RMGZ 400/600 Series Force Measuring Roller

Nominal forces from 60 – 4000 N [13.5 – 900 lbf]
Wide material processing range

10 times overload protection
Recalibration is not required

20:1 force measuring range
Wide measuring capability at high resolution

Lifetime lubricated ball bearings built-in
No maintenance necessary

● RMGZ 400/600 Series
FMS force measuring roller
RMGZ 400/600 series are used to measure the tension in wires, cables and narrow flat materials.
An application specific sheave is mounted to the covering of the lifetime lubricated ball bearings.
A mounting hole with a key-way is required in the machine frame.
The key-way holds the position pin which prevents the sensor from twisting. The location of the position pin depends on the direction of force and the position of the red point.

● Functional Description
The force measuring rollers RMGZ 400/600 work based on an enhanced bending beam principal.
This ensures maximum accuracy and high measuring sensitivity. Four foil-type strain gauges configured in a full Wheatstone Bridge are utilized to measure the material tension.
A mechanical hard stop ensures the highest overload protection and makes the sensor virtually indestructible.
This combination provides highest accuracy and reliability without the need for recalibration.
RMGZ 400/600 Series • Technical Data

| Sensitivity | 1.8 mV / V |
| Tolerance of sensitivity | < ± 0.2 % |
| Accuracy class | ± 0.5 % (F_nom) |
| Temperature coefficient | ± 0.1 % / 10 K |
| Temperature range | –10...+60 °C (option H16: –10...+120 °C) |
| Input resistance | 350 Ω |
| Supply voltage | 1...12 VDC |
| Overload protection | 10 times nominal force |
| Material | Force sensor: stainless steel; Cover: aluminium |
| Protection class | Sealed against dust (IP 40) |

Options:

- **H14** = Right angle connector
- **H16** = Temperature range up to 120 °C [248 °F]

Order code (example):

RMGZ422B.H14

Scope of delivery:

- Straight connector
- (Sheave is not in the scope of delivery)