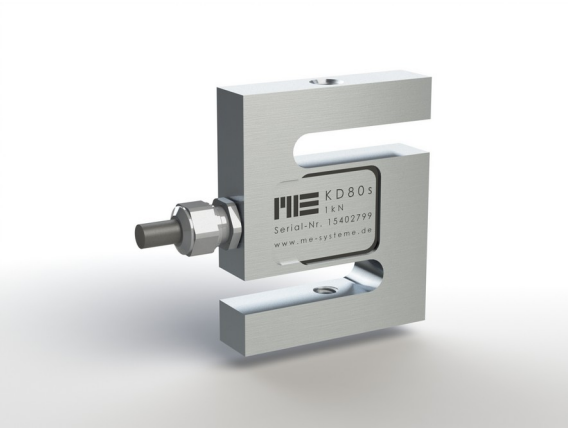
# Force Sensor KD80se 1kN/420-12

Item number: 10692




The force sensor KD80se is used for tensile and compressive force measurements and for weighing.

Fields of application are e.g. Rope force measurements, test benches, overload protection for lifting equipment, process controls and scales.

The KD80se sensors have an integrated GSV-13q measuring amplifier with analogue output. The supply voltage is 14 ...28V DC Unlike the GSV-6L integratable measuring amplifier, the GSV-13q is not configurable via the ClickRClackR menu. The integrated measuring amplifier GSV-13q focuses on smallest dimensions, zero setting and scaling function. In contrast, filter functions and resolution with 600 nV/V ... 20 µV/V noise amplitude PkPk not suitable for high resolution applications. For high resolutions the use of an external measuring amplifier is recommended.

The KD80se sensors correspond to accuracy class 0.5. The protection class is IP65.

## Optional special version

- Protection class IP68: from rated force 200 N
- Temperature range: -40°C to 180°C
- Vacuum version from $10^{-5}$ mbar
- Pressure range up to 8 bar
- Suitable for cleanrooms

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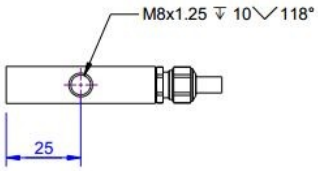
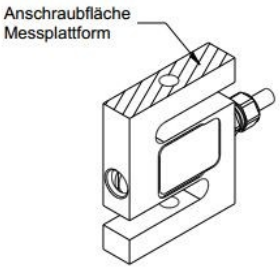
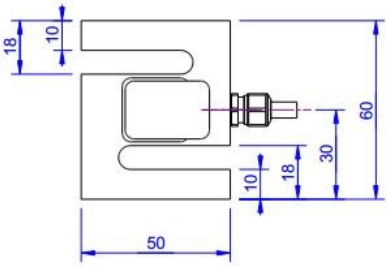
Stand: 26.03.2026

## Technical Drawing

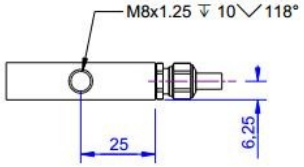


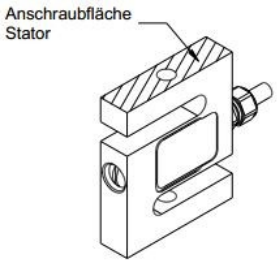







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## Technical Data

| Basic Data | | Unit |
|---|---|---|
| Type | Kraftsensor | |
| Force direction | Tension/Compression | |
| Rated force Fx | 1 | kN |
| Force introduction | Internal thread | |
| Dimension 1 | M8x1,25 | |
| Sensor Fastening | Internal thread | |
| Dimension 2 | M8x1,25 | |
| Operating force | 150 | %FS |
| Rated displacement | 0.2 | mm |
| Lateral force limit | 100 | %FS |
| Material | Stainless steel | |
| Natural frequency fx | 5 | kHz |
| Dimensions | 60mm x 50mm x 10mm ... 200mm x 150mm x 60mm | |
| Height | 60 | mm |
| Length or Diameter | 50 | mm |
| Variants | 100N... 200kN | |

| Electrical Data | Unit |
|---|---|

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| Accuracy Data | | Unit |
|---|---|---|
| Accuracy class | 0,5 | |
| Relative linearity error | 0.02 | %FS |
| Relative zero signal hysteresis | 0.02 | %FS |
| Temperature effect on zero signal | 0.02 | %FS/K |
| Temperature effect on characteristic value | 0.01 | %RD/K |
| Relative creep | 0.1 | %FS |

| Analog Output | | Unit |
|---|---|---|
| Current output from | 4 | mA |
| Current output to | 20 | mA |
| Zero adjustment to | 12 | mA |

| Measuring Frequency | | Unit |
|---|---|---|
| Limit frequency (analog) | 1000 | Hz |

| Supply | | Unit |
|---|---|---|
| Supply voltage from | 14 | V |
| Supply voltage to | 28 | V |
| Current consumption from | 40 | mA |

| Environmental Data | | Unit |
|---|---|---|
| Rated temperature range from | -10 | °C |
| Rated temperature range to | 70 | °C |
| Operating temperature range from | -10 | °C |
| Operating temperature range to | 85 | °C |
| Storage temperature range from | -10 | °C |
| Storage temperature range to | 85 | °C |
| Environmental protection | IP65 | |

Abbreviation: RD: „Reading“; FS: „Full Scale“;1) The exact nominal sensitivity is indicated in the test report;

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## Pin Assignment

| Channel | Symbol | Description | Wire color | PIN |
|---|---|---|---|---|
| | Ub | Supply voltage (depends on variant) | brown | |
| | GND | Ground power supply | white | |
| | Ua (Out) | Output signal 4... 20mA / 0... 10V / 0... 5V | green | |
| | Tara (Ta) | Control input for zero balance | yellow | |
| | Scale (Sc) | Control input for amplification factor | grey | |
| | GND | Ground, signal | pink | |
| | | Shield | transparent | |

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