

## Force Sensor KAT

### Scope of Supply

Small measuring roll with 5 m cable (PVC), axial output with cable connection T: cable gland, straight

### Variants

- N2: Plug connection, straight, M12, moulded
- S2: Plug connection, right-angled, M12, moulded

### Additional Options

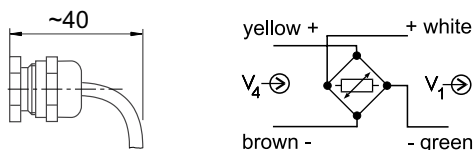
- F: For use in explosive areas, incl. J-Box

### Additional Accessories

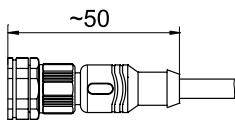
KAT- Clamp device

### Connections

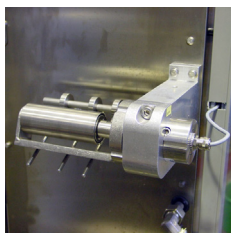
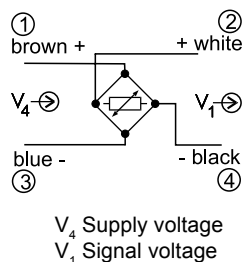
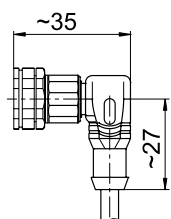
Variant T



Variante N2



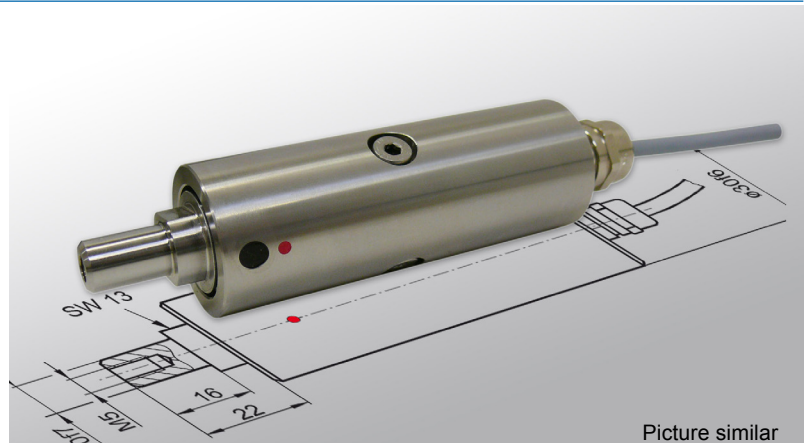
Variante S2



### Ordering example:

**KAT-A500-TF**

Type \_\_\_\_\_  
 Shaft design \_\_\_\_\_  
 Nominal force \_\_\_\_\_  
 Variants/ Options \_\_\_\_\_



Picture similar

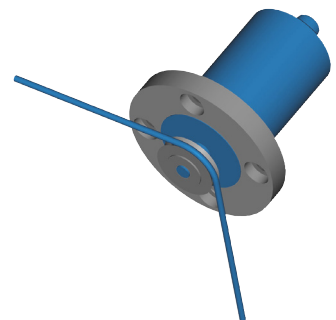
### Special features

- Easy assembly and small space requirement
- Overload protection utilizing mechanical stops
- Measuring range from 25 to 630 N

Tension force sensors of the type KAT were specifically developed for direct measurement of forces acting in cables, wires, ropes, or tapes. They can best be installed in places where the design of the machine already requires the use of deflection rollers or guide rollers.

This is e. g. the case in situations such as

- Cable making machines
- Stranding machines
- Foil capacitor manufacturing
- Label printing machinery etc.

