

# CERTIFICATE OF ACCREDITATION

UNITHREE Co.,Ltd

**Accreditation No. :** KC12-264

**Corporation Registration No. :** 194211-0186173

**Address of Laboratory :** 76, Yutongdanji 1-ro, Gangseo-gu, Busan, Republic of Korea

**Date of Initial Accreditation :** January 27, 2012.

**Validity of Accreditation :** January 27, 2024. ~ January 26, 2028.

**Scope of Accreditation :** Attached Annex

**Date of issue :** November 02, 2023.

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



*CHIN CHONGWOOK*

Head

Korea Laboratory Accreditation Scheme

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

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CALIBRATION

Valid To : Jan. 26. 2028

Accreditation No : KC12-264

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		10409	Roundness measurement instruments	Y	20109	Electric balances	Y
10206	Dial/Cylinder gauge testers	N				20112	Platform scale balances	Y
10207	Doctor blades	N	10412	Straight edges	N	20113	Spring scale balances	Y
10209	End bars	N	10413	Straight rules	N	20116	Weights	N
10210	Extensometers, linear displacement transducers	Y	105.	Complex geometry		202.	Force	
			10503	Contact coordinate measuring machines	Y	20203	Tension/Compression testing	Y
10211	Filler gauges	N				20204	push pull gauges	N
10213	Gap gauges	N	10504	Non-contact coordinate measuring machines	Y	204.	Pressure	
10214	Gauge blocks, by comparison	N				20406	Absolute pressure gauges	Y
10216	Height gauges/measuring machines	Y	10511	Measuring microscopes, Profile projectors	Y	20408	Compound pressure gauges	Y
						20409	Differential pressure gauges	Y
10220	Standard measuring machines	Y	10512	Micro measuring microscopes	N	20411	Gauge pressure gauges	Y
10223	Electronic micrometers	N	10517	Stylus type roughness testers	Y	20412	Pressure transducers / transmitters	N
10224	Height micrometers, Riser blocks	N	10519	Roughness standard/comparison specimens	N	20413	Dial type vacuum gauges	Y
10227	Standard tape rules, Peripheral gauges	N	10525	Thread plug gauges	N	210.	Hardness	
			10526	Taper thread plug gauges	N	21001	Brinell hardness testrs	Y
10228	Cylindrical plug/pin gauges, Thread measuring wire gauges	N	10527	Thread ring gauges	N	21002	Rockwell hardness testers	Y
			106.	Various dimensional		21004	Vickers hardness testers	Y
10229	Radius gauges	N	10601	Inside/Outside/Gear tooth calipers, Caliper gauges	Y	21005	Durometer hardness testers	N
10230	Cylindrical ring gauges	N				21006	Leeb hardness testers	N
10232	Step gauges	N	10603	Cylinder/Bore gauges	Y	401.	DC voltage & current	
10233	Taper thickness gauges	N	10604	Depth gauges, Depth micrometers	Y	40101	DC ammeters	Y
10234	Ultrasonic thickness gauges	Y				40105	DC current shunts	Y
10235	Ultrasonic/coating thickness specimens	N	10605	Dial/Digital gauges	Y	40108	DC power supplies	Y
			10608	Grind gauges	N	40112	DC voltmeters	Y
10236	Coating thickness testers	Y	10609	Micro indicators, Test indicators	Y	402.	Resistance, Capacitance and inductance	
103.	Angle							
10304	Bevel protractors	N	10610	Micrometer heads	N	40205	Earth testers	Y
10311	Plate/Square/Electric levels	N	10611	3-Point micrometers	Y	40210	Insulation testers	Y
10318	Squareness testers, Right angle testers	N	10612	Inside micrometers	Y	40214	Resistance meters	Y
			10613	Outside micrometers	Y	40215	Resistors	Y
10320	Precision squares	N	10617	Standard sieves	N	403.	AC voltage, Current & power	
104.	Form		10620	Welding gauges	N	40301	AC ammeters	Y
10401	Form testers	Y	201.	Mass		40302	Clamp ammeters/voltmeters	Y
10404	Optical flats	N	20102	Auto-hopper scale balances	Y	40305	AC current shunts	Y
10405	Optical parallels	N	20105	Counter beam balances	Y	40311	Power meters AC	Y
10407	Precision surface plates	Y	20107	Dial swing scale balances	Y	40312	AC power supplies	Y

Field Code	Item of calibration	on-site	Field Code	Item of calibration	on-site	Field Code	Item of calibration	on-site
403. AC voltage, Current & power			501. Contact thermometry			503. Humidity		
40313	Puncture/safety testers	Y	50101	Temperature generators: ovens furnaces, isothermal liquid baths, ice-point baths,	N	50302	Relative humidity hygrometers: polimer thinfilm, hair, etc.	N
40318	AC voltmeters	Y						
404. Other DC & LF Measurements			50102	Temperature indicators/recorders /controllers, temperature calibrators	Y	50304	Temperature humidity recorders ; Hygrothermograph, etc	N
40410	Line frequency meters	Y						
40411	Function generators	Y	50103	Glass thermometers: liquid-in-glass, Beckmann	N	50306	Humidity generators: two-pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity chamber, etc.	Y
40413	AC/DC high voltage volt meters	Y						
40414	LF impulse generators	Y	50104	Resistance thermometers: SPRT, IPRT, thermistors, etc	N			
40416	Leakage current testers	Y						
40417	Electronic AC/DC loads	Y	50105	Thermal expansion thermometers: bimeter, gas or liquid type	N			
40418	Modulation meters	Y						
40419	Analogue/Digital multimeters	Y	50106	Thermocouples: noble metal, base metal, pure metal, special type, etc.	N	901. Chemical analysis		
40421	Oscilloscopes	Y				90103	Gas analyzers	Y
40424	Volt/Current recorders	Y						
40425	Relay test sets	Y						
40426	LF generators	Y						
40434	AC/DC high voltage generators	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	$\sqrt{0.37^2 + (0.003\ 0 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10206
Doctor blades	10207	(0 ~ 10) mm	3.2 $\mu\text{m}$	Micrometer, height / UNT-CAL-10207
End bars	10209	(25 ~ 1 500) mm	$\sqrt{1.0^2 + (0.002\ 9 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10209
Extensometers, linear displacement transducers	10210	(0 ~ 500) mm	$\sqrt{0.9^2 + (0.002\ 9 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10210
Filler gauges	10211	(0 ~ 5) mm	1.43 $\mu\text{m}$	Measuring machines, standard / UNT-CAL-10211
Gap gauges	10213	(0 ~ 250) mm	$\sqrt{2.1^2 + (0.004\ 0 \times l)^2} \mu\text{m} (l:\text{mm})$	Micrometer, height / UNT-CAL-10213
Gauge blocks, by comparison	10214	(0.5 ~ 100) mm	$\sqrt{80^2 + (1.3 \times l)^2} \text{nm} (l:\text{mm})$	Gauge blocks / UNT-CAL-10214
Height gauges/measuring machines	10216	(0 ~ 1 500) mm	$\sqrt{2.0^2 + (0.002\ 9 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10216
Standard measuring machines	10220	(0 ~ 500) mm	$\sqrt{0.62^2 + (0.002\ 7 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10220
Electronic micrometers	10223	(0 ~ 5) mm	0.12 $\mu\text{m}$	Gauge blocks / UNT-CAL-10223
Height micrometers, Riser blocks	10224			Gauge blocks / UNT-CAL-10224
Head Calibration		(0 ~ 30) mm	$\sqrt{1.9^2 + (0.002\ 9 \times l)^2} \mu\text{m} (l:\text{mm})$	
Block Calibration		(0 ~ 1 010) mm	$\sqrt{1.8^2 + (0.002\ 9 \times l)^2} \mu\text{m} (l:\text{mm})$	
Standard tape rules, Peripheral gauges	10227	(0 ~ 15) m	$\sqrt{0.27^2 + (0.008\ 4 \times l)^2} \mu\text{m} (l:\text{mm})$	Standard tape rules / UNT-CAL-10227
Cylindrical plug/pin gauges, Thread measuring wire gauges	10228	(0 ~ 300) mm	$\sqrt{0.63^2 + (0.004\ 0 \times l)^2} \mu\text{m} (l:\text{mm})$	Measuring machines, standard / UNT-CAL-10228
Radius gauges	10229	(0 ~ 100) mm	3.1 $\mu\text{m}$	Profile projectors / UNT-CAL-10229
Cylindrical ring gauges	10230	(2 ~ 300) mm	$\sqrt{0.80 + (0.003\ 8 \times l)^2} \mu\text{m} (l:\text{mm})$	Measuring machines, standard / UNT-CAL-10230
Step gauges	10232	(0 ~ 1 500) mm	$\sqrt{1.8^2 + (0.002\ 9 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10232
Taper thickness gauges	10233	(0 ~ 50) mm	3.1 $\mu\text{m}$	Profile projectors / UNT-CAL-10233
Ultrasonic thickness gauges	10234	(0 ~ 500) mm	9 $\mu\text{m}$	Ultrasonic test blocks / UNT-CAL-10234
Ultrasonic/coating, thickness specimens	10235			Measuring machines, standard, Gauge blocks / UNT-CAL-10235
		(0 ~ 30) mm	1.2 $\mu\text{m}$	
		(30 ~ 500) mm	$\sqrt{1.8^2 + (0.002\ 9 \times l)^2} \mu\text{m} (l:\text{mm})$	
Coating thickness testers	10236	(0 ~ 15) mm	1.9 $\mu\text{m}$	Thickness specimens / UNT-CAL-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	10304			Angle Gauge blocks / UNT-CAL-10304
Angle of Accuracy		(0 ~ 90) °	1.5'	
Angle of Accessories		(0 ~ 90) °	0.9'	
Plate/Square/Electric levels	10311			Level comparators / UNT-CAL-10311
Sensitivity		± 2°	1.4"	
Flatness of Base side		(0 ~ 500) mm	1.8 μm	
Squareness		(0 ~ 300) mm	3.1 μm	
Squareness testers, Right angle testers	10318	(0 ~ 300) mm	2.5 μm	Squares, Cylindrical / UNT-CAL-10318
Precision squares	10320			Squareness testers / UNT-CAL-10320
Squareness		(0 ~ 300) mm	3.1 μm	
Parallelism		(0 ~ 300) mm	2.6 μm	

