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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 LNLS Brazil is a SENIS 3-axis ultra-lownoise 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.



Centro Nacional de Pesquisa em Energia e Materiais







The Brazilian Synchrotron Light Laboratory (LNLS) <u>https://www.lnls.cnpem.br/the-lnls/</u> is responsible for operating the only synchrotron light source in Latin America.

LNLS applies the SENIS H3A analog low noise Hall magnetic transducer in the Sirius Light Source for BC dipole measurements (Citadini et al. -2017).

The SENIS Hall magnetic transducer H3A is calibrated at SENIS' ISO17025:2017 accredited calibration lab.

«After the recalibration, we noticed an improvement in the noise level and in the linearity of the response with the voltage and the sensitivity with the probes temperature, which is in accordance with the results you sent us, in the order of 200 ppm/°C:», says **Luana Nayara Pires Vilela, LNLS Brazil.**

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