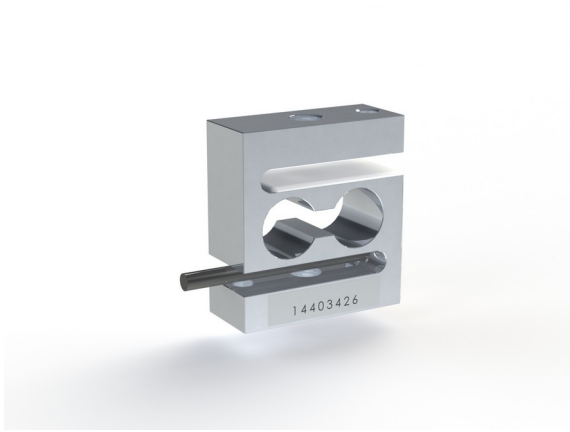


## Force Sensor KD24s 2N

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.

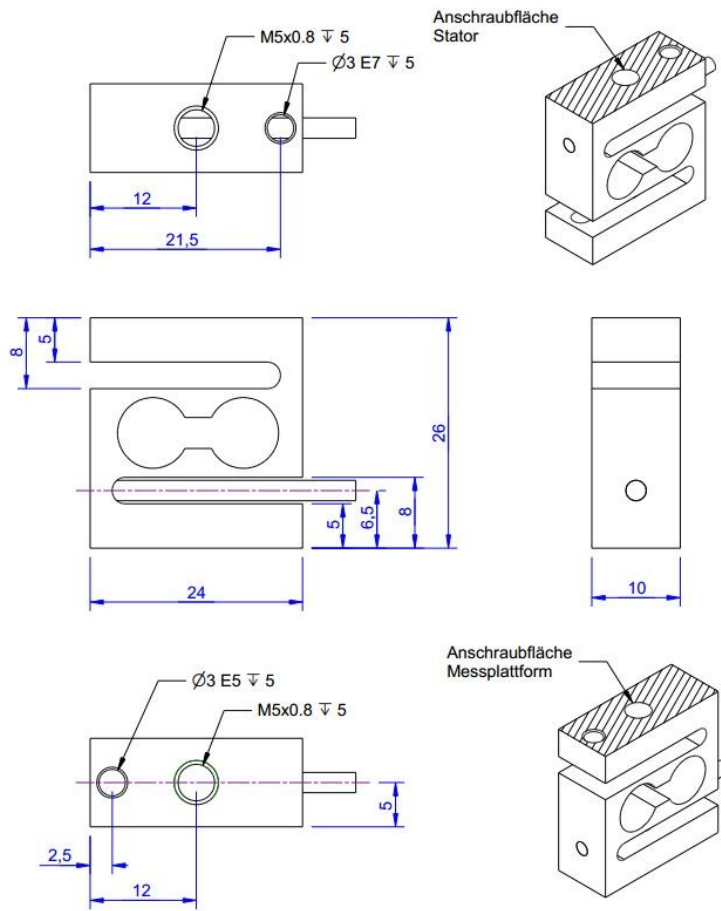
Sensors from 2 to 20N can be operated with 4 times and sensors from 50 to 100N with two times their nominal force range.

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

### Optional special version

- Vacuum version from  $10^{-5}$  mbar
- Pressure range up to 8 bar

## 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.