

Manufacturer	HEWLETT-PACKARD	Calibration date	October 12 2018
Model Number	3458A	Ambient Temperature	24.30 °C
Serial	ACAL-DMM	Relative Humidity	61.80 %
ID Number	CalCheck	Pressure	1011.79
Notes	N/A	Test type	KS meter

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
DMM	Agilent	3458A	001,002	2823A22815	MD1	11/14/2017	11/14/2018
CAL MFC	Fluke	5700A	/03 WB	XXX	MC01	03/25/2018	09/25/2018
DC STD	Fluke	732B-3	9.9999288 VDC	±0.56 ppm	SV03	11/03/2017	11/03/2018
STDR	IET	1 Ohm	0.99997483	±0.17 ppm	SM02	11/03/2017	11/30/2018
STDR	ESI	SR104	10000.0530 KΩ	±0.15 ppm	SM01	10/30/2017	10/30/2018

MFC last calibrated	3.0 days ago	MFC since DCV ZERO	3.0 days ago
MFC since WBFLAT	11241.0 days ago	MFC since WBGAIN	3.0 days ago
MFC Confidence level	24h 95% REL	MFC Calibrate date	2018-10-09 00:00:00
MFC Calibrate date Zero	2018-10-09 00:00:00	Calibrate date WB Flatness	1988-10-01 00:00:00
Calibrate date WB Gain	2018-10-09 00:00:00	CAL CONST 6.5V reference voltage	6.8913630064
CAL CONST 13V reference voltage	13.7948160154	CAL CONST 22V range positive zero	398.17865
CAL CONST 22V range negative zero	398.17845	CAL CONST DAC Linearity	0.0
CAL CONST 10KOHM true output resistance	10000.0886418	CAL CONST 10KOHM standard resistance	10000.4488527
CAL CONST, Zero calibration temperature	24.6000003815	CAL CONST, All calibration temp	24.6000003815

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?	"20171114161345~38.7~2823A22815"	Test date	12 October 2018 03:21
DUT Internal TEMP?	35.7	DUT Calibrations number?	1
Self-test result?	0,"NO ERROR"	ACAL ALL result?	0,"NO ERROR"
Firmware	9,2	Options	1,0
CAL? 72	0.997926056	CAL? 1,1	39999.5844
CAL? 2,1	7.18235527	CAL? Res 73	0.998644435
CAL 0 TEMP	39.31	CAL 10V TEMP	36.06
CAL 10KOhm TEMP	36.15	CAL? DCI	0.996890352

Service information

CAL DUMP

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Destructive overloads?

38, DESTRUCTIVE OVERLOADS valid 2941

Reference

Belden cable to front posts

DUT Condition

PreCal

Test procedure : \$Id: hp3458a.py | Rev 990 | 2018/10/12 06:43:08 clu \$

Source procedure : \$Id: f5720a.py | Rev 990 | 2018/10/12 06:43:08 clu \$

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	0.85 µV	0.75 µV	-0.910 µV	0.910 µV	N/A	0.16 µV	PASS
Short 0.0 VDC	0.000000E+00	0.80 µV	0.75 µV	-0.900 µV	0.900 µV	N/A	0.15 µV	PASS
Short 00.0 VDC	0.000000E+00	0.78 µV	0.75 µV	-1.070 µV	1.070 µV	N/A	0.32 µV	PASS
Short 000.0 VDC	0.000000E+00	17.27 µV	0.75 µV	-14.750 µV	14.750 µV	N/A	14.00 µV	FAIL
Short 0000.0 VDC	0.000000E+00	21.37 µV	0.75 µV	-41.750 µV	41.750 µV	N/A	41.00 µV	PASS
DCV Test	0.1V-1000V	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
0.1 VDC (0.10 Range)	0.1000000	0.099999914	7.27 ppm	0.099998723	0.10000128	-0.858 ppm	5.50 ppm	PASS 6.71 %
-0.1 VDC (0.10 Range)	-0.1000000	-0.099999885	7.27 ppm	-0.10000128	-0.099998723	-1.153 ppm	5.50 ppm	PASS 9.03 %
0.1 VDC (1.00 Range)	0.1000000	0.099999927	7.27 ppm	0.099999093	0.10000091	-0.726 ppm	1.80 ppm	PASS 8.01 %
0.2 VDC (1.00 Range)	0.2000000	0.20000005	3.86 ppm	0.19999887	0.20000113	0.255 ppm	1.80 ppm	PASS 4.51 %
1.0 VDC (1.00 Range)	1.0000000	0.99999879	3.86 ppm	0.99999434	1.0000057	-1.212 ppm	1.80 ppm	PASS 21.41 %
-0.1 VDC (1.00 Range)	-0.1000000	-0.099999889	7.27 ppm	-0.10000091	-0.099999093	-1.106 ppm	1.80 ppm	PASS 12.20 %
-0.2 VDC (1.00 Range)	-0.2000000	-0.19999977	3.86 ppm	-0.20000113	-0.19999887	-1.154 ppm	1.80 ppm	PASS 20.38 %
-1.0 VDC (1.00 Range)	-1.0000000	-0.99999916	3.86 ppm	-1.0000057	-0.99999434	-0.839 ppm	1.80 ppm	PASS 14.83 %
1.0 VDC (10.00 Range)	1.0000000	0.99999914	3.86 ppm	0.99999559	1.0000044	-0.857 ppm	0.55 ppm	PASS 19.43 %
2.0 VDC (10.00 Range)	2.0000000	1.9999984	2.77 ppm	1.9999934	2.0000066	-0.807 ppm	0.55 ppm	PASS 24.31 %
10.0 VDC (10.00 Range)	10.0000000	9.999994	2.73 ppm	9.9999672	10.000033	-0.598 ppm	0.55 ppm	PASS 18.23 %
-1.0 VDC (10.00 Range)	-1.0000000	-0.99999977	3.86 ppm	-1.0000044	-0.99999559	-0.230 ppm	0.55 ppm	PASS 5.21 %
-2.0 VDC (10.00 Range)	-2.0000000	-1.9999987	2.77 ppm	-2.0000066	-1.9999934	-0.635 ppm	0.55 ppm	PASS 19.14 %
-10.0 VDC (10.00 Range)	-10.0000000	-9.9999949	2.73 ppm	-10.000033	-9.9999672	-0.514 ppm	0.55 ppm	PASS 15.66 %
10 VDC (100.00 Range)	10.0000000	10.000037	2.77 ppm	9.9999443	10.000056	3.691 ppm	2.80 ppm	PASS 66.27 %
20 VDC (100.00 Range)	20.0000000	20.000015	3.73 ppm	19.999869	20.000131	0.768 ppm	2.80 ppm	PASS 11.76 %
100 VDC (100.00 Range)	100.0000000	99.999905	3.73 ppm	99.999347	100.00065	-0.951 ppm	2.80 ppm	PASS 14.57 %
-10 VDC (100.00 Range)	-10.0000000	-9.9999647	2.77 ppm	-10.000056	-9.9999443	-3.534 ppm	2.80 ppm	PASS 63.45 %
-20 VDC (100.00 Range)	-20.0000000	-19.999947	3.73 ppm	-20.000131	-19.999869	-2.667 ppm	2.80 ppm	PASS 40.83 %
-100 VDC (100.00 Range)	-100.0000000	-99.999813	3.73 ppm	-100.00065	-99.999347	-1.870 ppm	2.80 ppm	PASS 28.63 %
100 VDC (1000.00 Range)	100.0000000	99.99992	3.73 ppm	99.999367	100.00063	-0.800 ppm	2.60 ppm	PASS 12.65 %
200 VDC (1000.00 Range)	200.0000000	199.99967	3.73 ppm	199.99873	200.00127	-1.639 ppm	2.60 ppm	PASS 25.88 %
1000 VDC (1000.00 Range)	1000.0000000	999.99855	5.45 ppm	999.97995	1000.02	-1.451 ppm	2.60 ppm	PASS 7.24 %
-100 VDC (1000.00 Range)	-100.0000000	-99.999846	3.73 ppm	-100.00063	-99.999367	-1.536 ppm	2.60 ppm	PASS 24.26 %
-200 VDC (1000.00 Range)	-200.0000000	-199.99956	3.73 ppm	-200.00127	-199.99873	-2.197 ppm	2.60 ppm	PASS 34.72 %
-1000 VDC (1000.00 Range)	-1000.0000000	-999.99915	5.45 ppm	-1000.02	-999.97995	-0.850 ppm	2.60 ppm	PASS 21.53 %

