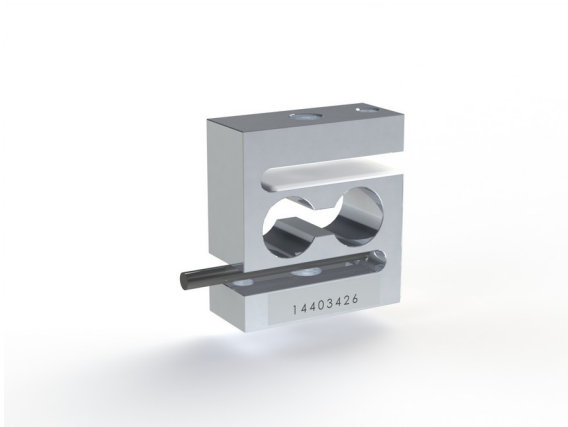


## Force Sensor KD24s 2N

Item number: 603



The force sensor KD24S is a universally applicable s-shaped force sensor. It is excellently suited for

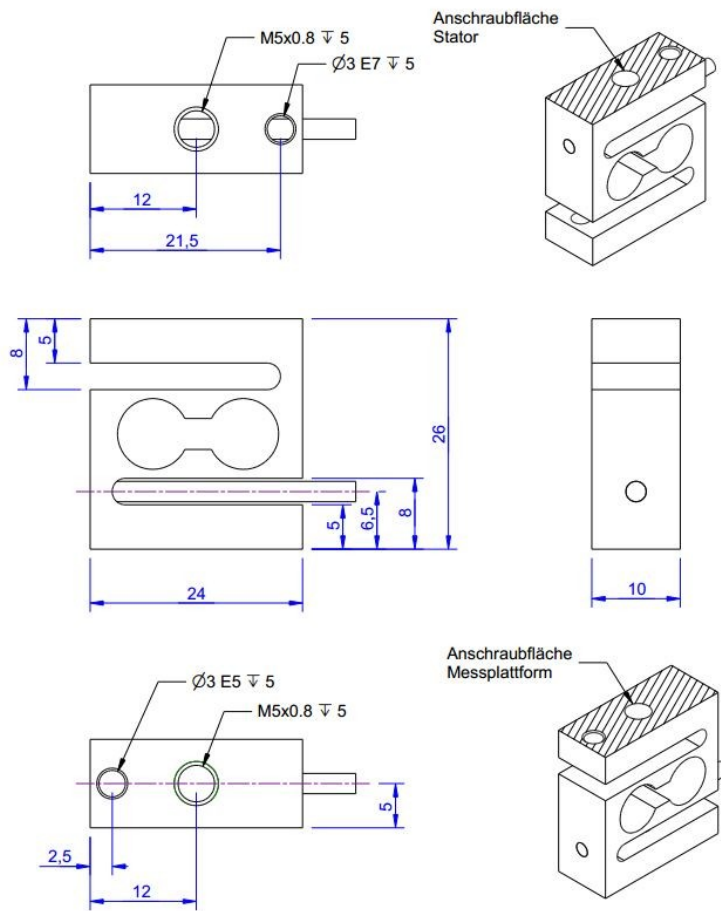
testing tasks in quality assurance as well as in material testing. Inward and outward force transmission are arranged centrally. Under loading the force transmission brackets are moved parallel.

Like the KD40s the force sensor KD24S is constructed as a multi-range sensor. The accuracy of 0.1% is already reached at an output of 0.5 mV/V.

Sensors from 2 to 20N can be operated with 4 times and sensors from 50 to 100N with two times their nominal force range.

It is recommended to fix the sensor cable side (bottom side on picture) on the non-moving side of force transmission.

## Technical Drawing



## Technical Data

| Basic Data           |                     | Unit |
|----------------------|---------------------|------|
| Type                 | Kraftsensor         |      |
| Force direction      | Tension/Compression |      |
| Rated force Fx       | 2                   | N    |
| Force introduction   | Internal thread     |      |
| Dimension 1          | M5x0,8              |      |
| Sensor Fastening     | Internal thread     |      |
| Dimension 2          | M5x0,8              |      |
| Operating force      | 400                 | %FS  |
| Rated displacement   | 0.08                | mm   |
| Lateral force limit  | 100                 | %FS  |
| Material             | aluminum-alloy      |      |
| Natural frequency fx | 450                 | Hz   |
| Dimensions           | 26mm x 24mm x 10mm  |      |
| Height               | 26                  | mm   |
| Length or Diameter   | 24                  | mm   |
| Torque limit         | 2                   | Nm   |
| Bending moment limit | 1                   | Nm   |
| Variants             | 2N... 1kN           |      |

| Electrical Data                            |      | Unit      |
|--|------|-----------|
| Input resistance                           | 440  | Ohm       |
| Tolerance input resistance                 | 50   | Ohm       |
| Output resistance                          | 350  | Ohm       |
| Tolerance output resistance                | 2    | Ohm       |
| Insulation resistance                      | 2    | GOhm      |
| Rated range of excitation voltage from     | 2.5  | V         |
| Rated range of excitation voltage to       | 5    | V         |
| Operating range of excitation voltage from | 1    | V         |
| Operating range of excitation voltage to   | 10   | V         |
| Zero signal                                | 0.05 | mV/V      |
| Rated output                               | 0.5  | mV/V / FS |

| Accuracy Data                              |      | Unit  |
|--|------|-------|
| Accuracy class                             | 0,1  |       |
| 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   |

| 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“;  
The exact characteristic value is indicated in the test report;

## Pin Assignment

| Channel | Symbol | Description            | Wire color | PIN |
|---------|--------|------------------------|------------|-----|
|         | +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.