

## U1B0A10B

### ➤ Voltage Measurement Module

#### Properties

- Small housing
- Measurement range  $\pm 70$  V
- Shock resistant for use in crash testing
- Low linearity error
- High bandwidth

#### Application

- General test and measurement
- Fatigue
- Vehicle crash

#### Measurement principles

- Voltage divider
- Signal processing

#### Options

- Alternative measurement range
- ID-Module integrated in measurement module



#### Technical description

The voltage measured at the input is galvanically isolated using a voltage divider and made available to a matching circuit at the output.

### ➤ Dimensions

Body:            W x H x D: 48 x 45 x 25 mm

# Technical Data Sheet



## U1B0A10B

### Technical specification

	Unit	Value	Comment
Measuring range	V	±70	
Sensitivity <sup>1)</sup>	mV/V	35.7	
Output signal <sup>1), 2)</sup>	V	±2.5	
Input resistance	MΩ	10	
Zero signal <sup>1)</sup>	mV	≤ 12	
Amplitude non-linearity <sup>3)</sup>	%	≤ 0.05	
Hysteresis <sup>3)</sup>	%	≤ 0.05	
Current consumption	mA	20	
Supply voltage	V	5.0	
Galvanic isolation <sup>4)</sup>	–	–	None
Insulation resistance	MΩ	> 100	
Connection cable:			
Appliance sockets	mm	4.0	
Fixed cord	mm	9.2	Optional
Temperature range	°C	-30...+70	
Weight (approximate)	g	60	

All values measured at 5 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

## U1B0A60A

### > Voltage Measurement Module

#### Properties

- Small housing
- Measurement range  $\pm 70$  V
- Shock resistant for use in crash testing
- Low linearity error
- High bandwidth
- Digital interface

#### Application

- General test and measurement
- Fatigue
- Vehicle crash

#### Measurement principles

- Voltage divider
- Signal processing

#### Options

- Alternative measurement range



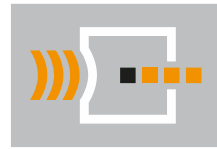
#### Technical description

The voltage measured at the input is galvanically isolated using a voltage divider and made available to a matching circuit at the output.

### > Dimensions

Body:            W x H x D: 48 x 45 x 25 mm

# Technical Data Sheet



**mg · sensor**  
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## U1B0A60A



### Technical specification

	Unit	Value	Comment
Measuring range	V	±70	
Output <sup>1), 2)</sup>	LSB	±31.500	Digital / RS485
Sensitivity <sup>1)</sup>	LSB/V	450	Digital
Input resistance	MΩ	10	
Zero signal <sup>1)</sup>	mV	≤ 50	
Amplitude non-linearity <sup>3)</sup>	%	≤ 0.5	
Hysteresis <sup>3)</sup>	%	≤ 0.5	
Current consumption	mA	20	
Supply voltage	V	5.6	Intern
Galvanic isolation <sup>4)</sup>	–	–	None
Insulation resistance	MΩ	> 100	
Connection cable:			
Appliance sockets	mm	4.0	
Fixed cord	mm	9.2	Optional
Temperature range	°C	-30...+70	
Weight (approximate)	g	60	

All values measured at 5.6 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

## U1B0B10A

### ➤ Voltage Measurement Module

#### Properties

- Small housing
- 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 made available to a matching circuit at the output. Thus, the galvanically isolated connection and measurement of the input voltage are possible with a measuring system.

### ➤ Dimensions

- Body: W x H x D: 70 x 46 x 32 mm
- Base plate: W x H x D: 95 x 32 x 3 mm
- Hole spacing: 83 mm ( $\varnothing 5.4$  mm)

# Technical Data Sheet



## U1B0B10A

### Technical specification

	Unit	Value	Comment
Measuring range	kV	±1.0	
Sensitivity <sup>1)</sup>	mV/V	1.0	Option: 2.5 mV/V
Output signal <sup>1), 2)</sup>	V	1.0	Option: 2.5 V
Input resistance	MΩ	10	
Zero signal <sup>1)</sup>	mV	≤ 12	
Amplitude non-linearity <sup>3)</sup>	%	≤ 1.0	
Hysteresis <sup>3)</sup>	%	≤ 0.5	
Current consumption	mA	35 25	With 5 V supply With 10 V supply
Supply voltage	V	5–12	
Galvanic isolation <sup>4)</sup>	kV	1.5	
Insulation resistance	MΩ	> 100	
Connection cable:			
Appliance sockets	mm	4.0	
Fixed cord	mm	9.2	Option
Temperature range	°C	-30...+70	
Weight (approximate)	g	200	