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	1.0999983	2.73 ppm	1.099996	1.100004	-1.49 ppm	0.55 ppm	PASS 45.34 %
0.9999999	0.9999999	0.9999985	2.73 ppm	0.9999966	1.000003	-1.43 ppm	0.55 ppm	PASS 43.61 %
0.9000000	0.9000000	0.8999987	2.73 ppm	0.899997	0.900003	-1.47 ppm	0.55 ppm	PASS 44.91 %
0.8888888	0.8888888	0.8888874	2.73 ppm	0.8888859	0.8888917	-1.53 ppm	0.55 ppm	PASS 46.62 %
0.8000000	0.8000000	0.7999988	2.73 ppm	0.7999974	0.8000026	-1.54 ppm	0.55 ppm	PASS 47.10 %
0.7777777	0.7777777	0.7777765	2.73 ppm	0.7777751	0.7777803	-1.58 ppm	0.55 ppm	PASS 48.26 %
0.7000000	0.7000000	0.6999989	2.73 ppm	0.6999977	0.7000023	-1.59 ppm	0.55 ppm	PASS 48.41 %
0.6666666	0.6666666	0.6666655	2.73 ppm	0.6666644	0.6666688	-1.59 ppm	0.55 ppm	PASS 48.58 %
0.6000000	0.6000000	0.5999990	2.73 ppm	0.599998	0.600002	-1.61 ppm	0.55 ppm	PASS 49.15 %
0.5555555	0.5555555	0.5555547	2.73 ppm	0.5555537	0.5555573	-1.51 ppm	0.55 ppm	PASS 46.05 %
0.5000000	0.5000000	0.4999992	2.73 ppm	0.4999984	0.5000016	-1.51 ppm	0.55 ppm	PASS 46.18 %
0.4444444	0.4444444	0.4444437	2.73 ppm	0.4444429	0.4444459	-1.62 ppm	0.55 ppm	PASS 49.51 %
0.4000000	0.4000000	0.3999993	2.73 ppm	0.3999987	0.4000013	-1.67 ppm	0.55 ppm	PASS 51.02 %
0.3333333	0.3333333	0.3333327	2.73 ppm	0.3333322	0.3333344	-1.67 ppm	0.55 ppm	PASS 51.05 %
0.3000000	0.3000000	0.2999994	2.73 ppm	0.299999	0.300001	-1.90 ppm	0.55 ppm	PASS 57.82 %
0.2222222	0.2222222	0.2222217	2.73 ppm	0.2222215	0.2222229	-2.08 ppm	0.55 ppm	PASS 63.51 %
0.2000000	0.2000000	0.1999995	2.73 ppm	0.1999993	0.2000007	-2.32 ppm	0.55 ppm	PASS 70.72 %
0.1234567	0.1234567	0.12345633	2.73 ppm	0.1234563	0.1234571	-3.00 ppm	0.55 ppm	PASS 91.53 %
0.1111111	0.1111111	0.1111107	2.73 ppm	0.1111107	0.1111115	-3.61 ppm	0.55 ppm	FAIL 110.20 %
0.1000000	0.1000000	0.0999996	2.73 ppm	0.09999967	0.1000003	-3.72 ppm	0.55 ppm	FAIL 113.51 %
0.0987654	0.0987654	0.09876501	3.86 ppm	0.09876496	0.09876584	-3.96 ppm	0.55 ppm	PASS 89.83 %
0.0111111	0.0111111	0.0111108	7.27 ppm	0.0111101	0.0111119	-23.50 ppm	0.55 ppm	FAIL 300.49 %
-0.0111111	-0.0111111	-0.0111115	7.27 ppm	-0.0111119	-0.0111101	32.31 ppm	0.55 ppm	FAIL 413.17 %
-0.0987654	-0.0987654	-0.0987657	3.86 ppm	-0.09876584	-0.09876496	2.66 ppm	0.55 ppm	PASS 60.30 %
-0.1000000	-0.1000000	-0.1000002	2.73 ppm	-0.1000003	-0.09999967	2.35 ppm	0.55 ppm	PASS 71.74 %
-0.1111111	-0.1111111	-0.1111113	2.73 ppm	-0.1111115	-0.1111107	1.98 ppm	0.55 ppm	PASS 60.43 %
-0.1234567	-0.1234567	-0.1234569	2.73 ppm	-0.1234571	-0.1234563	1.72 ppm	0.55 ppm	PASS 52.59 %
-0.2000000	-0.2000000	-0.2000001	2.73 ppm	-0.2000007	-0.1999993	0.34 ppm	0.55 ppm	PASS 10.52 %
-0.2222222	-0.2222222	-0.2222223	2.73 ppm	-0.2222229	-0.2222215	0.41 ppm	0.55 ppm	PASS 12.41 %
-0.3000000	-0.3000000	-0.3000000	2.73 ppm	-0.300001	-0.299999	-0.13 ppm	0.55 ppm	PASS 3.83 %
-0.3333333	-0.3333333	-0.3333332	2.73 ppm	-0.3333344	-0.3333322	-0.39 ppm	0.55 ppm	PASS 11.98 %
-0.4000000	-0.4000000	-0.3999997	2.73 ppm	-0.4000013	-0.3999987	-0.67 ppm	0.55 ppm	PASS 20.50 %
-0.4444444	-0.4444444	-0.4444441	2.73 ppm	-0.4444459	-0.4444429	-0.70 ppm	0.55 ppm	PASS 21.24 %
-0.5000000	-0.5000000	-0.4999996	2.73 ppm	-0.5000016	-0.4999984	-0.73 ppm	0.55 ppm	PASS 22.20 %
-0.5555555	-0.5555555	-0.5555551	2.73 ppm	-0.5555573	-0.5555537	-0.78 ppm	0.55 ppm	PASS 23.68 %
-0.6000000	-0.6000000	-0.5999995	2.73 ppm	-0.600002	-0.599998	-0.87 ppm	0.55 ppm	PASS 26.59 %
-0.6666666	-0.6666666	-0.6666660	2.73 ppm	-0.6666688	-0.6666644	-0.90 ppm	0.55 ppm	PASS 27.50 %
-0.7000000	-0.7000000	-0.6999993	2.73 ppm	-0.7000023	-0.6999977	-0.96 ppm	0.55 ppm	PASS 29.30 %
-0.7777777	-0.7777777	-0.7777770	2.73 ppm	-0.7777803	-0.7777751	-0.90 ppm	0.55 ppm	PASS 27.54 %
-0.8000000	-0.8000000	-0.7999993	2.73 ppm	-0.8000026	-0.7999974	-0.88 ppm	0.55 ppm	PASS 26.76 %
-0.8888888	-0.8888888	-0.8888880	2.73 ppm	-0.8888917	-0.8888859	-0.89 ppm	0.55 ppm	PASS 27.15 %
-0.9000000	-0.9000000	-0.8999993	2.73 ppm	-0.900003	-0.899997	-0.80 ppm	0.55 ppm	PASS 24.30 %
-0.9999999	-0.9999999	-0.9999991	2.73 ppm	-1.000003	-0.9999966	-0.76 ppm	0.55 ppm	PASS 23.05 %
-1.0999999	-1.0999999	-1.0999990	2.73 ppm	-1.100004	-1.099996	-0.85 ppm	0.55 ppm	PASS 25.89 %
DCV Linearity	10V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
10.999999	10.999999	10.9999902	2.73 ppm	10.99996	11.00004	-0.80 ppm	0.55 ppm	PASS 24.31 %
10.101010	10.101010	10.1010030	2.73 ppm	10.10098	10.10104	-0.69 ppm	0.55 ppm	PASS 21.16 %
10.000000	10.000000	9.9999922	2.73 ppm	9.999967	10.00003	-0.78 ppm	0.55 ppm	PASS 23.93 %
9.999999	9.999999	9.9999905	2.73 ppm	9.999966	10.00003	-0.85 ppm	0.55 ppm	PASS 25.77 %
9.000000	9.000000	8.9999926	2.73 ppm	8.99997	9.00003	-0.82 ppm	0.55 ppm	PASS 25.08 %
8.888888	8.888888	8.8888812	2.73 ppm	8.888859	8.888917	-0.76 ppm	0.55 ppm	PASS 23.18 %
8.000000	8.000000	7.9999944	2.73 ppm	7.999974	8.000026	-0.70 ppm	0.55 ppm	PASS 21.49 %
7.777777	7.777777	7.7777704	2.73 ppm	7.777751	7.777803	-0.84 ppm	0.55 ppm	PASS 25.70 %
7.000000	7.000000	6.9999942	2.73 ppm	6.999977	7.000023	-0.83 ppm	0.55 ppm	PASS 25.32 %
6.666666	6.666666	6.6666602	2.73 ppm	6.666644	6.666688	-0.87 ppm	0.55 ppm	PASS 26.54 %
6.000000	6.000000	5.9999945	2.73 ppm	5.99998	6.00002	-0.92 ppm	0.55 ppm	PASS 27.90 %
5.555555	5.555555	5.5555502	2.73 ppm	5.555537	5.555573	-0.86 ppm	0.55 ppm	PASS 26.16 %
5.000000	5.000000	4.9999960	2.73 ppm	4.999984	5.000016	-0.80 ppm	0.55 ppm	PASS 24.24 %
4.444444	4.444444	4.4444406	2.73 ppm	4.444429	4.444459	-0.78 ppm	0.55 ppm	PASS 23.64 %
4.000000	4.000000	3.9999970	2.73 ppm	3.999987	4.000013	-0.74 ppm	0.55 ppm	PASS 22.55 %
3.333333	3.333333	3.3333309	2.73 ppm	3.333322	3.333344	-0.62 ppm	0.55 ppm	PASS 18.95 %
3.000000	3.000000	2.9999983	2.73 ppm	2.99999	3.00001	-0.58 ppm	0.55 ppm	PASS 17.74 %
2.222222	2.222222	2.2222205	2.73 ppm	2.222215	2.222229	-0.66 ppm	0.55 ppm	PASS 20.06 %
2.000000	2.000000	1.9999988	2.73 ppm	1.999993	2.000007	-0.58 ppm	0.55 ppm	PASS 17.62 %
1.111111	1.111111	1.1111106	2.73 ppm	1.111107	1.111115	-0.38 ppm	0.55 ppm	PASS 11.66 %
1.000000	1.000000	0.9999997	3.86 ppm	0.9999956	1.000004	-0.25 ppm	0.55 ppm	PASS 5.77 %
0.555555	0.555555	0.5555550	7.27 ppm	0.5555507	0.5555593	0.01 ppm	0.55 ppm	PASS 0.14 %
-0.555555	-0.555555	-0.5555562	7.27 ppm	-0.5555593	-0.5555507	2.16 ppm	0.55 ppm	PASS 27.68 %
-1.000000	-1.000000	-1.0000006	3.86 ppm	-1.000004	-0.9999956	0.59 ppm	0.55 ppm	PASS 13.30 %
-1.111111	-1.111111	-1.1111116	2.73 ppm	-1.111115	-1.111107	0.53 ppm	0.55 ppm	PASS 16.02 %

