

Force Sensor KD24s

Variant: $\pm 2\text{N}$, $\pm 10\text{N}$, $\pm 20\text{N}$, $\pm 50\text{N}$, $\pm 100\text{N}$, $\pm 200\text{N}$, $\pm 500\text{N/VA}$, $\pm 1\text{kN/VA}$



Description

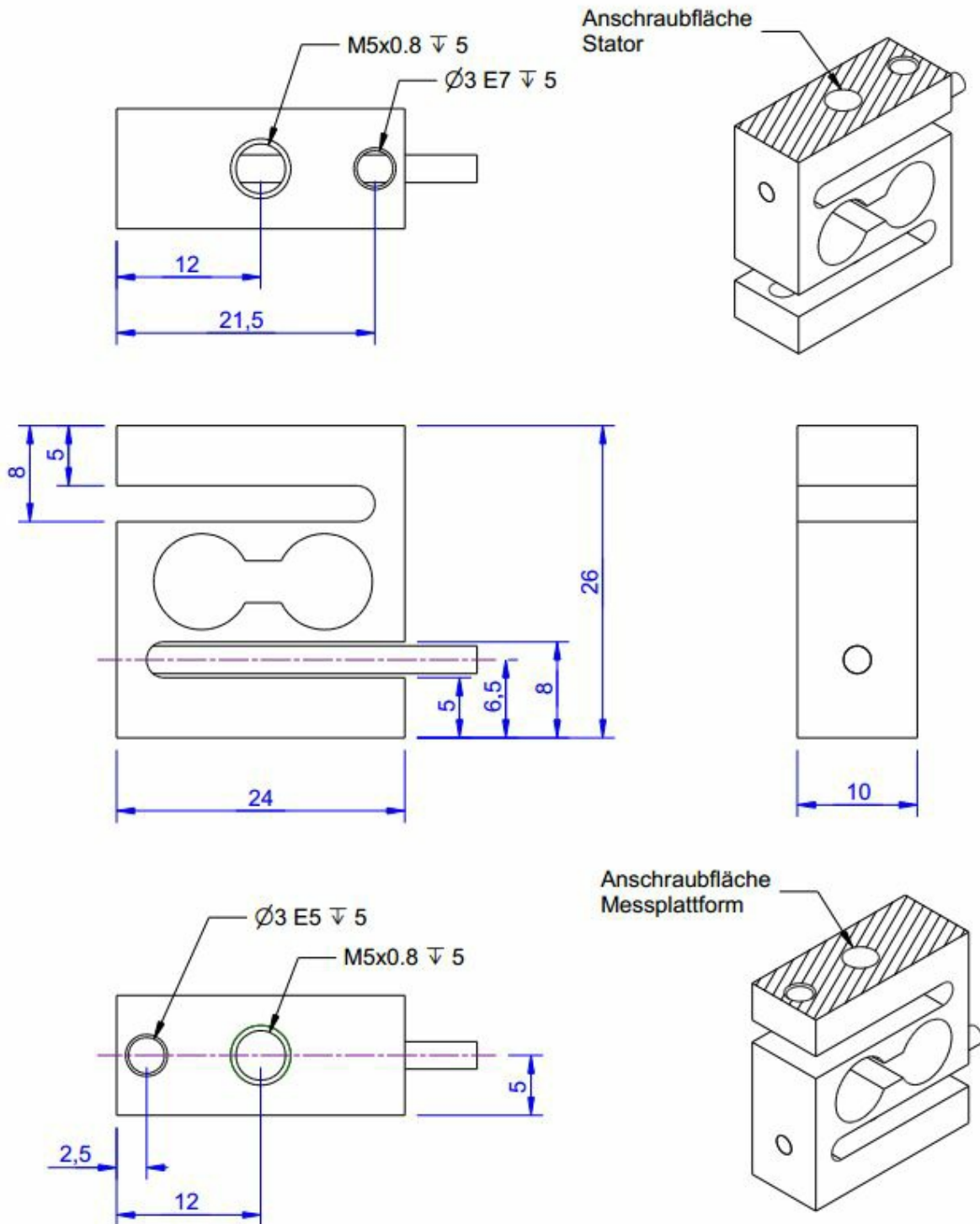
The force sensor KD24S is the smallest s-shaped force sensor. It is excellently suited for testing tasks in quality assurance as well as in material testing. Inward and outward force transmission are arranged centrally. Under loading the force transmission brackets are moved parallel.

