



YOKOGAWA

European Standards Laboratory
Yokogawa Europe Solutions B.V.
Amersfoort, The Netherlands



CALIBRATION-CERTIFICATE

Certificate number 58239P10315
Page 1 of 19

Example

Applicant User
address

Instrument WT333 Digital Power Meter
Manufacturer Yokogawa
Type WT333-F-C1/C7
Serial number C3RG09035E
Inventory number CCE_1_920
ID numbers used standards CSE820 CSE976 CSE981 CSE965 CSE1029
Procedure CALWT333_NO_EX Version: 1 of 20-03-2017

Calibration method The Powermeter was compared to the Yokogawa Power Calibration System via a phantom technique. During the calibration the distortion of the applied voltage and current were below 0.1 %. Before calibration the device was powered on for at least 12 hours.

Environmental conditions Temperature (23.0 ± 1) °C
Relative Humidity (50 ± 4) %rh

Date of Calibration 01 May 2018

Result The results of the calibration are shown on the next pages.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor 2 such that the coverage probability corresponds to approximately 95 %.
The standard uncertainty of measurement has been determined in accordance with the EA-4/02 M:2013.
The long term stability of the calibrated object is not included in the reported expanded uncertainty measurement.
This certificate of calibration is issued in compliance with ISO/IEC 17025:2005

Traceability The measurements have been executed using standards for which the traceability to (inter)national standards has been demonstrated towards the RvA.

Date 01 May 2018
Name N. el Morabit
Function Calibration Engineer

Yokogawa Europe Solutions B.V.
European Standards Laboratory
P.O. Box 163, 3800 AD Amersfoort (NL)
Phone +31 (0)88 46410000
website <http://tmi.yokogawa.com>

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E L E M E N T 1

Example

Voltage Calibration DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V	60.00	59.97	0.02	V DC	-0.050
600V	-60.00	-60.00	0.02	V DC	0.000
600V	100.00	99.97	0.02	V DC	-0.030
600V	-100.00	-99.99	0.02	V DC	-0.007
600V	300.00	299.93	0.02	V DC	-0.024
600V	-300.00	-299.93	0.02	V DC	-0.023
600V	600.00	599.87	0.02	V DC	-0.021
600V	-600.00	-599.90	0.02	V DC	-0.017

Voltage Calibration AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	14.995	0.002	V AC	-0.031
30V	30.000	29.991	0.005	V AC	-0.031
60V	60.000	59.982	0.008	V AC	-0.031
150V	150.00	149.96	0.02	V AC	-0.027
300V	300.00	299.92	0.04	V AC	-0.026

Voltage Calibration AC RMS 1 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	14.996	0.002	V AC	-0.029
30V	30.000	29.990	0.004	V AC	-0.032
60V	60.000	59.980	0.008	V AC	-0.033
150V	150.00	149.96	0.04	V AC	-0.025
300V	300.00	299.94	0.08	V AC	-0.019
600V	600.00	599.74	0.23	V AC	-0.043

Voltage Calibration AC RMS 10 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.001	0.002	V AC	0.005
30V	30.000	29.998	0.015	V AC	-0.005
60V	60.000	60.005	0.010	V AC	0.009
150V	150.00	150.02	0.02	V AC	0.015
300V	300.0	300.0	0.4	V AC	-0.009
600V	600.0	599.8	0.4	V AC	-0.027

Voltage Calibration AC RMS 50 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.041	0.005	V AC	0.276
30V	30.000	30.079	0.008	V AC	0.264
60V	60.000	60.156	0.012	V AC	0.260
150V	100.00	100.29	0.02	V AC	0.287

Voltage Calibration AC RMS 100 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V	100.00	98.82	0.10	V AC	-1.178

Voltage Calibration AC MEAN 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V	150.00	149.96	0.02	V AC	-0.027

Voltage Calibration Linearity AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V	60.00	59.99	0.02	V AC	-0.021
600V	100.00	99.98	0.02	V AC	-0.023
600V	300.00	299.93	0.04	V AC	-0.022
600V	600.00	599.90	0.09	V AC	-0.016

Current Calibration DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
5A	5.0000	5.0002	0.0006	A DC	0.004
5A	-5.0000	-5.0002	0.0011	A DC	0.005

