

Manufacturer	HEWLETT-PACKARD	Calibration date	July 28 2018
Model Number	3458A	Ambient Temperature	21.59 °C
Serial	STDHP	Relative Humidity	45.01 %
ID Number	IM5700A	Pressure	1001.62
Notes	Post-cal test	Test type	M5700

This note is test dummy text block for further use. It allow to include user information for further reference

Reference standard	Mfg	Model	Options	Serial / Unc	CEID	Calibration date	Due date
TEST MFC	Fluke	5700A	None	x26	ID02	07/04/2018	07/04/2019
DMM	Keithley	2002	MEM2	0603805	XD4	02/25/2018	02/25/2019
STDR	ESI	SR104	10000.0012 KΩ	±1.00 ppm	XR04	06/30/2018	12/30/2018
STDR	xDevs.com/Fluke	SL935	1.00005942 Ω	±0.17 ppm	XR03	05/31/2018	05/31/2019
STDR	xDevs.com/Fluke	SL935	9999.9755 kΩ	±0.33 ppm	XR02	05/31/2018	05/31/2019
STDR	xDevs.com	HVR4	0.997 GΩ	±30000 ppm	XR04	02/14/2018	02/14/2019
DC STD	Wavetek	7000	10.0000007 VDC	±0.9 ppm	XD02	06/07/2018	12/08/2018
DC STD	xDevs.com	792X[2]	10.000009 VDC	±2.2 ppm	XD01	02/16/2018	08/16/2018

MFC last calibrated	12.0 days ago	MFC since DCV ZERO	0.0 days ago
MFC since WBFLAT	0.0 days ago	MFC since WBGAIN	0.0 days ago
MFC Confidence level	24h 95%	MFC Calibrate date	2018-07-16 00:00:00
MFC Calibrate date Zero	2018-07-28 00:00:00	Calibrate date WB Flatness	1988-10-01 00:00:00
Calibrate date WB Gain	1988-10-01 00:00:00	CAL CONST 6.5V reference voltage	6.53722526281
CAL CONST 13V reference voltage	13.072594746	CAL CONST 22V range positive zero	398.18733
CAL CONST 22V range negative zero	398.18677	CAL CONST DAC Linearity	0.0
CAL CONST 10KOHM true output resistance	9999.59355069	CAL CONST 10KOHM standard resistance	9999.79920516
CAL CONST, Zero calibration temperature	23.0	CAL CONST, All calibration temp	23.0

This note is test MFC dummy text block for further use.
Calibrator was warmed up >8 hours.

Meter Info	HP3458A	Last calibration date	7/24/2018
CALSTR?	"7/26/2018 CAL, TEMP: 33.7"	Test date	28 July 2018 10:52
DUT Internal TEMP?	28.9	DUT Calibrations number?	180
Self-test result?	0,"NO ERROR"	ACAL ALL result?	0,"NO ERROR"
Firmware	9,2	Options	1,0
CAL? 72	0.997706701	CAL? 1,1	39998.8732
CAL? 2,1	7.18070929	CAL? Res 73	0.997508201
CAL 0 TEMP	31.74	CAL 10V TEMP	32.61
CAL 10KOhm TEMP	34.52	CAL? DCI	0.997875259

Service information

CAL DUMP

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Destructive overloads?

88, DESTRUCTIVE OVERLOADS valid 2941

Reference

Long-Belden-sense, PTFE RG400 main

DUT Condition

PostCal 3-meter

Test procedure : \$!d: hp3458a.py | Rev 777 | 2018/07/28 07:54:15 tin_fpga \$

Source procedure : \$!d: f5700a.py | Rev 776 | 2018/07/27 12:51:14 tin_fpga \$

Main DC Voltage ranges performance test.

Checks zero offset and +/-FS calibration on all ranges

The following test for the offset voltage specification using MFC 0V source in 4-wire ext sense mode as reference.

DCV gain range points verify gain of the DC voltage function, using uncorrected 24-hour MFC output. DC voltage offset of DUT is nulled before FS tests.

Test Description	Expected Value	Measured Value	Measurement Uncertainty	Lower Limit	Upper Limit	Deviation	DUT Spec	Test Status
Short 0 mVDC	0.000000E+00	0.12 µV	0.75 µV	-0.910 µV	0.910 µV	N/A	0.16 µV	PASS
Short 0.0 VDC	0.000000E+00	0.28 µV	0.75 µV	-0.900 µV	0.900 µV	N/A	0.15 µV	PASS
Short 00.0 VDC	0.000000E+00	0.50 µV	0.75 µV	-1.070 µV	1.070 µV	N/A	0.32 µV	PASS
Short 000.0 VDC	0.000000E+00	62.41 µV	0.75 µV	-14.750 µV	14.750 µV	N/A	14.00 µV	INFO
Short 0000.0 VDC	0.000000E+00	94.26 µV	0.75 µV	-41.750 µV	41.750 µV	N/A	41.00 µV	INFO
DCV Test	0.1V-1000V	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
0.1 VDC (0.10 Range)	0.1000000	0.099999677	7.27 ppm	0.099998723	0.10000128	-3.227 ppm	5.50 ppm	PASS 25.27 %
-0.1 VDC (0.10 Range)	-0.1000000	-0.10000013	7.27 ppm	-0.10000128	-0.099998723	1.259 ppm	5.50 ppm	PASS 9.86 %
0.1 VDC (1.00 Range)	0.1000000	0.10000026	7.27 ppm	0.099999093	0.10000091	2.567 ppm	1.80 ppm	PASS 28.31 %
0.2 VDC (1.00 Range)	0.2000000	0.20000024	3.86 ppm	0.19999887	0.20000113	1.187 ppm	1.80 ppm	PASS 20.98 %
1.0 VDC (1.00 Range)	1.0000000	0.9999999	3.86 ppm	0.99999434	1.0000057	-0.104 ppm	1.80 ppm	PASS 1.84 %
-0.1 VDC (1.00 Range)	-0.1000000	-0.099999925	7.27 ppm	-0.10000091	-0.099999093	-0.754 ppm	1.80 ppm	PASS 8.31 %
-0.2 VDC (1.00 Range)	-0.2000000	-0.19999989	3.86 ppm	-0.20000113	-0.19999887	-0.557 ppm	1.80 ppm	PASS 9.84 %
-1.0 VDC (1.00 Range)	-1.0000000	-0.99999952	3.86 ppm	-1.0000057	-0.99999434	-0.477 ppm	1.80 ppm	PASS 8.44 %
1.0 VDC (10.00 Range)	1.0000000	1.0000006	3.86 ppm	0.99999559	1.0000044	0.572 ppm	0.55 ppm	PASS 12.96 %
2.0 VDC (10.00 Range)	2.0000000	1.9999996	2.77 ppm	1.9999934	2.0000066	-0.212 ppm	0.55 ppm	PASS 6.39 %
10.0 VDC (10.00 Range)	10.0000000	9.999996	2.73 ppm	9.9999672	10.000033	-0.397 ppm	0.55 ppm	PASS 12.12 %
-1.0 VDC (10.00 Range)	-1.0000000	-1.0000001	3.86 ppm	-1.0000044	-0.99999559	0.114 ppm	0.55 ppm	PASS 2.58 %
-2.0 VDC (10.00 Range)	-2.0000000	-1.9999993	2.77 ppm	-2.0000066	-1.9999934	-0.354 ppm	0.55 ppm	PASS 10.66 %
-10.0 VDC (10.00 Range)	-10.0000000	-9.9999959	2.73 ppm	-10.000033	-9.9999672	-0.410 ppm	0.55 ppm	PASS 12.49 %
20 VDC (100.00 Range)	20.0000000	20.000071	3.73 ppm	19.999869	20.000131	3.545 ppm	2.80 ppm	PASS 54.29 %
100 VDC (100.00 Range)	100.0000000	99.999936	3.73 ppm	99.999347	100.00065	-0.637 ppm	2.80 ppm	PASS 9.75 %
-20 VDC (100.00 Range)	-20.0000000	-19.99992	3.73 ppm	-20.000131	-19.999869	-4.005 ppm	2.80 ppm	PASS 61.34 %
-100 VDC (100.00 Range)	-100.0000000	-99.99977	3.73 ppm	-100.00065	-99.999347	-2.304 ppm	2.80 ppm	PASS 35.29 %
100 VDC (1000.00 Range)	100.0000000	99.999989	3.73 ppm	99.999367	100.00063	-0.109 ppm	2.60 ppm	PASS 1.72 %
200 VDC (1000.00 Range)	200.0000000	199.99976	3.73 ppm	199.99873	200.00127	-1.189 ppm	2.60 ppm	PASS 18.78 %
1000 VDC (1000.00 Range)	1000.0000000	999.99981	5.45 ppm	999.97995	1000.02	-0.189 ppm	2.60 ppm	PASS 0.94 %
-100 VDC (1000.00 Range)	-100.0000000	-99.999862	3.73 ppm	-100.00063	-99.999367	-1.380 ppm	2.60 ppm	PASS 21.79 %
-200 VDC (1000.00 Range)	-200.0000000	-199.9996	3.73 ppm	-200.00127	-199.99873	-1.984 ppm	2.60 ppm	PASS 31.34 %
-1000 VDC (1000.00 Range)	-1000.0000000	-999.99997	5.45 ppm	-1000.02	-999.97995	-0.034 ppm	2.60 ppm	PASS 0.86 %