## 104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Form testers	10401			Gauge blocks, Standard scales / UNT-CAL-10401
Vertical		(0 ~ 20) mm	0.12 μm	
Horizontal		(0 ~ 50) mm	0.53 μm	
Optical flats	10404			Optical flats / UNT-CAL-10404
Flatness		(10 ~ 60) mm	0.09 μm	
Optical parallels	10405			Optical flats, Comparators, gauge block / UNT-CAL-10405
Flatness		(10 ~ 50) mm	0.09 μm	
Parallelism		(10 ~ 50) mm	0.08 μm	
Precision surface plates	10407	(3 000×3 000) mm <sup>2</sup>	3.3 μm	Levels / UNT-CAL-10407
Roundness measurement instruments	10409			Specimens, roundness standard, Squares, cylindrical / UNT-CAL-10409
Detector accuracy		(0 ~ 1) mm	0.40 μm	
Rotational accuracy		360°	0.02 μm	

## 104. Form

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Straight edges	10412	(0 ~ 1 500) mm	3.3 $\mu\text{m}$	Micrometer, electronic / UNT-CAL-10412
		parallelism	(0 ~ 1 500) mm	
Straight rules	10413	(0 ~ 3) m	$\sqrt{0.10^2 + (0.0084 \times l)^2}$ $\mu\text{m}$ ( $l$ :mm)	Standard tape rules / UNT-CAL-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.	
Contact coordinate measuring machines	10503	Directed accuracy	(0 ~ 1 000) mm	$\sqrt{1.8^2 + (0.0041 \times l)^2}$ $\mu\text{m}$ ( $l$ :mm)	Step gauges, Squares, Straight edges / UNT-CAL-10503
		Squareness	(0 ~ 90)°	1.1'	
		Straightness	(0 ~ 1 000) mm	5.3 $\mu\text{m}$	
Non-contact coordinate measuring machines	10504	Directed accuracy	(0 ~ 500) mm	$\sqrt{0.41^2 + (0.0043 \times l)^2}$ $\mu\text{m}$ ( $l$ :mm)	Standard scales, Squares / UNT-CAL-10504
		Squareness	(0 ~ 150) mm	2.0 $\mu\text{m}$	
		Straightness	(0 ~ 150) mm	2.0 $\mu\text{m}$	
Measuring microscopes, Profile projectors	10511	Directed accuracy	(0 ~ 300) mm	$\sqrt{0.41^2 + (0.0041 \times l)^2}$ $\mu\text{m}$ ( $l$ :mm)	Standard scales, Squares / UNT-CAL-10511
		Squareness	(0 ~ 150) mm	2.0 $\mu\text{m}$	
		Straightness	(0 ~ 150) mm	2.0 $\mu\text{m}$	
		Scale errors	(0 ~ 300) mm	$7.7 \times 10^{-2}$	
		Splitting angle accuracy	(0 ~ 360)°	1.6'	
Micro measuring microscopes	10512	(0 ~ 20) mm	0.96 $\mu\text{m}$	Standard scales / UNT-CAL-10512	
Stylus type roughness testers	10517	Arithmetic Mean(Ra)	(0 ~ 10) $\mu\text{m}$	0.072 $\mu\text{m}$	Specimens, roughness standard, Gauge blocks / UNT-CAL-10517
		Max. Height(Rz)	(0 ~ 20) $\mu\text{m}$	0.19 $\mu\text{m}$	
		Depth(H)	(0 ~ 20) $\mu\text{m}$	0.16 $\mu\text{m}$	

105. Complex geometry

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Roughness standard/ comparison specimens	10519			Roughness testers, stylus type, Gauge blocks, Specimens, roughness standard / UNT-CAL-10519
Standard				
Arithmetic Mean(Ra)		(0 ~ 10) μm	0.060 μm	
Max. Height(Rz)		(0 ~ 20) μm	0.16 μm	
Depth(H)		(0 ~ 20) μm	0.052 μm	
Comparison				
Arithmetic Mean(Ra)		(0 ~ 500) μm	0.082 μm	
Max. Height(Rz)		(0 ~ 500) μm	0.23 μm	
Thread plug gauges	10525			Profile projectors, Measuring machines, standard, Form testers, Gauge blocks / UNT-CAL-10525
Effective Dia.		(2 ~ 200) mm	$\sqrt{1.2^2 + (0.0027 \times l)^2}$ μm (l:mm)	
Outside Dia.		(2 ~ 200) mm	$\sqrt{0.65^2 + (0.0027 \times l)^2}$ μm (l:mm)	
Pitch		(0.25 ~ 10) mm	1.2 μm	
Half Angle of Thread		(0 ~ 45)°	0.05°	
Taper thread plug gauges	10526			Profile projectors, Measuring machines, standard, Gauge blocks / UNT-CAL-10526
Effective Dia. Of Large,Small Part		(2 ~ 200) mm	3.6 μm	
Outside Dia. Of Large,Small Part		(2 ~ 200) mm	2.6 μm	
Pitch		(0.25 ~ 10) mm	1.2 μm	
Half Angle of Thread		(0 ~ 45)°	0.05°	
Taper Half-Angle		(0 ~ 45)°	0.005°	
Length, gauges		(10 ~ 250) mm	2.6 μm	
Length, notch		(0.1 ~ 150) mm	3.7 μm	
Thread ring gauges	10527			Profile projectors, Measuring machines standard, Balls, Form testers / UNT-CAL-10527
Effective Dia.		(2 ~ 100) mm	$\sqrt{1.4^2 + (0.0038 \times l)^2}$ μm (l:mm)	
Inside Dia.		(2 ~ 100) mm	$\sqrt{1.6^2 + (0.0027 \times l)^2}$ μm (l:mm)	
Pitch		(0.25 ~ 10) mm	0.9 μm	

106. Various dimensional

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Inside/Outside/Gear tooth calipers, Caliper gauges	10601	(0 ~ 300) mm (300 ~ 2 000) mm	$\sqrt{0.7^2 + (0.003 \times l)^2} \mu\text{m} (l:\text{mm})$ $\sqrt{9^2 + (0.003 \times l)^2} \mu\text{m} (l:\text{mm})$	Step gauges, Gauge blocks / UNT-CAL-10601
Cylinder/Bore gauges	10603	(0 ~ 800) mm	0.86 $\mu\text{m}$	Dial gauge testers / UNT-CAL-10603
Depth gauges, Depth micrometers	10604	(0 ~ 300) mm (300 ~ 1 000) mm	$\sqrt{1.1 + (0.003 \times l)^2} \mu\text{m} (l:\text{mm})$ $\sqrt{10^2 + (0.003 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10604
Dial/Digital gauges	10605	(0 ~ 100) mm	$\sqrt{0.88^2 + (0.004 \times l)^2} \mu\text{m} (l:\text{mm})$	Dial gauge testers / UNT-CAL-10605
Grind gauges  Depth of Inclined Plane  Straightness	10608	(0 ~ 1) mm (0 ~ 100) mm	3.3 $\mu\text{m}$ 2.7 $\mu\text{m}$	Micrometer, electronic, Micrometer, height / UNT-CAL-10608
Micro indicators, Test indicators	10609	(0 ~ 5) mm	0.82 $\mu\text{m}$	Dial gauge testers / UNT-CAL-10609
Micrometer heads	10610	(0 ~ 100) mm	$\sqrt{0.68^2 + (0.002 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10610
3-Point micrometers	10611	(2 ~ 200) mm	$\sqrt{1.5^2 + (0.002 \times l)^2} \mu\text{m} (l:\text{mm})$	Ring gauges, cylindrical / UNT-CAL-10611
Inside micrometers	10612	(5 ~ 2 100) mm	$\sqrt{2.1^2 + (0.002 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10612
Outside micrometers	10613	(0 ~ 2 000) mm	$\sqrt{0.9^2 + (0.003 \times l)^2} \mu\text{m} (l:\text{mm})$	Gauge blocks / UNT-CAL-10613
Standard sieves  Standard net sieve wire diameter Sieve size	10617	(0.01 ~ 10) mm (0.01 ~ 150) mm	3.1 $\mu\text{m}$ 4.4 $\mu\text{m}$	Profile projectors / UNT-CAL-10617
Welding gauges  Scale accuracy  Angle accuracy	10620	(0 ~ 100) mm (0 ~ 360)°	3.2 $\mu\text{m}$ 2.3'	Profile projectors / UNT-CAL-10620



