Issue date: 05 May 2025
Valid Until: -

NO: SAMM 256
(Issue 3, 05 May 2025 replacement
of SAMM 256 dated 05 May 2025)

LABORATORY LOCATION/ CENTRAL OFFICE:	Metcal Technologies Sdn Bhd 36, Cangkat Bukit Belah, 11920 Bayan Lepas, Pulau Pinang , 11920, PULAU PINANG MALAYSIA
ACCREDITED SINCE :	11 JUNE 2025
FIELD(S) OF CALIBRATION:	Parallel Screw/Thread Plug Gauge DIMENSIONAL

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory's fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

*** The uncertainty covered by the CMC is expressed as the expanded uncertainty corresponding to a coverage probability of approximately 95 % and have a coverage factor of k=2 unless stated otherwise.**

CENTRAL LOCATION	Metcal Technologies Sdn Bhd 36, Cangkat Bukit Belah, 11920 Bayan Lepas, Pulau Pinang , 11920, Pulau Pinang
FIELD(S) OF CALIBRATION :	, DIMENSIONAL

SCOPE OF CALIBRATION : Parallel Screw/Thread Plug Gauge

Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**

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SCOPE OF CALIBRATION : DIMENSIONAL

Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**
Parallel Screw/thread Plug Gauge Pitch Diameter	Up to 100 mm	(1.6 + 1L) mm 'L' in meter	ULM, Three Wire Gauge, Micro-indicator, Non-Contact Measuring System based on JIS B 0261:2020 or ANSI/ASME B1.2-1983
Parallel Screw/thread Plug Gauge Pitch	0.25 mm to 6 mm	2.1 mm	ULM, Three Wire Gauge, Micro-indicator, Non-Contact Measuring System based on JIS B 0261:2020 or ANSI/ASME B1.2-1983
Parallel Screw/thread Plug Gauge Major Diameter	Up to 100 mm	(0.3 + 3.4L) mm 'L' in meter	ULM, Three Wire Gauge, Micro-indicator, Non-Contact Measuring System based on JIS B 0261:2020 or ANSI/ASME B1.2-1983
Taper Screw/thread Plug Gauge Major Diameter	Up to 100 mm	(1.4 + 0.6L) mm 'L' in meter	ULM, T-probe, gauge block, Length Comparator based on JIS B 0262:1989, AS 2710:1984
Taper Screw/thread Plug Gauge Pitch Diameter	Up to 100 mm	(1.6 + 0.8L) mm 'L' in meter	ULM, T-probe, gauge block, Length Comparator based on JIS B 0262:1989, AS 2710:1984
Taper Screw/thread Plug Gauge Step Limits	Up to 100 mm	(0.5 + 3.8L) mm 'L' in meter	ULM, T-probe, gauge block, Length Comparator based on JIS B 0262:1989, AS 2710:1984

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of SAMM 256 dated 05 May 2025)

Instrument Calibrated/Measurement Parameter	**Range**	**Calibration and Measurement Capability Expressed as an Uncertainty (±)***	**Remarks**
Parallel Screw/thread Ring Gauge Minor Diameter	Up to 50 mm	(0.7 + 3.9L) mm 'L' in meter	ULM, T-Probe, Plain Plug Gauge / Screw Check Plugs based on JIS B 0261:2020 or ANSI/ASME B1.2-1983
	Above 50 to 100 mm	(0.6 + 1.3L) mm 'L' in meter	ULM, T-Probe, Plain Plug Gauge / Screw Check Plugs based on JIS B 0261:2020 or ANSI/ASME B1.2-1983
Parallel Screw/thread Ring Gauge Pitch Diameter	Up to 50 mm	(1.5 + 0.9L) mm 'L' in meter	ULM, T-Probe, Plain Plug Gauge/ Screw Check Plugs based on JIS B 0261:2020 or ANSI/ASME B1.2-1983
	Above 50 to 100 mm	(2.5 + 0.4L) mm 'L' in meter	ULM, T-Probe, Plain Plug Gauge/ Screw Check Plugs based on JIS B 0261:2020 or ANSI/ASME B1.2-1983
Taper Screw/thread Ring Gauge Pitch Diameter	Up to 100 mm	(1.6 + 0.8L) mm 'L' in meter	ULM, T-probe, gauge block, Length Comparator based on JIS B 0262:1989, AS 2710:1984
Taper Screw/thread Ring Gauge Step Limits	Up to 100 mm	(0.5 + 3.8L) mm 'L' in meter	ULM, T-probe, gauge block, Length Comparator based on JIS B 0262:1989, AS 2710:1984