Additional test for **combined DUT+MFC** DC Voltage Integral Linearity (INL) using fixed 10V range. Integral linearity is a measure of the device's deviation from ideal linear behaviour.

DCV Linearity	1V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
1.0999999	1.0999999	1.0999981	2.73 ppm	1.099996	1.100004	-1.60 ppm	0.55 ppm	PASS 48.80 %
0.9999999	0.9999999	0.9999985	2.73 ppm	0.9999966	1.000003	-1.38 ppm	0.55 ppm	PASS 42.09 %
0.9000000	0.9000000	0.8999989	2.73 ppm	0.899997	0.900003	-1.23 ppm	0.55 ppm	PASS 37.56 %
0.8888888	0.8888888	0.8888878	2.73 ppm	0.8888859	0.8888917	-1.18 ppm	0.55 ppm	PASS 35.90 %
0.8000000	0.8000000	0.7999991	2.73 ppm	0.7999974	0.8000026	-1.14 ppm	0.55 ppm	PASS 34.79 %
0.7777777	0.7777777	0.7777769	2.73 ppm	0.7777751	0.7777803	-1.00 ppm	0.55 ppm	PASS 30.47 %
0.7000000	0.7000000	0.6999993	2.73 ppm	0.6999977	0.7000023	-0.95 ppm	0.55 ppm	PASS 29.00 %
0.6666666	0.6666666	0.6666660	2.73 ppm	0.6666644	0.6666688	-0.85 ppm	0.55 ppm	PASS 26.06 %
0.6000000	0.6000000	0.5999995	2.73 ppm	0.599998	0.600002	-0.83 ppm	0.55 ppm	PASS 25.39 %
0.5555555	0.5555555	0.5555550	2.73 ppm	0.5555537	0.5555573	-0.88 ppm	0.55 ppm	PASS 26.83 %
0.5000000	0.5000000	0.4999997	2.73 ppm	0.4999984	0.5000016	-0.68 ppm	0.55 ppm	PASS 20.58 %
0.4444444	0.4444444	0.4444441	2.73 ppm	0.4444429	0.4444459	-0.71 ppm	0.55 ppm	PASS 21.79 %
0.4000000	0.4000000	0.3999997	2.73 ppm	0.3999987	0.4000013	-0.65 ppm	0.55 ppm	PASS 19.96 %
0.3333333	0.3333333	0.3333330	2.73 ppm	0.3333322	0.3333344	-0.84 ppm	0.55 ppm	PASS 25.62 %
0.3000000	0.3000000	0.2999997	2.73 ppm	0.299999	0.300001	-0.90 ppm	0.55 ppm	PASS 27.54 %
0.2222222	0.2222222	0.2222219	2.73 ppm	0.2222215	0.2222229	-1.44 ppm	0.55 ppm	PASS 43.96 %
0.2000000	0.2000000	0.1999998	2.73 ppm	0.1999993	0.2000007	-1.23 ppm	0.55 ppm	PASS 37.44 %
0.1234567	0.1234567	0.1234564	2.73 ppm	0.1234563	0.1234571	-2.39 ppm	0.55 ppm	PASS 72.73 %
0.1111111	0.1111111	0.11111078	2.73 ppm	0.1111107	0.1111115	-2.86 ppm	0.55 ppm	PASS 87.18 %
0.1000000	0.1000000	0.09999971	2.73 ppm	0.09999967	0.1000003	-2.87 ppm	0.55 ppm	PASS 87.38 %
0.0987654	0.0987654	0.0987651	3.86 ppm	0.09876496	0.09876584	-3.33 ppm	0.55 ppm	PASS 75.46 %
-0.0987654	-0.0987654	-0.0987657	3.86 ppm	-0.09876584	-0.09876496	2.71 ppm	0.55 ppm	PASS 61.40 %
-0.1000000	-0.1000000	-0.10000032	2.73 ppm	-0.1000003	-0.09999967	3.23 ppm	0.55 ppm	PASS 98.47 %
-0.1111111	-0.1111111	-0.11111140	2.73 ppm	-0.1111115	-0.1111107	2.69 ppm	0.55 ppm	PASS 82.04 %
-0.1234567	-0.1234567	-0.12345704	2.73 ppm	-0.1234571	-0.1234563	2.78 ppm	0.55 ppm	PASS 84.75 %
-0.2000000	-0.2000000	-0.2000004	2.73 ppm	-0.2000007	-0.1999993	1.81 ppm	0.55 ppm	PASS 55.24 %
-0.2222222	-0.2222222	-0.2222226	2.73 ppm	-0.2222229	-0.2222215	1.58 ppm	0.55 ppm	PASS 48.29 %
-0.3000000	-0.3000000	-0.3000003	2.73 ppm	-0.300001	-0.299999	1.16 ppm	0.55 ppm	PASS 35.35 %
-0.3333333	-0.3333333	-0.3333336	2.73 ppm	-0.3333344	-0.3333322	0.97 ppm	0.55 ppm	PASS 29.61 %
-0.4000000	-0.4000000	-0.4000004	2.73 ppm	-0.4000013	-0.3999987	0.88 ppm	0.55 ppm	PASS 26.88 %
-0.4444444	-0.4444444	-0.4444447	2.73 ppm	-0.4444459	-0.4444429	0.74 ppm	0.55 ppm	PASS 22.55 %
-0.5000000	-0.5000000	-0.5000003	2.73 ppm	-0.5000016	-0.4999984	0.56 ppm	0.55 ppm	PASS 17.07 %