## 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	8.1 g	Weights / UNT-CAL-20102
		(20 ~ 50) kg	16 g	
		(50 ~ 100) kg	40 g	
		(100 ~ 500) kg	81 g	
		(500 ~ 1 000) kg	0.16 kg	
Counter beam balances	20105	(0 ~ 311) g	7.6 mg	Weights / UNT-CAL-20105
		(311 ~ 2 610) g	76 mg	
		(2.61 ~ 20) kg	0.76 g	
Dial swing scale balances	20107	(0 ~ 20) kg	9.1 g	Weights / UNT-CAL-20107
		(20 ~ 50) kg	18 g	
		(50 ~ 100) kg	45 g	
		(100 ~ 500) kg	91 g	
		(500 ~ 1 000) kg	0.18 kg	
		(1 000 ~ 2 000) kg	0.45 kg	
Electric balances	20109	(0 ~ 20) g	74 µg	Weights / UNT-CAL-20109
		(20 ~ 50) g	87 µg	
		(50 ~ 100) g	0.14 mg	
		(100 ~ 200) g	0.22 mg	
		(200 ~ 600) g	0.66 mg	
		(0.6 ~ 1.2) kg	1.5 mg	
		(1.2 ~ 3) kg	2.6 mg	
		(3 ~ 5) kg	3.1 mg	
		(5 ~ 10) kg	6.5 mg	
		(10 ~ 30) kg	24 mg	
		(30 ~ 60) kg	0.13 g	
		(60 ~ 100) kg	0.67 g	

## 201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Electric balances	20109	(100 ~ 200) kg	10 g	Weights / UNT-CAL-20109
		(200 ~ 300) kg	12 g	
		(300 ~ 500) kg	17 g	
		(500 ~ 1 000) kg	34 g	
		(1 000 ~ 2 000) kg	73 g	
		(2 000 ~ 3 000) kg	0.12 kg	
		(3 000 ~ 5 000) kg	0.22 kg	
Platform scale balances	20112	(0 ~ 10) kg	0.90 g	Weights / UNT-CAL-20112
		(10 ~ 20) kg	1.8 g	
		(20 ~ 50) kg	9.1 g	
		(50 ~ 100) kg	18 g	
		(100 ~ 500) kg	91 g	
		(500 ~ 1 000) kg	0.45 kg	
		(1 000 ~ 2 000) kg	0.90 kg	
Spring scale balances	20113	(0 ~ 1) kg	0.90 g	Weights / UNT-CAL-20113
		(1 ~ 5) kg	4.5 g	
		(5 ~ 10) kg	9.0 g	
		(10 ~ 50) kg	45 g	
		(50 ~ 100) kg	90 g	

## 201. Mass

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Weights	20116	(1 mg ~ 1 kg)	(F2 秤)	Weights , Electric balances / UNT-CAL-20116
		1 mg	13 µg	
		2 mg	13 µg	
		5 mg	13 µg	
		10 mg	13 µg	
		20 mg	14 µg	
		50 mg	14 µg	
		100 mg	14 µg	
		200 mg	15 µg	
		500 mg	16 µg	
		1 g	17 µg	
		2 g	20 µg	
		5 g	23 µg	
		10 g	27 µg	
		20 g	33 µg	
		50 g	40 µg	
		100 g	0.12 mg	
		200 g	0.16 mg	
		500 g	0.96 mg	
		1 kg	1.1 mg	
		(2kg ~ 20kg)	(M1 秤)	
		2 kg	9.1 mg	
5 kg	9.6 mg			
10 kg	91 mg			
20 kg	91 mg			

## 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	(1 ~ 1 000) N	$1.3 \times 10^{-3}$	Weight, Force calibration machines / UNT-CAL-20203
		(1 ~ 500) N	$1.2 \times 10^{-3}$	
		(0.5 ~ 1) kN	$1.5 \times 10^{-3}$	
		(1 ~ 3) kN	$1.5 \times 10^{-3}$	
		(3 ~ 5) kN	$1.6 \times 10^{-3}$	
		(5 ~ 10) kN	$2.0 \times 10^{-3}$	
		(10 ~ 30) kN	$1.7 \times 10^{-3}$	
		(30 ~ 50) kN	$1.8 \times 10^{-3}$	
		(50 ~ 100) kN	$2.0 \times 10^{-3}$	
		(100 ~ 300) kN	$1.7 \times 10^{-3}$	
		(300 ~ 500) kN	$2.0 \times 10^{-3}$	
		(500 ~ 1 000) kN	$2.0 \times 10^{-3}$	
		(1 000 ~ 3 000) kN	$1.7 \times 10^{-3}$	
push pull gauges  Tension  Compression	20204	(1 ~ 1 000) N	$1.4 \times 10^{-3}$	Weight /  UNT-CAL-20204
		(1 ~ 1 000) N	$1.4 \times 10^{-3}$	

## 204. Pressure

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Absolute pressure gauges Pressure generators /controllers	20406	(5 ~ 350) kPa abs	$1.1 \times 10^{-4}$	Digital manometer / UNT-CAL-20406
		(350 ~ 7 000) kPa abs	$1.0 \times 10^{-4}$	
Compound pressure gauges	20408	-95 kPa ~ 7MPa	$7.8 \times 10^{-4}$	Digital manometer / UNT-CAL-20408
Differential pressure gauges	20409	(0 ~ 7) kPa	$1.4 \times 10^{-3}$	Deadweight / UNT-CAL-20409
		(7 ~ 250) kPa	$1.5 \times 10^{-4}$	
		(250 ~ 7 000) kPa	$1.2 \times 10^{-4}$	
Gauge pressure gauges	20411	(0 ~ 7) kPa	$1.4 \times 10^{-3}$	Deadweight / UNT-CAL-20411
		(7 ~ 250) kPa	$1.4 \times 10^{-4}$	
		(250 ~ 6 000) kPa	$1.6 \times 10^{-4}$	
		(6 ~ 100) MPa	$9.0 \times 10^{-5}$	
		(100 ~ 200) MPa	$9.0 \times 10^{-5}$	

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 ~ 7) kPa	$5.7 \times 10^{-4}$	Deadweight / UNT-CAL-20412
		(7 ~ 250) kPa	$1.6 \times 10^{-4}$	
		(250 ~ 6 000) kPa	$1.0 \times 10^{-4}$	
		(6 ~ 100) MPa	$1.1 \times 10^{-4}$	
		(100 ~ 200) MPa	$1.1 \times 10^{-4}$	
		(5 ~ 350) kPa abs	$1.4 \times 10^{-4}$	
		(350 ~ 7 000) kPa abs	$1.3 \times 10^{-4}$	
Dial type vacuum gauges	20413	(-95 ~ 0) kPa	$1.6 \times 10^{-3}$	Digital manometer / UNT-CAL-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 ~ 250)HBW 10/3 000	2.8 HBW 10/3 000	Brinell hardness STD blocks UNT-CAL-21001
		(250 ~ 450)HBW 10/3 000	4.8 HBW 10/3 000	
Rockwell hardness testers	21002	(20 ~ 70) HRC	0.5 HRC	Rockwell hardness STD blocks UNT-CAL-21002
		(10 ~ 100) HRBW	0.8 HRBW	
Vickers hardness testers	21004	(50 ~ 300)HV 0.2	5.4 HV 0.2	Vickers hardness STD blocks UNT-CAL-21004
		(300 ~ 600)HV 0.2	17 HV 0.2	
		(600 ~ 850)HV 0.2	26 HV 0.2	
Durometer hardness testers	21005	(0 ~ 100) HDA	0.4 HDA	Durometer hardness STD blocks UNT-CAL-21005
		(0 ~ 100) HDD	0.4 HDD	
Leeb hardness testers	21006	≤500 HLD	4.7 HLD	Leeb hardness STD blocks UNT-CAL-21006
		(500 ~ 700) HLD	4.6 HLD	
		>700 HLD	4.6 HLD	