Current Calibration AC RMS 10 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0000	0.0002	A AC	-0.004

Current Calibration AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
2A	2.0000	1.9999	0.0002	A AC	-0.006
5A	5.0000	4.9998	0.0002	A AC	-0.005
10A	10.000	9.999	0.002	A AC	-0.005
20A	20.000	20.002	0.005	A AC	0.011

Current Calibration AC RMS 1 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0002	0.0002	A AC	0.019
5A	5.0000	5.0013	0.0011	A AC	0.025

Current Calibration AC RMS 10 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0028	0.0002	A AC	0.280

Current Calibration AC RMS 20 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0051	0.0002	A AC	0.510

Current Calibration AC RMS 100 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0009	0.0007	A AC	0.086

Current Calibration Linearity DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	0.1000	0.1000	0.0002	A DC	-0.005
1A	-0.1000	-0.1000	0.0002	A DC	-0.005
1A	0.2000	0.2000	0.0002	A DC	0.019
1A	-0.2000	-0.2000	0.0002	A DC	-0.016
1A	0.6000	0.6002	0.0002	A DC	0.041
1A	-0.6000	-0.5997	0.0002	A DC	-0.042
1A	1.0000	1.0003	0.0004	A DC	0.034
1A	-1.0000	-0.9998	0.0004	A DC	-0.023

Current Calibration Linearity AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	0.1000	0.1000	0.0002	A AC	-0.026
1A	0.2000	0.2000	0.0002	A AC	-0.019
1A	0.6000	0.6000	0.0002	A AC	0.005
1A	1.0000	0.9999	0.0002	A AC	-0.007

Power Calibration DC Constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
60V 1A	60.00	59.99	0.02	W	-0.014
60V 1A	-60.00	-59.99	0.02	W	-0.010
600V 1A	600.00	599.99	0.12	W	-0.001
600V 1A	-600.00	-600.01	0.12	W	0.002

Power Calibration DC Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.00	0.04	W	-0.003
150V 1A	-100.00	-100.00	0.05	W	-0.004

Power Calibration AC RMS 10 Hz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	99.99	0.05	W	-0.009

Power Calibration AC RMS 60 Hz PF=1 at constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	15.000	14.995	0.002	W	-0.033
30V 1A	30.000	29.990	0.005	W	-0.032
60V 1A	60.00	59.98	0.02	W	-0.031
150V 1A	150.00	149.96	0.02	W	-0.023
300V 1A	300.00	299.92	0.05	W	-0.026

Power Calibration AC RMS 60 Hz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 2A	200.00	199.95	0.04	W	-0.025
150V 5A	500.00	499.89	0.06	W	-0.022
150V 10A	1.000	1.000	0.002	kW	-0.020
150V 20A	2.000	2.000	0.002	kW	-0.013

Power Calibration AC RMS 1 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.00	0.02	W	0.005

Power Calibration AC RMS 10 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.34	0.05	W	0.339

Power Calibration AC RMS 20 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.72	0.04	W	0.718

Power Calibration AC RMS 50 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	101.20	0.10	W	1.196

Power Calibration AC RMS 100 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.0	99.1	0.3	W	-0.892

Power Calibration Linearity 60 Hz PF=1 at constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V 1A	60.00	59.99	0.02	W	-0.013
600V 1A	100.00	99.98	0.02	W	-0.023
600V 1A	600.00	599.92	0.10	W	-0.013

Power Calibration 60Hz PF=0 Leg

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	0.00	-0.01	0.02	W	-

Power Calibration 60Hz PF=0 Lead

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	0.00	-0.01	0.02	W	-

Power Calibration 60Hz PF=0 Leg

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	0.00	0.00	0.02	W	-

Power Calibration 60Hz PF=0 Lead

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	0.00	0.00	0.02	W	-

ELEMENT 2

Voltage Calibration DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V	60.00	59.97	0.02	V DC	-0.050
600V	-60.00	-60.00	0.02	V DC	0.005
600V	100.00	99.98	0.02	V DC	-0.020
600V	-100.00	-100.01	0.02	V DC	0.010
600V	300.00	299.97	0.02	V DC	-0.010
600V	-300.00	-300.00	0.02	V DC	0.000
600V	600.00	599.99	0.02	V DC	-0.001
600V	-600.00	-600.02	0.02	V DC	0.003