-0.5555555	-0.5555555	-0.5555559	2.73 ppm	-0.5555573	-0.5555537	0.63 ppm	0.55 ppm	PASS 19.31 %
-0.6000000	-0.6000000	-0.6000005	2.73 ppm	-0.600002	-0.599998	0.78 ppm	0.55 ppm	PASS 23.92 %
-0.6666666	-0.6666666	-0.6666673	2.73 ppm	-0.6666688	-0.6666644	0.99 ppm	0.55 ppm	PASS 30.29 %
-0.7000000	-0.7000000	-0.7000009	2.73 ppm	-0.7000023	-0.6999977	1.26 ppm	0.55 ppm	PASS 38.44 %
-0.7777777	-0.7777777	-0.7777786	2.73 ppm	-0.7777803	-0.7777751	1.14 ppm	0.55 ppm	PASS 34.81 %
-0.8000000	-0.8000000	-0.8000008	2.73 ppm	-0.8000026	-0.7999974	1.03 ppm	0.55 ppm	PASS 31.41 %
-0.8888888	-0.8888888	-0.8888896	2.73 ppm	-0.8888917	-0.8888859	0.92 ppm	0.55 ppm	PASS 27.94 %
-0.9000000	-0.9000000	-0.9000009	2.73 ppm	-0.900003	-0.899997	0.95 ppm	0.55 ppm	PASS 29.07 %
-0.9999999	-0.9999999	-1.0000007	2.73 ppm	-1.000003	-0.9999966	0.79 ppm	0.55 ppm	PASS 24.02 %
-1.0999999	-1.0999999	-1.1000005	2.73 ppm	-1.100004	-1.099996	0.56 ppm	0.55 ppm	PASS 17.06 %
DCV Linearity	10V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
10.999999	10.999999	10.9999972	2.73 ppm	10.99996	11.00004	-0.17 ppm	0.55 ppm	PASS 5.04 %
10.101010	10.101010	10.1010091	2.73 ppm	10.10098	10.10104	-0.09 ppm	0.55 ppm	PASS 2.84 %
10.000000	10.000000	9.9999999	2.73 ppm	9.999967	10.00003	-0.01 ppm	0.55 ppm	PASS 0.35 %
9.999999	9.999999	9.9999990	2.73 ppm	9.999966	10.00003	0.00 ppm	0.55 ppm	PASS 0.11 %
9.000000	9.000000	9.0000000	2.73 ppm	8.99997	9.00003	-0.00 ppm	0.55 ppm	PASS 0.09 %
8.888888	8.888888	8.8888881	2.73 ppm	8.888859	8.888917	0.01 ppm	0.55 ppm	PASS 0.21 %
8.000000	8.000000	7.9999994	2.73 ppm	7.999974	8.000026	-0.07 ppm	0.55 ppm	PASS 2.20 %
7.777777	7.777777	7.7777767	2.73 ppm	7.777751	7.777803	-0.04 ppm	0.55 ppm	PASS 1.13 %
7.000000	7.000000	6.9999999	2.73 ppm	6.999977	7.000023	-0.01 ppm	0.55 ppm	PASS 0.28 %
6.666666	6.666666	6.6666657	2.73 ppm	6.666644	6.666688	-0.05 ppm	0.55 ppm	PASS 1.60 %
6.000000	6.000000	5.9999999	2.73 ppm	5.99998	6.00002	-0.02 ppm	0.55 ppm	PASS 0.76 %
5.555555	5.555555	5.5555548	2.73 ppm	5.555537	5.555573	-0.03 ppm	0.55 ppm	PASS 1.02 %
5.000000	5.000000	4.9999997	2.73 ppm	4.999984	5.000016	-0.06 ppm	0.55 ppm	PASS 1.85 %
4.444444	4.444444	4.4444438	2.73 ppm	4.444429	4.444459	-0.05 ppm	0.55 ppm	PASS 1.60 %
4.000000	4.000000	3.9999999	2.73 ppm	3.999987	4.000013	-0.03 ppm	0.55 ppm	PASS 0.92 %
3.333333	3.333333	3.3333330	2.73 ppm	3.333322	3.333344	-0.01 ppm	0.55 ppm	PASS 0.20 %
3.000000	3.000000	2.9999996	2.73 ppm	2.99999	3.00001	-0.12 ppm	0.55 ppm	PASS 3.77 %
2.222222	2.222222	2.2222214	2.73 ppm	2.222215	2.222229	-0.25 ppm	0.55 ppm	PASS 7.63 %
2.000000	2.000000	1.9999996	2.73 ppm	1.999993	2.000007	-0.21 ppm	0.55 ppm	PASS 6.45 %
1.111111	1.111111	1.1111107	2.73 ppm	1.111107	1.111115	-0.28 ppm	0.55 ppm	PASS 8.63 %
1.000000	1.000000	0.9999995	3.86 ppm	0.9999956	1.000004	-0.45 ppm	0.55 ppm	PASS 10.29 %
0.555555	0.555555	0.5555542	7.27 ppm	0.5555507	0.5555593	-1.36 ppm	0.55 ppm	PASS 17.43 %
-0.555555	-0.555555	-0.5555561	7.27 ppm	-0.5555593	-0.5555507	2.04 ppm	0.55 ppm	PASS 26.03 %
-1.000000	-1.000000	-1.0000010	3.86 ppm	-1.000004	-0.9999956	1.05 ppm	0.55 ppm	PASS 23.80 %
-1.111111	-1.111111	-1.1111121	2.73 ppm	-1.111115	-1.111107	1.00 ppm	0.55 ppm	PASS 30.52 %