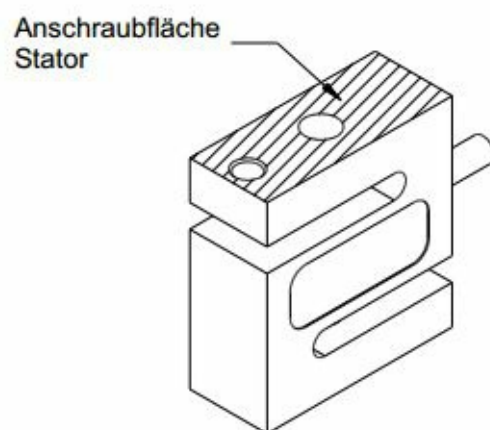
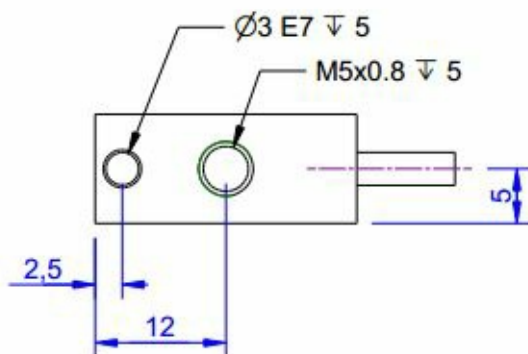
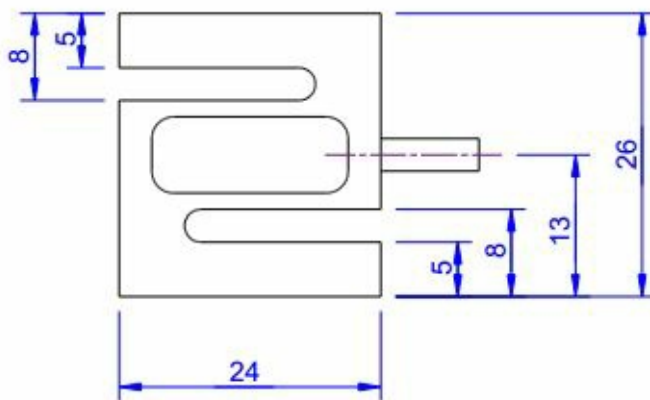
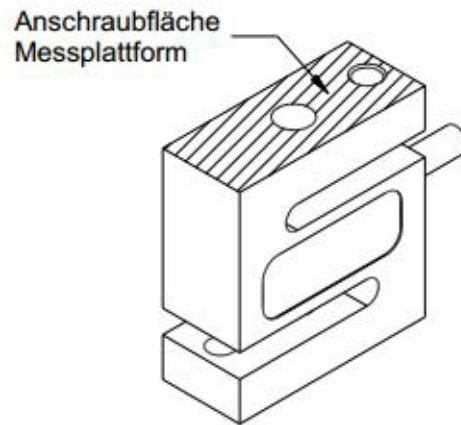
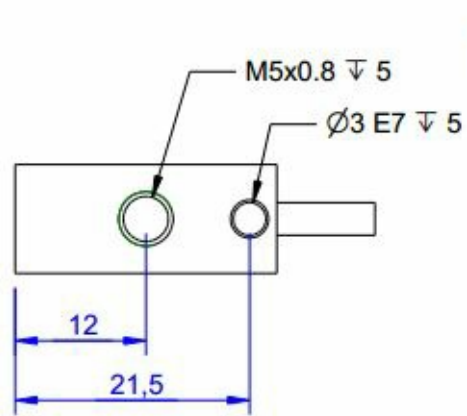
Like the KD40s the force sensor KD24S is constructed as a multi-range sensor. The accuracy of 0.1% is already reached at an output of 0.5 mV/V.

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.

Dimensions







Technical Data

Kraftsensoren

Type	Force sensor
Load	Tension / Compression
Force introduction	Inner thread
Dimension 1	M5x0,8
Sensor Fastening	Inner thread
Dimension 2	M5x0,8
Rated displacement	0.075 mm
Material	Aluminium alloy
Height	26 mm
Length or Diameter	24 mm

Elektrische Daten

Input resistance	390 Ohm
Tolerance input resistance	40 Ohm
Output resistance	350 Ohm
Tolerance output resistance	2 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	0.5 mV/V / FS

Precision

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

Connection Data

Connection type	4 conductor open
Name of the connection	STC-31V-4
Cable length	2 m



Temperature

Rated temperature range f	-10 ... 70 °C
Operating temperature range f	-10 ... 85 °C
Storage temperature range f	-10 ... 85 °C
Environmental protection	IP65

*Abbreviation: RD: „Reading“; FS: „Full Scale“;
The exact characteristic value is indicated in the test report;*



Pin Configuration

Channel	Symbol	Description	Wire colour	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



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.
