

# CUSTOMER REFERENCE

**SENIS**  
magnetic & current measurement

SENIS AG, Switzerland develops, manufactures and supplies advanced sensors and instruments for magnetic field and electric current measurement as well as the corresponding development and engineering services.

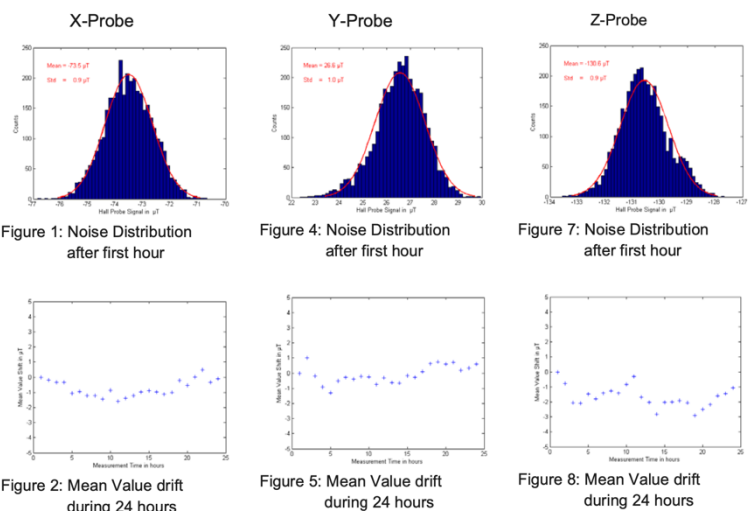
Our solutions and services help our clients in the automotive, consumer electronics, test and measurement industries, as well as to research institutes to create powerful, robust and effective products.

SENIS® H3A Transducer used at Helmholtz Zentrum Berlin is a SENIS 3-axis ultra-low-noise and high-resolution magnetic flux density-to-analog voltage transducer with a hybrid 3-axis Hall probe of type S.

The hybrid Hall probe integrates three high resolution Hall sensors, and a temperature sensor. The probe provides a good angular accuracy of the three measurement axes. The Hall probe is connected with an electronic box providing biasing for the Hall probe and the application of the improved **spinning-current technique**, which very effectively cancels offset, low frequency noise and the planar Hall effect. The additional conditioning of the Hall probe output signals in the electronic box includes Hall signal amplification, high linearization, compensation of the temperature variations, and limitation of the f-bandwidth.

[www.senis.ch](http://www.senis.ch)

**HZB** Helmholtz  
Zentrum Berlin



HZB-BESSY II (Helmholtz Zentrum Berlin [www.helmholtz-berlin.de](http://www.helmholtz-berlin.de)) utilizes the SENIS 3-axis low noise transducer H3A-03S05L-B02T0K4K for magnetic field measurement of Undulators. HZB-BESSY II performed a Long-Term Measurement test of the SENIS Hall Probe in a Magnetic Zero Field Chamber. Results: During 24-hour data taking were obtained for the given measurement setup the following signal behavior of the Magnetic-Zero-Field-Noise Distribution: 1-3  $\mu T$  drift for the mean value and  $\sim 1 \mu T$  constant standard deviation. "This is an excellent result for our purposes." says Dr. Christoph Rethfeldt, HZB-BESSY II, January 2016.