(Site Laboratory) Matrix A

Scope of Calibration: Electrical

AC Voltage Measurement

Range	Frequency				
	Hz	kHz			
	10 to 50	0.05 to 1	1 to 20	20 to 50	50 to 100

0 mV to 320 mV	0.094 + 0.025	0.091 + 0.024	0.36 + 0.026	0.36 + 0.025	0.97 + 0.89
320 mV to 3.2 V	0.085 + 0.26	0.085 + 0.33	0.35 + 0.73	0.36 + 2.8	0.97 + 11
3.2 V to 32 V	0.24 + 2.4	0.24 + 2.7	0.42 + 25	0.42 + 41	1.4 + 4.2
32 V to 320 V	0.48 + 25	0.47 + 29	1.4 + 29	-	-
320 V to 1020 V	0.43 + 18	0.43 + 17	-	-	-
The expanded uncertainties given in above table are expressed in mV/V + mV					

(Site Laboratory) Matrix B

AC Current Measurement

Range	Frequency (Hz)	Frequency (kHz)			
	10 to 45	0.045 to 1	1 to 5	5 to 10	10 to 30
29 µA to 330 µA	1.2 µA/mA + 0.086 µA	0.97 µA/mA + 0.078 µA	2.3 µA/mA + 0.12 µA	6.3 µA/mA + 0.16 µA	13 µA/mA + 0.32 µA
0.33 mA to 3.3 mA	0.98 µA/mA + 1.2 µA	0.79 µA/mA + 1.0 µA	1.6 µA/mA + 1.0 µA	3.9 µA/mA + 1.8 µA	7.8 µA/mA + 1.9 µA
3.3 mA to 33 mA	0.75 µA/mA + 3.5 µA	0.36 µA/mA + 3.5 µA	0.67 µA/mA + 3.5 µA	1.6 µA/mA + 3.9 µA	3.2 µA/mA + 4.4 µA
33 mA to 330 mA	0.72 mA/A + 0.091 mA	0.36 mA/A + 0.092 mA	0.80 mA/A + 0.098 mA	1.6 mA/A + 0.12 mA	3.1 mA/A + 0.18 mA
0.33 A to 1.1 A	1.4 mA/A + 0.12 mA	0.41 mA/A + 0.12 mA	4.6 mA/A + 0.77 mA	20 mA/A + 0.39 mA	-
1.1 A to 3 A	1.6 mA/A + 0.55 mA	0.80 mA/A + 0.55 mA	4.8 mA/A + 0.91 mA	20 mA/A + 4.0 mA	-
3 A to 11 A	-	0.78 mA/A + 2.1 mA	24 mA/A + 2.0 mA	-	-
11 A to 20 A	-	1.2 mA/A + 4.0 mA	24 mA/A + 4.0 mA	-	-

(Site Laboratory) Matrix C

Generating Instruments

AC Voltage:

Voltage	Frequency (Hz)	Frequency (kHz)			
	0 to 40	0.04 to 1	1 to 20	20 to 50	50 to 100
0 to 10 mV	0.50 mV + 0.40 mV/V	0.40 mV + 0.28 mV/V	0.67 mV + 0.40 mV/V	0.38 mV + 1.3 mV/V	0.37 mV + 6.1 mV/V
10 mV to 100 mV	0.11 mV + 0.15 mV/V	0.092 mV + 0.13 mV/V	0.092 mV + 0.21 mV/V	0.19 mV + 0.41 mV/V	0.18 mV 1.1 mV/V
100 mV to 1 V	0.15 mV + 0.082 mV/V	0.14 mV + 0.082 mV/V	0.14 mV + 0.17 mV/V	0.14 mV + 0.35 mV/V	0.91 mV + 0.93 mV/V
1 V to 10 V	1.4 mV + 0.084 mV/V	1.5 mV + 0.084 mV/V	1.5 mV + 0.17 mV/V	2.7 mV + 0.35 mV/V	12 mV + 0.93 mV/V
10 V to 100 V	14 mV + 0.24 mV/V	13 mV + 0.24 mV/V	28 mV + 0.24 mV/V	42 mV + 0.41 mV/V	19 mV + 0.11 mV/V
100 V to 1000 V	50 mV + 0.48 mV/V	31 mV 0.48 mV/V	-	-	-

(Site Laboratory) Matrix D

AC Current:

Current	Frequency (Hz)	Frequency (kHz)			Measuring Instrument
	0 to 50	0.05 to 1	1 to 5	5 to 30	
0 A to 1 mA	0.37 µA + 0.70 mA/A	0.33 µA + 0.36 mA/A	0.34 µA + 0.37 mA/A	0.52 µA + 4.7 mA/A	Keysight 3458A
1 mA to 10 mA	4.2 µA + 0.70 mA/A	4.1 µA + 0.36 mA/A	3.9 µA + 0.37 mA/A	5.8 µA + 4.7 mA/A	
10 mA to 100 mA	33 µA + 0.70 mA/A	35 µA + 0.36 mA/A	35 µA + 0.37 mA/A	55 µA + 4.7 mA/A	
100 mA to 1 A	0.40 mA + 0.94 mA/A	0.40 mA + 1.2 mA/A	0.34 mA + 1.2 mA/A	-	
1 A to 3 A	7.7 mA + 1.8 mA/A	7.9 mA + 1.8 mA/A	7.8 mA + 1.8 mA/A	-	Agilent 34401A
3 A to 20 A	0.16 mA/A + 11 mA	0.13 mA/A + 18 mA	0.15 mA/A + 25 mA	-	Keysight 34330A
20 to 30 A	0.16 mA/A + 16 mA			-	Current Shunt with Keysight 16 mA 3458A

Matrix A

AC Voltage Measurement

Range	Frequency (Hz)	Frequency (kHz)			
	10 to 50	0.05 to 1	1 to 20	20 to 50	50 to 100
0 mV to 320 mV	0.094 + 0.025	0.091 + 0.024	0.36 + 0.026	0.36 + 0.025	0.97 + 0.89
320 mV to 3.2 V	0.085 + 0.26	0.085 + 0.33	0.35 + 0.73	0.36 + 2.8	0.97 + 11
3.2 V to 32 V	0.24 + 2.4	0.24 + 2.7	0.42 + 25	0.42 + 41	1.4 + 4.2
32 V to 320 V	0.48 + 25	0.47 + 29	1.4 + 29		
320 V to 1020 V	0.43 + 18	0.43 + 17			

The expanded uncertainties given in above table are expressed in mV/V +mV

Matrix B

AC Current Measurement

Range	Frequency (Hz)	Frequency (kHz)			
	10 to 45	0.045 to 1	1 to 5	5 to 10	10 to 30
29 µA to 330 µA	1.2 µA/mA + 0.086 µA	0.97 µA/mA + 0.078 µA	2.3 µA/mA + 0.12 µA	6.3 µA/mA + 0.16 µA	13 µA/mA + 0.32 µA
0.33 mA to 3.3 mA	0.98 µA/mA + 1.2 µA	0.79 µA/mA + 1.0 µA	1.6 µA/mA + 1.0 µA	3.9 µA/mA + 1.8 µA	7.8 µA/mA + 1.9 µA
3.3 mA to 33 mA	0.75 µA/mA + 3.5 µA	0.36 µA/mA + 3.5 µA	0.67 µA/mA + 3.5 µA	1.6 µA/mA + 3.9 µA	3.2 µA/mA + 4.4 µA
33 mA to 330 mA	0.72 mA/A + 0.091 mA	0.36 mA/A + 0.092 mA	0.80 mA/A + 0.098 mA	1.6 mA/A + 0.12 mA	3.1 mA/A + 0.18 mA
0.33 A to 1.1 A	1.4 mA/A + 0.12 mA	0.41 mA/A + 0.12 mA	4.6 mA/A + 0.77 mA	20 mA/A + 0.39 mA	
1.1 A to 3 A	1.6 mA/A + 0.55 mA	0.80 mA/A + 0.55 mA	4.8 mA/A + 0.91 mA	20 mA/A + 4.0 mA	

3 A to 11 A		0.78 mA/A + 2.1 mA	24 mA/A + 2.0 mA		
11 A to 20 A		1.2 mA/A + 4.0 mA	24 mA/A + 4.0 mA		

Matrix C

AC Voltage:

Voltage	Frequency (Hz)	Frequency (kHz)			
	0 to 40	0.04 to 1	1 to 20	20 to 50	50 to 100
0 to 10 mV	0.40 mV/V + 0.35 mV	0.28 mV/V + 0.38 mV	0.40 mV/V + 38 mV	1.3 mV/V + 0.37 mV	6.1 mV/V + 0.35 mV
10 mV to 100 mV	0.15 mV/V + 0.089 mV	0.12 mV/V + 0.024 mV	0.20 mV/V + 0.0039 mV	0.41 mV/V + 0.13 mV	1.1 mV/V + 0.16 mV
100 mV to 1 V	0.086 mV/V + 0.048 mV	0.083 mV/V + 0.026 mV	0.17 mV/V + 0.028 mV	0.35 mV/V + 0.031 mV	0.93 mV/V + 11 mV
1 V to 10 V	0.085 mV/V + 0.47 mV	0.085 mV/V + 0.34 mV	0.17 mV/V + 0.73 mV	0.35 mV/V + 2.7 mV	0.94 mV/V + 11 mV
10 V to 100 V	0.24 mV/V + 4.7 mV	0.25 mV/V + 2.8 mV	0.24 mV/V + 24 mV	0.41 mV/V + 39 mV	0.11 mV/V + 3.6 mV
100 V to 1000 V	0.48 mV/V + 50 mV	0.48 mV/V + 30 mV	-	-	-

Matrix D

AC Current:

Current	Frequency (Hz)	Frequency (kHz)			Measuring Instrument
	0 to 50	0.05 to 1	1 to 5	5 to 30	
0 A to 1 mA	0.71 mA/A + 0.47 µA	0.36 mA/A + 0.24 µA	0.38 mA/A + 0.24 µA	4.7 mA/A + 0.24 µA	Keysight 3458A
1 mA to 10 mA	0.70 mA/A + 2.7 µA	0.36 mA/A + 2.6 µA	0.37 mA/A + 2.7 µA	4.7 mA/A + 5.0 µA	
10 mA to 100 mA	0.70 mA/A + 24 µA	0.36 mA/A + 26 µA	0.37 mA/A + 26 µA	4.7 mA/A + 49 µA	
100 mA to 1 A	0.94 mA/A + 0.25 mA	1.2 mA/A + 0.26 mA	1.2 mA/A + 0.25 mA	-	
1 A to 3 A	1.8 mA/A + 2.6 mA	1.8 mA/A + 3.0 mA	1.8 mA/A + 3.0 mA	-	Agilent 34401A
3 A to 20 A	0.16 mA/A + 11 mA	0.13 mA/A + 18 mA	0.15 mA/A + 25 mA	-	Keysight 34330A
20 to 30 A	0.16 mA/A + 16 mA			-	Current Shunt with Keysight 3458A

(Site Laboratory) Matrix A

Scope of Calibration: Electrical

AC Voltage Measurement

Range	Frequency

	Hz	kHz			
	10 to 50	0.05 to 1	1 to 20	20 to 50	50 to 100
0 mV to 320 mV	0.094 + 0.025	0.091 + 0.024	0.36 + 0.026	0.36 + 0.025	0.97 + 0.89
320 mV to 3.2 V	0.085 + 0.26	0.085 + 0.33	0.35 + 0.73	0.36 + 2.8	0.97 + 11
3.2 V to 32 V	0.24 + 2.4	0.24 + 2.7	0.42 + 25	0.42 + 41	1.4 + 4.2
32 V to 320 V	0.48 + 25	0.47 + 29	1.4 + 29	-	-
320 V to 1020 V	0.43 + 18	0.43 + 17	-	-	-

The expanded uncertainties given in above table are expressed in mV/V + mV

(Site Laboratory) Matrix B

AC Current Measurement

Range	Frequency (Hz)	Frequency (kHz)			
	10 to 45	0.045 to 1	1 to 5	5 to 10	10 to 30
29 µA to 330 µA	1.2 µA/mA + 0.086 µA	0.97 µA/mA + 0.078 µA	2.3 µA/mA + 0.12 µA	6.3 µA/mA + 0.16 µA	13 µA/mA + 0.32 µA
0.33 mA to 3.3 mA	0.98 µA/mA + 1.2 µA	0.79 µA/mA + 1.0 µA	1.6 µA/mA + 1.0 µA	3.9 µA/mA + 1.8 µA	7.8 µA/mA + 1.9 µA
3.3 mA to 33 mA	0.75 µA/mA + 3.5 µA	0.36 µA/mA + 3.5 µA	0.67 µA/mA + 3.5 µA	1.6 µA/mA + 3.9 µA	3.2 µA/mA + 4.4 µA
33 mA to 330 mA	0.72 mA/A + 0.091 mA	0.36 mA/A + 0.092 mA	0.80 mA/A + 0.098 mA	1.6 mA/A + 0.12 mA	3.1 mA/A + 0.18 mA
0.33 A to 1.1 A	1.4 mA/A + 0.12 mA	0.41 mA/A + 0.12 mA	4.6 mA/A + 0.77 mA	20 mA/A + 0.39 mA	-
1.1 A to 3 A	1.6 mA/A + 0.55 mA	0.80 mA/A + 0.55 mA	4.8 mA/A + 0.91 mA	20 mA/A + 4.0 mA	-
3 A to 11 A	-	0.78 mA/A + 2.1 mA	24 mA/A + 2.0 mA	-	-
11 A to 20 A	-	1.2 mA/A + 4.0 mA	24 mA/A + 4.0 mA	-	-

