAL-P08
Dial type vacuum gauges	20413	(-100 ~ 0) kPa	6.2×10^{-4}	Pressure Calibrator/KML-CAL-P09

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 10/3 000 (250 ~ 450) HBW 10/3 000	2.7 HBW 10/3 000 4.2 HBW 10/3 000	Brinell hardness standard block / C&M-CI-0163
Rockwell Hardness Testers	21002	(20 ~ 70) HRC (20 ~ 60) HRBW (60 ~ 100) HRBW	0.39 HRC 0.65 HRBW 0.62 HRBW	Rockwell hardness standard block / C&M-CI-0164
Shore Hardness Testers	21003	(30 ~ 100) HS	0.9 HS	Shore hardness standard block / C&M-CI-0165
Vickers Hardness Testers	21004	(50 ~ 250) HV 0.2 (250 ~ 600) HV 0.2 (600 ~ 900) HV 0.2 (50 ~ 250) HV 1 (250 ~ 600) HV 1 (600 ~ 900) HV 1	5.2 HV 0.2 12 HV 0.2 18 HV 0.2 4.0 HV 1 12 HV 1 19 HV 1	Vickers hardness standard block / C&M-CI-0166
Durometer hardness testers	21005	(0 ~ 100) HDA (0 ~ 100) HDD	0.6 HDA 0.6 HDD	Measuring microscopes / C&M-CI-0171
Leeb Hardness Testers	21006	(300 ~ 500) HLD (500 ~ 700) HLD (700 ~ 900) HLD	4.5 HLD 4.5 HLD 4.4 HLD	Leeb hardness standard block / C&M-CI-0167

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 meters/counters Input Frequency Time Base Frequency	30104	10 MHz 10 MHz	2.5×10^{-11} 1.1×10^{-11}	GPS Receiver, Universal Counter/ KML-CAL-S01
Time interval meters/ Stop watches/Timers Stop watches Timer	30106	(0.1 ~ 86 400) s (1 ~ 1 000) s	1.4×10^{-7} 6.0×10^{-4}	Stop Watch Calibrator/KML-CAL-S02 Stop Watch Calibrator/KML-CAL-S03

302. Velocity & revolution

Measured Quantity Instrument or Gauge	Field code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Contact type tachometers	30202	(30 ~ 999) min ⁻¹ (1 000 ~ 4 000) min ⁻¹	0.059 min ⁻¹ 0.084 min ⁻¹	RPM Calibration system/ KML-CAL-S04
Photo tachometers/stroboscopes	30203	(30 ~ 9 999) min ⁻¹ (10 000 ~ 99 990) min ⁻¹	0.062 min ⁻¹ 0.61 min ⁻¹	Photo Signal detector/ KML-CAL-S05

401. DC volatage & 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) μA (0.1 ~ 1) mA (1 ~ 10) mA (10 ~100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~30) A	1.5×10^{-4} 9.2×10^{-5} 8.2×10^{-5} 9.0×10^{-5} 1.2×10^{-4} 1.3×10^{-3} 1.0×10^{-3}	Calibrator/KML-CAL-E01
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) μA (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 30) A	1.1×10^{-5} 7.1×10^{-6} 7.1×10^{-6} 8.7×10^{-6} 8.8×10^{-6} 6.2×10^{-5} 6.2×10^{-5} 6.3×10^{-5} 7.7×10^{-5} 2.2×10^{-4} 4.9×10^{-4} 6.3×10^{-4}	DMM/KML-CAL-E02
Electrical temperature calibrators(Except sensor) B Type E Type J Type K Type N Type R Type S Type T Type Resistance type(RTD)	40104	(1.792 ~ 7.848) mV (-2.255 ~ 76.373) mV (-1.961 ~ 69.553) mV (-1.527 ~ 52.410) mV (-1.023 ~ 47.513) mV (0.647 ~ 14.629) mV (0.646 ~ 13.159) mV (-1.475 ~ 20.872) mV (84.270 ~ 194.101) Ω	5.3×10^{-4} 4.2×10^{-4} 4.8×10^{-4} 6.1×10^{-4} 8.9×10^{-4} 1.5×10^{-3} 1.5×10^{-3} 6.3×10^{-4} 2.1×10^{-5}	DMM/KML-CAL-E03

