

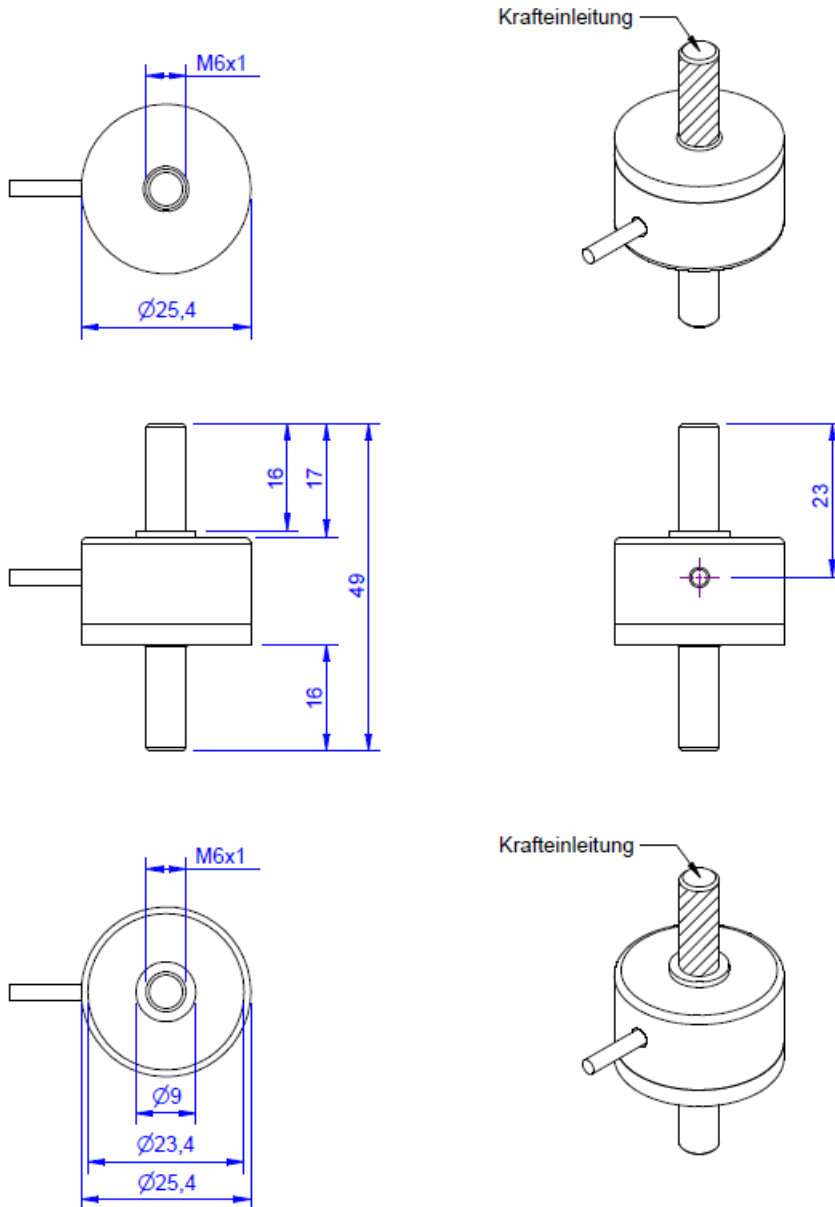
## KM26z 100N



### Description

The load cell KM26z is a membrane-type force sensor with small dimensions. It is suitable for measuring compressive and tensile forces. For force transmission there exist two threads M6. Environmental protection rating is IP 67. Force transmission must be free of lateral forces.

## Dimensions



## Technical Data

### Force sensor

|                            |                       |
|----------------------------|-----------------------|
| Type                       | Load cell             |
| Force direction            | Tension / Compression |
| Rated force F <sub>x</sub> | 100 N                 |
| Force introduction         | Außengewinde          |
| Dimension 1                | M6x1                  |
| Sensor Fastening           | Außengewinde          |
| Dimension 2                | M6x1                  |
| Operating force            | 150 %FS               |
| Rated displacement         | 0.08 mm               |
| Lateral force limit        | 10 %FS                |
| Material                   | Stainless steel       |
| Natural frequency          | 5 kHz                 |
| Height                     | 49 mm                 |
| Length or Diameter         | 25.4 mm               |
| Torque limit               | 5 Nm                  |
| Bending moment limit       | 1 Nm                  |

### Electrical Data

|                                         |             |
|-----------------------------------------|-------------|
| Input resistance                        | 390 Ohm     |
| Tolerance input resistance              | 40 Ohm      |
| Output resistance                       | 350 Ohm     |
| Insulation resistance                   | 2 GOhm      |
| Rated range of excitation voltage f     | 2.5 ... 5 V |
| Operating range of excitation voltage f | 1 ... 10 V  |
| Zero signal                             | 0.05 mV/V   |
| Rated output                            | 1 mV/V / FS |

### Precision data

|                                            |            |
|--------------------------------------------|------------|
| Accuracy class                             | 1%         |
| Relative linearity error                   | 0.5 %FS    |
| Relative zero signal hysteresis            | 0.05 %FS   |
| Temperature effect on zero signal          | 0.02 %FS/K |
| Temperature effect on characteristic value | 0.02 %RD/K |
| Relative creep                             | 0.1 %FS    |

