

Force Sensor ZAK

Scope of Supply

Force sensor 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

R: Radial cable output
P: Reduced protection IP54
F: For use in explosive areas, incl. J-Box

Additional Accessories

ZAK- Mounting flange
ZAK- Clamp device

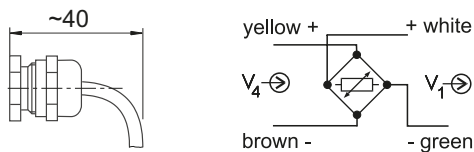


Special features

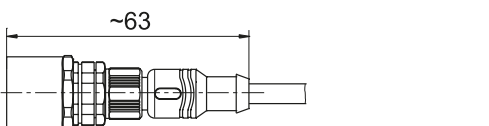
- Stainless steel design
- Measuring range from 10 to 2000 N
- Easy assembly and small space requirement
- Overload protection utilizing mechanical stops
- Flange mounting and clamp version available

Connections

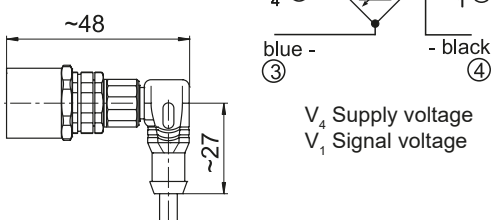
Variant T



Variant N2



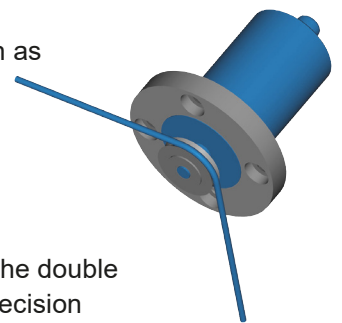
Variant S2



Tension force sensors of the type ZAK 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.



The sensor is designed according to the double beam principle. This results in high precision measurement even in off center load situations.

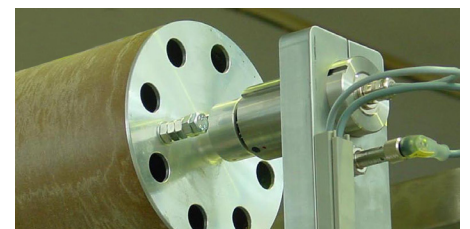
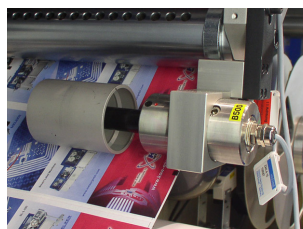
Mechanical stops limit the measuring deflection and provide overload protection. Strain gauges applied to the active surfaces of the cantilever beam measure the acting forces.

The strain gauge bridge is supplied with stabilized DC voltage from a strain gauge amplifier of the *HAEHNE* program for further processing of the measuring signals.

Ordering example

ZAK-A500-TF

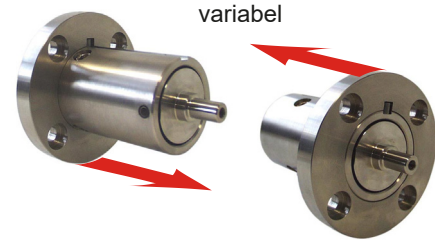
Type
Design
Nominal force
Variants / Options



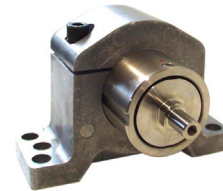
Technical Data	Values (%) based on nominal force
Nominal force (Measuring range)	10; 20; 50; 100; 200; 500; 1000; 2000 N
Overload protection	1000% , but max. 3200 N
Max. operating force	160 %
Max. lateral force	100 %
Nominal rating Sensors from 10 to 20 N Sensors from 50 N	1 mV/V 1,5 mV/V
Combined error	0,5 %
Nominal ambient temperature	+10... +60° C (+50...+140° F)
Operational temperature range	-10... +70° C (+14... +158° F)
Nominal resistance of strain gauge bridge	1000 Ω
Bridge supply voltage	10 V DC
Enclosure protection (Variants T, N2, S2, option R) (Option P)	IP65 IP54

Fastening possibilities

ZAK- Mounting flange
Material: Stainless steel



ZAK- Clamping device
Material: aluminium alloy

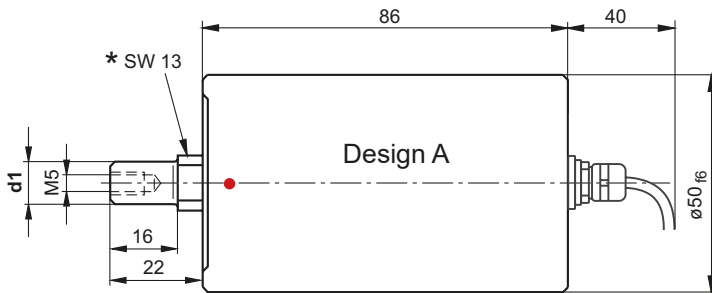


Design	d1	Versions of bearing	a	b
A	10 f7	6000 / 6300	-	-
B	15 f7	6002 / 6302	9	13
C	17 f7	6003 / 6303	10	14

Dimensions in mm (1 mm = 0.03937 inches)

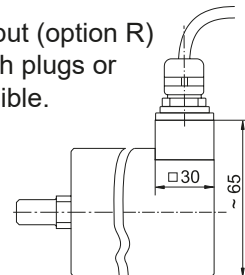


*** Attention!** When assembling axes adapters, pulleys or similar devices no torque should act on the internal measuring elements. For this reason assembly should be made before installation into a machine; use wrench for countering.



Option R:

A radial cable output (option R) in combination with plugs or receptacle is possible.



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