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) $\mu$ A  (100 ~ 300) $\mu$ A  (0.3 ~ 1) mA  (1 ~ 3) mA  (3 ~ 10) mA  (10 ~ 30) mA  (30 ~ 100) mA  (100 ~ 300) mA  (0.3 ~ 1) A  (1 ~ 3) A  (3 ~ 10) A  (10 ~ 30) A  (30 ~ 100) A	$3.4 \times 10^{-3}$  $4.6 \times 10^{-4}$  $6.4 \times 10^{-4}$  $2.3 \times 10^{-4}$  $6.0 \times 10^{-4}$  $2.0 \times 10^{-4}$  $6.1 \times 10^{-4}$  $2.0 \times 10^{-4}$  $7.3 \times 10^{-4}$  $4.0 \times 10^{-4}$  $9.6 \times 10^{-4}$  $3.3 \times 10^{-4}$  $7.0 \times 10^{-4}$	Calibrator,  Amplifier  UNT-CAL-40101
DC current shunts  Resistance	40105	0.000 5 $\Omega$  0.005 $\Omega$  0.05 $\Omega$	$4.8 \times 10^{-4}$  $1.1 \times 10^{-3}$  $1.3 \times 10^{-4}$	Calibrator,  Digital Multimeter  UNT-CAL-40105
DC power supply  DC voltage      DC current	40108	(0 ~ 1) V  (1 ~ 10) V  (10 ~ 100) V  (100 ~ 1 000) V  (0 ~ 1) A  (1 ~ 10) A  (10 ~ 100) A	$3.2 \times 10^{-4}$  $2.9 \times 10^{-4}$  $2.9 \times 10^{-4}$  $2.9 \times 10^{-4}$  $2.4 \times 10^{-3}$  $2.4 \times 10^{-3}$  $2.4 \times 10^{-3}$	Digital Multimeter,  Current shunt  UNT-CAL-40108

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	40112	(0 ~ 100) mV	2.0 $\mu$ V	Calibrator  UNT-CAL-40112
		(0.1 ~ 1) V	9 $\mu$ V	
		(1 ~ 10) V	87 $\mu$ V	
		(10 ~ 100) V	1.0 mV	
		(100 ~ 1 000) V	11 mV	

402. Resistance, Capacitance and Inductance

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Earth testers	40205	(0 ~ 1) $\Omega$	$3.1 \times 10^{-3}$	Calibrator, Decade resistor  UNT-CAL-40205
		(1 ~ 10) $\Omega$	$3.1 \times 10^{-3}$	
AC Input voltage	40205	(10 ~ 100) $\Omega$	$3.1 \times 10^{-3}$	
		(0.1 ~ 1) k $\Omega$	$3.1 \times 10^{-3}$	
		(1 ~ 10) k $\Omega$	$3.1 \times 10^{-3}$	
		40 Hz ~ 1 kHz		
		(0 ~ 1) V	$3.1 \times 10^{-3}$	
		(1 ~ 2) V	$4.2 \times 10^{-4}$	
		(2 ~ 3) V	$2.7 \times 10^{-4}$	
		(3 ~ 5) V	$1.9 \times 10^{-4}$	
		(5 ~ 10) V	$6.1 \times 10^{-4}$	
		(10 ~ 20) V	$5.2 \times 10^{-4}$	
		(20 ~ 30) V	$2.9 \times 10^{-4}$	
		(30 ~ 50) V	$1.8 \times 10^{-4}$	
		(50 ~ 100) V	$6.2 \times 10^{-4}$	
		(100 ~ 200) V	$5.2 \times 10^{-4}$	
		(200 ~ 300) V	$2.9 \times 10^{-4}$	
(300 ~ 400) V	$2.0 \times 10^{-4}$			

402. Resistance, Capacitance and Inductar

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Insulation testers	40210			Calibrator,
Insulation resistance		(0 ~ 10) kΩ	$1.2 \times 10^{-2}$	Decade resistor,
		(10 ~ 100)k Ω	$1.2 \times 10^{-2}$	Digital Multimeter
		(0.1 ~ 1) MΩ	$1.8 \times 10^{-2}$	UNT-CAL-40210
		(1 ~ 10) MΩ	$2.9 \times 10^{-2}$	
		(10 ~ 100) MΩ	$2.9 \times 10^{-2}$	
		(0.1 ~ 1) GΩ	$5.9 \times 10^{-2}$	
AC voltage		60 Hz		
		(0 ~ 750) V	0.58 V	
DC voltage		(0 ~ 1) kV	5.8 V	
Insulation voltage		(0 ~ 1) kV	0.58 V	
		(1 ~ 2.5) kV	19 V	
		(2.5 ~ 5) kV	33 V	
Resistance meters	40214			Standard resistance
Resistance		1 mΩ	0.13 μΩ	Decade resistor
		10 mΩ	1.1 μΩ	UNT-CAL-40214
		100 mΩ	9.3 μΩ	
		1 Ω	74 μΩ	
		10 Ω	0.74 mΩ	
		100 Ω	6.6 mΩ	
		1 kΩ	69 mΩ	
		10 kΩ	0.69 Ω	
		100 kΩ	6.7 Ω	
		1 MΩ	69 Ω	
		10 MΩ	0.80 kΩ	



402. Resistance, Capacitance and Inductar

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Resistors, Decade resistance	40215	(0 ~ 0.01) Ω	$2.3 \times 10^{-3}$	Digitalmultimeter
		(0.01 ~ 0.1) Ω	$2.4 \times 10^{-4}$	UNT-CAL-40215
		(0.1 ~ 1) Ω	$3.5 \times 10^{-5}$	
		(1 ~ 10) Ω	$1.8 \times 10^{-5}$	
		(10 ~ 100) Ω	$5.8 \times 10^{-6}$	
		(0.1 ~ 1) kΩ	$1.2 \times 10^{-5}$	
		(1 ~ 10) kΩ	$1.2 \times 10^{-5}$	
		(10 ~ 100) kΩ	$5.9 \times 10^{-6}$	
		(0.1 ~ 1) MΩ	$1.6 \times 10^{-5}$	
		(1 ~ 10) MΩ	$6.9 \times 10^{-5}$	
		(10 ~ 100) MΩ	$6.4 \times 10^{-4}$	
		(0.1 ~ 1) GΩ	$6.4 \times 10^{-3}$	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC ammeters	40301	50 Hz ~ 1 kHz		Calibrator,
		(0 ~ 1) mA	$2.0 \times 10^{-4}$	Amplifier
		(1 ~ 10) mA	$2.1 \times 10^{-4}$	UNT-CAL-40301
		(10 ~ 100) mA	$2.1 \times 10^{-4}$	
		(0.1 ~ 1) A	$7.9 \times 10^{-4}$	
		(1 ~ 10) A	$7.5 \times 10^{-3}$	
		50 Hz ~ 60 Hz		
		(10 ~ 100) A	$7.5 \times 10^{-3}$	
Clamp ammeter/voltmeters	40302			Calibrator, Coil
AC current		50 Hz ~ 65 Hz		UNT-CAL-40302
		(0 ~ 1) mA	$3.7 \times 10^{-3}$	
		(1 ~ 10) mA	$3.5 \times 10^{-3}$	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Clamp ammeter/voltmeters	40302			Calibrator, Coil
AC current		(10 ~ 100) mA	$3.5 \times 10^{-3}$	UNT-CAL-40302
		(0.1 ~ 1) A	$3.3 \times 10^{-3}$	
		(1 ~ 10) A	$3.8 \times 10^{-3}$	
		(10 ~ 100) A	$5.9 \times 10^{-2}$	
		(100 ~ 1 000) A	$1.3 \times 10^{-2}$	
DC current		(0 ~ 1) A	$3.1 \times 10^{-3}$	
		(1 ~ 10) A	$3.1 \times 10^{-3}$	
		(10 ~ 100) A	$3.5 \times 10^{-2}$	
		(100 ~ 1 000) A	$1.1 \times 10^{-2}$	
AC voltage	50 Hz ~ 1 kHz	(0 ~ 1) V	$3.2 \times 10^{-3}$	
		(1 ~ 10) V	$3.2 \times 10^{-3}$	
		(10 ~ 100) V	$4.7 \times 10^{-2}$	
		(100 ~ 1 000) V	$3.2 \times 10^{-3}$	
		DC voltage		
(1 ~ 10) V	$3.1 \times 10^{-3}$			
(10 ~ 100) V	$3.1 \times 10^{-3}$			
(100 ~ 1 000) V	$3.1 \times 10^{-3}$			
Resistance		(0 ~ 1) $\Omega$	$3.1 \times 10^{-3}$	
		(1 ~ 10) $\Omega$	$3.1 \times 10^{-3}$	
		(10 ~ 100) $\Omega$	$3.1 \times 10^{-3}$	
		(0.1 ~ 1) k $\Omega$	$8.8 \times 10^{-3}$	
		(1 ~ 10) k $\Omega$	$8.4 \times 10^{-3}$	
		(10 ~ 100) k $\Omega$	$9.0 \times 10^{-3}$	
		(0.1 ~ 1) M $\Omega$	$4.8 \times 10^{-3}$	
		(1 ~ 10) M $\Omega$	$5.2 \times 10^{-3}$	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
AC current shunts  Resistance	40305	0.001 Ω 0.01 Ω 0.1 Ω 1 Ω 10 Ω 100 Ω 1 000 Ω	$2.9 \times 10^{-3}$ $1.7 \times 10^{-3}$ $8.4 \times 10^{-4}$ $3.4 \times 10^{-4}$ $3.3 \times 10^{-4}$ $3.3 \times 10^{-4}$ $3.3 \times 10^{-4}$	Calibrator,  Digital multimeter  UNT-CAL-40305
Power meters, AC  AC voltage          AC current	40311	50 Hz~ 1 kHz  (0.1 ~ 0.5) V  (0.5 ~ 1) V  (1 ~ 5) V  (5 ~ 10) V  (10 ~ 50) V  (50 ~ 100) V  (100 ~ 300) V  (300 ~ 600) V  50 Hz~ 1 kHz  (0.5 ~ 1) mA  (1 ~ 5) mA  (5 ~ 10) mA  (10 ~ 50) mA  (50 ~ 100) mA	  0.68 mV  0.77 mV  3.1 mV  5.3 mV  36 mV  65 mV  0.18 V  0.44 V    1.5 μA  8.6 μA  14 μA  86 μA  0.14 mA	5500A Calibrator  / UNT-CAL-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.
Power meters, AC	40311			5500A Calibrator
AC current		(100 ~ 500) mA	0.92 mA	/ UNT-CAL-40311
		(0.5 ~ 1) A	1.5 mA	
		(1 ~ 5) A	21 mA	
		(5 ~ 10) A	40 mA	
AC power		(Lag, Lead)		
		120 V, 0.5 A, 60 Hz;		
		60 W, (P.F. = 1)	0.12 W	
		48 W, (P.F. = 0.8)	0.10 W	
		30 W, (P.F. = 0.5)	0.07 W	
		180 W, (P.F. = 0.3)	0.05 W	
		120 V, 1 A, 60 Hz;		
		120 W, (P.F. = 1)	0.19 W	
		96 W, (P.F. = 0.8)	0.16 W	
		60 W, (P.F. = 0.5)	0.10 W	
		36 W, (P.F. = 0.3)	0.08 W	
		120 V, 5 A, 60 Hz;		
		600 W, (P.F. = 1)	0.80 W	
		480 W, (P.F. = 0.8)	0.66 W	
		300 W, (P.F. = 0.5)	0.44 W	
		180 W, (P.F. = 0.3)	0.30 W	
		120 V, 10 A, 60 Hz;		
		1.2 kW, (P.F. = 1)	1.4 W	
		960 W, (P.F. = 0.8)	1.1 W	
		600 W, (P.F. = 0.5)	0.81 W	
		360 W, (P.F. = 0.3)	0.62 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 meters, AC  AC power	40311	240 V, 0.5 A, 60 Hz; 120 W, (P.F. = 1) 96 W, (P.F. = 0.8) 60 W, (P.F. = 0.5) 36 W, (P.F. = 0.3) 240 V, 1 A, 60 Hz; 240 W, (P.F. = 1) 192 W, (P.F. = 0.8) 120 W, (P.F. = 0.5) 72 W, (P.F. = 0.3) 240 V, 5 A, 60 Hz; 1.2 kW, (P.F. = 1) 960 W, (P.F. = 0.8) 600 W, (P.F. = 0.5) 360 W, (P.F. = 0.3) 240 V, 5 A, 60 Hz; 2.4 kW, (P.F. = 1) 1.92 kW, (P.F. = 0.8) 1.2 kW, (P.F. = 0.5) 720 W, (P.F. = 0.3)	0.23 W 0.18 W 0.13 W 0.09 W 0.39 W 0.31 W 0.20 W 0.14 W 1.6 W 1.2 W 0.87 W 0.62 W 2.6 W 2.2 W 1.5 W 1.1 W	5500A Calibrator  / UNT-CAL-40311
AC power supply  AC voltage	40312	40 Hz ~ 1 kHz  (0 ~ 10) V (10 ~ 100) V (100 ~ 600) V	  $2.9 \times 10^{-2}$ $2.9 \times 10^{-3}$ $4.0 \times 10^{-4}$	Digital multimeter  UNT-CAL-40312