401. DC volatage & current

Measured Quantity Instrument or Gauge	Field code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
DC Current shunts Resistance	40105	(0 ~ 1) mΩ (1 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (100 ~ 1 000) Ω	4.7×10^{-4} 6.9×10^{-4} 1.1×10^{-4} 6.9×10^{-5} 6.0×10^{-5} 6.0×10^{-5} 1.3×10^{-4}	DMM/KML-CAL-E04
DC power supplies DC Voltage	40108	(0 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (0 ~ 1) A (1 ~ 10) A (10 ~ 100) A	5.8×10^{-5} 5.8×10^{-5} 8.7×10^{-6} 8.8×10^{-6} 2.2×10^{-4} 4.9×10^{-4} 6.0×10^{-4}	DMM/KML-CAL-E05
DC voltmeters DC Voltage	40112	(0 ~ 100) mV (0.1 ~ 1)V (1 ~ 10) V (10 ~ 100)V (100 ~ 1 000) V	1.6×10^{-5} 1.1×10^{-5} 1.1×10^{-5} 1.1×10^{-5} 1.1×10^{-5}	Calibrator/KML-CAL-E06

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 Resistance AC Voltage(60 Hz)	40205	(0 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 10) V (10 ~ 100) V (100 ~ 300) V	7.0×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 1.1×10^{-4} 1.1×10^{-4} 2.5×10^{-4}	Decade Resistor/KML-CAL-E07
Insulation testers DC Voltage	40210	(10 ~ 100) V (0.1 ~ 1) kV (1 ~ 2) kV (2 ~ 5) kV	5.8×10^{-5} 5.8×10^{-5} 7.5×10^{-3} 6.4×10^{-3}	Decade Resistor/KML-CAL-E08

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 AC Voltage(60 Hz)	40210	(0 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ (10 ~ 100) MΩ (0.1 ~ 1) GΩ (1 ~ 10) GΩ (10 ~ 100) GΩ (0.1 ~ 1) TΩ (10 ~ 100) V (100 ~ 600) V	5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 6.2×10^{-4} 6.4×10^{-4} 1.1×10^{-3} 1.3×10^{-3} 1.7×10^{-3} 1.1×10^{-4} 1.1×10^{-4}	
Resistance bridges & similar instruments ratio arm(Resistor)	40213	(0 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ	9.2×10^{-6} 9.2×10^{-6} 7.0×10^{-6} 7.0×10^{-6} 4.6×10^{-6} 7.0×10^{-6} 7.2×10^{-5} 7.2×10^{-5}	Standard Resistor/KML-CAL-E09
Resistance meters Resistance	40214	(0 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ (10 ~ 100) MΩ	5.8×10^{-5} 5.8×10^{-5} 1.1×10^{-5} 1.1×10^{-5} 9.0×10^{-6} 9.0×10^{-6} 7.4×10^{-6} 9.0×10^{-6} 1.1×10^{-5} 1.4×10^{-5} 2.2×10^{-4}	Standard Resistor/KML-CAL-E10
Resistors Resistance	40215	(0 ~ 10) mΩ (10 ~ 100) mΩ (0.1 ~ 1) Ω (1 ~ 10) Ω (10 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ	1.5×10^{-4} 1.1×10^{-4} 2.0×10^{-5} 1.1×10^{-5} 9.6×10^{-6} 9.2×10^{-6} 8.6×10^{-6} 9.2×10^{-6} 1.0×10^{-5} 2.4×10^{-5}	DMM/KML-CAL-E11

