



FlexMeasure-L

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BENEFITS

- Measurement of currents up to 2500 A
- Voltage measurement up to 1000 V
- Galvanic isolation
- Extremely compact design
- Protection class IP65
- Operating temperature range: -40°C ... +85°C
- Temperature-compensated current measurement via shunt resistor

CURRENT AND VOLTAGE MEASUREMENT IN A HIGH-PRECISION, COMPACT UNIT

The inline measuring adapter was developed as an alternative to the FlexMeasure-S (E812). The measuring value output is digital via a CAN bus. The included DBC file allows for quick and simple integration into new and existing measuring systems. To ensure HV safety, the HV and LV circuits are galvanically isolated.

In addition to current and voltage measurement, the unit can provide the temperature and measured values such as output and energy quantity. Thanks to the robust, IP65-certified housing, the measuring module is ideal for use in harsh environments such as an engine compartment or a vehicle underbody. EMC cable glands of the type BlueGlobe TRI® are used to ensure the HV cables are connected to the housing safely and in an EMC-compatible manner. Other cable configurations and current measurement ranges up to 2500 A are possible. Delivery includes in-house calibration and HV acceptance depending on design.

APPLICATION

- Precise current and voltage measurement in the electrical systems of test vehicles
- In test bench use
- Validation of charging stations

VARIANTS

- 100 A
- 300 A
- 500 A
- 1000 A
- 2500 A

PROPERTIES

- Current measurement up to ± 2500 A
- Voltage supply: 5.5VDC ... 40VDC
- Operating temperature up to +85°C (temperature compensated)
- Linearity to 0.01% MBE
- Total accuracy current measurement: 0.4% (nominal range)
- Total accuracy voltage measurement: 0.5% (nominal range)
- Bandwidth: 1 kHz
- Custom delivery with assembled HV connection cable possible

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TECHNICAL DATA FOR 1000 A VARIANT

HV shunt, 1000 A variant	
Voltage supply	5.5 VDC ... 40 VDC
Communication	High-speed CAN
Maximum working voltage	1000 V RMS CAT1
Measuring range	1000 A / 1000 V
Bandwidth	1 kHz
Operating temperature range	-40°C ... +85°C
Exterior dimensions incl. screw connections	250 x 96 x 58 mm
Protection class	IP65
for cable outer diameter	5 - 25 mm
for cable shield diameter	13 - 20 mm

Current measurement	
Nominal measuring range	± 1000 A
Power loss (shunt only)	< 20 W
Extended measuring range (temporary, 10s)	± 2000 A
Initial accuracy	± 0.1%
Overall accuracy	± 0.4%
Offset max.	125 mA
Linearity	0.01% of range
Noise	70 mA (RMS)
Resolution	47 mA

Voltage measurement	
Nominal measuring range	±1000 V
Extended measuring range (temporary, non-linear)	±1200 V
Initial accuracy	± 0.1%
Overall accuracy	± 0.5%
Offset max.	100 mV
Linearity	0.01% of range
Noise	60 mV (RMS)
Resolution	30 mV