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			Digital high voltage meter
AC voltage		60 Hz		
		(0 ~ 5) kV	$7.9 \times 10^{-2}$	UNT-CAL-40313
		(5 ~ 10) kV	$2.2 \times 10^{-2}$	
		(10 ~ 15) kV	$1.9 \times 10^{-2}$	
		(15 ~ 19) kV	$1.7 \times 10^{-2}$	
		(19 ~ 20) kV	$1.6 \times 10^{-2}$	
		(20 ~ 40) kV	$2.1 \times 10^{-2}$	
		(40 ~ 60) kV	$1.6 \times 10^{-2}$	
		(60 ~ 80) kV	$1.8 \times 10^{-2}$	
		(80 ~ 100) kV	$1.7 \times 10^{-2}$	
AC Cut-off current		60 Hz		
		(0 ~ 0.5) mA	$1.7 \times 10^{-3}$	
		(0.5 ~ 1) mA	$1.1 \times 10^{-3}$	
		(1 ~ 2) mA	$3.6 \times 10^{-3}$	
		(2 ~ 5) mA	$1.7 \times 10^{-3}$	
		(5 ~ 10) mA	$1.1 \times 10^{-3}$	
		(10 ~ 20) mA	$3.6 \times 10^{-3}$	
		(20 ~ 50) mA	$2.0 \times 10^{-3}$	
		(50 ~ 100) mA	$1.1 \times 10^{-3}$	
DC voltage		(0 ~ 5) kV	$5.1 \times 10^{-2}$	
		(5 ~ 10) kV	$1.0 \times 10^{-2}$	
		(10 ~ 15) kV	$1.2 \times 10^{-2}$	
		(15 ~ 19) kV	$1.1 \times 10^{-2}$	
		(19 ~ 20) kV	$1.1 \times 10^{-2}$	
		(20 ~ 40) kV	$1.4 \times 10^{-2}$	

403. AC voltage, current & power

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Puncture/safety testers	40313			
DC voltage		(40 ~ 60) kV	$1.2 \times 10^{-2}$	Digital high voltage meter Digital high voltage
		(60 ~ 80) kV	$1.1 \times 10^{-2}$	
		(80 ~ 95) kV	$1.0 \times 10^{-2}$	UNT-CAL-40313
DC Cut-off current		(0 ~ 0.5) mA	$1.2 \times 10^{-3}$	
		(0.5 ~ 1) mA	$6.1 \times 10^{-4}$	
		(1 ~ 2) mA	$3.1 \times 10^{-3}$	
		(2 ~ 5) mA	$1.2 \times 10^{-3}$	
		(5 ~ 10) mA	$6.1 \times 10^{-4}$	
AC voltmeters	40318			Calibrator
AC voltage		(0 ~ 100) mV		UNT-CAL-40318
		40 Hz	$3.0 \times 10^{-3}$	
		(0.04 ~ 20) kHz	$3.0 \times 10^{-3}$	
		(20 ~ 50) kHz	$3.1 \times 10^{-3}$	
		(50 ~ 100) kHz	$3.8 \times 10^{-3}$	
		(0.1 ~ 1) V		
		40 Hz	$2.9 \times 10^{-3}$	
		(0.04 ~ 20) kHz	$2.9 \times 10^{-3}$	
		(20 ~ 50) kHz	$2.9 \times 10^{-3}$	
		(50 ~ 100) kHz	$3.0 \times 10^{-3}$	
		(1 ~ 10) V		
		40 Hz	$3.2 \times 10^{-3}$	
		(0.04 ~ 20) kHz	$2.9 \times 10^{-3}$	
		(20 ~ 50) kHz	$2.9 \times 10^{-3}$	
		(50 ~ 100) kHz	$3.0 \times 10^{-3}$	
		(10 ~ 100) 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.
AC voltmeters	40318	40 Hz	$2.9 \times 10^{-3}$	Calibrator  UNT-CAL-40318
		(0.04 ~ 20) kHz	$2.9 \times 10^{-3}$	
		(20 ~ 50) kHz	$3.0 \times 10^{-3}$	
		(50 ~ 100) kHz	$3.1 \times 10^{-3}$	
		(100 ~ 1 000) V		
		50 Hz	$2.9 \times 10^{-3}$	
		1 kHz	$2.9 \times 10^{-3}$	

404. Order DC & LF Measurements 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.
Line frequency meters  Input frequency	40410	(0 ~ 10) Hz	$1.0 \times 10^{-4}$	Function generator  UNT-cal-40410
		(10 ~ 100) Hz	$1.0 \times 10^{-4}$	
		(0.1 ~ 1) kHz	$1.0 \times 10^{-4}$	
		(1 ~ 10) kHz	$1.0 \times 10^{-4}$	
		(10 ~ 100) kHz	$1.0 \times 10^{-4}$	
		(0.1 ~ 1) MHz	$1.0 \times 10^{-4}$	
		Function generators  Out frequency  Out voltage	40411	
(0 ~ 10) mV				
(0.04 ~ 1) kHz	$4.4 \times 10^{-4}$			
(1 ~ 10) kHz	$4.3 \times 10^{-4}$			
(10 ~ 100) kHz	$1.4 \times 10^{-3}$			
(10 ~ 100) mV				
(0.04 ~ 1) kHz	$8.9 \times 10^{-4}$			
(1 ~ 10) kHz	$8.9 \times 10^{-4}$			
(10 ~ 100) kHz	$5.2 \times 10^{-3}$			
(0.1 ~ 1) V				
(0.04 ~ 1) kHz	$6.6 \times 10^{-4}$			
(1 ~ 10) kHz	$6.6 \times 10^{-4}$			
(10 ~ 100) kHz	$4.1 \times 10^{-3}$			