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 AC Current(60 Hz)	40301	(0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	2.0×10^{-4} 2.0×10^{-4} 2.0×10^{-4} 7.2×10^{-4} 2.0×10^{-3} 2.8×10^{-3}	Calibrator/KML-CAL-E12
Clamp ammeters/voltmeters DC Voltage AC Voltage(0.04 ~ 1) kHz DC Current AC Current(0.04 ~ 1) kHz Resistance	40302	(0 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (0.1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (0 ~ 1) A (1 ~ 10) A (10 ~ 500) A (500 ~ 1 500) A (0.01 ~ 1) A (1 ~ 10) A (10 ~ 500) A (500 ~ 1 500) A (0 ~ 100) Ω (0.1 ~ 1) kΩ (1 ~ 10) kΩ (10 ~ 100) kΩ (0.1 ~ 1) MΩ (1 ~ 10) MΩ	5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-5} 5.8×10^{-5} 6.2×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 1.1×10^{-4} 1.1×10^{-4} 2.4×10^{-3} 2.8×10^{-3} 2.6×10^{-3} 2.5×10^{-3} 2.6×10^{-3} 3.2×10^{-3} 3.0×10^{-3} 5.9×10^{-3} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 5.8×10^{-4}	Calibrator/KML-CAL-E13
AC voltage/current calibrators AC Voltage(0.04 ~ 1) kHz AC Current(0.04 ~ 1) kHz	40303	(0.1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (0.1 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 50) A	1.9×10^{-4} 1.1×10^{-4} 1.3×10^{-4} 1.3×10^{-4} 1.7×10^{-4} 5.6×10^{-4} 9.8×10^{-4} 1.3×10^{-3} 1.3×10^{-3}	DMM/KML-CAL-E14

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 factor meters Factor(60 Hz, Lead, Lag)	40310	1 0.9 0.8 0.7 0.6 0.5 0.4	5.8×10^{-4} 1.2×10^{-3} 1.8×10^{-3} 2.3×10^{-3} 2.8×10^{-3} 3.6×10^{-3} 4.8×10^{-3}	Power Calibrator/KML-CAL-E15
Power factor meters Factor(60 Hz, Lead, Lag)	40310	0.3 0.2 0.1	6.7×10^{-3} 1.0×10^{-2} 2.1×10^{-2}	
AC power meters AC power meters AC Voltage(0.04 ~ 1) kHz AC Current(0.04 ~ 1) kHz AC Power(60 Hz)	40311	(0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (0.01 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10~ 50) A (1 ~ 60) W (60 ~ 120) W (120 ~ 240) W (240 ~ 600) W (0.6 ~ 1.2) kW (1.2 ~ 2.4) kW (2.4 ~ 4.8) kW	1.2×10^{-4} 1.2×10^{-4} 1.2×10^{-4} 1.2×10^{-4} 2.0×10^{-4} 2.0×10^{-4} 2.0×10^{-4} 7.0×10^{-4} 2.3×10^{-3} 4.0×10^{-3} 8.3×10^{-4} 7.5×10^{-4} 7.3×10^{-4} 1.2×10^{-3} 9.2×10^{-4} 9.2×10^{-4} 1.7×10^{-3}	Power Calibrator/KML-CAL-E16
AC power supplies AC Voltage(0.04 ~ 1) kHz AC Current(0.04 ~ 1) kHz	40312	(1 ~ 100) V (100 ~ 300) V (0.1 ~ 10) A (10 ~ 100) A	5.9×10^{-4} 3.7×10^{-4} 1.4×10^{-3} 1.7×10^{-3}	DMM/KML-CAL-E17
Puncture/safety testers Puncture testers DC Voltage	40313	(0 ~ 0.5) kV (0.5 ~ 1) kV (1 ~ 2) kV (2 ~ 3) kV	1.1×10^{-2} 8.0×10^{-3} 7.0×10^{-3} 6.7×10^{-3}	AC/DC Kilovoltmeter/KML-CAL-E18