-2.000000	-2.000000	-2.0000012	2.73 ppm	-2.000007	-1.999993	0.62 ppm	0.55 ppm	PASS 18.93 %
-2.222222	-2.222222	-2.2222232	2.73 ppm	-2.222229	-2.222215	0.53 ppm	0.55 ppm	PASS 16.15 %
-3.000000	-3.000000	-3.0000011	2.73 ppm	-3.000001	-2.999999	0.37 ppm	0.55 ppm	PASS 11.42 %
-3.333333	-3.333333	-3.3333343	2.73 ppm	-3.333344	-3.333322	0.39 ppm	0.55 ppm	PASS 12.03 %
-4.000000	-4.000000	-4.0000014	2.73 ppm	-4.000013	-3.999987	0.35 ppm	0.55 ppm	PASS 10.71 %
-4.444444	-4.444444	-4.4444455	2.73 ppm	-4.444459	-4.444429	0.34 ppm	0.55 ppm	PASS 10.45 %
-5.000000	-5.000000	-5.0000011	2.73 ppm	-5.000016	-4.999984	0.23 ppm	0.55 ppm	PASS 6.99 %
-5.555555	-5.555555	-5.5555564	2.73 ppm	-5.555573	-5.555537	0.25 ppm	0.55 ppm	PASS 7.74 %
-6.000000	-6.000000	-6.0000013	2.73 ppm	-6.000002	-5.999998	0.22 ppm	0.55 ppm	PASS 6.76 %
-6.666666	-6.666666	-6.6666673	2.73 ppm	-6.666688	-6.666644	0.20 ppm	0.55 ppm	PASS 6.05 %
-7.000000	-7.000000	-7.0000015	2.73 ppm	-7.000023	-6.999977	0.21 ppm	0.55 ppm	PASS 6.42 %
-7.777777	-7.777777	-7.7777789	2.73 ppm	-7.777803	-7.777751	0.24 ppm	0.55 ppm	PASS 7.40 %
-8.000000	-8.000000	-8.0000017	2.73 ppm	-8.000026	-7.999974	0.22 ppm	0.55 ppm	PASS 6.61 %
-8.888888	-8.888888	-8.8888899	2.73 ppm	-8.888917	-8.888859	0.21 ppm	0.55 ppm	PASS 6.55 %
-9.000000	-9.000000	-9.0000019	2.73 ppm	-9.000003	-8.999997	0.21 ppm	0.55 ppm	PASS 6.50 %
-9.999999	-9.999999	-10.0000004	2.73 ppm	-10.000003	-9.999966	0.14 ppm	0.55 ppm	PASS 4.17 %
-10.000000	-10.000000	-10.0000018	2.73 ppm	-10.000003	-9.999967	0.18 ppm	0.55 ppm	PASS 5.46 %
-10.101010	-10.101010	-10.1010118	2.73 ppm	-10.10104	-10.10098	0.18 ppm	0.55 ppm	PASS 5.43 %
-10.999999	-10.999999	-11.0000015	2.73 ppm	-11.000004	-10.999996	0.23 ppm	0.55 ppm	PASS 6.92 %
DCV Linearity	100V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
100.99999	100.99999	100.9997674	2.73 ppm	100.99966	101.00032	-2.20 ppm	0.55 ppm	PASS 49.06 %
100.10101	100.10101	100.1007948	2.73 ppm	100.10068	100.10134	-2.15 ppm	0.55 ppm	PASS 47.98 %
100.00000	100.00000	99.9997906	2.73 ppm	99.999672	100.00033	-2.09 ppm	0.55 ppm	PASS 63.85 %
99.99999	99.99999	99.9997782	2.73 ppm	99.999662	100.00032	-2.12 ppm	0.55 ppm	PASS 64.59 %
90.00000	90.00000	89.9998243	2.73 ppm	89.999705	90.000295	-1.95 ppm	0.55 ppm	PASS 59.51 %
88.88888	88.88888	88.8887047	2.73 ppm	88.888588	88.889172	-1.97 ppm	0.55 ppm	PASS 60.14 %
80.00000	80.00000	79.9998550	2.73 ppm	79.999738	80.000262	-1.81 ppm	0.55 ppm	PASS 55.26 %
77.77777	77.77777	77.7776337	2.73 ppm	77.777515	77.778025	-1.75 ppm	0.55 ppm	PASS 53.43 %
70.00000	70.00000	69.9998732	2.73 ppm	69.99977	70.00023	-1.81 ppm	0.55 ppm	PASS 55.23 %
66.66666	66.66666	66.6665436	2.73 ppm	66.666441	66.666879	-1.75 ppm	0.55 ppm	PASS 53.24 %
60.00000	60.00000	59.9998969	2.73 ppm	59.999803	60.000197	-1.72 ppm	0.55 ppm	PASS 52.37 %
55.55555	55.55555	55.5554543	2.73 ppm	55.555368	55.555732	-1.72 ppm	0.55 ppm	PASS 52.52 %
50.00000	50.00000	49.9999157	2.73 ppm	49.999836	50.000164	-1.69 ppm	0.55 ppm	PASS 51.40 %
44.44444	44.44444	44.4443648	2.73 ppm	44.444294	44.444586	-1.69 ppm	0.55 ppm	PASS 51.57 %
40.00000	40.00000	39.9999387	2.73 ppm	39.999869	40.000131	-1.53 ppm	0.55 ppm	PASS 46.76 %
33.33333	33.33333	33.3332781	2.73 ppm	33.333221	33.333439	-1.56 ppm	0.55 ppm	PASS 47.45 %
30.00000	30.00000	29.9999541	2.73 ppm	29.999902	30.000098	-1.53 ppm	0.55 ppm	PASS 46.64 %
22.22222	22.22222	22.2221863	2.73 ppm	22.222147	22.222293	-1.51 ppm	0.55 ppm	PASS 46.17 %
20.00000	20.00000	19.9999690	2.73 ppm	19.999934	20.000066	-1.55 ppm	0.55 ppm	PASS 47.19 %
11.11111	11.11111	11.1110937	2.73 ppm	11.111075	11.111147	-1.55 ppm	0.55 ppm	PASS 47.39 %
10.00000	10.00000	9.9999823	3.86 ppm	9.9999559	10.000044	-1.77 ppm	0.55 ppm	PASS 40.24 %
9.87654	9.87654	9.8765253	7.27 ppm	9.8764658	9.8766202	-1.79 ppm	0.55 ppm	PASS 22.87 %
-9.87654	-9.87654	-9.8765271	7.27 ppm	-9.8766202	-9.8764658	-1.61 ppm	0.55 ppm	PASS 20.64 %
-10.00000	-10.00000	-9.9999868	3.86 ppm	-10.000044	-9.9999559	-1.32 ppm	0.55 ppm	PASS 29.98 %
-11.11111	-11.11111	-11.1110940	2.73 ppm	-11.111147	-11.111075	-1.53 ppm	0.55 ppm	PASS 46.72 %
-20.00000	-20.00000	-19.9999705	2.73 ppm	-20.000066	-19.999934	-1.48 ppm	0.55 ppm	PASS 45.02 %
-22.22222	-22.22222	-22.2221856	2.73 ppm	-22.222293	-22.222147	-1.55 ppm	0.55 ppm	PASS 47.18 %
-30.00000	-30.00000	-29.9999479	2.73 ppm	-30.000098	-29.999902	-1.74 ppm	0.55 ppm	PASS 52.90 %
-33.33333	-33.33333	-33.3332767	2.73 ppm	-33.333439	-33.333221	-1.60 ppm	0.55 ppm	PASS 48.73 %
-40.00000	-40.00000	-39.9999312	2.73 ppm	-40.000131	-39.999869	-1.72 ppm	0.55 ppm	PASS 52.44 %
-44.44444	-44.44444	-44.4443612	2.73 ppm	-44.444586	-44.444294	-1.77 ppm	0.55 ppm	PASS 54.04 %
-50.00000	-50.00000	-49.9999100	2.73 ppm	-50.000164	-49.999836	-1.80 ppm	0.55 ppm	PASS 54.91 %
-55.55555	-55.55555	-55.5554486	2.73 ppm	-55.555732	-55.555368	-1.82 ppm	0.55 ppm	PASS 55.62 %
-60.00000	-60.00000	-59.9998887	2.73 ppm	-60.000197	-59.999803	-1.85 ppm	0.55 ppm	PASS 56.55 %
-66.66666	-66.66666	-66.6665328	2.73 ppm	-66.666879	-66.666441	-1.91 ppm	0.55 ppm	PASS 58.18 %
-70.00000	-70.00000	-69.9998632	2.73 ppm	-70.00023	-69.99977	-1.95 ppm	0.55 ppm	PASS 59.58 %
-77.77777	-77.77777	-77.7776197	2.73 ppm	-77.778025	-77.777515	-1.93 ppm	0.55 ppm	PASS 58.90 %
-80.00000	-80.00000	-79.9998416	2.73 ppm	-80.000262	-79.999738	-1.98 ppm	0.55 ppm	PASS 60.35 %
-88.88888	-88.88888	-88.8887011	2.73 ppm	-88.889172	-88.888588	-2.01 ppm	0.55 ppm	PASS 61.35 %
-90.00000	-90.00000	-89.9998176	2.73 ppm	-90.000295	-89.999705	-2.03 ppm	0.55 ppm	PASS 61.80 %
-99.99999	-99.99999	-99.9997767	2.73 ppm	-100.00032	-99.999662	-2.13 ppm	0.55 ppm	PASS 65.03 %
-100.00000	-100.00000	-99.9997829	2.73 ppm	-100.00033	-99.999672	-2.17 ppm	0.55 ppm	PASS 66.18 %