-2.000000	-2.000000	-1.999995	2.73 ppm	-2.000007	-1.999993	-0.27 ppm	0.55 ppm	PASS 8.32 %
-2.222222	-2.222222	-2.2222211	2.73 ppm	-2.222229	-2.222215	-0.39 ppm	0.55 ppm	PASS 11.94 %
-3.000000	-3.000000	-2.9999986	2.73 ppm	-3.00001	-2.99999	-0.47 ppm	0.55 ppm	PASS 14.44 %
-3.333333	-3.333333	-3.3333315	2.73 ppm	-3.333344	-3.333322	-0.44 ppm	0.55 ppm	PASS 13.38 %
-4.000000	-4.000000	-3.9999977	2.73 ppm	-4.000013	-3.999987	-0.57 ppm	0.55 ppm	PASS 17.43 %
-4.444444	-4.444444	-4.4444412	2.73 ppm	-4.444459	-4.444429	-0.63 ppm	0.55 ppm	PASS 19.22 %
-5.000000	-5.000000	-4.9999963	2.73 ppm	-5.000016	-4.999984	-0.74 ppm	0.55 ppm	PASS 22.53 %
-5.555555	-5.555555	-5.5555507	2.73 ppm	-5.555573	-5.555537	-0.77 ppm	0.55 ppm	PASS 23.36 %
-6.000000	-6.000000	-5.9999953	2.73 ppm	-6.00002	-5.99998	-0.79 ppm	0.55 ppm	PASS 23.94 %
-6.666666	-6.666666	-6.6666603	2.73 ppm	-6.666688	-6.666644	-0.86 ppm	0.55 ppm	PASS 26.24 %
-7.000000	-7.000000	-6.9999940	2.73 ppm	-7.000023	-6.999977	-0.85 ppm	0.55 ppm	PASS 25.96 %
-7.777777	-7.777777	-7.7777700	2.73 ppm	-7.777803	-7.777751	-0.90 ppm	0.55 ppm	PASS 27.36 %
-8.000000	-8.000000	-7.9999937	2.73 ppm	-8.000026	-7.999974	-0.79 ppm	0.55 ppm	PASS 24.08 %
-8.888888	-8.888888	-8.8888806	2.73 ppm	-8.888917	-8.888859	-0.83 ppm	0.55 ppm	PASS 25.23 %
-9.000000	-9.000000	-8.9999934	2.73 ppm	-9.00003	-8.99997	-0.73 ppm	0.55 ppm	PASS 22.26 %
-9.999999	-9.999999	-9.9999910	2.73 ppm	-10.00003	-9.999966	-0.80 ppm	0.55 ppm	PASS 24.45 %
-10.000000	-10.000000	-9.9999926	2.73 ppm	-10.00003	-9.999967	-0.74 ppm	0.55 ppm	PASS 22.62 %
-10.101010	-10.101010	-10.1010029	2.73 ppm	-10.10104	-10.10098	-0.71 ppm	0.55 ppm	PASS 21.54 %
-10.999999	-10.999999	-10.9999920	2.73 ppm	-11.00004	-10.99996	-0.64 ppm	0.55 ppm	PASS 19.47 %
DCV Linearity	100V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
100.99999	100.99999	100.9999136	2.73 ppm	100.99966	101.00032	-0.76 ppm	0.55 ppm	PASS 16.83 %
100.10101	100.10101	100.1009092	2.73 ppm	100.10068	100.10134	-1.01 ppm	0.55 ppm	PASS 22.47 %
100.00000	100.00000	99.9998856	2.73 ppm	99.999672	100.00033	-1.14 ppm	0.55 ppm	PASS 34.87 %
99.99999	99.99999	99.9998668	2.73 ppm	99.999662	100.00032	-1.23 ppm	0.55 ppm	PASS 37.57 %
90.00000	90.00000	89.9998802	2.73 ppm	89.999705	90.000295	-1.33 ppm	0.55 ppm	PASS 40.57 %
88.88888	88.88888	88.8887653	2.73 ppm	88.888588	88.889172	-1.29 ppm	0.55 ppm	PASS 39.36 %
80.00000	80.00000	79.9998928	2.73 ppm	79.999738	80.000262	-1.34 ppm	0.55 ppm	PASS 40.85 %
77.77777	77.77777	77.7776732	2.73 ppm	77.777515	77.778025	-1.25 ppm	0.55 ppm	PASS 37.96 %
70.00000	70.00000	69.9999168	2.73 ppm	69.99977	70.00023	-1.19 ppm	0.55 ppm	PASS 36.25 %
66.66666	66.66666	66.6665869	2.73 ppm	66.666441	66.666879	-1.10 ppm	0.55 ppm	PASS 33.45 %
60.00000	60.00000	59.9999354	2.73 ppm	59.999803	60.000197	-1.08 ppm	0.55 ppm	PASS 32.83 %
55.55555	55.55555	55.5554895	2.73 ppm	55.555368	55.555732	-1.09 ppm	0.55 ppm	PASS 33.19 %
50.00000	50.00000	49.9999418	2.73 ppm	49.999836	50.000164	-1.16 ppm	0.55 ppm	PASS 35.47 %
44.44444	44.44444	44.4443877	2.73 ppm	44.444294	44.444586	-1.18 ppm	0.55 ppm	PASS 35.85 %
40.00000	40.00000	39.9999543	2.73 ppm	39.999869	40.000131	-1.14 ppm	0.55 ppm	PASS 34.82 %
33.33333	33.33333	33.3332880	2.73 ppm	33.333221	33.333439	-1.26 ppm	0.55 ppm	PASS 38.41 %
30.00000	30.00000	29.9999645	2.73 ppm	29.999902	30.000098	-1.18 ppm	0.55 ppm	PASS 36.09 %
22.22222	22.22222	22.2221915	2.73 ppm	22.222147	22.222293	-1.28 ppm	0.55 ppm	PASS 39.04 %
20.00000	20.00000	19.9999724	2.73 ppm	19.999934	20.000066	-1.38 ppm	0.55 ppm	PASS 42.01 %
11.11111	11.11111	11.1110969	2.73 ppm	11.111075	11.111147	-1.27 ppm	0.55 ppm	PASS 38.74 %
10.00000	10.00000	9.9999832	3.86 ppm	9.9999559	10.000044	-1.68 ppm	0.55 ppm	PASS 38.02 %
9.87654	9.87654	9.8765255	7.27 ppm	9.8764658	9.8766202	-1.77 ppm	0.55 ppm	PASS 22.65 %
-9.87654	-9.87654	-9.8765376	7.27 ppm	-9.8766202	-9.8764658	-0.54 ppm	0.55 ppm	PASS 6.95 %
-10.00000	-10.00000	-9.9999923	3.86 ppm	-10.000044	-9.9999559	-0.77 ppm	0.55 ppm	PASS 17.39 %
-11.11111	-11.11111	-11.1110925	2.73 ppm	-11.111147	-11.111075	-1.66 ppm	0.55 ppm	PASS 50.65 %
-20.00000	-20.00000	-19.9999696	2.73 ppm	-20.000066	-19.999934	-1.52 ppm	0.55 ppm	PASS 46.33 %
-22.22222	-22.22222	-22.2221820	2.73 ppm	-22.222293	-22.222147	-1.71 ppm	0.55 ppm	PASS 52.19 %
-30.00000	-30.00000	-29.9999542	2.73 ppm	-30.000098	-29.999902	-1.53 ppm	0.55 ppm	PASS 46.56 %
-33.33333	-33.33333	-33.3332839	2.73 ppm	-33.333439	-33.333221	-1.38 ppm	0.55 ppm	PASS 42.15 %
-40.00000	-40.00000	-39.9999561	2.73 ppm	-40.000131	-39.999869	-1.10 ppm	0.55 ppm	PASS 33.44 %
-44.44444	-44.44444	-44.4443919	2.73 ppm	-44.444586	-44.444294	-1.08 ppm	0.55 ppm	PASS 33.03 %
-50.00000	-50.00000	-49.9999433	2.73 ppm	-50.000164	-49.999836	-1.13 ppm	0.55 ppm	PASS 34.59 %
-55.55555	-55.55555	-55.5554921	2.73 ppm	-55.555732	-55.555368	-1.04 ppm	0.55 ppm	PASS 31.76 %
-60.00000	-60.00000	-59.9999295	2.73 ppm	-60.000197	-59.999803	-1.18 ppm	0.55 ppm	PASS 35.84 %
-66.66666	-66.66666	-66.6665803	2.73 ppm	-66.666879	-66.666441	-1.20 ppm	0.55 ppm	PASS 36.45 %
-70.00000	-70.00000	-69.9999100	2.73 ppm	-70.00023	-69.99977	-1.29 ppm	0.55 ppm	PASS 39.19 %
-77.77777	-77.77777	-77.7776690	2.73 ppm	-77.778025	-77.777515	-1.30 ppm	0.55 ppm	PASS 39.59 %
-80.00000	-80.00000	-79.9998951	2.73 ppm	-80.000262	-79.999738	-1.31 ppm	0.55 ppm	PASS 39.99 %
-88.88888	-88.88888	-88.8887598	2.73 ppm	-88.889172	-88.888588	-1.35 ppm	0.55 ppm	PASS 41.24 %
-90.00000	-90.00000	-89.9998574	2.73 ppm	-90.000295	-89.999705	-1.58 ppm	0.55 ppm	PASS 48.31 %
-99.99999	-99.99999	-99.9998163	2.73 ppm	-100.00032	-99.999662	-1.74 ppm	0.55 ppm	PASS 52.95 %
-100.00000	-100.00000	-99.9998235	2.73 ppm	-100.00033	-99.999672	-1.76 ppm	0.55 ppm	PASS 53.80 %
-100.10101	-100.10101	-100.10081690	2.73 ppm	-100.10134	-100.10068	-1.93 ppm	0.55 ppm	PASS 92.80 %
-100.99999	-100.99999	-100.99979190	2.73 ppm	-101.00032	-100.99966	-1.96 ppm	0.55 ppm	PASS 94.84 %

