



Certificate of Calibration

This certificate provides measurement results that are traceable to the SI (The International System of Units) through internationally recognized standards.

Object	DC Current Transducer and Control Unit
Manufacturer	Danisense
Type	DR5000IM
Identification	SampleID
Serial number	SampleSN
Customer	Sample customer
Customer address	Sample customer address Sample customer address 2
Calibration number	Sample-report-3
Calibration method	Current output
Performed by	ADM
Authorized by	ADM
Date of calibration	2022-02-04
Date of certificate	2022-02-04
Next calibration	2024-02-04

The results presented in this report relate only to the items calibrated. This report shall not be reproduced except in full without approval of the laboratory.

Calibration Details

Values expressed in [%] or [ppm] are relative to the nominal value. 1 ppm = 0.0001%

Extent of Calibration

Nominal current: 8000.0 A dc

Range: [-8000 A; 8000 A]

Environment Conditions

Ambient temperature $23\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, relative humidity $45\text{ \%} \pm 15\text{ \%}$.

Uncertainty of Measurement

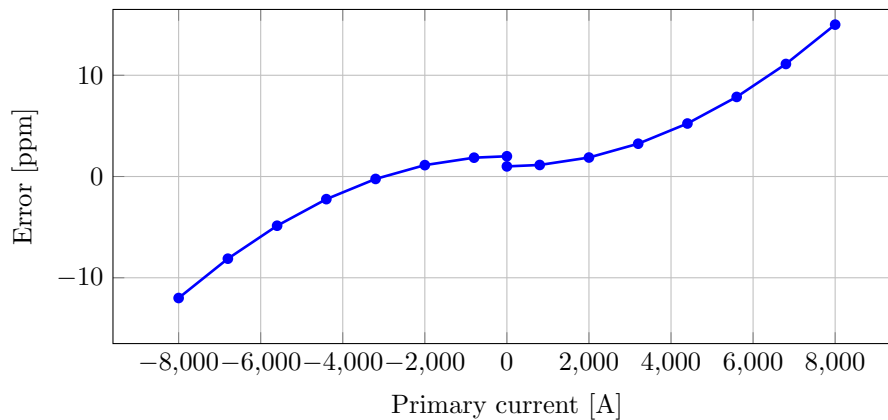
The uncertainty is based on the expanded uncertainty of measurement. Stated as the combined standard uncertainty multiplied by a coverage factor $K=2$ (Level of confidence at 95 percent).

Instruments Used for Calibration

Danisense ID	Type	Description	Cal.due
100-250	Danisense DS REF DCCT	High Precision REF DCCT	2022-07-15
104	Reference resistor	1000.1725	2022-01-21
59	Keysight 3458A	8.5 digit multimeter	2022-11-25
63	Magna-power TSA5-1800/380	Current source	None

Total Error

Total error relative to nominal value.



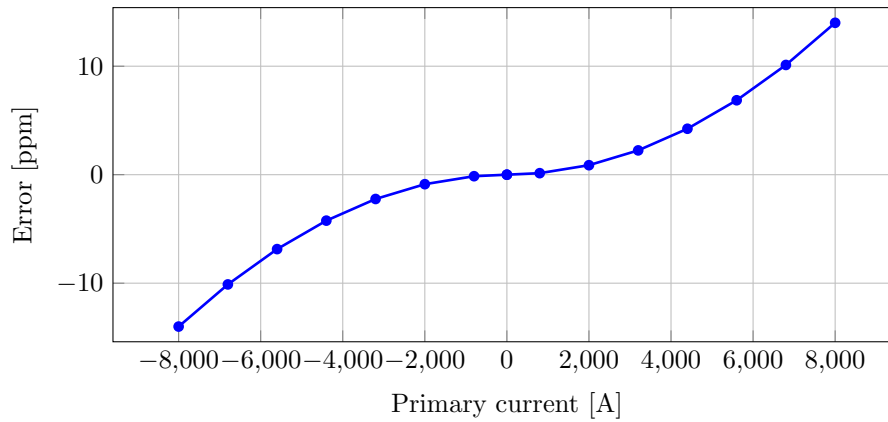
Current [A]	Reading [A]	Error [ppm]	Uncertainty [ppm]	Specification [ppm]	Note
0	0.008	1.0	1.0	3.0	*
800	800.0091	1.1	1.4	4.0	*
2000	2000.015	1.9	2.6	4.0	**
3200	3200.0259	3.2	3.9	4.0	**
4400	4400.0419	5.2	5.3	4.0	****
5600	5600.0629	7.9	6.7	4.0	****
6800	6800.0889	11.1	8.1	4.0	****
8000	8000.12	15.0	9.5	4.0	F
0	0.016	2.0	1.0	3.0	**
-800	-799.9851	1.9	1.4	4.0	*
-2000	-1999.991	1.1	2.6	4.0	*
-3200	-3200.0019	-0.2	3.9	4.0	**
-4400	-4400.0179	-2.2	5.3	4.0	****
-5600	-5600.0389	-4.9	6.7	4.0	****
-6800	-6800.0649	-8.1	8.1	4.0	****
-8000	-8000.096	-12.0	9.5	4.0	****

Measurement Notes

- * Result is within the specification with added measurement uncertainty.
- ** Result is within the specification, but it is outside when added the measurement uncertainty.
- *** Result is outside the specification, but it is inside when added the measurement uncertainty.
- **** Result is inside (outside) the specification, but the uncertainty is larger than the specification.
- F Result is outside the specification when added the measurement uncertainty: No Compliance.