Voltage Calibration AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.000	0.002	V AC	0.003
30V	30.000	30.000	0.005	V AC	0.001
60V	60.000	60.000	0.008	V AC	-0.001
150V	150.00	150.00	0.02	V AC	0.000
300V	300.00	299.99	0.04	V AC	-0.002

Voltage Calibration AC RMS 1 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.001	0.002	V AC	0.004
30V	30.000	30.000	0.004	V AC	0.001
60V	60.000	59.998	0.008	V AC	-0.003
150V	150.00	150.00	0.04	V AC	0.002
300V	300.00	300.01	0.08	V AC	0.005
600V	600.00	599.90	0.23	V AC	-0.016

Voltage Calibration AC RMS 10 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.005	0.002	V AC	0.034
30V	30.000	30.007	0.015	V AC	0.025
60V	60.000	60.023	0.010	V AC	0.039
150V	150.00	150.06	0.02	V AC	0.042
300V	300.0	300.0	0.4	V AC	0.015
600V	600.0	600.0	0.4	V AC	-0.002

Voltage Calibration AC RMS 50 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.040	0.005	V AC	0.270
30V	30.000	30.078	0.008	V AC	0.258
60V	60.000	60.151	0.012	V AC	0.252
150V	100.00	100.28	0.02	V AC	0.284

Voltage Calibration AC RMS 100 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V	100.00	98.72	0.10	V AC	-1.278

Voltage Calibration AC MEAN 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V	150.00	150.00	0.02	V AC	0.000

Voltage Calibration Linearity AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V	60.00	60.00	0.02	V AC	-0.004
600V	100.00	100.00	0.02	V AC	-0.003
600V	300.00	300.00	0.04	V AC	0.001
600V	600.00	600.03	0.08	V AC	0.005

Current Calibration DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
5A	5.0000	4.9995	0.0006	A DC	-0.011
5A	-5.0000	-4.9996	0.0011	A DC	-0.008

Current Calibration AC RMS 10 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	0.9999	0.0002	A AC	-0.014

Current Calibration AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
2A	2.0000	1.9996	0.0002	A AC	-0.022
5A	5.0000	4.9991	0.0002	A AC	-0.017
10A	10.000	9.998	0.002	A AC	-0.016
20A	20.000	19.998	0.005	A AC	-0.009

Current Calibration AC RMS 1 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0001	0.0002	A AC	0.008
5A	5.0000	5.0007	0.0011	A AC	0.014

Current Calibration AC RMS 10 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0026	0.0002	A AC	0.260

Current Calibration AC RMS 20 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0052	0.0002	A AC	0.523

Current Calibration AC RMS 100 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0002	0.0007	A AC	0.018

Current Calibration Linearity DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	0.1000	0.1000	0.0002	A DC	-0.007
1A	-0.1000	-0.1000	0.0002	A DC	-0.004
1A	0.2000	0.2000	0.0002	A DC	0.002
1A	-0.2000	-0.2000	0.0002	A DC	-0.016
1A	0.6000	0.6002	0.0002	A DC	0.032
1A	-0.6000	-0.5996	0.0002	A DC	-0.071
1A	1.0000	1.0001	0.0004	A DC	0.013
1A	-1.0000	-0.9996	0.0004	A DC	-0.039

Current Calibration Linearity AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	0.1000	0.1000	0.0002	A AC	-0.025
1A	0.2000	0.2000	0.0002	A AC	-0.018
1A	0.6000	0.5998	0.0002	A AC	-0.026
1A	1.0000	0.9998	0.0002	A AC	-0.023

Power Calibration DC Constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
60V 1A	60.00	60.00	0.02	W	-0.007
60V 1A	-60.00	-60.00	0.02	W	-0.002
600V 1A	600.00	599.99	0.12	W	-0.001
600V 1A	-600.00	-600.00	0.12	W	0.000

Power Calibration DC Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.00	0.04	W	-0.004
150V 1A	-100.00	-99.99	0.05	W	-0.010