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	0.9998017	0.99978702	32.0 ppm	9.9976171E-01	9.9984169E-01	-14.686 ppm	8.0 ppm	PASS 36.71 %
1.9 Ω	1.8995064	1.8994809	25.0 ppm	1.8994437E+00	1.8995691E+00	-13.409 ppm	8.0 ppm	PASS 40.63 %
10 Ω	9.999933	9.9998833	5.0 ppm	9.9998030E+00	1.0000063E+01	-4.971 ppm	8.0 ppm	PASS 38.24 %
19 Ω	18.999097	18.99909	4.0 ppm	1.8998907E+01	1.8999287E+01	-0.375 ppm	6.0 ppm	PASS 3.75 %
100 Ω	100.00183	100.00181	1.7 ppm	1.0000106E+02	1.0000260E+02	-0.247 ppm	6.0 ppm	PASS 3.21 %
190 Ω	189.99505	189.99514	1.7 ppm	1.8999431E+02	1.8999579E+02	0.465 ppm	2.2 ppm	PASS 11.92 %
1.0 kΩ	999.9918	999.99159	1.7 ppm	9.9998790E+02	9.9999570E+02	-0.207 ppm	2.2 ppm	PASS 5.30 %
1.9 kΩ	1899.9976	1899.997	1.7 ppm	1.8999902E+03	1.9000050E+03	-0.310 ppm	2.2 ppm	PASS 7.95 %
10 kΩ	10000.084	10000.082	1.6 ppm	1.0000046E+04	1.0000122E+04	-0.208 ppm	2.2 ppm	PASS 5.49 %
19 kΩ	18999.701	18999.701	1.7 ppm	1.8999627E+04	1.8999775E+04	-0.011 ppm	2.2 ppm	PASS 0.28 %
100 kΩ	100001.4	100000.94	2.0 ppm	1.0000098E+05	1.0000182E+05	-4.584 ppm	2.2 ppm	FAIL 109.15 %
190 kΩ	189992.98	189993.55	2.0 ppm	1.8999051E+05	1.8999545E+05	2.993 ppm	11.0 ppm	PASS 23.02 %
1.0 MΩ	1000003.1	1000002.3	2.5 ppm	9.9998960E+05	1.0000166E+06	-0.800 ppm	11.0 ppm	PASS 5.93 %
1.9 MΩ	1899959.2	1899995.6	3.0 ppm	1.8998490E+06	1.9000694E+06	19.134 ppm	55.0 ppm	PASS 32.99 %
10 MΩ	9999407	9999420.6	10.0 ppm	9.9987570E+06	1.0000057E+07	1.362 ppm	55.0 ppm	PASS 2.10 %
19 MΩ	18999096	19000099	20.0 ppm	1.8989026E+07	1.9009166E+07	52.780 ppm	510.0 ppm	PASS 9.96 %
100 MΩ	1.000094E+08	1.0001992E+08	50.0 ppm	9.9953395E+07	1.0006541E+08	105.204 ppm	510.0 ppm	PASS 18.79 %
1 GΩ STD	9.9751672E+08	1.0000000E+09	30000.0 ppm	962593659.633	1032439780.37	2489.462 ppm	5010.00 ppm	PASS 7.11 %

