Safety Instructions

HV Breakout Module Type 1.2C

General Safety Instructions

Please observe the following safety instructions and signs provided with the measurement modules, as well as the safety-specific information in the accompanying technical documentation.

WARNING!
HV Breakout Modules of type HV BM 1.2C are used in high-voltage environments. **Improper use poses risks such as life-threatening electrical shocks and fire hazards.** ☞ Only use qualified and trained personnel (observe local guidelines/regulations). ☞ Do not modify the HV measurement module in any way, neither electrically nor mechanically. ☞ Observe safety instructions.

WARNING!
HV Breakout Modules of type HV BM 1.2C can be integrated into the interlock loop. This will ensure that there are no open plug connections. **Removing the lid of the housing impairs the operational safety of the HV measurement module and entails the risk of life-threatening electrical shocks.** ☞ Do not remove the lid! ☞ Do not carry out any mechanical or electrical modifications on the HV measurement module.

WARNING!
The measurement module has to be connected to the vehicle's potential equalization or protective earth (PE) in order to ensure user safety. **In the event of a fault, there is danger to life due to high-voltage potential if this connection is not established.** ☞ Connect the measurement module to the vehicle's potential equalization or PE using a suitable ground cable. ☞ Only use qualified and trained personnel.

WARNING!

The internal temperature of the measurement module and the temperature of the shunt must not exceed +120 °C. As soon as the temperature of the shunt exceeds this value, the HV Breakout Module sends the error code "0x8001" instead of the measured values for U and I. The user usually does not see this error code but the error message "THERMAL_OVERLOAD" that has been generated from the DBC or A2L file. This data is sent until the temperature of the shunt drops below +115 °C again.

Exceeding the specified temperature impairs the operational safety of the HV measurement module. There are risks including life-threatening electrical shocks and fire hazards.

☞ Reduce or interrupt the current flow through the shunts to prevent a further temperature increase of the module.

☞ Always monitor the temperatures in order to make sure that the threshold value will not be exceeded.

CAUTION!

The measurement module can heat up considerably if it is operated in a specific working environment (e.g. engine compartment). The shunts integrated in the measurement module can also build up heat during operation under high load.

Touching the surface of the module may cause serious burns.

☞ Let the measurement module cool down before handling.

☞ Wear appropriate safety gloves.

- Only use qualified and trained personnel for handling HV Breakout Modules.
- Make sure that HV Breakout Modules are only operated within an operating temperature range of -40 °C to +120 °C and at a relative humidity of max. 95 % (non-condensing).
- To ensure operational safety, an isolation test in accordance with the latest edition of EN 61010 has to be carried out at least once per year.
- The entire documentation that has been delivered with the HV Breakout Module has to be read thoroughly before initial operation. The operating personnel has to be instructed accordingly. Please contact CSM GmbH with any further questions.

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