### Connection Data

|                        |                  |
|------------------------|------------------|
| Connection type        | 4 conductor open |
| Name of the connection | STC-31V-4        |
| Cable length           | 3 m              |

### Environmental data

|                               |               |
|-------------------------------|---------------|
| Rated temperature range f     | -10 ... 70 °C |
| Operating temperature range f | -10 ... 85 °C |

|                             |               |
|-----------------------------|---------------|
| Storage temperature range f | -10 ... 85 °C |
| Environmental protection    | IP67          |

Abbreviation: RD: „Reading“; FS: „Full Scale“;  
1) The exact nominal sensitivity is indicated in the test report;  
till nominal output 50N: ca 0,5 ... 1,0mV/V

## Pin Configuration

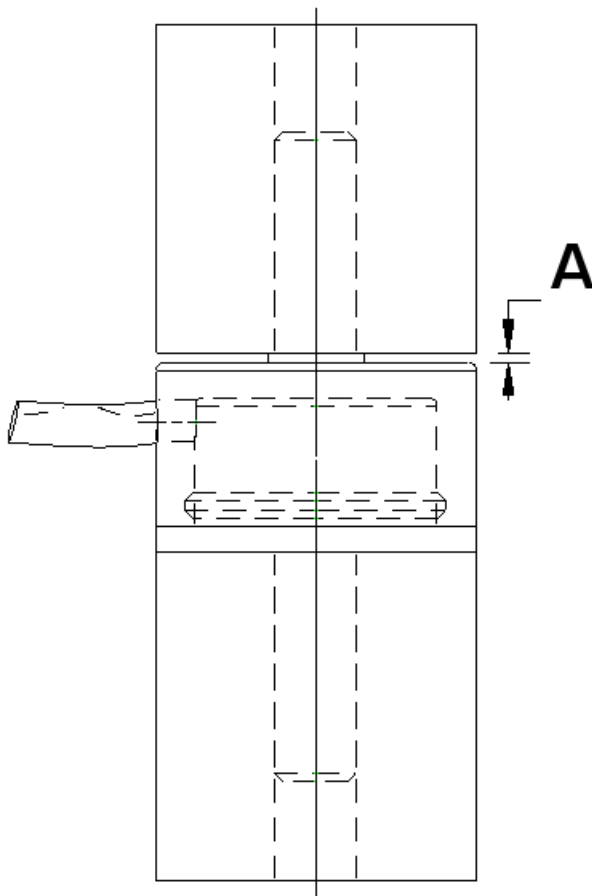
| Symbol | Description            | Wire colour |
|--------|------------------------|-------------|
| +Us    | positive bridge supply | red         |
| -Us    | negative bridge supply | black       |
| +Ud    | positive bridge output | green       |
| -Ud    | negative bridge output | white       |

*Pressure load: positive output signal.*  
*Shield- transparent.*

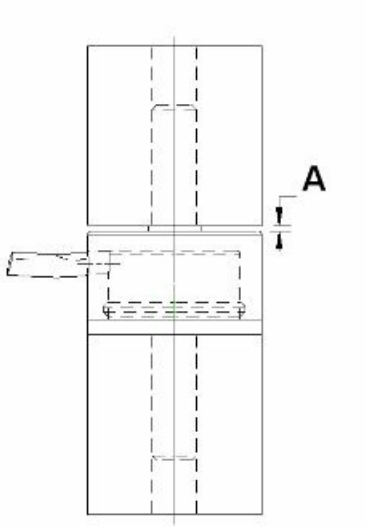
## Mounting

Installation instructions: When assembling attachment parts, hold the sensor in place on the installation side / do not guide any tensioning torque through the sensor. Attachment parts may be supported on adjustable feet on the end faces, if preferred

## Installation



Gap "A" may not be closed, is necessary for the function of the force sensor.



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## accessories

|                                                                                     | Description                     | Description                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Calibration Certificate kn/20/5 | Factory calibration certificate for force to 20 kN in accordance with DIN EN ISO / IEC 17025 for test materials monitoring according to DIN ISO 9001: 2008 with 5 load levels and 3 series of measurements. |
|    | GSV-1H                          | Measuring amplifier in top-hat rail housing for sensors with strain gauges. Analogue output -10V...+10V, limiting frequency 250Hz, 4 input sensitivities from 2.0mV/V.                                      |
|    | GSV-2TSD-DI                     | Measuring amplifier in desktop-housing for sensors with strain gauges. Serial port RS232, USB port, analogue output -5V...+5V, limiting frequency 260Hz, input sensitivity 3.5mV/V.                         |
|    | GSV-3USB                        | Measuring amplifier in aluminum housing for sensors with strain gauges. Limiting frequency 1250Hz, input sensitivity 2 / 3,5 / 10 mV/V.                                                                     |
|    | GSV-6K                          | Analogue measuring amplifier in plug housing for sensors with strain gauges. Analogue output configurable, TEDS, sampling frequency 1Hz ... 25kHz, input sensitivity configurable 0.1mV/V ... 8mV/V         |
|  | High Accuracy Calibration/1D    |                                                                                                                                                                                                             |