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 0.0000026 Ω	5.000e-05 Ω	-5e-05	5e-05	N/A	8.0000e-06 Ω	PASS
100 Ω	Range -0.0000331 Ω	5.500e-04 Ω	-0.00055	0.00055	N/A	2.2000e-06 Ω	PASS
1.0 kΩ	Range 0.0000216 Ω	5.500e-03 Ω	-0.0055	0.0055	N/A	2.2000e-06 Ω	PASS
10 kΩ	Range 0.0002695 Ω	5.500e-02 Ω	-0.055	0.055	N/A	2.2000e-06 Ω	PASS
100 kΩ	Range -0.0021570 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range 0.0503333 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range 0.9345547 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range 1.2580546 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range 1.4737211 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
10 Ω	Range 0.3029988 Ω	3.000e-01 Ω	-0.3	0.3	N/A	8.0000e-06 Ω	FAIL
100 Ω	Range 0.3019271 Ω	3.500e-01 Ω	-0.35	0.35	N/A	2.2000e-06 Ω	PASS
1.0 kΩ	Range 0.3007824 Ω	4.000e-01 Ω	-0.4	0.4	N/A	2.2000e-06 Ω	PASS
10 kΩ	Range 0.3088461 Ω	4.000e-01 Ω	-0.4	0.4	N/A	2.2000e-06 Ω	PASS
100 kΩ	Range 0.3192415 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range 0.6471412 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range 4.7087003 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range 4.4570924 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range 4.5289810 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	1.0001596	129.09	0.99955091	1.00044909	VAC	159.635 ppm	320.0 ppm	PASS 35.55 %
1.0 VAC @ 1.0 MHz	1.0	1.0128769	0.2500 %	0.9874	1.0126	VAC	1.2877 %	1.0100 %	FAIL 102.20 %
10 VAC @ 40 Hz	10	10.000928	0.0073 %	9.8982682	10.1017318	VAC	0.0093 %	1.0100 %	PASS 0.91 %
10 VAC @ 200 Hz	10	10.00012	73.18	9.9983682	10.0016318	VAC	12.001 ppm	90.0 ppm	PASS 7.35 %
10 VAC @ 500 Hz	10	10.000157	73.18	9.9983682	10.0016318	VAC	15.657 ppm	90.0 ppm	PASS 9.59 %
10 VAC @ 50.0 kHz	10	10.000915	129.09	9.9955091	10.0044909	VAC	91.544 ppm	320.0 ppm	PASS 20.38 %
10 VAC @ 1.0 MHz	10	10.097298	0.3000 %	9.869	10.131	VAC	0.9730 %	1.0100 %	PASS 74.27 %

