

# Technical Data Sheet



## U3B0F10A

### Voltage Measurement Module 3 Channels

#### Properties

- Measurement range  $\pm 1$  kV
- Shock resistant for use in crash testing
- Low linearity error
- High bandwidth

#### Application

- General test and measurement
- Fatigue
- Vehicle crash

#### Measurement principles

- Voltage divider
- Galvanic isolation
- Signal processing

#### Options

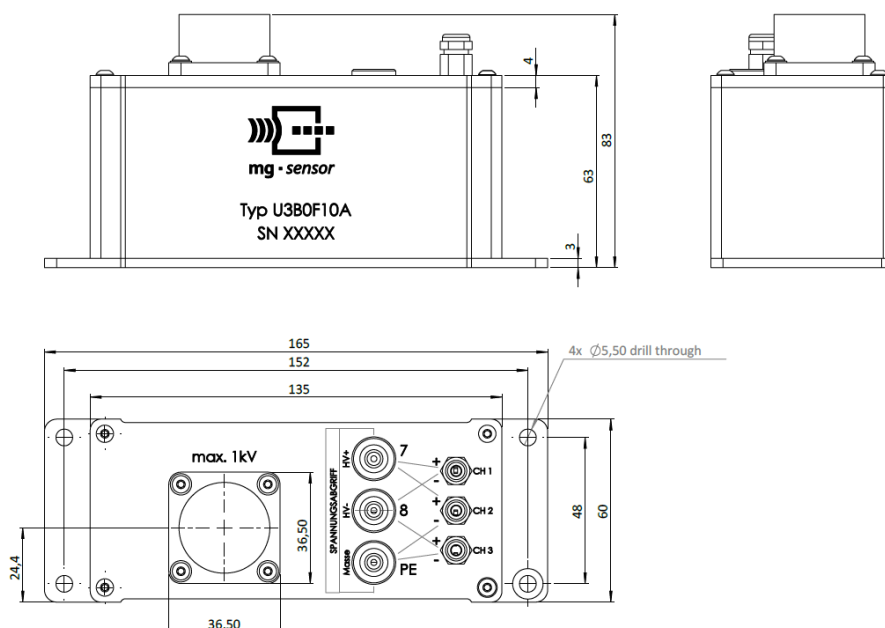
- ID-Module integrated in measurement module



#### Technical description

The voltage, measured at the input is galvanically isolated using a voltage divider, and provided to a circuit at the output. This allows the galvanically isolated connection and measurement of the input voltage with a measuring system.

### Dimensions



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**mg · sensor**  
P U R E P R E C I S I O N

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### Technical specification

|                                              | Unit | Value     | Comment                                                                                |
|----------------------------------------------|------|-----------|----------------------------------------------------------------------------------------|
| Measuring range                              | kV   | ±1.0      | 3 channels, as delta circuit                                                           |
| Sensitivity <sup>1)</sup>                    | mV/V | 1.0       |                                                                                        |
| Output signal <sup>1), 2)</sup>              | V    | 1.0       |                                                                                        |
| Input resistance                             | MΩ   | 10        |                                                                                        |
| Zero signal <sup>1)</sup>                    | mV   | ≤ 30      |                                                                                        |
| Amplitude non-linearity <sup>3)</sup>        | %    | ≤ 0.5     |                                                                                        |
| Hysteresis <sup>3)</sup>                     | %    | ≤ 0.5     |                                                                                        |
| Current consumption                          | mA   | 35<br>25  | With 5 V supply<br>With 10 V supply                                                    |
| Supply voltage                               | V    | 5–12      |                                                                                        |
| Galvanic isolation <sup>4)</sup>             | kV   | 1.5       |                                                                                        |
| Insulation resistance                        | MΩ   | > 100     |                                                                                        |
| Connection cable:<br>High voltage connectors |      |           | Amphenol C016 10C008 0001<br>Contact 7 HV+<br>Contact 8 HV-<br>Contact PE vehicle mass |
| Output signal                                |      |           | 3 x cable, custom configuration                                                        |
| Temperature range                            | °C   | -30...+70 |                                                                                        |
| Weight (approximate)                         | g    | 600       |                                                                                        |

All values measured at 10 V sensor supply voltage and at 23 °C.

<sup>1)</sup> Typical value

<sup>2)</sup> At nominal load

<sup>3)</sup> Relative nominal range

<sup>4)</sup> Input to output