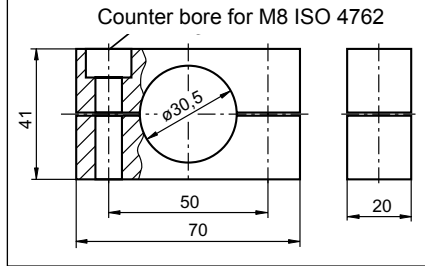


By using a screw instead of a roller to lead the force into the shaft, the tension sensor KAT can also be used to measure compression forces. Strain gauges applied to the active surfaces of the cantilever beam measure the acting forces.

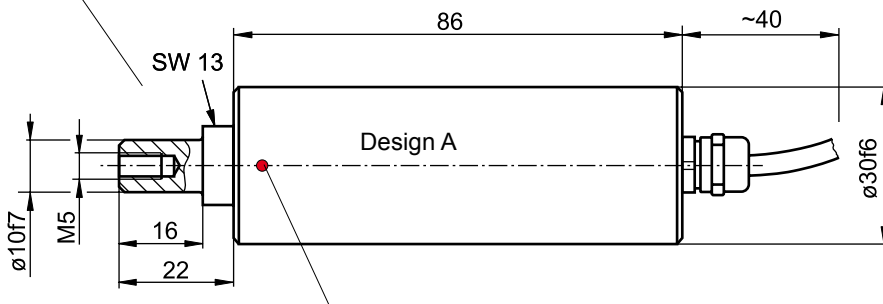
The strain gauge bridge is supplied with stabilized DC voltage from a strain gauge amplifier such as the Measuring Amplifiers AME2 or MV125 for further processing of the measuring signals. The signals at the output terminals of the amplifier are proportional to the tensile force in the material. The signals can be digitally displayed or used as actual values in closed loop controls. Mechanical stops limit the measuring deflection and provide overload protection. The axial cable entry facilitates mounting the sensor to the machine frame.

Technical Data	Values (%) based on nominal force
Nominal force (Measuring range)	25*), 40, 63, 100, 160, 250, 400, 630 N
Overload protection	1000 %, but max. 2000 N
Max. operating force	160 %
Lateral force	100 %
Nominal rating	1,5 mV / V
Combined error	0,5 %
Nominal ambient temperature	+ 10 ... +60° C (+50...+140° F)
Operational temperature range	- 10 ... +70° C (14... 158° F)
Nominal resistance of the strain gauge bridge	350 Ω
Max. bridge supply voltage	10 VDC
Enclosure protection	IP 52
Sensor cable (standard)	PVC, grey, 4 x 0,14 mm <sup>2</sup>
	*) Nominal rating 1 mV/V

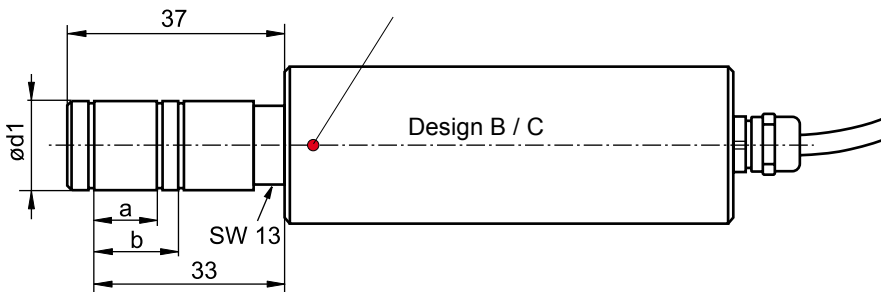
Additional Accessories:  
Clamp device



**Attention!** When assembling axes adapters, pulleys or similar devices no torque should act on the internal measuring elements. For this reason assembly should be made before installation into a machine; use wrench for countering.



**Absolutely pay attention:**  
**Red dot in measuring direction!**



Dimensions in mm (1 mm = 0.03937 inches)

Design	d1	Version of bearing	a	b
A	10 f7	6000 / 6300	-	-
B	15 f7	6002 / 6302	9	13
C	17 f7	6003 / 6303	10	14