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	0.0099991239	312.27	0.009991	0.010009	-87.612 ppm	600.0 ppm	PASS 9.60 %
0.01 V AC+DC @ 20 Hz	0.0099988579	312.27	0.009991	0.010009	-114.207 ppm	600.0 ppm	PASS 12.52 %
0.01 V AC+DC @ 40 Hz	0.0099989711	312.27	0.009991	0.010009	-102.890 ppm	600.0 ppm	PASS 11.28 %
0.01 V AC+DC @ 100 Hz	0.0099989327	312.27	0.009994	0.010006	-106.734 ppm	310.0 ppm	PASS 17.15 %
0.01 V AC+DC @ 1.0 kHz	0.0099989231	312.27	0.009994	0.010006	-107.689 ppm	310.0 ppm	PASS 17.31 %
0.01 V AC+DC @ 10.0 kHz	0.0099979355	312.27	0.009993	0.010007	-206.455 ppm	410.0 ppm	PASS 28.58 %
0.01 V AC+DC @ 20.0 kHz	0.0099947975	312.27	0.009993	0.010007	-520.247 ppm	410.0 ppm	PASS 72.03 %
0.01 V AC+DC @ 50.0 kHz	0.0099931911	0.0312 %	0.009986	0.010014	-0.0681 %	0.1110 %	PASS 47.87 %
0.01 V AC+DC @ 100.0 kHz	0.009967282	0.0312 %	0.009946	0.010054	-0.3272 %	0.5110 %	PASS 60.34 %
0.01 V AC+DC @ 300.0 kHz	0.010085086	0.0447 %	0.009594	0.010406	0.8509 %	4.0200 %	PASS 20.93 %
0.01 V AC+DC @ 500.0 kHz	0.0095742143	0.0773 %	0.006787	0.013213	-4.2579 %	32.0500 %	PASS 13.25 %
0.01 V AC+DC @ 1.0 MHz	0.008898582	0.1500 %	0.006780	0.013220	-11.0142 %	32.0500 %	PASS 34.21 %
0.1 V AC+DC @ 10 Hz	0.099998458	1500	0.099839	0.100161	-15.419 ppm	110.0 ppm	PASS 0.96 %
0.1 V AC+DC @ 20 Hz	0.099995726	2500	0.099739	0.100261	-42.742 ppm	110.0 ppm	PASS 1.64 %
0.1 V AC+DC @ 40 Hz	0.099995817	4000	0.099589	0.100411	-41.826 ppm	110.0 ppm	PASS 1.02 %
0.1 V AC+DC @ 100 Hz	0.099995387	101.36	0.099981	0.100019	-46.134 ppm	90.0 ppm	PASS 24.11 %
0.1 V AC+DC @ 1.0 kHz	0.099998365	101.36	0.099981	0.100019	-16.352 ppm	90.0 ppm	PASS 8.55 %
0.1 V AC+DC @ 10.0 kHz	0.099997781	101.36	0.099974	0.100026	-22.191 ppm	160.0 ppm	PASS 8.49 %
0.1 V AC+DC @ 20.0 kHz	0.099990786	101.36	0.099974	0.100026	-92.143 ppm	160.0 ppm	PASS 35.26 %
0.1 V AC+DC @ 50.0 kHz	0.099988713	101.36	0.099958	0.100042	-112.868 ppm	320.0 ppm	PASS 26.79 %
0.1 V AC+DC @ 100.0 kHz	0.099943452	101.36	0.099908	0.100092	-565.484 ppm	820.0 ppm	PASS 61.37 %
0.1 V AC+DC @ 300.0 kHz	0.099741278	0.0101 %	0.099680	0.100320	-0.2587 %	0.3100 %	PASS 80.82 %
0.1 V AC+DC @ 500.0 kHz	0.099642711	0.0101 %	0.098980	0.101020	-0.3573 %	1.0100 %	PASS 35.02 %
0.1 V AC+DC @ 1.0 MHz	0.099042489	0.0101 %	0.098980	0.101020	-0.9575 %	1.0100 %	PASS 93.86 %
1.0 V AC+DC @ 10 Hz	1.0000619	171.36	0.999719	1.000281	61.882 ppm	110.0 ppm	PASS 21.99 %
1.0 V AC+DC @ 20 Hz	1.0000345	460.91	0.999429	1.000571	34.545 ppm	110.0 ppm	PASS 6.05 %
1.0 V AC+DC @ 40 Hz	1.0000313	763.64	0.999126	1.000874	31.292 ppm	110.0 ppm	PASS 3.58 %
1.0 V AC+DC @ 100 Hz	1.0000284	763.64	0.999146	1.000854	28.411 ppm	90.0 ppm	PASS 3.33 %
1.0 V AC+DC @ 1.0 kHz	1.0000548	1500	0.998410	1.001590	54.760 ppm	90.0 ppm	PASS 3.44 %
1.0 V AC+DC @ 10.0 kHz	0.99999693	3000	0.996840	1.003160	-3.073 ppm	160.0 ppm	PASS 0.10 %
1.0 V AC+DC @ 20.0 kHz	0.99994183	49.55	0.999790	1.000210	-58.174 ppm	160.0 ppm	PASS 27.76 %
1.0 V AC+DC @ 50.0 kHz	1.0000008	49.55	0.999630	1.000370	0.814 ppm	320.0 ppm	PASS 0.22 %
1.0 V AC+DC @ 100.0 kHz	1.000029	49.55	0.999130	1.000870	28.995 ppm	820.0 ppm	PASS 3.33 %
1.0 V AC+DC @ 300.0 kHz	1.001094	0.0050 %	0.996850	1.003150	0.1094 %	0.3100 %	PASS 34.73 %
1.0 V AC+DC @ 500.0 kHz	1.0029002	0.0050 %	0.989850	1.010150	0.2900 %	1.0100 %	PASS 28.58 %
1.0 V AC+DC @ 1.0 MHz	1.0074774	0.0050 %	0.989850	1.010150	0.7477 %	1.0100 %	PASS 73.67 %
10.0 V AC+DC @ 10 Hz	10.000671	49.55	9.997105	10.002895	67.059 ppm	240.0 ppm	PASS 23.16 %
10.0 V AC+DC @ 20 Hz	10.000405	49.55	9.997105	10.002895	40.514 ppm	240.0 ppm	PASS 13.99 %
10.0 V AC+DC @ 40 Hz	10.00037	49.55	9.997105	10.002895	37.006 ppm	240.0 ppm	PASS 12.78 %
10.0 V AC+DC @ 100 Hz	10.000349	80.45	9.996996	10.003004	34.929 ppm	220.0 ppm	PASS 11.63 %
10.0 V AC+DC @ 1.0 kHz	10.000556	113.18	9.996668	10.003332	55.600 ppm	220.0 ppm	PASS 16.69 %
10.0 V AC+DC @ 10.0 kHz	10.000003	395.45	9.993846	10.006154	0.328 ppm	220.0 ppm	PASS 0.05 %
10.0 V AC+DC @ 20.0 kHz	9.9997259	395.45	9.993846	10.006154	-27.414 ppm	220.0 ppm	PASS 4.45 %
10.0 V AC+DC @ 50.0 kHz	9.9991589	1100	9.985300	10.014700	-84.114 ppm	370.0 ppm	PASS 5.72 %
10.0 V AC+DC @ 100.0 kHz	9.9958445	0.1800 %	9.969800	10.030200	-0.0416 %	0.1220 %	PASS 13.76 %
10.0 V AC+DC @ 300.0 kHz	9.9832209	0.0048 %	9.958518	10.041482	-0.1678 %	0.4100 %	PASS 40.45 %
10.0 V AC+DC @ 500.0 kHz	9.9913128	0.0048 %	9.848518	10.151482	-0.0869 %	1.5100 %	PASS 5.73 %
10.0 V AC+DC @ 1.0 MHz	10.049868	0.0048 %	9.848518	10.151482	0.4987 %	1.5100 %	PASS 32.92 %
100.0 V AC+DC @ 1.0 kHz	100.005	48.18	99.953182	100.046818	49.997 ppm	420.0 ppm	PASS 10.65 %
100.0 V AC+DC @ 10.0 kHz	100.0032	48.18	99.933182	100.066818	31.958 ppm	620.0 ppm	PASS 4.77 %
100.0 V AC+DC @ 20.0 kHz	99.994172	48.18	99.933182	100.066818	-58.279 ppm	620.0 ppm	PASS 8.72 %
100.0 V AC+DC @ 50.0 kHz	99.970921	0.0048 %	99.873182	100.126818	-0.0291 %	0.1220 %	PASS 22.93 %
100.0 V AC+DC @ 100.0 kHz	99.925567	0.0048 %	99.693182	100.306818	-0.0744 %	0.3020 %	PASS 24.26 %
700.0 V AC+DC @ 1.0 kHz	700.24856	48.18	699.672274	700.327726	355.090 ppm	420.0 ppm	PASS 74.51 %