(Site Laboratory) Matrix C

Generating Instruments

AC Voltage:

Voltage	Frequency (Hz)	Frequency (kHz)			
	0 to 40	0.04 to 1	1 to 20	20 to 50	50 to 100
0 to 10 mV	0.50 mV + 0.40 mV/V	0.40 mV + 0.28 mV/V	0.67 mV + 0.40 mV/V	0.38 mV + 1.3 mV/V	0.37 mV + 6.1 mV/V
10 mV to 100 mV	0.11 mV + 0.15 mV/V	0.092 mV + 0.13 mV/V	0.092 mV + 0.21 mV/V	0.19 mV + 0.41 mV/V	0.18 mV 1.1 mV/V
100 mV to 1 V	0.15 mV + 0.082 mV/V	0.14 mV + 0.082 mV/V	0.14 mV + 0.17 mV/V	0.14 mV + 0.35 mV/V	0.91 mV + 0.93 mV/V
1 V to 10 V	1.4 mV + 0.084 mV/V	1.5 mV + 0.084 mV/V	1.5 mV + 0.17 mV/V	2.7 mV + 0.35 mV/V	12 mV + 0.93 mV/V
10 V to 100 V	14 mV + 0.24 mV/V	13 mV + 0.24 mV/V	28 mV + 0.24 mV/V	42 mV + 0.41 mV/V	19 mV + 0.11 mV/V
100 V to 1000 V	50 mV + 0.48 mV/V	31 mV 0.48 mV/V	-	-	-

(Site Laboratory) Matrix D

AC Current:

Current	Frequency (Hz)	Frequency (kHz)			Measuring Instrument
	0 to 50	0.05 to 1	1 to 5	5 to 30	
0 A to 1 mA	0.37 µA + 0.70 mA/A	0.33 µA + 0.36 mA/A	0.34 µA + 0.37 mA/A	0.52 µA + 4.7 mA/A	Keysight 3458A
1 mA to 10 mA	4.2 µA + 0.70 mA/A	4.1 µA + 0.36 mA/A	3.9 µA + 0.37 mA/A	5.8 µA + 4.7 mA/A	
10 mA to 100 mA	33 µA + 0.70 mA/A	35 µA + 0.36 mA/A	35 µA + 0.37 mA/A	55 µA + 4.7 mA/A	
100 mA to 1 A	0.40 mA + 0.94 mA/A	0.40 mA + 1.2 mA/A	0.34 mA + 1.2 mA/A	-	
1 A to 3 A	7.7 mA + 1.8 mA/A	7.9 mA + 1.8 mA/A	7.8 mA + 1.8 mA/A	-	Agilent 34401A
3 A to 20 A	0.16 mA/A + 11 mA	0.13 mA/A + 18 mA	0.15 mA/A + 25 mA	-	Keysight 34330A Current Shunt with Keysight 16 mA 3458A
20 to 30 A	0.16 mA/A + 16 mA			-	

Matrix A

AC Voltage Measurement

Range	Frequency (Hz)	Frequency (kHz)			
	10 to 50	0.05 to 1	1 to 20	20 to 50	50 to 100
0 mV to 320 mV	0.094 + 0.025	0.091 + 0.024	0.36 + 0.026	0.36 + 0.025	0.97 + 0.89
320 mV to 3.2 V	0.085 + 0.26	0.085 + 0.33	0.35 + 0.73	0.36 + 2.8	0.97 + 11
3.2 V to 32 V	0.24 + 2.4	0.24 + 2.7	0.42 + 25	0.42 + 41	1.4 + 4.2
32 V to 320 V	0.48 + 25	0.47 + 29	1.4 + 29		
320 V to 1020 V	0.43 + 18	0.43 + 17			

