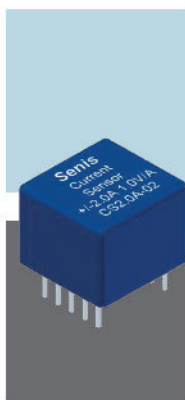


SENIS

magnetic & current measurement

Advanced
**Current
Measurements**
Sensors, Instruments
and Services



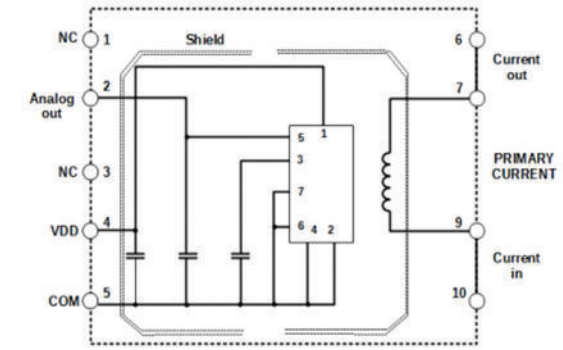
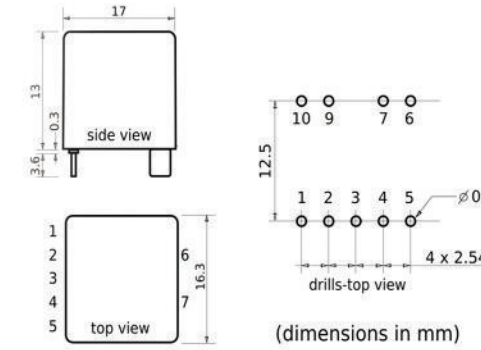
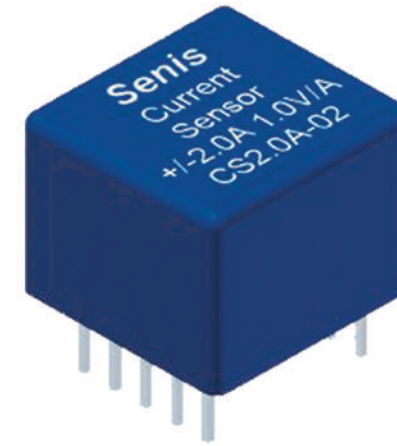
2017
CATALOGUE

Our Mission

SENIS AG develops, manufactures and supplies advanced instruments for magnetic field measurement and electric current measurement, as well as the corresponding development and engineering. Our products and services and our growth and sustainability always stay in accordance with our customers' needs and satisfaction.

Our Competency

SENIS team has a record of more than 100 patent applications, several hundred technical publications and more than 100 years of overall experience in the field.



CS-03 Series - PCB Mount Current Sensors

SENIS provides miniature, PCB mount current sensors with a magnetic shield and high performance linear Hall sensor. Thanks to its unique design the CS series current sensors is capable to measure both a unidirectional and the bidirectional current.

KEY FEATURES

- Low current measurement ranges: 0.1A to 8A
- High current measurement ranges: 15A and 25A
- High voltage isolation > 4KV
- F-bandwidth: DC to 7kHz
- Linear analog voltage output
- Accuracy: better than 2% of full scale
- Resolution: better than 0.05% of full scale
- High disturbance immunity due to magnetic shield
- High temperature range: -40°C to +80°C
- Low current consumption
- Small size 17 x 16 x 13 mm
- Through hole mounting