404. Order DC & LF Measurements 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.
Function generators	40411			Frequency counter, Digital multimeter, Oscilloscope UNT-CAL-40411
Out voltage		(1 ~ 10) V		
		(0.04 ~ 1) kHz	$6.6 \times 10^{-4}$	
		(1 ~ 10) kHz	$6.6 \times 10^{-4}$	
		(10 ~ 100) kHz	$4.1 \times 10^{-3}$	
Frequence responses		(0 ~ 10) mV		
		(0.04 ~ 1) kHz	$4.4 \times 10^{-4}$	
		(1 ~ 10) kHz	$4.3 \times 10^{-4}$	
		(10 ~ 100) kHz	$1.4 \times 10^{-3}$	
		(10 ~ 100) mV		
		(0.04 ~ 1) kHz	$8.9 \times 10^{-4}$	
		(1 ~ 10) kHz	$8.9 \times 10^{-4}$	
		(10 ~ 100) kHz	$5.2 \times 10^{-3}$	
		(0.1 ~ 1) V		
		(0.04 ~ 1) kHz	$6.6 \times 10^{-4}$	
		(1 ~ 10) kHz	$6.6 \times 10^{-4}$	
		(10 ~ 100) kHz	$4.1 \times 10^{-3}$	
		(1 ~ 10) V		
		(0.04 ~ 1) kHz	$6.6 \times 10^{-4}$	
		(1 ~ 10) kHz	$6.6 \times 10^{-4}$	
		(10 ~ 100) kHz	$4.1 \times 10^{-3}$	
DC Offset		(-20 ~ 20) V	$6.1 \times 10^{-4}$	
AC/DC high voltage volt meters	40413			High voltage supply UNT-CAL-40413
DC voltage		(0 ~ 20) kV	$2.7 \times 10^{-2}$	
		(20 ~ 40) kV	$1.7 \times 10^{-2}$	
		(40 ~ 60) kV	$1.5 \times 10^{-2}$	

404. Order DC & LF Measurements 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.
LF impulse generators	40414			Digital Oscilloscope,
Impulse voltage		(0 ~ 1) kV	$5.3 \times 10^{-2}$	High probe
		(1 ~ 5) kV	$4.4 \times 10^{-2}$	UNT-CAL-40414
		(5 ~ 10) kV	$4.7 \times 10^{-2}$	
		(10 ~ 20) kV	$3.9 \times 10^{-2}$	
Pulse width Rise time		(0 ~ 10) ns	$5.9 \times 10^{-3}$	
		(10 ~ 100) ns	$5.9 \times 10^{-3}$	
		(0.1 ~ 1) $\mu$ s	$5.9 \times 10^{-3}$	
		(1 ~ 10) $\mu$ s	$5.9 \times 10^{-3}$	
		(10 ~ 100) $\mu$ s	$5.9 \times 10^{-3}$	
		(0.1 ~ 1) ms	$5.9 \times 10^{-3}$	
		(1 ~ 10) ms	$5.9 \times 10^{-3}$	
Leakage current testers	40416			Calibrator
AC voltage		40 Hz		UNT-CAL-40416
		(0 ~ 0.1) V	$3.4 \times 10^{-3}$	
		(0.1 ~ 1) V	$3.1 \times 10^{-3}$	
		(1 ~ 10) V	$3.1 \times 10^{-3}$	
		(10 ~ 100) V	$3.1 \times 10^{-3}$	
		(100 ~ 1 000) V	$3.8 \times 10^{-3}$	
		40 Hz ~ 1 kHz		
		(0 ~ 0.1) V	$3.1 \times 10^{-3}$	
		(0.1 ~ 1) V	$2.9 \times 10^{-3}$	
		(1 ~ 10) V	$2.9 \times 10^{-3}$	
		(10 ~ 100) V	$2.9 \times 10^{-3}$	
		(100 ~ 1 000) V	$2.9 \times 10^{-3}$	
DC current		(0 ~ 0.1) mA	$3.1 \times 10^{-2}$	
		(0.1 ~ 1) mA	$3.1 \times 10^{-2}$	
		(1 ~ 10) mA	$3.1 \times 10^{-2}$	
		(10 ~ 100) mA	$3.1 \times 10^{-2}$	

404. Order DC & LF Measurements 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.
Leakage current testers  AC current	40416	50 Hz ~ 1 kHz  (0 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA	  $3.1 \times 10^{-2}$ $3.1 \times 10^{-2}$ $3.1 \times 10^{-2}$	Calibrator  UNT-CAL-40416
Electronic AC/DC loads  DC voltage          DC current	40417	(0 ~ 10) V (10 ~ 20) V (20 ~ 30) V (30 ~ 40) V (40 ~ 50) V (50 ~ 60) V (60 ~ 100) V (100 ~ 200) V (200 ~ 300) V (300 ~ 400) V (400 ~ 500) V (0 ~ 1) A (1 ~ 10) A (10 ~ 60) A	 $6.1 \times 10^{-5}$ $3.2 \times 10^{-5}$ $2.5 \times 10^{-5}$ $2.0 \times 10^{-5}$ $1.6 \times 10^{-5}$ $1.7 \times 10^{-5}$ $6.1 \times 10^{-5}$ $3.5 \times 10^{-5}$ $2.5 \times 10^{-5}$ $2.0 \times 10^{-5}$ $1.6 \times 10^{-5}$ $2.0 \times 10^{-3}$ $1.9 \times 10^{-3}$ $1.8 \times 10^{-3}$	Calibrator, Current shunt, Digital multimeter UNT-CAL-40417
Modulation meters  AM modulation	40418	1 000 Hz  (0 ~ 5) % (5 ~ 10) % (10 ~ 30) % (30 ~ 80) % (80 ~ 90) % (90 ~ 99) %	  $3.2 \times 10^{-2}$ $3.2 \times 10^{-2}$ $3.1 \times 10^{-2}$ $2.1 \times 10^{-2}$ $3.1 \times 10^{-2}$ $3.2 \times 10^{-2}$	Modulation meter  UNT-CAL-40418

404. Order DC & LF Measurements 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.
Modulation meters	40418			Modulation meter
FM modulation		(0 ~ 1) kHz	$4.0 \times 10^{-2}$	UNT-CAL-40418
		(1 ~ 10) kHz	$3.2 \times 10^{-2}$	
		(10 ~ 30) kHz	$3.2 \times 10^{-2}$	
		(30 ~ 100) kHz	$3.2 \times 10^{-2}$	
		(100 ~ 200) kHz	$3.2 \times 10^{-2}$	
		(200 ~ 300) kHz	$3.2 \times 10^{-2}$	
		(300 ~ 400) kHz	$3.3 \times 10^{-2}$	
Analogu/Digital multimeters	40419			Calibrator
DC voltage		(0 ~ 100) mV	$5.0 \times 10^{-5}$	UNT-CAL-40419
		(0.1 ~ 1) V	$1.7 \times 10^{-5}$	
		(1 ~ 10) V	$1.4 \times 10^{-5}$	
		(10 ~ 100) V	$1.8 \times 10^{-5}$	
		(100 ~ 1 000) V	$1.9 \times 10^{-5}$	
DC current		(0 ~ 100) $\mu$ A	$5.3 \times 10^{-4}$	
		(0.1 ~ 1) mA	$1.3 \times 10^{-4}$	
		(1 ~ 10) mA	$1.3 \times 10^{-4}$	
		(10 ~ 100) mA	$1.4 \times 10^{-4}$	
		(0.1 ~ 1) A	$2.6 \times 10^{-4}$	
		(1 ~ 10) A	$1.0 \times 10^{-3}$	
AC voltage		40 Hz		
		(0 ~ 100) mV	$7.9 \times 10^{-4}$	
		(0.1 ~ 1) V	$3.9 \times 10^{-4}$	
		(1 ~ 10) V	$3.8 \times 10^{-4}$	
		(10 ~ 100) V	$2.7 \times 10^{-4}$	
		(100 ~ 1 000) V	$5.0 \times 10^{-4}$	