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.
DC Voltage	40313	(3 ~ 4) kV	6.5×10^{-3}	
		(4 ~ 5) kV	6.4×10^{-3}	
		(5 ~ 6) kV	6.0×10^{-3}	
		(6 ~ 7) kV	6.0×10^{-3}	
		(7 ~ 8) kV	6.0×10^{-3}	
		(8 ~ 9) kV	6.0×10^{-3}	
		(9 ~ 10) kV	6.0×10^{-3}	
		(10 ~ 20) kV	6.0×10^{-2}	
		(20 ~ 50) kV	2.4×10^{-2}	
(50 ~ 95) kV	1.3×10^{-2}			
AC Voltage		(0.001 ~ 0.5) kV	1.1×10^{-2}	
		(0.5 ~ 1) kV	1.0×10^{-2}	
		(1 ~ 2) kV	7.0×10^{-3}	
		(2 ~ 3) kV	6.7×10^{-3}	
		(3 ~ 4) kV	6.5×10^{-3}	
		(4 ~ 5) kV	6.4×10^{-3}	
		(5 ~ 6) kV	6.0×10^{-3}	
		(6 ~ 7) kV	6.0×10^{-3}	
		(7 ~ 8) kV	6.0×10^{-3}	
		(8 ~ 9) kV	6.0×10^{-3}	
		(9 ~ 10) kV	6.0×10^{-3}	
		(10 ~ 20) kV	6.0×10^{-2}	
		(20 ~ 50) kV	2.4×10^{-2}	
		(50 ~ 100) kV	1.2×10^{-2}	
		DC Current		
(0.5 ~ 1) mA	7.0×10^{-3}			
(1 ~ 2) mA	6.5×10^{-3}			
(2 ~ 5) mA	6.0×10^{-3}			
(5 ~ 10) mA	7.0×10^{-3}			
AC Current		(0.01 ~ 0.5) mA	8.4×10^{-3}	
		(0.5 ~ 1) mA	7.0×10^{-3}	
		(1 ~ 2) mA	6.5×10^{-3}	
		(2 ~ 5) mA	6.0×10^{-3}	
		(5 ~ 10) mA	7.0×10^{-3}	
		(10 ~ 20) mA	6.5×10^{-3}	
		(20 ~ 50) mA	6.0×10^{-3}	
(50 ~ 100) mA	7.0×10^{-3}			
Power recorders AC Power(60 Hz)	40314	(1 ~ 60) W	8.3×10^{-4}	Power Calibrator/KML-CAL-E19
		(60 ~ 120) W	7.5×10^{-4}	
		(120 ~ 240) W	7.5×10^{-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 Power(60 Hz)	40314	(240 ~ 600) W (0.6 ~ 1.2) kW (1.2 ~ 2.4) kW (2.4 ~ 4.8) kW	1.2×10^{-3} 9.2×10^{-4} 1.7×10^{-3} 1.7×10^{-3}	
AC voltmeters AC Voltage(0.04 ~ 1) kHz	40318	(1 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	2.0×10^{-4} 1.1×10^{-4} 1.1×10^{-4} 1.1×10^{-4} 1.1×10^{-4}	Power Calibrator/KML-CAL-E19

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 DC Voltage AC Voltage(0.04 ~ 1) kHz DC Current AC Current(0.04 ~ 1) kHz	40416	(10 ~ 100) V (100 ~ 300) V (10 ~ 100) V (100 ~ 300) V (0 ~ 100) μ A (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 50) mA (0.01 ~ 1) mA (1 ~ 10) mA (10 ~ 50) mA	5.8×10^{-4} 1.9×10^{-4} 5.8×10^{-4} 2.5×10^{-4} 6.0×10^{-4} 5.8×10^{-4} 5.8×10^{-4} 1.4×10^{-4} 6.2×10^{-4} 6.2×10^{-4} 3.0×10^{-4}	Calibrator/KML-CAL-E21
Electronic AC/DC loads DC Voltage DC Current	40417	(0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A (10 ~ 100) A	5.8×10^{-4} 5.8×10^{-5} 5.8×10^{-5} 5.8×10^{-5} 9.0×10^{-5} 1.2×10^{-4} 1.2×10^{-3} 4.6×10^{-4}	Calibrator/KML-CAL-E22
Analogue/Digital multimeters DC Voltage	40419	(0 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	1.5×10^{-5} 1.0×10^{-5} 9.4×10^{-6} 1.1×10^{-5} 1.1×10^{-5}	Calibrator/KML-CAL-E23