TYPICAL APPLICATIONS

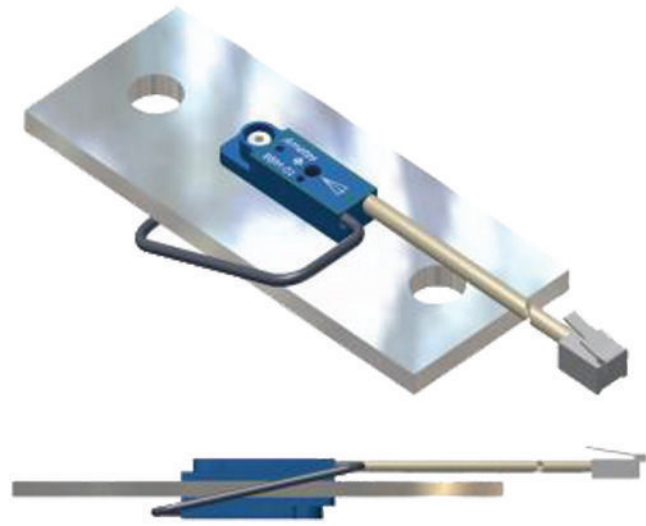
- Laboratory, production lines and in-product applications
- Process control
- Continuous current sensing
- Battery charge monitoring
- Motor drives monitoring

In more than 15 years, SENIS has won trust of major physics laboratories and research institutes, as well as worldwide leading companies in the automotive, energy, consumer and test and measurement industries. Working in close cooperation with our customers we try to understand their businesses in order to continuously adapt and improve our products and services according to customers' needs.

Our Customers

SENIS AG is privately owned company, profitable and financially independent. SENIS, with its ISO 9001 certified subsidiary provides design, key process know-how, advanced manufacturing, calibration & test services and quality assurance.

Our Sustainability



BBM-02 - Bus Bar Current Sensors

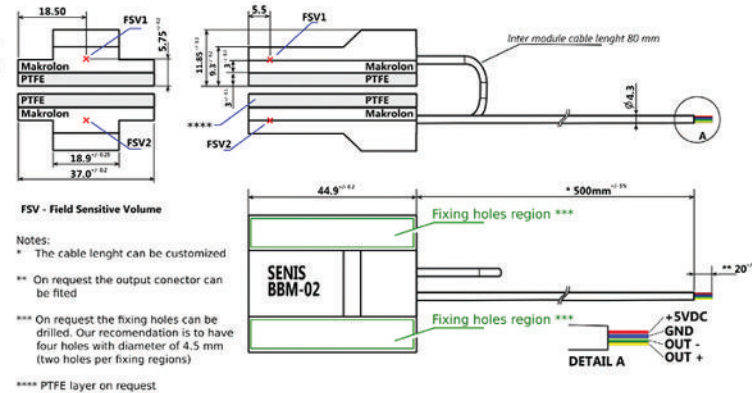
SENBIS Bus Bar Current Sensors composed of two magnetic field sensors at each side of current bus bar enable the measurement of currents in the large frequency bandwidth and without an impact of external magnetic fields. The sensor mounting does not require the current conductor interruption. The position of the sensor on the bus bar impacts the sensitivity of the sensor, so SENIS offers a service to define the position of the sensor onto the bus bar.

KEY FEATURES

- DC, AC and pulsed currents
- F-bandwidth: DC to 200kHz
- Clean recovery from very high transient overload (1us)
- High current measurement ranges up to 10kA
- Accuracy: better than 1% of full scale
- High voltage isolation > 4KV
- Optionally, improved HV isolation through an added layer of PTFE
- +5Vdc / 15Vdc unipolar power supply
- Signal output electrically isolated from primary bus bar
- High level differential linear signal output
- Differential output / Single-ended output
- Small size, very compact 45 x 37 x 12 mm
- High temperature range: -40°C to +85°C

TYPICAL APPLICATIONS

- *Power electronics*
- *Fluctuating DC to AC power conversion*
- *Monitoring of electromechanical systems*
- *Monitoring of battery charging and battery farms*
- *Monitoring of transit and road vehicles*
- *Short-circuit protection in HV equipment*