404. Order DC & LF Measurements 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.
Analogu/Digital multimeters	40419			Calibrator
AC voltage		40 Hz ~ 1 kHz		UNT-CAL-40419
		(0 ~ 100) mV	$6.8 \times 10^{-4}$	
		(0.1 ~ 1) V	$2.4 \times 10^{-4}$	
		(1 ~ 10) V	$1.8 \times 10^{-4}$	
		(10 ~ 100) V	$1.9 \times 10^{-4}$	
		(100 ~ 1 000) V	$1.8 \times 10^{-4}$	
		1 kHz ~ 10 kHz		
		(0 ~ 100) mV	$6.8 \times 10^{-4}$	
		(0.1 ~ 1) V	$2.4 \times 10^{-4}$	
		(1 ~ 10) V	$1.8 \times 10^{-4}$	
		(10 ~ 100) V	$1.9 \times 10^{-4}$	
		10 kHz ~ 20 kHz		
		(0 ~ 100) mV	$8.4 \times 10^{-4}$	
		(0.1 ~ 1) V	$3.7 \times 10^{-4}$	
		(1 ~ 10) V	$4.0 \times 10^{-4}$	
		(10 ~ 100) V	$4.4 \times 10^{-4}$	
		20 kHz ~ 50 kHz		
		(0 ~ 100) mV	$2.4 \times 10^{-3}$	
		(0.1 ~ 1) V	$4.2 \times 10^{-4}$	
		(1 ~ 10) V	$4.4 \times 10^{-4}$	
		(10 ~ 100) V	$6.8 \times 10^{-4}$	
		50 kHz ~ 100 kHz		
		(0 ~ 100) mV	$2.5 \times 10^{-3}$	
		(0.1 ~ 1) V	$7.8 \times 10^{-4}$	
		(1 ~ 10) V	$6.2 \times 10^{-4}$	
		(10 ~ 100) V	$7.2 \times 10^{-4}$	
AC current		50 Hz		
		(0 ~ 1) mA	$5.7 \times 10^{-4}$	
		(1 ~ 10) mA	$4.8 \times 10^{-4}$	
		(10 ~ 100) mA	$4.8 \times 10^{-4}$	
		(0.1 ~ 1) A	$9.9 \times 10^{-4}$	
		(1 ~ 10) A	$1.9 \times 10^{-3}$	

404. Order DC & LF Measurements 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.
Analogu/Digital multimeters	40419	50 Hz ~ 1 kHz		Calibrator
AC current		(0 ~ 1) mA	$4.3 \times 10^{-4}$	UNT-CAL-40419
		(1 ~ 10) mA	$3.0 \times 10^{-4}$	
		(10 ~ 100) mA	$3.0 \times 10^{-4}$	
		(0.1 ~ 1) A	$9.9 \times 10^{-4}$	
		(1 ~ 10) A	$2.3 \times 10^{-3}$	
		1 kHz ~ 10 kHz		
		(0 ~ 1) mA	$2.8 \times 10^{-3}$	
		(1 ~ 10) mA	$2.8 \times 10^{-3}$	
		(10 ~ 100) mA	$2.8 \times 10^{-3}$	
		(0.1 ~ 1) A	$1.1 \times 10^{-2}$	
Resistance		1 $\Omega$	$1.1 \times 10^{-4}$	
		10 $\Omega$	$3.3 \times 10^{-5}$	
		100 $\Omega$	$2.1 \times 10^{-5}$	
		1 k $\Omega$	$1.6 \times 10^{-5}$	
		10 k $\Omega$	$1.5 \times 10^{-5}$	
		100 k $\Omega$	$1.7 \times 10^{-5}$	
		1 M $\Omega$	$2.4 \times 10^{-5}$	
		10 M $\Omega$	$4.7 \times 10^{-5}$	
Oscilloscope	40421	(0 ~ 1) mV	$2.3 \times 10^{-1}$	Oscilloscope
DC voltage		(1 ~ 2) mV	$1.2 \times 10^{-1}$	calibrator
		(2 ~ 5) mV	$5.0 \times 10^{-2}$	UNT-CAL-40421
		(5 ~ 10) mV	$2.7 \times 10^{-2}$	
		(10 ~ 20) mV	$1.6 \times 10^{-2}$	

404. Order DC & LF Measurements 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.	
Oscilloscope	40421	(20 ~ 50) mV	$8.6 \times 10^{-3}$	Oscilloscope calibrator UNT-CAL-40421	
		(50 ~ 100) mV	$6.4 \times 10^{-3}$		
		(100 ~ 200) mV	$5.0 \times 10^{-3}$		
		(200 ~ 500) mV	$4.6 \times 10^{-3}$		
		(0.5 ~ 1) V	$4.3 \times 10^{-3}$		
		(1 ~ 2) V	$4.2 \times 10^{-3}$		
		(2 ~ 5) V	$4.2 \times 10^{-3}$		
		(5 ~ 10) V	$4.1 \times 10^{-3}$		
		(10 ~ 20) V	$4.1 \times 10^{-3}$		
		Bandwidth	(0 ~ 50) kHz		$2.3 \times 10^{-2}$
			(50 ~ 100) kHz		$4.2 \times 10^{-2}$
			(0.1 ~ 1) MHz		$4.5 \times 10^{-2}$
			(1 ~ 10) MHz		$4.7 \times 10^{-2}$
			(10 ~ 50) MHz		$4.7 \times 10^{-2}$
			(50 ~ 100) MHz		$4.7 \times 10^{-2}$
			(100 ~ 200) MHz		$5.2 \times 10^{-2}$
			Time Marker		(0 ~ 2) ns
		(2 ~ 5) ns			$1.2 \times 10^{-4}$
		(5 ~ 10) ns			$6.1 \times 10^{-4}$
		(10 ~ 20) ns			$3.1 \times 10^{-4}$
		(20 ~ 50) ns			$1.2 \times 10^{-4}$
		(50 ~ 100) ns			$6.1 \times 10^{-4}$
		(100 ~ 200) ns			$3.1 \times 10^{-4}$
		(200 ~ 500) ns			$1.2 \times 10^{-4}$

404. Order DC & LF Measurements 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.
Oscilloscope	40421			Oscilloscope
Time Marker		(0.5 ~ 1) $\mu$ s	$6.1 \times 10^{-4}$	calibrator
		(1 ~ 2) $\mu$ s	$3.1 \times 10^{-4}$	UNT-CAL-40421
		(2 ~ 5) $\mu$ s	$1.2 \times 10^{-4}$	
		(5 ~ 10) $\mu$ s	$6.1 \times 10^{-4}$	
		(10 ~ 20) $\mu$ s	$3.1 \times 10^{-4}$	
		(20 ~ 50) $\mu$ s	$1.2 \times 10^{-4}$	
		(50 ~ 100) $\mu$ s	$6.1 \times 10^{-4}$	
		(100 ~ 200) $\mu$ s	$3.1 \times 10^{-4}$	
		(200 ~ 500) $\mu$ s	$1.2 \times 10^{-4}$	
		(0.5 ~ 1) ms	$6.1 \times 10^{-4}$	
		(1 ~ 2) ms	$3.1 \times 10^{-4}$	
		(2 ~ 5) ms	$1.2 \times 10^{-4}$	
		(5 ~ 10) ms	$6.1 \times 10^{-4}$	
		(10 ~ 20) ms	$3.1 \times 10^{-4}$	
		(20 ~ 50) ms	$1.4 \times 10^{-4}$	
		(50 ~ 100) ms	$6.1 \times 10^{-4}$	
		(100 ~ 200) ms	$3.1 \times 10^{-4}$	
		(200 ~ 500) ms	$1.4 \times 10^{-4}$	
		(0.5 ~ 1) s	$6.1 \times 10^{-4}$	
		(1 ~ 2) s	$3.1 \times 10^{-4}$	
		(2 ~ 5) s	$1.3 \times 10^{-4}$	
Cal. Out put voltage		40 Hz		
		(0 ~ 100) mV	$2.0 \times 10^{-4}$	
		(0.1 ~ 0.5) V	$2.0 \times 10^{-4}$	
		(0.5 ~ 0.6) V	$1.7 \times 10^{-4}$	
		(0.6 ~ 1) V	$1.4 \times 10^{-4}$	
		(1 ~ 5) V	$1.8 \times 10^{-4}$	
		(5 ~ 10) V	$1.3 \times 10^{-4}$	



404. Order DC & LF Measurements 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.
Oscilloscope  Cal. Out put voltage	40421	40 Hz ~ 1 kHz (0 ~ 100) mV (0.1 ~ 0.5) V (0.5 ~ 0.6) V (0.6 ~ 1) V (1 ~ 5) V (5 ~ 10) V 1 kHz ~ 10 kHz (0 ~ 100) mV (0.1 ~ 0.5) V (0.5 ~ 0.6) V (0.6 ~ 1) V (1 ~ 5) V (5 ~ 10) V	$2.0 \times 10^{-4}$ $1.6 \times 10^{-4}$ $1.5 \times 10^{-4}$ $1.1 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.1 \times 10^{-4}$ $3.0 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.7 \times 10^{-4}$ $1.3 \times 10^{-4}$ $1.8 \times 10^{-4}$ $1.4 \times 10^{-4}$	Oscilloscope calibrator UNT-CAL-40421
CAL.Out frequency		(0 ~ 0.1) kHz (0.1 ~ 1) kHz (1 ~ 10) kHz (10 ~ 100) kHz (0.1 ~ 1) MHz (1 ~ 10) MHz	$6.2 \times 10^{-4}$ $6.2 \times 10^{-4}$ $6.2 \times 10^{-5}$ $6.2 \times 10^{-7}$ $6.2 \times 10^{-8}$ $6.4 \times 10^{-9}$	
Volt/Current recorders  DC voltage	40424	(0 ~ 10) mV (10 ~ 100) mV (0.1 ~ 1) V (1 ~ 10) V (10 ~ 100) V (100 ~ 1 000) V	$4.6 \times 10^{-4}$ $2.9 \times 10^{-4}$ $2.9 \times 10^{-4}$ $2.9 \times 10^{-4}$ $2.9 \times 10^{-4}$ $2.9 \times 10^{-4}$	Voltage/Current calibrator UNT-CAL-40424
DC current		(0 ~ 10) uA (10 ~ 100) uA (0.1 ~ 1) mA (1 ~ 10) mA (10 ~ 100) mA (0.1 ~ 1) A (1 ~ 10) A	$3.1 \times 10^{-2}$ $4.3 \times 10^{-3}$ $2.9 \times 10^{-3}$ $2.9 \times 10^{-3}$ $2.9 \times 10^{-3}$ $3.0 \times 10^{-3}$ $3.1 \times 10^{-3}$	