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	-1.2974538E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
50 nADC	5E-08	5.0001738E-08	71.82 ppm	4.997591E-08	5.002409E-08	34.757 ppm	410 ppm	INFO
100 nADC	1E-07	9.9992384E-08	71.82 ppm	9.995182E-08	1.000482E-07	-76.157 ppm	410 ppm	PASS 15.81 %
-100 nADC	-1E-07	-1.0003189E-07	71.82 ppm	-1.000482E-07	-9.995182E-08	318.930 ppm	410 ppm	PASS 66.19 %
-50 nADC	-5E-08	-5.0057966E-08	71.82 ppm	-5.002409E-08	-4.997591E-08	1159.319 ppm	410 ppm	INFO
Zero µADC	0	-2.1443417E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
0.5 µADC	5E-07	4.9997754E-07	71.82 ppm	4.999391E-07	5.000609E-07	-44.921 ppm	50 ppm	PASS 36.87 %
1.0 µADC	1E-06	9.9995614E-07	71.82 ppm	9.998782E-07	1.000122E-06	-43.862 ppm	50 ppm	PASS 36.01 %
-1.0 µADC	-1E-06	-1.0000159E-06	71.82 ppm	-1.000122E-06	-9.998782E-07	15.943 ppm	50 ppm	PASS 13.09 %
-0.5 µADC	-5E-07	-5.0005166E-07	71.82 ppm	-5.000609E-07	-4.999391E-07	103.314 ppm	50 ppm	PASS 84.81 %
Zero 00 µADC	0	-1.0593022E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
5 µADC	5E-06	4.9999684E-06	71.82 ppm	4.999556E-06	5.000444E-06	-6.312 ppm	17 ppm	PASS 7.11 %
10 µADC	1E-05	9.9998989E-06	71.82 ppm	9.999112E-06	1.000089E-05	-10.109 ppm	17 ppm	PASS 11.38 %
-10 µADC	-1E-05	-1.0000012E-05	71.82 ppm	-1.000089E-05	-9.999112E-06	1.198 ppm	17 ppm	PASS 1.35 %
-5 µADC	-5E-06	-5.0000258E-06	71.82 ppm	-5.000444E-06	-4.999556E-06	5.168 ppm	17 ppm	PASS 5.82 %
Zero 000 µADC	0	-6.4965539E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
50 µADC	5E-05	4.9999744E-05	71.82 ppm	4.999561E-05	5.000439E-05	-5.121 ppm	16 ppm	PASS 5.83 %
100 µADC	0.0001	9.999942E-05	71.82 ppm	9.999122E-05	0.0001000088	-5.798 ppm	16 ppm	PASS 6.60 %
-100 µADC	-0.0001	-9.9999431E-05	71.82 ppm	-0.0001000088	-9.999122E-05	-5.687 ppm	16 ppm	PASS 6.48 %
-50 µADC	-5E-05	-4.999963E-05	71.82 ppm	-5.000439E-05	-4.999561E-05	-7.396 ppm	16 ppm	PASS 8.42 %
Zero mADC	0	-3.8762348E-11	33.64 ppm	0	0	Z-check	410 ppm	INFO
0.5 mADC	0.0005	0.00049999837	33.64 ppm	0.0004999762	0.0005000238	-3.261 ppm	14 ppm	PASS 6.84 %
1.0 mADC	0.001	0.00099999562	33.64 ppm	0.0009999524	0.001000048	-4.385 ppm	14 ppm	PASS 9.20 %
-1.0 mADC	-0.001	-0.00099999616	33.64 ppm	-0.001000048	-0.0009999524	-3.842 ppm	14 ppm	PASS 8.06 %
-0.5 mADC	-0.0005	-0.00049999837	33.64 ppm	-0.0005000238	-0.0004999762	-3.265 ppm	14 ppm	PASS 6.85 %
Zero 00 mADC	0	-5.8430216E-11	32.27 ppm	0	0	Z-check	410 ppm	INFO
5 mADC	0.005	0.0049999622	32.27 ppm	0.004999769	0.005000231	-7.568 ppm	14 ppm	PASS 16.36 %
10 mADC	0.01	0.009999941	32.27 ppm	0.009999537	0.01000046	-5.899 ppm	14 ppm	PASS 12.75 %
-10 mADC	-0.01	-0.009999958	32.27 ppm	-0.01000046	-0.009999537	-0.418 ppm	14 ppm	PASS 0.90 %
-5 mADC	-0.005	-0.0050000077	32.27 ppm	-0.005000231	-0.004999769	1.548 ppm	14 ppm	PASS 3.35 %
Zero 000 mADC	0	-1.5054699E-11	53.32 ppm	0	0	Z-check	410 ppm	INFO
50 mADC	0.05	0.050000381	53.32 ppm	0.04999588	0.05000412	7.627 ppm	29 ppm	PASS 9.26 %
100 mADC	0.1	0.10000146	53.32 ppm	0.09999177	0.1000082	14.601 ppm	29 ppm	PASS 17.74 %
-100 mADC	-0.1	-0.10000226	53.32 ppm	-0.1000082	-0.09999177	22.638 ppm	29 ppm	PASS 27.50 %
-50 mADC	-0.05	-0.050001148	53.32 ppm	-0.05000412	-0.04999588	22.955 ppm	29 ppm	PASS 27.89 %
Zero ADC	0	-2.0524693E-12	115.22 ppm	0	0	Z-check	410 ppm	INFO
0.5 ADC	0.5	0.50000962	115.22 ppm	0.4998874	0.5001126	19.247 ppm	110 ppm	PASS 8.55 %
1.0 ADC	1	1.0000115	115.22 ppm	0.9997748	1.000225	11.531 ppm	110 ppm	PASS 5.12 %
-1.0 ADC	-1	-0.99998327	115.22 ppm	-1.000225	-0.9997748	-16.732 ppm	110 ppm	PASS 7.43 %
-0.5 ADC	-0.5	-0.49999463	115.22 ppm	-0.5001126	-0.4998874	-10.740 ppm	110 ppm	PASS 4.77 %