CTH Series - Closed-Loop Clamp-On Current Transducers

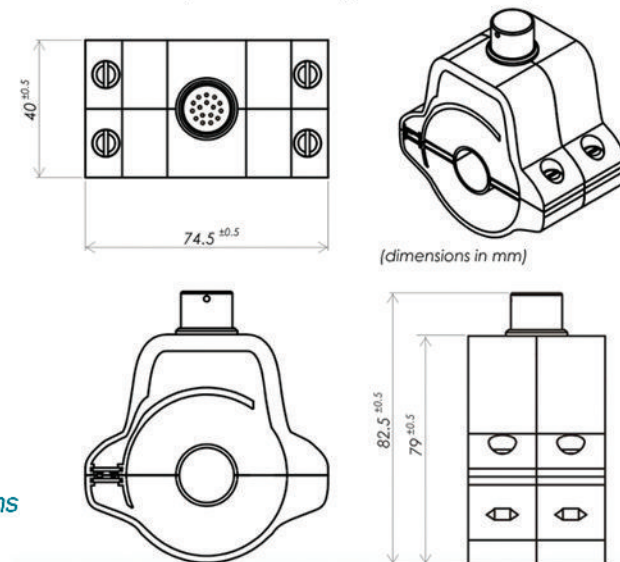
The Clamp-On Closed-Loop Current Transducers allow the measurement of DC, AC and pulsed currents, with galvanic isolation between the primary circuit and the secondary circuit. SENIS Closed-Loop Current Transducers measure electric currents in the wide measurement range within the high f-bandwidth of DC to 300kHz and with the unique superior total accuracy. It contains two magnetic cores (degaussing applied) and Hall sensors for differential measurement and for the elimination of the impact of the external magnetic field. The size of the sensor is smaller than the competitive products (such as commercially available flux-gate sensors). The sensors provide the differential output with the signal cables of up to 10m.

KEY FEATURES

- Measurement of DC, AC and pulsed currents in the range of 100A - 10kA
- Frequency bandwidth from DC to 300kHz (-3dB)
- Clamp-on for easy installation, without interrupting of the primary circuit
- Closed loop current transducer using the Hall effect
- Superior total accuracy: better than 0.1%
- Resolution: better than 0.05% of full scale
- Excellent linearity
- Very small offset
- High immunity to external interference

TYPICAL APPLICATIONS

- Motor & generator control
- Fluctuating DC to AC power conversion
- Monitoring of electromechanical systems
- Wind and other turbines and motor drives
- Monitoring of battery charging, photovoltaic and battery farms
- Monitoring of transit and road vehicles





MiA02 - Open-Loop Clamp-On MicroAmmeter

SENIS' open-loop high sensitivity clamp-on Microammeters can measure direct currents down to 1 μ A only. The MicroAmmeter is a clamp-on toroidal Ferro-magnetic core with an air gap, in which the Hall elements or AMRs are inserted.

This high-resolution clamp-on current transducer can be used to indirectly measure and track the DC leakage current through a fault in the insulation system of electrical machines. The system includes a demagnetization circuit for MicroAmmeters cores. The Insulation Defect Locator utilizes two high-sensitivity clamp-on Micorameters. By differential measurement of the leakage current, the defect or fault can be located without cutting conductors or removing insulation long before the damage occurs, helping in this way an effective maintenance of electrical generators and motors.



Senis Distributors



SENIS AG
Switzerland
www.senis.ch
info@senis.ch

Our Inventions and Know-How

Our R&D team, led by Prof. R. Popovic, invented some of the most advanced magnetic field sensors:

- The first integrated 3D Hall Probe
- The most sensitive Vertical Hall Devices
- Novel Angular Position Sensors
- The most successful Compass Chip
- Novel Current Sensors

We can help you develop your own advanced products based on these inventions and the related know-how. Or we can grant you a license on some of our patents or designs.

Test Services

Senis provides to its customers various Test Services for current measurement and characterization of current sensors & current monitoring systems

Consulting, Engineering, Contract R&D

SENIS implements customized innovative solutions to fulfill the highest customers requirements with an unique and extraordinary performance.





►►► *Our World Records:*

*the Bus Bar current sensors with the highest dynamic response
with the f-bandwidth DC - >200kHz*

*the Closed-Loop, Clamp-On current transducer
with the highest accuracy of better than 0.1%
and the f-bandwidth of DC – 300kHz
in the measurement range of 100A – 10kA*

*the Open-Loop Clamp-On MicorAmmeters
with the DC resolution of 1uA only*

SENIS AG

Switzerland

Phone: +41 43 205 2637

www.senis.ch

e-mail: info@senis.ch