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

## U3B0C10A

### 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

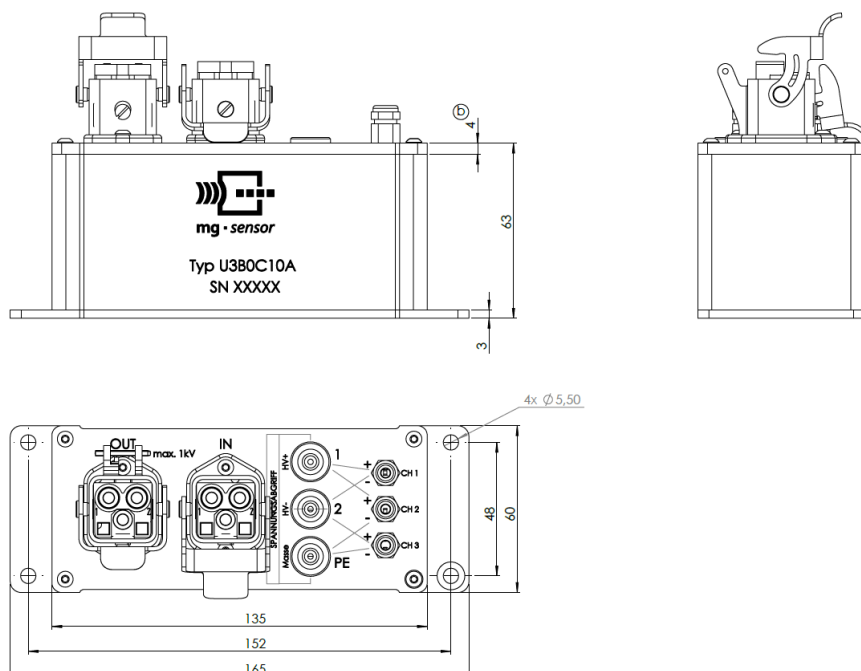
- ID-Module integrated in measurement module



#### 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



# Technical Data Sheet



## U3B0C10A

### Technical specification

	Unit	Value	Comment
Measuring range	kV	$\pm 1.0$	3 channels, as delta circuit
Sensitivity <sup>1)</sup>	mV/V	1.0	Option: 2.5 mV/V
Output signal <sup>1), 2)</sup>	V	1.0	Option: 2.5 V
Input resistance	M $\Omega$	10	
Zero signal <sup>1)</sup>	mV	$\leq 1.0$	
Amplitude non-linearity <sup>3)</sup>	%	$\leq 0.5$	
Hysteresis <sup>3)</sup>	%	$\leq 0.5$	
Current consumption	mA	25 15	With 5 V supply With 10 V supply
Supply voltage	V	5–12	
Galvanic isolation <sup>4)</sup>	kV	1.5	
Insulation resistance	M $\Omega$	> 100	
Connection cable: High voltage connectors			Harting Han Q 2/0 <sup>5), 6)</sup> : Contact 1 banana socket 1 (red) Contact 2 banana socket 2 (black) Contact $\ominus$ banana socket 3 (yellow) <sup>5)</sup>
Output signal	m	2.0	Fixed cord, length and connector customized
Temperature range	°C	-30...+70	
Weight (approximate)	g	750	

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

<sup>5)</sup> **Contact  $\ominus$  and banana jack #3 (yellow) have direct connection to the case!**

<sup>6)</sup> **Rated voltage of the contacts according to the manufacturer: 400 V**



## U3B0D10B

### 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

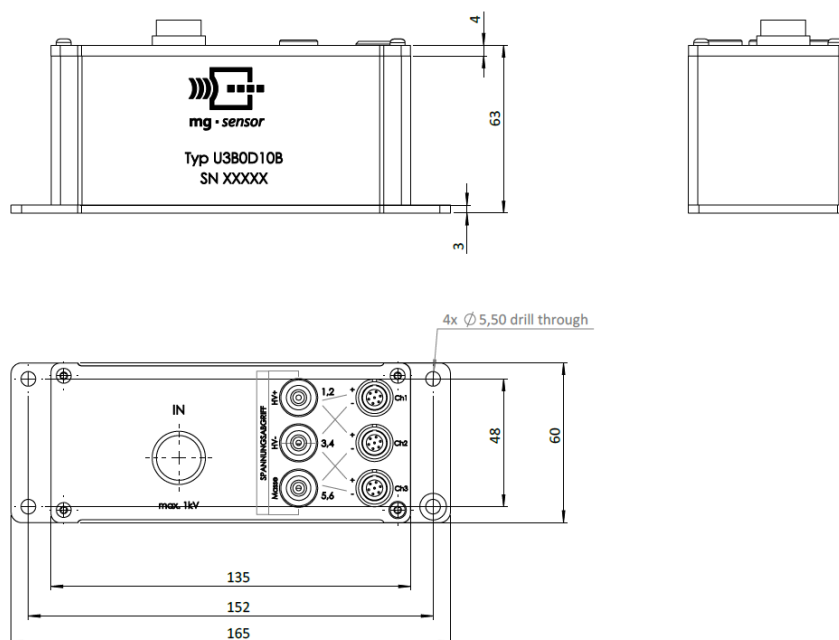
- ID-Module integrated in measurement module



#### 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



# Technical Data Sheet



## U3B0D10B

### 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	≤ 1.0	
Amplitude non-linearity <sup>3)</sup>	%	≤ 0.5	
Hysteresis <sup>3)</sup>	%	≤ 0.5	
Current consumption	mA	35 25	With 5 V supply With 10 V supply
Supply voltage	V	5–12	
Galvanic isolation <sup>4)</sup>	kV	1.5	
Insulation resistance	MΩ	> 100	
Connection cable: High voltage connectors			SAB Appliance socket T641-060-260 Contact 1&2 HV+ Contact 3&4 HV- Contact 5&6 vehicle mass
Output signal			3 x Lemo 1B appliance socket, 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