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 Voltage(0.04 ~ 1) kHz AC Voltage(1 ~ 20) kHz AC Voltage(20 ~ 100) kHz DC Current AC Current(0.04 ~ 1) kHz Resistance	40419	(1 ~ 100) mV	1.9×10^{-4}	
		(0.1 ~ 1) V	9.2×10^{-5}	
		(1 ~ 10) V	9.6×10^{-5}	
		(10 ~ 100) V	9.6×10^{-5}	
		(100 ~ 1 000) V	9.4×10^{-5}	
		(1 ~ 100) mV	1.9×10^{-4}	
		(0.1 ~ 1) V	9.2×10^{-5}	
		(1 ~ 10) V	9.2×10^{-5}	
		(10 ~ 100) V	9.6×10^{-5}	
		(1 ~ 100) mV	1.1×10^{-3}	
		(0.1 ~ 1) V	3.2×10^{-4}	
		(1 ~ 10) V	3.0×10^{-4}	
		(0 ~ 100) μ A	1.3×10^{-4}	
		(0.1 ~ 1) mA	5.8×10^{-5}	
		(1 ~ 10) mA	5.8×10^{-5}	
		(10 ~ 100) mA	6.8×10^{-5}	
		(0.1 ~ 1) A	1.1×10^{-4}	
		(1 ~ 10) A	1.2×10^{-3}	
		(0.1 ~ 1) mA	1.9×10^{-4}	
		(1 ~ 10) mA	1.9×10^{-4}	
(10 ~ 100) mA	2.0×10^{-4}			
(0.1 ~ 1) A	7.2×10^{-4}			
(1 ~ 10) A	2.3×10^{-3}			
(0 ~ 1) Ω	1.2×10^{-5}			
(1 ~ 10) Ω	1.1×10^{-5}			
(10 ~ 100) Ω	9.0×10^{-6}			
(0.1 ~ 1) k Ω	9.0×10^{-6}			
(1 ~ 10) k Ω	7.4×10^{-6}			
(10 ~ 100) k Ω	9.2×10^{-6}			
(0.1 ~ 1) M Ω	1.1×10^{-5}			
(1 ~ 10) M Ω	1.3×10^{-5}			
Oscilloscopes	40421	(0 ~ 6) mV	9.0×10^{-3}	Calibrator, oscilloscope/ KML-CAL-E24
AC Voltage		(6 ~ 12) mV	5.0×10^{-3}	
		(12 ~ 30) mV	2.7×10^{-3}	
		(30 ~ 60) mV	1.9×10^{-3}	
		(60 ~ 120) mV	1.7×10^{-3}	
		(120 ~ 300) mV	1.3×10^{-3}	
		(300 ~ 600) mV	1.2×10^{-3}	
		(0.6 ~ 1.2) V	1.3×10^{-3}	
		(1.2 ~ 3) V	1.2×10^{-3}	