4W test procedure for all test points that verify Gain of the OHMF function. 4-wire kelvin connection is used between DMM and MFC. 1GΩ resistance range is tested using the external standard, as MFC unable to provide this range value.

OHM Test	1 Ohm to 1 GOhm	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
1 Ω	1.0000056	0.99997949	27.0 ppm	9.9997060E-01	1.0000406E+00	-26.110 ppm	8.0 ppm	PASS 74.60 %
1.9 Ω	1.8997773	1.8997246	20.0 ppm	1.8997241E+00	1.8998305E+00	-27.744 ppm	8.0 ppm	PASS 99.09 %
10 Ω	9.9997	9.9997008	4.0 ppm	9.9995800E+00	9.9998200E+00	0.083 ppm	8.0 ppm	PASS 0.69 %
19 Ω	18.998219	18.99832	3.5 ppm	1.8998039E+01	1.8998399E+01	5.291 ppm	6.0 ppm	PASS 55.69 %
100 Ω	99.9981	99.99839	1.6 ppm	9.9997340E+01	9.9998860E+01	2.904 ppm	6.0 ppm	PASS 38.21 %
190 Ω	189.9883	189.98877	1.6 ppm	1.8998758E+02	1.8998902E+02	2.455 ppm	2.2 ppm	PASS 64.62 %
1.0 kΩ	999.9402	999.9417	1.6 ppm	9.9993640E+02	9.9994400E+02	1.501 ppm	2.2 ppm	PASS 39.50 %
1.9 kΩ	1899.892	1899.8953	1.6 ppm	1.8998848E+03	1.8998992E+03	1.718 ppm	2.2 ppm	PASS 45.22 %
10 kΩ	9999.589	9999.6081	1.6 ppm	9.9995510E+03	9.9996270E+03	1.915 ppm	2.2 ppm	PASS 50.39 %
19 kΩ	18999.152	18999.186	1.6 ppm	1.8999080E+04	1.8999224E+04	1.796 ppm	2.2 ppm	PASS 47.27 %
100 kΩ	99992.8	99992.636	1.6 ppm	9.9992420E+04	9.9993180E+04	-1.641 ppm	2.2 ppm	PASS 43.19 %
190 kΩ	189998.23	189999.31	1.6 ppm	1.8999584E+05	1.9000062E+05	5.690 ppm	11.0 ppm	PASS 45.16 %
1.0 MΩ	999879	999879.79	2.0 ppm	9.9986600E+05	9.9989200E+05	0.792 ppm	11.0 ppm	PASS 6.09 %
1.9 MΩ	1899902.9	1899937.6	2.5 ppm	1.8997937E+06	1.9000121E+06	18.244 ppm	55.0 ppm	PASS 31.73 %
10 MΩ	9998114	9998072.4	8.0 ppm	9.9974841E+06	9.9987439E+06	-4.161 ppm	55.0 ppm	PASS 6.60 %
19 MΩ	18998488	18999465	16.0 ppm	1.8988495E+07	1.9008481E+07	51.446 ppm	510.0 ppm	PASS 9.78 %
100 MΩ	1.000034E+08	1.0001396E+08	40.0 ppm	9.9948398E+07	1.0005840E+08	105.609 ppm	510.0 ppm	PASS 19.20 %
1 GΩ STD	9.9551672E+08	9.9762075E+08	30000.0 ppm	960663679.633	1030369760.37	2113.509 ppm	5010.00 ppm	PASS 6.04 %

4W and 2W Zero test procedure for all test points that verify Zero offset of the OHMF function. 4-wire kelvin connection is used between DMM and MFC. 1GΩ resistance range is tested using the external standard, as MFC unable to provide this range value.

OHM ZERO 4W	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
10 Ω	Range 0.0000020 Ω	5.000e-05 Ω	-5e-05	5e-05	N/A	8.0000e-06 Ω	PASS
100 Ω	Range -0.0000200 Ω	5.500e-04 Ω	-0.00055	0.00055	N/A	2.2000e-06 Ω	PASS
1.0 kΩ	Range 0.0000000 Ω	5.500e-03 Ω	-0.0055	0.0055	N/A	2.2000e-06 Ω	PASS
10 kΩ	Range 0.0001375 Ω	5.500e-02 Ω	-0.055	0.055	N/A	2.2000e-06 Ω	PASS
100 kΩ	Range -0.0005185 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range 0.1328105 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range 0.9826961 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range 6.5338292 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range -183.9297527 Ω	5.500e+03 Ω	-5500	5500	N/A	2.2000e-06 Ω	PASS
OHM ZERO 2W	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
1.0 kΩ	Range -0.0044196 Ω	5.500e-03 Ω	-0.0055	0.0055	N/A	2.2000e-06 Ω	PASS
10 kΩ	Range -0.0216478 Ω	5.500e-02 Ω	-0.055	0.055	N/A	2.2000e-06 Ω	PASS
100 kΩ	Range -0.0556357 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range -0.0139591 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range 1.1455567 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range 1.1345154 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range 1.2918569 Ω	5.500e+03 Ω	-5500	5500	N/A	2.2000e-06 Ω	PASS