404. Order DC & LF Measurements 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.
Relay test sets	40425	40 Hz ~ 1 kHz		Digital Multimeter,
AC voltage		(0 ~ 10) V	$6.2 \times 10^{-4}$	Current shunt
		(10 ~ 20) V	$3.2 \times 10^{-4}$	UNT-CAL-40425
		(20 ~ 30) V	$3.7 \times 10^{-4}$	
		(30 ~ 40) V	$2.8 \times 10^{-4}$	
		(40 ~ 50) V	$2.4 \times 10^{-4}$	
		(50 ~ 60) V	$2.0 \times 10^{-4}$	
		(60 ~ 70) V	$1.9 \times 10^{-4}$	
		(70 ~ 80) V	$1.6 \times 10^{-4}$	
		(80 ~ 90) V	$1.6 \times 10^{-4}$	
		(90 ~ 100)V	$6.2 \times 10^{-4}$	
		(100 ~ 200) V	$3.3 \times 10^{-4}$	
		(200 ~ 300) V	$4.0 \times 10^{-4}$	
		(300 ~ 400) V	$3.0 \times 10^{-4}$	
		(400 ~ 500) V	$2.4 \times 10^{-4}$	
		(500 ~ 600) V	$2.2 \times 10^{-4}$	
DC voltage		(0 ~ 99.99) V	$6.1 \times 10^{-5}$	
		(99.99 ~ 1 000) V	$6.1 \times 10^{-5}$	
DC current		(0 ~ 1) A	$5.1 \times 10^{-3}$	
		(1 ~ 2) A	$2.6 \times 10^{-3}$	
		(2 ~ 5) A	$3.8 \times 10^{-3}$	
		(5 ~ 10) A	$2.0 \times 10^{-3}$	
		(10 ~ 20) A	$1.2 \times 10^{-3}$	
		(20 ~ 40) A	$4.8 \times 10^{-3}$	
		(40 ~ 60) A	$3.2 \times 10^{-3}$	
		(60 ~ 80) A	$2.4 \times 10^{-3}$	
		(80 ~ 100) A	$1.9 \times 10^{-3}$	

404. Order DC & LF Measurements 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.
LF signal generators	40426			Digital Multimeter, Frequency counter
Out frequency		(0 ~ 1) Hz	$1.0 \times 10^{-2}$	UNT-CAL-40426
		(1 ~ 10) Hz	$1.2 \times 10^{-3}$	
		(10 ~ 100) Hz	$5.8 \times 10^{-4}$	
		(0.1 ~ 1) kHz	$5.7 \times 10^{-4}$	
		(1 ~ 10) kHz	$5.7 \times 10^{-4}$	
		(10 ~ 100) kHz	$5.7 \times 10^{-4}$	
		(0.1 ~ 1) MHz	$5.7 \times 10^{-4}$	
		(1 ~ 10) MHz	$5.7 \times 10^{-4}$	
		(10 ~ 20) MHz	$2.9 \times 10^{-4}$	
Out put level		(0 ~ 10) mV		
		(0.04 ~ 1) kHz	$3.0 \times 10^{-3}$	
		(1 ~ 10) kHz	$3.0 \times 10^{-3}$	
		(10 ~ 100) kHz	$4.3 \times 10^{-3}$	
		(10 ~ 100) mV		
		(0.04 ~ 1) kHz	$3.1 \times 10^{-3}$	
		(1 ~ 10) kHz	$3.1 \times 10^{-3}$	
		(10 ~ 100) kHz	$6.6 \times 10^{-3}$	
		(0.1 ~ 1) V		
		(0.04 ~ 1) kHz	$3.0 \times 10^{-3}$	
		(1 ~ 10) kHz	$3.0 \times 10^{-3}$	
		(10 ~ 100) kHz	$5.0 \times 10^{-3}$	
		(0.1 ~ 1) MHz	$1.7 \times 10^{-1}$	
		(1 ~ 10) V		
		(0.04 ~ 1) kHz	$3.0 \times 10^{-3}$	
		(1 ~ 10) kHz	$3.0 \times 10^{-3}$	
		(10 ~ 100) kHz	$5.0 \times 10^{-3}$	
		(0.1 ~ 1) MHz	$1.7 \times 10^{-1}$	



## 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: oven, furnaces, isothermal liquid bath, ice-point, dry-block calibrators	50101			SPRT, Thermocouple, Temperature recorder / UNT-CAL-50101
Ovens		(-70 ~ 250) °C	1.2 °C	
Isothermal liquid baths		(-70 ~ 250) °C	0.06 °C	
Ice-point baths		0 °C	0.011 °C	
Dry-block calibrators		(-70 ~ 400) °C	0.1 °C	
Temperature indicators/recorders/controlle temperature calibrators	50102			SPRT, Thermocouple,  Calibrator  / UNT-CAL-50102
resistance type(sensor included)		(-70 ~ 250) °C	0.04 °C	
Thermocouple type(sensor included)		(250 ~ 1 100) °C	2.4 °C	
		(1 100 ~ 1 500) °C	3.1 °C	
resistance type(sensor excepted)		(-70 ~ 250) °C	0.02 °C	
Thermocouple type(sensor excepted)		(-70 ~ 1 500) °C	0.06 °C	
Glass thermometers: liquid-in- glass, Beckmann	50103	(-70 ~ 250) °C	0.051 °C	SPRT/UNT-CAL-50103
Resistance thermometers: SPRT, IPRT, thermistors. Etc	50104	(-70 ~ 250) °C	0.06 °C	SPRT/UNT-CAL-50104
Thermal expansion thermometers: bimetal, gas or bimetal	50105	(-70 ~ 250) °C	0.37 °C	SPRT/UNT-CAL-50105
Thermocouples: noble metal, base metal, pure metal, special type, etc.	50106			SPRT, Thermocouple / UNT-CAL-50106
Base metal		(-70 ~ 250) °C	0.6 °C	
		(250 ~ 1 100) °C	2.4 °C	
		(1 100 ~ 1 300) °C	3.9 °C	
Noble metal		(250 ~ 1 100) °C	1.1 °C	
	(1 100 ~ 1 500) °C	3.1 °C		

## 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. Relative humidity temperature	50302	(25 ~ 90) % R.H. (-40 ~ 140) °C	2.1 % R.H. 0.68 °C	Dew point thermometer / UNT-CAL-50302-1 / UNT-CAL-50302-2
Temperature humidity recorders; Hygrothermograph, etc Relative humidity temperature	50304	(25 ~ 90) % R.H. (-20 ~ 50) °C	3.2 % R.H. 1.1 °C	Dew point thermometer / UNT-CAL-50304
Humidity generators: two- pressure, two-temperature, flow mixing humidity generator, constant temperature and humidity constant temperature and humidity chamber (Relative humidity) constant temperature and humidity chamber (temperature)	50306	(25 ~ 40) % R.H. (40 ~ 60) % R.H. (60 ~ 80) % R.H. (80 ~ 95) % R.H. (-70 ~ 200) °C	2.6 % R.H. 2.8 % R.H. 3.0 % R.H. 3.2 % R.H. 0.5 °C	Dew point thermometer / UNT-CAL-5036

## 901. Chemical analysis

Measured Quantity Instrument or Gauge	Field Code	Range	Measurement uncertainty (The Confidence Level is about 95 %)	Standard/Method of Measurement etc.
Gas analyzers / Oxygen Carbon monoxide Hydrogen sulfide Methane Carbon Dioxide Isobutane Hydrogen	90103	(0 ~ 21) cmol/mol (0 ~ 100) µmol/mol (0 ~ 25) µmol/mol (0 ~ 2.5) cmol/mol (0 ~ 5 000) µmol/mol (0.5 ~ 5) cmol/mol (0 ~ 0.8) cmol/mol (0 ~ 1 000) µmol/mol (1 ~ 2) cmol/mol	$2.0 \times 10^{-2}$ $2.4 \times 10^{-2}$ $4.6 \times 10^{-2}$ $2.1 \times 10^{-2}$ $2.0 \times 10^{-2}$ $1.9 \times 10^{-2}$ $1.6 \times 10^{-2}$ $1.3 \times 10^{-2}$ $1.6 \times 10^{-2}$	Standard gas / UNT-CAL-90103