



ISABELLENHÜTTE

Press release

Isabellenhütte 01 / 2021

Dillenburg, Germany 25 November 2021

Isabellenhütte: New sensor meets safety class ASIL C for current measuring

This current measuring system will increase safety on the roads

With their IVT 3.0 system, Isabellenhütte Heusler GmbH & Co. KG from Dillenburg in Germany, is presenting a complete and recently developed current measuring system. The device is an intelligent and easy-to-integrate solution for measuring and monitoring electrical values in battery-powered electric and fuel-cell powertrains.

Compared to our previous IVT model, IVT 3.0 has been developed in accordance with the ISO 26262 Road vehicles - functional safety standard. Under this standard the measuring system meets safety level ASIL C in the current measuring area. This means that it provides the safety required by the automotive industry for an absolute system-relevant component. ASIL safety ratings are required by more and more car manufacturers, especially with regard to autonomous driving developments.

Extremely robust against overcurrent

The shunt-based technology makes our IVT 3.0 especially robust at the same time. A current of up to 12,000 amps can briefly occur on the bus-bar without damaging the sensor. The current measuring range covers up to 4,000 amps. In ambient temperatures ranging from -40° to +105°C, the system will operate with constant precision with a maximum deviation of only ± 0.4 per cent - and this is throughout its entire lifetime. Temperature measuring is also integrated in our IVT 3.0.

An analog channel is optionally available for our IVT 3.0 in addition to its high-precision current measuring channel. It will continue measuring if the 12V power supply for the vehicle's electrical system fails or is disrupted. This further increases the system's robustness.

Other available options include various CAN protocols and a sleep mode. This will significantly reduce the power consumption to less than 100 microamperes on average. The sensor will be ready for operation again within 30 milliseconds! Isabellenhütte can further develop their IVT 3.0 with a CAN open interface or for 24V electrical system compatibility upon customer request.

Successor model IVT 3.0 Pro with insulation monitoring

Isabellenhütte will be launching our IVT 3.0 Pro system in the near future to complete the IVT 3.0 platform concept. It will be able to determine the voltage on six channels in addition to current measuring. Voltage measuring with a nominal range of up to 1,000V and an overvoltage measuring range of up to 1,250V achieves a precision level that is similar to that of current measuring.

IVT 3.0 Pro will also have active insulation monitoring. It will not only be able to detect symmetrical and asymmetrical insulation faults, but it will specify the fault position as well.

B samples of IVT 3.0 will become available during the second quarter of 2022. Series production is scheduled to start in 2022. Series production of IVT 3.0 Pro is scheduled for the end of 2023.

Isabellenhütte at Battery Show Europe

Anyone who wants to see IVT 3.0 for themselves will have the opportunity to do so at Battery Show Europe, which will be held in Stuttgart from the 30th November to the 2nd December 2021. Isabellenhütte's experts will be happy to advise all interested parties at Stand 6-250 in Hall 6.

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**We look forward to your visit:
Isabellenhütte will be an exhibitor at Battery Show Europe, to be held in Stuttgart
from the 30th November to the 2nd December 2021
Hall 6, Stand 6-250**

About Isabellenhütte Heusler

Isabellenhütte Heusler GmbH & Co. KG has been owned by the Heusler family since 1827. Today we are one of the world's leading manufacturers of measuring technology products. Other business sectors include the manufacturing of precision alloys as well as low-ohmic precision and power resistors. Around 1,000 employees work at the company's headquarters and production facility in Dillenburg (Hesse).

www.isabellenhuette.de



Image 1: Safety-relevant component: Our new IVT 3.0 meets safety class ASIL C in the current measuring area. IVT 3.0 Pro, which will be released later on, will also feature voltage measuring and active insulation monitoring. *Image: @Isabellenhütte Heusler GmbH & Co. KG*

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Thank you!

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