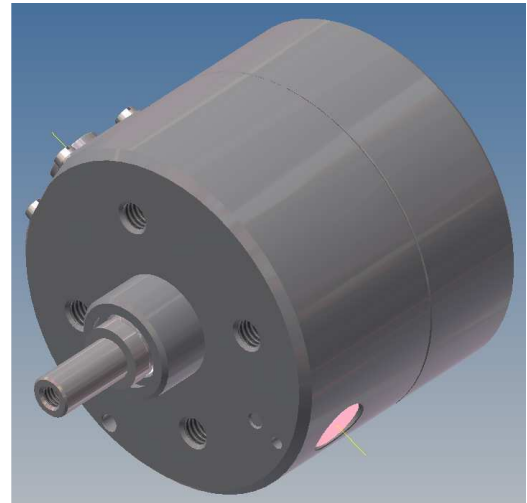


**Technical Data**

**Radial Force Sensor**

**CF - COMP- PRO**

Centrifugal force and weight force compensated  
Radial force and tensile force sensor



**Description**

**Radial Force Sensors series CF-COMP-PRO are precise and reliable measuring instruments with high overload protection and large long-term stability.**

**Function:** For tension measurement on running material a ball-bearing roller is mounted on the measuring axis. This roller will now be positioned in the machine in such a way that it deflects the material to be measured in a defined angle. In doing so, angles of wrap of the material to be measured around the roller are possible from 3° up to 180°. The resulting radial force on the measuring axis, due to the deflection, is measured by the sensor. The radial force is proportional to the tensile force in the material being measured. According to this radial force the nominal load of the sensor must be selected.

**Application:** Tension measurement on optical fibers, wires, cables, ropes, tapes, etc.

**Special features:**

- **Centrifugal force and weight-compensated measuring system up to 150G.**
- **Guide rollers or deflection pulleys are mounted on the bearing axis, and used for tension measurement. So a great flexibility is reached in the use of different materials and shapes of the measured material.**
- **The dimensions of the bearing axis and the measuring roller can be adjusted according to your needs.**
- **No restriction in relation of roller weight and tensile force.**

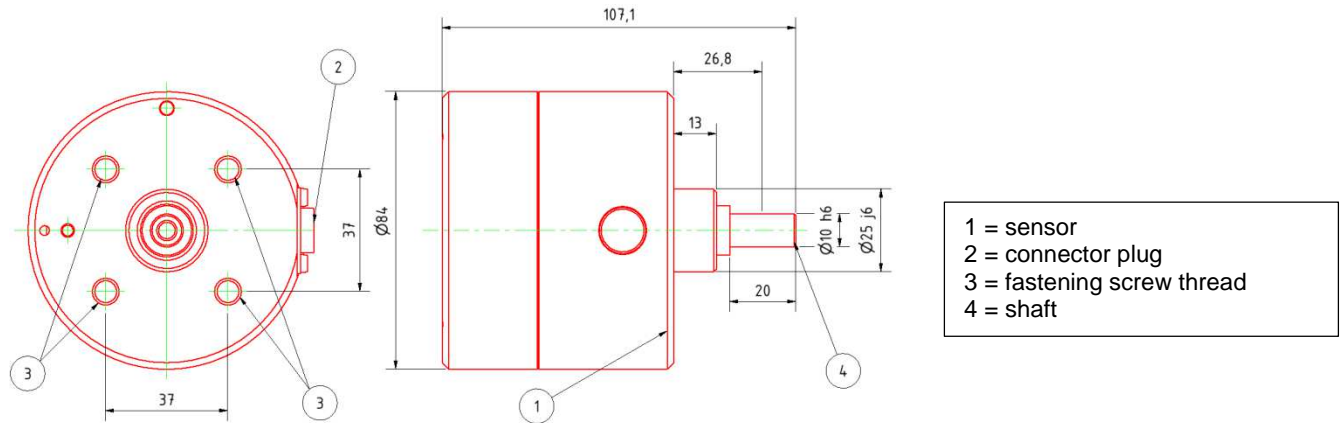
**Measuring range:** The measuring range will be determined by the wrap angle of the material to be measured around the measuring roller. Measured is the resultant force.

**Fastening:** with 4 screws M8.

Series **CF-COMP-PPRO-E** and **CF-COMPPRO-C-E**

**Radial Force Sensor series CF-COMP-PRO-E and CF-COMP-PRO-C-E**

**Dimensions**



**CF-COMP-PRO-E ( CF-COMP-PRO with integrated measuring amplifier )**

Strain-gage, full-bridge, sensor with integrated amplifier.  
 Required operation voltage to be specified in your order.  
 Operating voltage and output are galvanically separated.  
 Electrical connection via 5-pin plug-in contact.  
 For accurate adjustment of the sensor the roller weight must be known.

Nominal loads: **25N up to 700N**, other nominal loads on request

Measuring range: 1% up to approx. 115% of the nominal load  
 Max. error in linearity:  $< \pm 0,2\%$   
 Overload protection: min. 5 fold

Coefficient of temperature  
 - of zero point:  $< 0,035\% / C$   
 - of the measuring range:  $< 0,055\% / C$

Operation voltage:  $5\text{ V} \pm 10\%$   $< 90\text{ mA}$

Output signal:  $0 \dots \pm 10\text{V}$   
 Optional:  $4\text{-}20\text{mA}$

$12\text{ V} \pm 10\%$   $< 70\text{ mA}$   
 $24\text{ V} \pm 10\%$   $< 40\text{ mA}$

Adjusting range ZERO  $\pm 20\%$  of the nominal load  
 Adjusting range calibration  $\pm 20\%$  of the nominal load

Protection: IP 5X (other on request)

Nominal temperature range:  $+5^\circ\text{C} \dots +55^\circ\text{C}$

Weight compensation: up to max. 1100 g (others on request)