The expanded uncertainties given in above table are expressed in mV/V +mV

Matrix B

AC Current Measurement

Range	Frequency (Hz)	Frequency (kHz)			
	10 to 45	0.045 to 1	1 to 5	5 to 10	10 to 30
29 µA to 330 µA	1.2 µA/mA + 0.086 µA	0.97 µA/mA + 0.078 µA	2.3 µA/mA + 0.12 µA	6.3 µA/mA + 0.16 µA	13 µA/mA + 0.32 µA
0.33 mA to 3.3 mA	0.98 µA/mA + 1.2 µA	0.79 µA/mA + 1.0 µA	1.6 µA/mA + 1.0 µA	3.9 µA/mA + 1.8 µA	7.8 µA/mA + 1.9 µA
3.3 mA to 33 mA	0.75 µA/mA + 3.5 µA	0.36 µA/mA + 3.5 µA	0.67 µA/mA + 3.5 µA	1.6 µA/mA + 3.9 µA	3.2 µA/mA + 4.4 µA
33 mA to 330 mA	0.72 mA/A + 0.091 mA	0.36 mA/A + 0.092 mA	0.80 mA/A + 0.098 mA	1.6 mA/A + 0.12 mA	3.1 mA/A + 0.18 mA
0.33 A to 1.1 A	1.4 mA/A + 0.12 mA	0.41 mA/A + 0.12 mA	4.6 mA/A + 0.77 mA	20 mA/A + 0.39 mA	

1.1 A to 3 A	1.6 mA/A + 0.55 mA	0.80 mA/A + 0.55 mA	4.8 mA/A + 0.91 mA	20 mA/A + 4.0 mA	
3 A to 11 A		0.78 mA/A + 2.1 mA	24 mA/A + 2.0 mA		
11 A to 20 A		1.2 mA/A + 4.0 mA	24 mA/A + 4.0 mA		

Matrix C

AC Voltage:

Voltage	Frequency (Hz)	Frequency (kHz)			
	0 to 40	0.04 to 1	1 to 20	20 to 50	50 to 100
0 to 10 mV	0.40 mV/V + 0.35 mV	0.28 mV/V + 0.38 mV	0.40 mV/V + 38 mV	1.3 mV/V + 0.37 mV	6.1 mV/V + 0.35 mV
10 mV to 100 mV	0.15 mV/V + 0.089 mV	0.12 mV/V + 0.024 mV	0.20 mV/V + 0.0039 mV	0.41 mV/V + 0.13 mV	1.1 mV/V + 0.16 mV
100 mV to 1 V	0.086 mV/V + 0.048 mV	0.083 mV/V + 0.026 mV	0.17 mV/V + 0.028 mV	0.35 mV/V + 0.031 mV	0.93 mV/V + 11 mV
1 V to 10 V	0.085 mV/V + 0.47 mV	0.085 mV/V + 0.34 mV	0.17 mV/V + 0.73 mV	0.35 mV/V + 2.7 mV	0.94 mV/V + 11 mV
10 V to 100 V	0.24 mV/V + 4.7 mV	0.25 mV/V + 2.8 mV	0.24 mV/V + 24 mV	0.41 mV/V + 39 mV	0.11 mV/V + 3.6 mV
100 V to 1000 V	0.48 mV/V + 50 mV	0.48 mV/V + 30 mV	-	-	-

Matrix D

AC Current:

Current	Frequency (Hz)	Frequency (kHz)			Measuring Instrument
	0 to 50	0.05 to 1	1 to 5	5 to 30	
0 A to 1 mA	0.71 mA/A + 0.47 µA	0.36 mA/A + 0.24 µA	0.38 mA/A + 0.24 µA	4.7 mA/A + 0.24 µA	Keysight 3458A
1 mA to 10 mA	0.70 mA/A + 2.7 µA	0.36 mA/A + 2.6 µA	0.37 mA/A + 2.7 µA	4.7 mA/A + 5.0 µA	
10 mA to 100 mA	0.70 mA/A + 24 µA	0.36 mA/A + 26 µA	0.37 mA/A + 26 µA	4.7 mA/A + 49 µA	
100 mA to 1 A	0.94 mA/A + 0.25 mA	1.2 mA/A + 0.26 mA	1.2 mA/A + 0.25 mA	-	
1 A to 3 A	1.8 mA/A + 2.6 mA	1.8 mA/A + 3.0 mA	1.8 mA/A + 3.0 mA	-	Agilent 34401A
3 A to 20 A	0.16 mA/A + 11 mA	0.13 mA/A + 18 mA	0.15 mA/A + 25 mA	-	Keysight 34330A Current Shunt with Keysight 3458A
20 to 30 A	0.16 mA/A + 16 mA			-	