Total Error Without Offset

Total error, corrected for offset, relative to nominal.



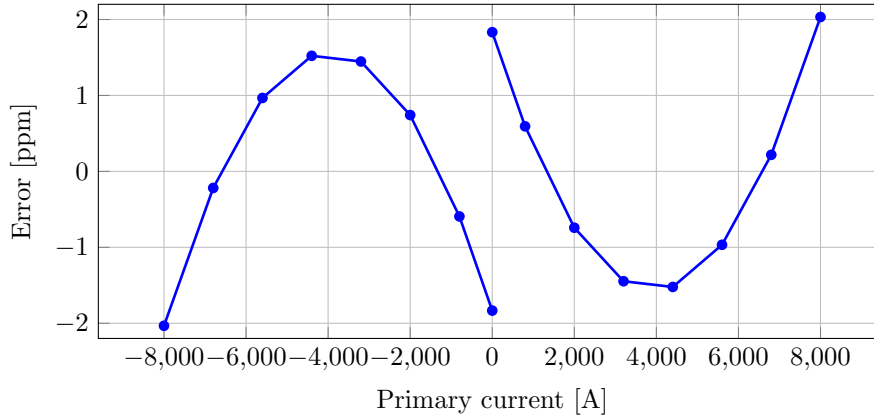
Current [A]	Reading [A]	Error [ppm]	Uncertainty [ppm]	Specification [ppm]	Note
0	0.0	0.0	1.0	1.0	****
800	800.0011	0.1	1.4	1.0	****
2000	2000.007	0.9	2.6	1.0	****
3200	3200.0179	2.2	3.9	1.0	****
4400	4400.0339	4.2	5.3	1.0	****
5600	5600.0549	6.9	6.7	1.0	****
6800	6800.0809	10.1	8.1	1.0	F
8000	8000.112	14.0	9.5	1.0	F
0	0.0	0.0	1.0	1.0	****
-800	-800.0011	-0.1	1.4	1.0	****
-2000	-2000.007	-0.9	2.6	1.0	****
-3200	-3200.0179	-2.2	3.9	1.0	****
-4400	-4400.0339	-4.2	5.3	1.0	****
-5600	-5600.0549	-6.9	6.7	1.0	****
-6800	-6800.0809	-10.1	8.1	1.0	F
-8000	-8000.112	-14.0	9.5	1.0	F

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Linearity Error

Total error, corrected for offset and best fit linear regression, relative to nominal.



Current [A]	Reading [A]	Error [ppm]	Uncertainty [ppm]	Specification [ppm]	Note
0	0.0	1.8	1.0	1.0	****
800	800.0011	0.6	1.4	1.0	****
2000	2000.007	-0.7	2.6	1.0	****
3200	3200.0179	-1.4	3.9	1.0	****
4400	4400.0339	-1.5	5.3	1.0	****
5600	5600.0549	-1.0	6.7	1.0	****
6800	6800.0809	0.2	8.1	1.0	****
8000	8000.112	2.0	9.5	1.0	****
0	0.0	-1.8	1.0	1.0	****
-800	-800.0011	-0.6	1.4	1.0	****
-2000	-2000.007	0.7	2.6	1.0	****
-3200	-3200.0179	1.4	3.9	1.0	****
-4400	-4400.0339	1.5	5.3	1.0	****
-5600	-5600.0549	1.0	6.7	1.0	****
-6800	-6800.0809	-0.2	8.1	1.0	****
-8000	-8000.112	-2.0	9.5	1.0	****

Measurement Notes

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- ** Result is within the specification, but it is outside when added the measurement uncertainty.
- *** Result is outside the specification, but it is inside when added the measurement uncertainty.
- **** Result is inside (outside) the specification, but the uncertainty is larger than the specification.
- F Result is outside the specification when added the measurement uncertainty: No Compliance.

Terms of Sale and Delivery of Calibration Services

Application

The general terms of sale and delivery set out below shall apply to all sales and deliveries of Calibration services by DaniSense A/S (the "Seller"), unless otherwise agreed in writing between the Seller and a buyer (separately or collectively referred to as "Party" or "Parties", as the case may be).

Offers

Offers made by the Seller shall be open for acceptance for 30 days from the date of the offer. An offer will always include a sample report for customer acceptance of actual report content, price with INCOTERMS and lead time from receiving part for calibration.

Confidentiality

Danisense Calibration is responsible for the management of all information obtained or created during the performance of laboratory activities. All information shared by buyer is considered confidential information. All results are the property of buyer, and seller has no right to disclose any results to third parties, unless agreed upon by the customer. The measurement results are used by seller for statistical purposes to improve the performance of the calibration lab. Information may be shared with DANAK, the national accreditation body in Denmark without notifying the customer. If for any reason the seller is required by law or special circumstances to disclose any data, the buyer must be informed in a timely manner. If seller is using sub-suppliers for any service, these suppliers are informed about the confidentiality required, but seller will try to avoid disclosing any confidential information to suppliers.

Delivery

Unless otherwise agreed between the Parties, the goods shall be delivered Ex Works (Incoterms 2010). Delivery is effected at the buyer's expense and risk.

Disclaimer

The lab is not responsible if information given by the customer alters the validity of the results.