Power Calibration AC RMS 10 Hz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	99.99	0.05	W	-0.015

Power Calibration AC RMS 60 Hz PF=1 at constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	15.000	14.997	0.002	W	-0.021
30V 1A	30.000	29.994	0.005	W	-0.021
60V 1A	60.00	59.99	0.02	W	-0.020
150V 1A	150.00	149.96	0.02	W	-0.024
300V 1A	300.00	299.94	0.05	W	-0.021

Power Calibration AC RMS 60 Hz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 2A	200.00	199.95	0.04	W	-0.026
150V 5A	500.00	499.91	0.06	W	-0.017
150V 10A	1.000	1.000	0.002	kW	-0.020
150V 20A	2.000	2.000	0.002	kW	-0.009

Power Calibration AC RMS 1 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.00	0.02	W	0.002

Power Calibration AC RMS 10 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.35	0.05	W	0.352

Power Calibration AC RMS 20 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.73	0.04	W	0.728

Power Calibration AC RMS 50 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	101.20	0.10	W	1.202

Power Calibration AC RMS 100 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.0	98.9	0.3	W	-1.065

Power Calibration Linearity 60 Hz PF=1 at constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V 1A	60.00	59.99	0.02	W	-0.012
600V 1A	100.00	99.98	0.02	W	-0.022
600V 1A	600.00	599.92	0.10	W	-0.014

Power Calibration 60Hz PF=0 Leg

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	0.00	-0.02	0.02	W	-

Power Calibration 60Hz PF=0 Lead

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	0.00	-0.01	0.02	W	-

Power Calibration 60Hz PF=0 Leg

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	0.00	0.00	0.02	W	-

Power Calibration 60Hz PF=0 Lead

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	0.00	0.00	0.02	W	-

ELEMENT 3

Voltage Calibration DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V	60.00	59.99	0.02	V DC	-0.011
600V	-60.00	-59.99	0.02	V DC	-0.017
600V	100.00	100.01	0.02	V DC	0.007
600V	-100.00	-99.97	0.02	V DC	-0.030
600V	300.00	299.97	0.02	V DC	-0.010
600V	-300.00	-299.94	0.02	V DC	-0.020
600V	600.00	599.96	0.02	V DC	-0.006
600V	-600.00	-599.95	0.02	V DC	-0.008

Voltage Calibration AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	14.997	0.002	V AC	-0.017
30V	30.000	29.995	0.005	V AC	-0.018
60V	60.000	59.989	0.008	V AC	-0.019
150V	150.00	149.98	0.02	V AC	-0.013
300V	300.00	299.96	0.04	V AC	-0.012

Voltage Calibration AC RMS 1 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	14.998	0.002	V AC	-0.016
30V	30.000	29.994	0.004	V AC	-0.019
60V	60.000	59.987	0.009	V AC	-0.022
150V	150.00	149.98	0.04	V AC	-0.011
300V	300.00	299.97	0.08	V AC	-0.009
600V	600.00	599.83	0.23	V AC	-0.028

Voltage Calibration AC RMS 10 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.002	0.002	V AC	0.014
30V	30.000	30.002	0.015	V AC	0.008
60V	60.000	60.013	0.010	V AC	0.022
150V	150.00	150.04	0.02	V AC	0.029
300V	300.0	300.0	0.4	V AC	0.005
600V	600.0	599.9	0.4	V AC	-0.013

Voltage Calibration AC RMS 50 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V	15.000	15.043	0.005	V AC	0.287
30V	30.000	30.082	0.008	V AC	0.274
60V	60.000	60.161	0.012	V AC	0.268
150V	100.00	100.30	0.02	V AC	0.304

Voltage Calibration AC RMS 100 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V	100.00	98.83	0.10	V AC	-1.175

Voltage Calibration AC MEAN 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V	150.00	149.98	0.02	V AC	-0.013

Voltage Calibration Linearity AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V	60.00	59.99	0.02	V AC	-0.010
600V	100.00	99.99	0.02	V AC	-0.013
600V	300.00	299.96	0.04	V AC	-0.012
600V	600.00	599.96	0.09	V AC	-0.006