Procedure for all test points in the AC performance verification for ANAlog mode. AC-measurements does not suffer from TEMF offsets, test connection can be made using shielded leads terminated with dual banana plugs. MFC main AC output is used as reference source

ACV ANA Test	1V-10V	DUT	w/Guardband	Low Limit	Hi limit	Units	Measured	24h spec	Result
1.0 VAC @ 50.0 kHz	1.0	0.99972366	129.09	0.99955091	1.00044909	VAC	-276.343 ppm	320.0 ppm	PASS 61.53 %
1.0 VAC @ 1.0 MHz	1.0	1.0057133	0.2500 %	0.9874	1.0126	VAC	0.5713 %	1.0100 %	PASS 45.34 %
10 VAC @ 200 Hz	10	10.00042	73.18	9.9983682	10.0016318	VAC	41.973 ppm	90.0 ppm	PASS 25.72 %
10 VAC @ 500 Hz	10	10.000363	73.18	9.9983682	10.0016318	VAC	36.335 ppm	90.0 ppm	PASS 22.27 %
10 VAC @ 50.0 kHz	10	9.9972564	129.09	9.9955091	10.0044909	VAC	-274.364 ppm	320.0 ppm	PASS 61.09 %
10 VAC @ 1.0 MHz	10	10.057013	0.3000 %	9.869	10.131	VAC	0.5701 %	1.0100 %	PASS 43.52 %

Procedure for all test points in the AC performance verification for SYNCronous mode. This is highest AC accuracy test. AC-measurements does not suffer from TEMF offsets, test connection can be made using shielded leads terminated with dual banana plugs. MFC main AC output is used as reference source

ACV SYNC Test	DUT	w/Guardband	Low Limit	Hi limit	Measured	24h spec	Result, % spec
0.01 V AC+DC @ 10 Hz	0.010001999	312.27	0.009991	0.010009	199.926 ppm	600.0 ppm	PASS 21.92 %
0.01 V AC+DC @ 20 Hz	0.010001386	312.27	0.009991	0.010009	138.605 ppm	600.0 ppm	PASS 15.19 %
0.01 V AC+DC @ 40 Hz	0.010001262	312.27	0.009991	0.010009	126.199 ppm	600.0 ppm	PASS 13.83 %
0.01 V AC+DC @ 100 Hz	0.010001142	312.27	0.009994	0.010006	114.170 ppm	310.0 ppm	PASS 18.35 %
0.01 V AC+DC @ 1.0 kHz	0.01000098	312.27	0.009994	0.010006	98.022 ppm	310.0 ppm	PASS 15.75 %
0.01 V AC+DC @ 10.0 kHz	0.010002169	312.27	0.009993	0.010007	216.851 ppm	410.0 ppm	PASS 30.02 %
0.01 V AC+DC @ 20.0 kHz	0.010001835	312.27	0.009993	0.010007	183.520 ppm	410.0 ppm	PASS 25.41 %
0.01 V AC+DC @ 50.0 kHz	0.010000732	0.0312 %	0.009986	0.010014	0.0073 %	0.1110 %	PASS 5.15 %
0.01 V AC+DC @ 100.0 kHz	0.0099896607	0.0312 %	0.009946	0.010054	-0.1034 %	0.5110 %	PASS 19.07 %
0.01 V AC+DC @ 300.0 kHz	0.0098461574	0.0447 %	0.009594	0.010406	-1.5384 %	4.0200 %	PASS 37.85 %
0.01 V AC+DC @ 500.0 kHz	0.0096480114	0.0773 %	0.006787	0.013213	-3.5199 %	32.0500 %	PASS 10.96 %
0.01 V AC+DC @ 1.0 MHz	0.0086877805	0.1500 %	0.006780	0.013220	-13.1222 %	32.0500 %	PASS 40.75 %
0.1 V AC+DC @ 10 Hz	0.10000317	1500	0.099839	0.100161	31.701 ppm	110.0 ppm	PASS 1.97 %
0.1 V AC+DC @ 20 Hz	0.099996825	2500	0.099739	0.100261	-31.754 ppm	110.0 ppm	PASS 1.22 %
0.1 V AC+DC @ 40 Hz	0.099995753	4000	0.099589	0.100411	-42.465 ppm	110.0 ppm	PASS 1.03 %
0.1 V AC+DC @ 100 Hz	0.099995295	121.36	0.099979	0.100021	-47.047 ppm	90.0 ppm	PASS 22.26 %
0.1 V AC+DC @ 1.0 kHz	0.099995585	121.36	0.099979	0.100021	-44.150 ppm	90.0 ppm	PASS 20.89 %
0.1 V AC+DC @ 10.0 kHz	0.099994276	121.36	0.099972	0.100028	-57.239 ppm	160.0 ppm	PASS 20.34 %
0.1 V AC+DC @ 20.0 kHz	0.099989551	121.36	0.099972	0.100028	-104.488 ppm	160.0 ppm	PASS 37.14 %
0.1 V AC+DC @ 50.0 kHz	0.09998547	121.36	0.099956	0.100044	-145.300 ppm	320.0 ppm	PASS 32.92 %