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 generators: ovens, furnaces, isothermal liquid baths, ice-point baths, dry-block calibrators	50101			
ovens		(-100 ~ 250) °C	0.64 °C	Temperature recorders/KML-CAL-T01
dry-block calibrators		(-80 ~ 400) °C	0.026 °C	SPRT, S type tc/KML-CAL-T02
isothermal liquid baths		(400 ~ 1 100) °C	1.0 °C	
furnaces		(-80 ~ 420) °C	0.080 °C	SPRT/KML-CAL-T10
ice-point baths		(250 ~ 1 100) °C	1.0 °C	S type tc/KML-CAL-T11
		(1 100 ~ 1 300) °C	2.2 °C	
		0 °C	0.010 °C	SPRT/KML-CAL-T12
Temperature indicators/ recorders/controllers, temperature calibrators	50102			
Temperature indicators/ recorders/controllers (Exclude Sensor)				
RTD		(-196 ~ 420) °C	0.03 °C	Decade Resistance Box/KML-CAL-T03
T/C		(-196 ~ 1 300) °C	0.14 °C	CALIBRATOR/KML-CAL-T03
(Include Sensor)		(-196 ~ 400) °C	0.06 °C	SPRT, S type tc/KML-CAL-T03
Temperature calibrators		(400 ~ 1 100) °C	1.5 °C	
		(1 100 ~ 1 300) °C	2.4 °C	BLACK STACK/KML-CAL-T13
		(-196 ~ 1 300) °C	0.14 °C	
		(-196 ~ 400) °C	0.03 °C	
Glass thermometers: liquid-in-glass, Beckmann	50103			SPRT/KML-CAL-T04
Glass thermometers		(-55 ~ 400) °C	0.060 °C	
Resistance thermometers: SPRT, IPRT, thermistors, etc	50104			SPRT/KML-CAL-T05
IPRT		(-196 ~ 420) °C	0.06 °C	
Thermal expansion thermometers : bimetal, gas or liquid type	50105			SPRT/KML-CAL-T06
		(-55 ~ 250) °C	0.29 °C	
		(250 ~ 400) °C	0.58 °C	
Thermomecoules: noble metal, base metal, pure metal, special type, etc.	50106			S type tc/KML-CAL-T07
noble metal		(0 ~ 1 100) °C	1.6 °C	
		(1 100 ~1 300) °C	2.6 °C	
base metal		(-196 ~ 400) °C	0.6 °C	
		(400 ~ 1 100) °C	1.6 °C	
		(1 100 ~1 200) °C	2.6 °C	
Temperature transducers	50107			SPRT, S type tc/KML-CAL-T08
		(-196 ~ 400) °C	0.56 °C	
		(400 ~ 1 100) °C	1.6 °C	

502. Non contact thermometry

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 ~ 300) °C (300 ~ 500) °C (500 ~ 1 500) °C	1.2 °C 1.5 °C 3.6 °C	Standard radiation thermometers/ KML-CAL-T09
Blackbody furnaces	50206	(0 ~ 300) °C (300 ~ 800) °C (800 ~ 1 500) °C	1.4 °C 2.0 °C 3.0 °C	Standard radiation thermometers/ KML-CAL-T14

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. polimer thinfilm(R.H.) (Temperature) hair(R.H.) (Temperature)	50302	(20 ~ 30) % R.H. (30 ~ 97) % R.H. (-20 ~ 50) °C (20 ~ 30) % R.H. (30 ~ 85) % R.H. (-20 ~ 50) °C	2.6 % R.H. 2.4 % R.H. 0.6 °C 4.4 % R.H. 4.2 % R.H. 1.2 °C	Dew-point hygrometers/KML-CAL-H02 Dew-point hygrometers/KML-CAL-H01
Psychrometers; Assmann ventilated, PRT type, etc. (R.H.)	50303	(20 ~ 30) % R.H. (30 ~ 97) % R.H.	2.8 % R.H. 2.4 % R.H.	Dew-point hygrometers/KML-CAL-H05
Temperature humidity recorders ; Hygrothermograph, etc (R.H.) (Temperature)	50304	(20 ~ 30) % R.H. (30 ~ 85) % R.H. (-20 ~ 50) °C	4.4 % R.H. 4.2 % R.H. 1.4 °C	Dew-point hygrometers/KML-CAL-H03
Humidity generators; constant temperature and humidity chamber(R.H.) (Temperature)	50306	(20 ~ 60) % R.H. (60 ~ 97) % R.H. (-55~ 250) °C	2.9 % R.H. 4.4 % R.H. 0.64 °C	Hygrometer, Temperature recorder /KML-CAL-H04