Current Calibration DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
5A	5.0000	5.0002	0.0006	A DC	0.005
5A	-5.0000	-5.0000	0.0011	A DC	0.000

Current Calibration AC RMS 10 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0000	0.0002	A AC	-0.004

Current Calibration AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
2A	2.0000	1.9999	0.0002	A AC	-0.007
5A	5.0000	4.9997	0.0002	A AC	-0.006
10A	10.000	10.000	0.002	A AC	-0.005
20A	20.000	20.002	0.005	A AC	0.010

Current Calibration AC RMS 1 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0002	0.0002	A AC	0.019
5A	5.0000	5.0010	0.0011	A AC	0.020

Current Calibration AC RMS 10 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0029	0.0002	A AC	0.288

Current Calibration AC RMS 20 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0057	0.0002	A AC	0.572

Current Calibration AC RMS 100 kHz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	1.0000	1.0098	0.0007	A AC	0.977

Current Calibration Linearity DC

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	0.1000	0.1000	0.0002	A DC	-0.005
1A	-0.1000	-0.0999	0.0002	A DC	-0.071
1A	0.2000	0.2001	0.0002	A DC	0.052
1A	-0.2000	-0.2000	0.0002	A DC	-0.015
1A	0.6000	0.6002	0.0002	A DC	0.040
1A	-0.6000	-0.5997	0.0002	A DC	-0.046
1A	1.0000	1.0004	0.0004	A DC	0.042
1A	-1.0000	-0.9997	0.0004	A DC	-0.026

Current Calibration Linearity AC RMS 60 Hz

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
1A	0.1000	0.1000	0.0002	A AC	-0.026
1A	0.2000	0.2000	0.0002	A AC	-0.019
1A	0.6000	0.6000	0.0002	A AC	0.000
1A	1.0000	0.9999	0.0002	A AC	-0.006

Power Calibration DC Constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
60V 1A	60.00	60.00	0.02	W	-0.006
60V 1A	-60.00	-60.00	0.02	W	-0.007
600V 1A	600.00	600.09	0.12	W	0.014
600V 1A	-600.00	-600.08	0.12	W	0.014

Power Calibration DC Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.01	0.04	W	0.006
150V 1A	-100.00	-100.00	0.05	W	-0.003

Power Calibration AC RMS 10 Hz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.00	0.05	W	0.001

Power Calibration AC RMS 60 Hz PF=1 at constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	15.000	14.996	0.002	W	-0.027
30V 1A	30.000	29.992	0.005	W	-0.028
60V 1A	60.00	59.98	0.02	W	-0.026
150V 1A	150.00	149.97	0.02	W	-0.019
300V 1A	300.00	299.94	0.05	W	-0.020

Power Calibration AC RMS 60 Hz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 2A	200.00	199.96	0.04	W	-0.020
150V 5A	500.00	499.91	0.06	W	-0.017
150V 10A	1.000	1.000	0.002	kW	-0.016
150V 20A	2.000	2.000	0.002	kW	-0.009

Power Calibration AC RMS 1 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.00	0.02	W	0.004

Power Calibration AC RMS 10 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.37	0.05	W	0.372

Power Calibration AC RMS 20 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	100.79	0.04	W	0.794

Power Calibration AC RMS 50 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.00	101.48	0.10	W	1.479

Power Calibration AC RMS 100 kHz PF=1 Constant 100 V

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	100.0	99.9	0.3	W	-0.056

Power Calibration Linearity 60 Hz PF=1 at constant 1 A

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
600V 1A	60.00	59.99	0.02	W	-0.013
600V 1A	100.00	99.98	0.02	W	-0.023
600V 1A	600.00	599.94	0.10	W	-0.010

Power Calibration 60Hz PF=0 Leg

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	0.00	-0.02	0.02	W	-

Power Calibration 60Hz PF=0 Lead

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
150V 1A	0.00	0.01	0.02	W	-

Power Calibration 60Hz PF=0 Leg

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	0.00	0.00	0.02	W	-

Power Calibration 60Hz PF=0 Lead

Range	Applied	Measured	±Uncertainty	Unit	Deviation %
15V 1A	0.00	0.00	0.02	W	-

Comments :