0.1 V AC+DC @ 100.0 kHz	0.099954522	121.36	0.099906	0.100094	-454.778 ppm	820.0 ppm	PASS 48.31 %
0.1 V AC+DC @ 300.0 kHz	0.099783971	0.0121 %	0.099678	0.100322	-0.2160 %	0.3100 %	PASS 67.06 %
0.1 V AC+DC @ 500.0 kHz	0.099619544	0.0121 %	0.098978	0.101022	-0.3805 %	1.0100 %	PASS 37.22 %
0.1 V AC+DC @ 1.0 MHz	0.099468329	0.0121 %	0.098978	0.101022	-0.5317 %	1.0100 %	PASS 52.02 %
1.0 V AC+DC @ 10 Hz	1.0000755	256.36	0.999634	1.000366	75.503 ppm	110.0 ppm	PASS 20.61 %
1.0 V AC+DC @ 20 Hz	1.0000095	590.91	0.999299	1.000701	9.480 ppm	110.0 ppm	PASS 1.35 %
1.0 V AC+DC @ 40 Hz	0.99999779	963.64	0.998926	1.001074	-2.213 ppm	110.0 ppm	PASS 0.21 %
1.0 V AC+DC @ 100 Hz	0.99999251	963.64	0.998946	1.001054	-7.488 ppm	90.0 ppm	PASS 0.71 %
1.0 V AC+DC @ 1.0 kHz	1.0000172	1500	0.998410	1.001590	17.207 ppm	90.0 ppm	PASS 1.08 %
1.0 V AC+DC @ 10.0 kHz	0.99995047	3000	0.996840	1.003160	-49.531 ppm	160.0 ppm	PASS 1.57 %
1.0 V AC+DC @ 20.0 kHz	0.99988337	49.55	0.999790	1.000210	-116.630 ppm	160.0 ppm	PASS 55.66 %
1.0 V AC+DC @ 50.0 kHz	0.99989843	49.55	0.999630	1.000370	-101.567 ppm	320.0 ppm	PASS 27.48 %
1.0 V AC+DC @ 100.0 kHz	0.99987365	49.55	0.999130	1.000870	-126.346 ppm	820.0 ppm	PASS 14.53 %
1.0 V AC+DC @ 300.0 kHz	1.0003239	0.0050 %	0.996850	1.003150	0.0324 %	0.3100 %	PASS 10.29 %
1.0 V AC+DC @ 500.0 kHz	1.0010388	0.0050 %	0.989850	1.010150	0.1039 %	1.0100 %	PASS 10.24 %
1.0 V AC+DC @ 1.0 MHz	1.0033412	0.0050 %	0.989850	1.010150	0.3341 %	1.0100 %	PASS 32.92 %
10.0 V AC+DC @ 10 Hz	10.000969	49.55	9.997105	10.002895	96.880 ppm	240.0 ppm	PASS 33.46 %
10.0 V AC+DC @ 20 Hz	10.00033	49.55	9.997105	10.002895	33.035 ppm	240.0 ppm	PASS 11.41 %
10.0 V AC+DC @ 40 Hz	10.000188	49.55	9.997105	10.002895	18.774 ppm	240.0 ppm	PASS 6.48 %
10.0 V AC+DC @ 100 Hz	10.000128	85.45	9.996945	10.003054	12.809 ppm	220.0 ppm	PASS 4.19 %
10.0 V AC+DC @ 1.0 kHz	10.000253	138.18	9.996418	10.003582	25.317 ppm	220.0 ppm	PASS 7.07 %
10.0 V AC+DC @ 10.0 kHz	9.9996502	425.45	9.993545	10.006455	-34.976 ppm	220.0 ppm	PASS 5.42 %
10.0 V AC+DC @ 20.0 kHz	9.9994354	425.45	9.993545	10.006455	-56.464 ppm	220.0 ppm	PASS 8.75 %
10.0 V AC+DC @ 50.0 kHz	9.9991658	1100	9.985300	10.014700	-83.424 ppm	370.0 ppm	PASS 5.68 %
10.0 V AC+DC @ 100.0 kHz	9.9955942	0.1800 %	9.969800	10.030200	-0.0441 %	0.1220 %	PASS 14.59 %
10.0 V AC+DC @ 300.0 kHz	9.9787048	0.0048 %	9.958518	10.041482	-0.2130 %	0.4100 %	PASS 51.34 %
10.0 V AC+DC @ 500.0 kHz	9.9784128	0.0048 %	9.848518	10.151482	-0.2159 %	1.5100 %	PASS 14.25 %
10.0 V AC+DC @ 1.0 MHz	10.037741	0.0048 %	9.848518	10.151482	0.3774 %	1.5100 %	PASS 24.91 %
100.0 V AC+DC @ 1.0 kHz	99.999894	48.18	99.953182	100.046818	-1.065 ppm	420.0 ppm	PASS 0.23 %
100.0 V AC+DC @ 10.0 kHz	99.997561	48.18	99.933182	100.066818	-24.392 ppm	620.0 ppm	PASS 3.65 %
100.0 V AC+DC @ 20.0 kHz	99.99457	48.18	99.933182	100.066818	-54.305 ppm	620.0 ppm	PASS 8.13 %
100.0 V AC+DC @ 50.0 kHz	99.995744	0.0048 %	99.873182	100.126818	-0.0043 %	0.1220 %	PASS 3.36 %
100.0 V AC+DC @ 100.0 kHz	99.983144	0.0048 %	99.693182	100.306818	-0.0169 %	0.3020 %	PASS 5.49 %
700.0 V AC+DC @ 1.0 kHz	699.91065	48.18	699.672274	700.327726	-127.647 ppm	420.0 ppm	PASS 26.78 %

