

## Force Sensor ZAD

### Scope of Supply

Force sensor with 5 m cable (PVC),  
axial output with cable connection T:  
cable gland, straight and  
two fastening nuts M25x1.5

### 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

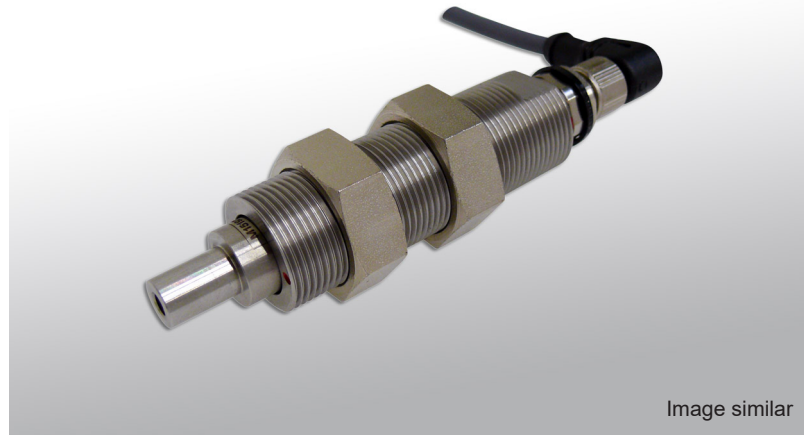
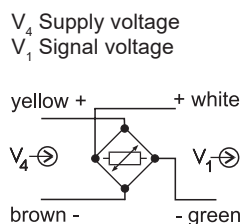
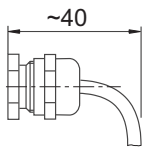


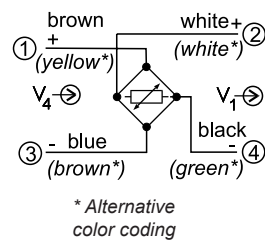
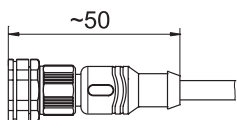
Image similar

### Connections

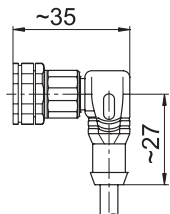
#### Variant T



#### Variant N2



#### Variant S2



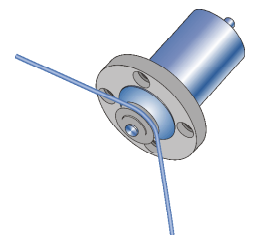
### Special features

- Easy assembly and small space requirement
- Overload protection utilizing mechanical stops
- Measuring range from 10 to 1000 N

Tension force sensors of the type ZAD 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.



When using an application of force transmission screw instead of a roll the tension sensor ZAD may be used as a compression load cell. The axial cable entry allows in most cases a simple installation on the machine. Mechanical stops limit the measurement path and serve as overload protection.

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

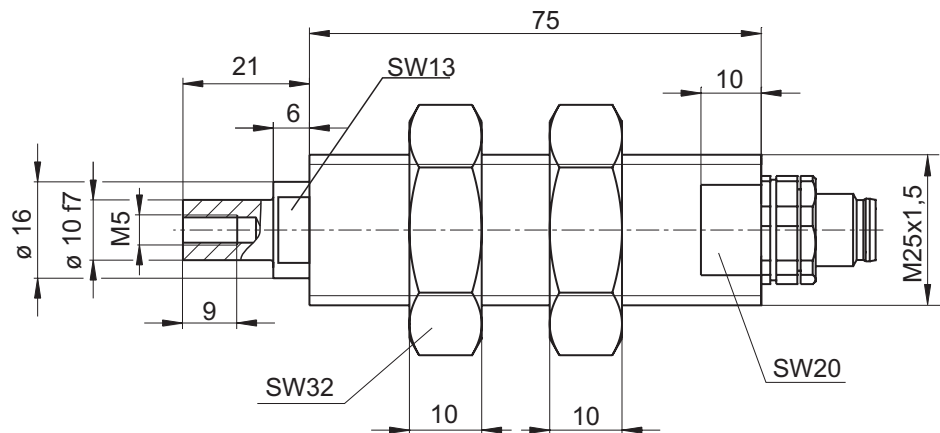
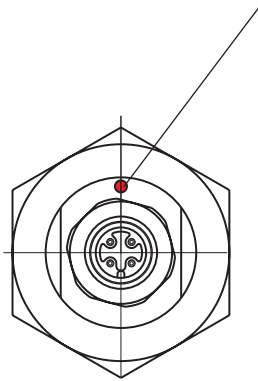
**ZAD500-S2**

Type	
Nominal force	
Variants/ Options	

Technical Data	Values (%) based on nominal force
Nominal force (Measuring range)	10; 20; 50; 100; 200; 500; 1000 N
Overload protection	1000% , but max. 2000 N
Max. operating force	160 %
Max. lateral force	100 %
Nominal rating	1 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 $\Omega$
Brigde supply voltage	10 V DC
Enclosure protection	IP54



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



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