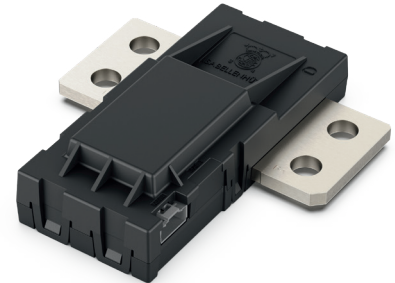


IVT 3.1 Base

COMPACT CURRENT SENSING

ISAscale® compact high precision current measurement device



IVT 3.1 Base

INTRODUCTION

The IVT 3 series product is a compact high precision current measurement device, that is built on a platform concept where additional functions can be added to adapt to many different use cases. The IVT 3.1 Base is the first product with ASIL-D as Safety Element out of Context (SEooC) on current measurement on the market. The experience of our IVT platform combined with cost management leads us to the next variant of IVT, the IVT 3.1 Base.

APPLICATIONS

- Hybrid and battery electric vehicles
- Stationary energy storage systems
- Uninterruptable power supply (UPS) systems
- Battery based applications
- Fuel cells
- Industrial applications

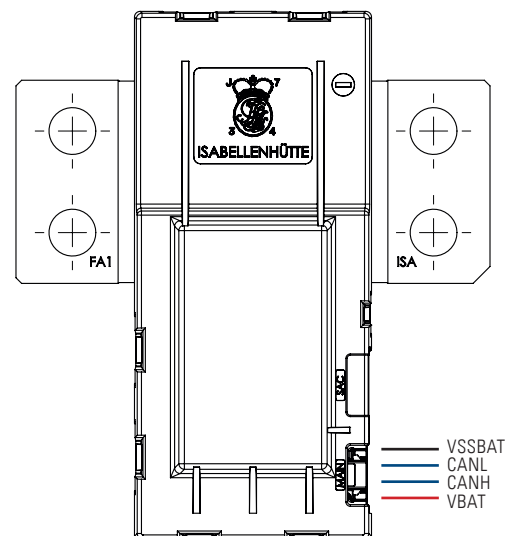
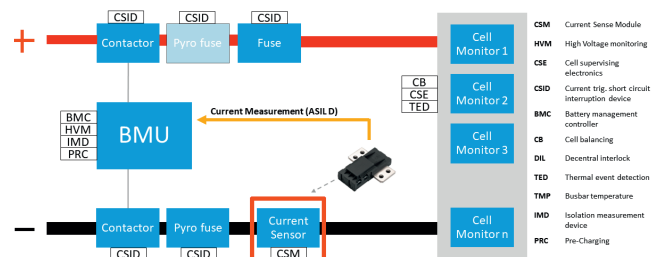
FEATURES

- Shunt based current measurement on system level (ASIL-D)
 - CAN 2.0A/B signal
 - CAN Output rate 5-50 ms
 - ADC sampling rate 1 ms
 - Total accuracy $\pm (0.4 \% \text{ of rdg.} + 0.1 \text{ A})^*$
 - Nominal current measurement range: $\pm 1,000 \text{ A}$
 - Extended measurement range: $\pm 4,000 \text{ A}$
 - PMHF <10 FIT
 - SPFM 99%
 - LFM >90%
- Temperature measurement
 - CAN 2.0 A/B signal
 - Measurement range $-40^\circ\text{C} - 125^\circ\text{C}$
 - Accuracy $\pm 5^\circ\text{C}$
- Galvanic Isolation
 - Isolation according to ISO 60664 basic isolation
 - Withstand Voltage 2500 V / 60 s

*over lifetime and whole temperature range -40°C up to 125°C

Overcurrent event

• System Integration



IVT 3.1 Base

	IVT 3 Base	IVT 3.1 Base
Current Measurement	ASIL C	ASIL D
Protection Class IP 40	✓	✓
Temperature Measurement	✓	✓
Firmware Update via UDS	✓	✓
Diagnostic via UDS	✓	✓
CAN 2.0 A&B	✓	✓
Sleep mode	Optional	Not implemented
CAN termination	Optional	Optional
AUTOSAR 4.0.3	✓	✓
CAN FD	Development on request	Development on request
Supply Voltage 12V	✓	✓