Procedure for all test points that verify Gain of the DC current DCI function. Both +/-FS points are tested.
 2-wire connection at LO and DCI is used between DMM and MFC.
 DCI gain range points verify gain of the DC current function, using corrected 24-hour MFC output.

DCI Test	100nA-1A	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
Zero µADC	0	1.7128765E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
50 nADC	5E-08	5.0014755E-08	71.82 ppm	4.997591E-08	5.002409E-08	295.107 ppm	410 ppm	INFO
100 nADC	1E-07	1.0001228E-07	71.82 ppm	9.995182E-08	1.000482E-07	122.812 ppm	410 ppm	PASS 25.49 %
-100 nADC	-1E-07	-9.995953E-08	71.82 ppm	-1.000482E-07	-9.995182E-08	-404.698 ppm	410 ppm	PASS 83.99 %
-50 nADC	-5E-08	-4.9976443E-08	71.82 ppm	-5.002409E-08	-4.997591E-08	-471.146 ppm	410 ppm	INFO
Zero µADC	0	8.1422185E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
0.5 µADC	5E-07	5.0001683E-07	71.82 ppm	4.999391E-07	5.000609E-07	33.659 ppm	50 ppm	PASS 27.63 %
1.0 µADC	1E-06	1.0000203E-06	71.82 ppm	9.998782E-07	1.000122E-06	20.316 ppm	50 ppm	PASS 16.68 %
-1.0 µADC	-1E-06	-1.0000023E-06	71.82 ppm	-1.000122E-06	-9.998782E-07	2.331 ppm	50 ppm	PASS 1.91 %
-0.5 µADC	-5E-07	-5.0002946E-07	71.82 ppm	-5.000609E-07	-4.999391E-07	58.916 ppm	50 ppm	PASS 48.36 %
Zero 00 µADC	0	-1.0165136E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
5 µADC	5E-06	4.9999537E-06	71.82 ppm	4.999556E-06	5.000444E-06	-9.269 ppm	17 ppm	PASS 10.44 %
10 µADC	1E-05	9.9998907E-06	71.82 ppm	9.999112E-06	1.000089E-05	-10.931 ppm	17 ppm	PASS 12.31 %
-10 µADC	-1E-05	-9.9998709E-06	71.82 ppm	-1.000089E-05	-9.999112E-06	-12.914 ppm	17 ppm	PASS 14.54 %
-5 µADC	-5E-06	-4.9999436E-06	71.82 ppm	-5.000444E-06	-4.999556E-06	-11.289 ppm	17 ppm	PASS 12.71 %
Zero 000 µADC	0	-2.7798185E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
50 µADC	5E-05	4.9999501E-05	71.82 ppm	4.999561E-05	5.000439E-05	-9.987 ppm	16 ppm	PASS 11.37 %
100 µADC	0.0001	9.9998912E-05	71.82 ppm	9.999122E-05	0.0001000088	-10.878 ppm	16 ppm	PASS 12.39 %
-100 µADC	-0.0001	-9.9998578E-05	71.82 ppm	-0.0001000088	-9.999122E-05	-14.219 ppm	16 ppm	PASS 16.19 %
-50 µADC	-5E-05	-4.9999274E-05	71.82 ppm	-5.000439E-05	-4.999561E-05	-14.522 ppm	16 ppm	PASS 16.54 %
Zero mADC	0	-5.0570724E-12	33.64 ppm	0	0	Z-check	410 ppm	INFO
0.5 mADC	0.0005	0.00049999732	33.64 ppm	0.0004999762	0.0005000238	-5.355 ppm	14 ppm	PASS 11.24 %
1.0 mADC	0.001	0.00099999354	33.64 ppm	0.0009999524	0.001000048	-6.462 ppm	14 ppm	PASS 13.56 %
-1.0 mADC	-0.001	-0.00099999096	33.64 ppm	-0.001000048	-0.0009999524	-9.043 ppm	14 ppm	PASS 18.98 %
-0.5 mADC	-0.0005	-0.00049999516	33.64 ppm	-0.0005000238	-0.0004999762	-9.685 ppm	14 ppm	PASS 20.33 %
Zero 00 mADC	0	-2.358633E-11	32.27 ppm	0	0	Z-check	410 ppm	INFO
5 mADC	0.005	0.0049999473	32.27 ppm	0.004999769	0.005000231	-10.549 ppm	14 ppm	PASS 22.80 %
10 mADC	0.01	0.0099999025	32.27 ppm	0.009999537	0.01000046	-9.745 ppm	14 ppm	PASS 21.06 %
-10 mADC	-0.01	-0.009999906	32.27 ppm	-0.01000046	-0.009999537	-9.398 ppm	14 ppm	PASS 20.31 %
-5 mADC	-0.005	-0.0049999585	32.27 ppm	-0.005000231	-0.004999769	-8.309 ppm	14 ppm	PASS 17.96 %
Zero 000 mADC	0	-1.3460327E-11	53.32 ppm	0	0	Z-check	410 ppm	INFO
50 mADC	0.05	0.050000218	53.32 ppm	0.04999588	0.05000412	4.362 ppm	29 ppm	PASS 5.30 %
100 mADC	0.1	0.10000031	53.32 ppm	0.09999177	0.1000082	3.102 ppm	29 ppm	PASS 3.77 %
-100 mADC	-0.1	-0.10000115	53.32 ppm	-0.1000082	-0.09999177	11.510 ppm	29 ppm	PASS 13.98 %
-50 mADC	-0.05	-0.050000749	53.32 ppm	-0.05000412	-0.04999588	14.974 ppm	29 ppm	PASS 18.19 %
Zero ADC	0	-2.0434924E-11	115.22 ppm	0	0	Z-check	410 ppm	INFO
0.5 ADC	0.5	0.49999739	115.22 ppm	0.4998874	0.5001126	-5.216 ppm	110 ppm	PASS 2.32 %
1.0 ADC	1	0.99997151	115.22 ppm	0.9997748	1.000225	-28.492 ppm	110 ppm	PASS 12.65 %
-1.0 ADC	-1	-0.99996657	115.22 ppm	-1.000225	-0.9997748	-33.427 ppm	110 ppm	PASS 14.84 %
-0.5 ADC	-0.5	-0.49998654	115.22 ppm	-0.5001126	-0.4998874	-26.928 ppm	110 ppm	PASS 11.96 %

Procedure for all test points that verify Gain of the AC Current ACI function. Three frequency band points are tested, 50 Hz, 60 Hz and 1 kHz. 2-wire connection at LO and DCI is used between DMM and MFC.

ACI Test	200µA-2A	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result, % spec
10 µA AC @ 50 Hz	1e-05	1.0012881E-05	0.0165 %	9.9893455e-06	1.00106545e-05	1288.149 ppm	0.0900 %	INFO
100 µA AC @ 50 Hz	0.0001	9.9984031E-05	0.0165 %	9.9893455e-05	0.000100106545	-159.686 ppm	0.0900 %	PASS 14.99 %
1.0 mA AC @ 50 Hz	0.001	0.00099998258	0.0165 %	0.00099903455	0.00100096545	-17.420 ppm	0.0800 %	PASS 1.80 %
10 mA AC @ 50 Hz	0.01	0.0099998237	0.0165 %	0.0099903455	0.0100096545	-17.633 ppm	0.0800 %	PASS 1.83 %
100 mA AC @ 50 Hz	0.1	0.10000329	0.0138 %	0.099906182	0.100093818	32.944 ppm	0.0800 %	PASS 3.51 %
1.0 A AC @ 50 Hz	1.0	0.99987146	0.0138 %	0.99886182	1.00113818	-0.0129 %	0.1000 %	PASS 11.29 %
10 µA AC @ 60 Hz	1e-05	1.0014707E-05	0.0138 %	9.9896182e-06	1.00103818e-05	1470.690 ppm	0.0900 %	INFO
100 µA AC @ 60 Hz	0.0001	9.9985701E-05	0.0138 %	9.9896182e-05	0.000100103818	-142.994 ppm	0.0900 %	PASS 13.77 %
1.0 mA AC @ 60 Hz	0.001	0.0010000111	0.0134 %	0.00099906636	0.00100093364	11.050 ppm	0.0800 %	PASS 1.18 %
10 mA AC @ 60 Hz	0.01	0.01000014	0.0134 %	0.0099906636	0.0100093364	13.962 ppm	0.0800 %	PASS 1.50 %
100 mA AC @ 60 Hz	0.1	0.10000664	0.0308 %	0.099889182	0.100110818	66.432 ppm	0.0800 %	PASS 5.99 %
1.0 A AC @ 60 Hz	1.0	0.99990605	0.0308 %	0.99869182	1.00130818	-0.0094 %	0.1000 %	PASS 7.18 %
10 µA AC @ 1.0 kHz	1e-05	1.0013098E-05	0.0165 %	9.9893455e-06	1.00106545e-05	1309.840 ppm	0.0900 %	INFO
100 µA AC @ 1.0 kHz	0.0001	9.9977336E-05	0.0165 %	9.9893455e-05	0.000100106545	-226.641 ppm	0.0900 %	PASS 21.27 %
1.0 mA AC @ 1.0 kHz	0.001	0.0010000671	0.0165 %	0.00099933455	0.00100066545	67.081 ppm	0.0500 %	PASS 10.08 %
10 mA AC @ 1.0 kHz	0.01	0.010000701	0.0165 %	0.0099933455	0.0100066545	70.096 ppm	0.0500 %	PASS 10.53 %
100 mA AC @ 1.0 kHz	0.1	0.10001243	0.0138 %	0.099936182	0.100063818	124.334 ppm	0.0500 %	PASS 19.48 %
1.0 A AC @ 1.0 kHz	1.0	1.0000313	0.0138 %	0.99866182	1.00133818	0.0031 %	0.1200 %	PASS 2.34 %

Test date	29 July 2018 10:23
UUT Internal TEMP?	29.8
Destructive overloads?	90, DESTRUCTIVE OVERLOADS valid 2941

Lab temperature maintained +24°C ±2°C

Internal use only

Not validated