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	1.002912E-05	0.0160 %	9.9893955e-06	1.00106045e-05	2911.979 ppm	0.0900 %	INFO
100 µA AC @ 50 Hz	0.0001	0.00010001353	0.0160 %	9.9893955e-05	0.000100106045	135.319 ppm	0.0900 %	PASS 12.76 %
1.0 mA AC @ 50 Hz	0.001	0.0010000237	0.0160 %	0.00099903955	0.00100096045	23.680 ppm	0.0800 %	PASS 2.47 %
10 mA AC @ 50 Hz	0.01	0.010000242	0.0160 %	0.0099903955	0.0100096045	24.200 ppm	0.0800 %	PASS 2.52 %
100 mA AC @ 50 Hz	0.1	0.10000923	0.0133 %	0.099906682	0.100093318	92.315 ppm	0.0800 %	PASS 9.89 %
1.0 A AC @ 50 Hz	1.0	1.0002427	0.0133 %	0.99886682	1.00113318	0.0243 %	0.1000 %	PASS 21.41 %
10 µA AC @ 60 Hz	1e-05	1.004419E-05	0.0133 %	9.9896682e-06	1.00103318e-05	4418.986 ppm	0.0900 %	INFO
100 µA AC @ 60 Hz	0.0001	0.00010000018	0.0133 %	9.9896682e-05	0.000100103318	1.767 ppm	0.0900 %	PASS 0.17 %
1.0 mA AC @ 60 Hz	0.001	0.0010000558	0.0129 %	0.00099907136	0.00100092864	55.820 ppm	0.0800 %	PASS 6.01 %
10 mA AC @ 60 Hz	0.01	0.010000623	0.0129 %	0.0099907136	0.0100092864	62.275 ppm	0.0800 %	PASS 6.71 %
100 mA AC @ 60 Hz	0.1	0.10001139	0.0288 %	0.099891182	0.100108818	113.936 ppm	0.0800 %	PASS 10.47 %
1.0 A AC @ 60 Hz	1.0	1.0002543	0.0288 %	0.99871182	1.00128818	0.0254 %	0.1000 %	PASS 19.74 %
10 µA AC @ 1.0 kHz	1e-05	1.0026708E-05	0.0160 %	9.9893955e-06	1.00106045e-05	2670.750 ppm	0.0900 %	INFO
100 µA AC @ 1.0 kHz	0.0001	9.9977932E-05	0.0160 %	9.9893955e-05	0.000100106045	-220.679 ppm	0.0900 %	PASS 20.81 %
1.0 mA AC @ 1.0 kHz	0.001	0.0010000966	0.0160 %	0.00099933955	0.00100066045	96.620 ppm	0.0500 %	PASS 14.63 %
10 mA AC @ 1.0 kHz	0.01	0.010000984	0.0160 %	0.0099933955	0.0100066045	98.385 ppm	0.0500 %	PASS 14.90 %
100 mA AC @ 1.0 kHz	0.1	0.10000149	0.0133 %	0.099936682	0.100063318	14.869 ppm	0.0500 %	PASS 2.35 %
1.0 A AC @ 1.0 kHz	1.0	1.0001859	0.0133 %	0.99866682	1.00133318	0.0186 %	0.1200 %	PASS 13.94 %

Test completed

Test date	12 October 2018 15:10
UUT Internal TEMP?	35.6
Destructive overloads?	39, DESTRUCTIVE OVERLOADS valid 2941

Lab temperature maintained +24°C ±2°C

Internal use only

Not validated

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