## U3B0E10A

### 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

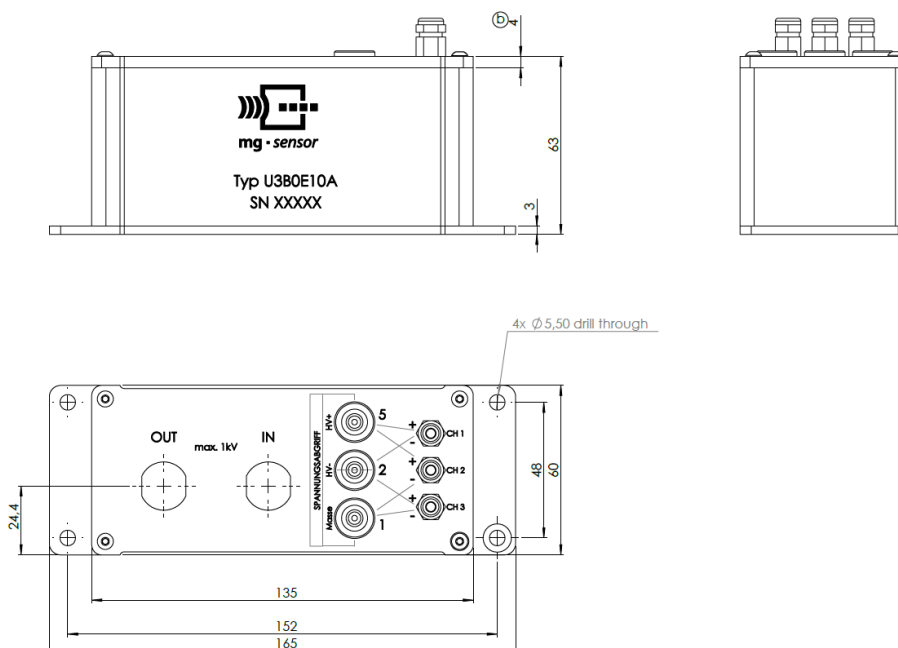
- ID-Module integrated in measurement module



#### 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



# Technical Data Sheet



## U3B0E10A

### 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 25	With 5 V supply With 10 V supply
Supply voltage	V	5–12	
Galvanic isolation <sup>4)</sup>	kV	1.5	
Insulation resistance	MΩ	> 100	
Connection cable: High voltage connectors			ODU MEDI-SNAP® HIGH-VOLTAGE Contact 3 HV+ Contact 4 HV- Contact 1 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

## 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

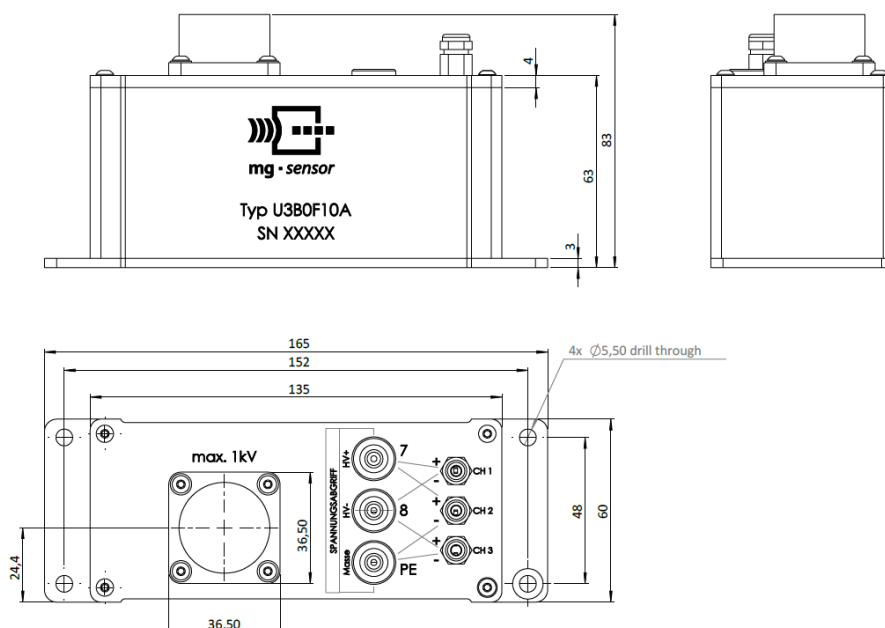
- ID-Module integrated in measurement module



#### 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



# Technical Data Sheet



## U3B0F10A

### 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 25	With 5 V supply With 10 V supply
Supply voltage	V	5–12	
Galvanic isolation <sup>4)</sup>	kV	1.5	
Insulation resistance	MΩ	> 100	
Connection cable: High voltage connectors			Amphenol C016 10C008 0001 Contact 7 HV+ Contact 8 HV- 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