

## RMGZ 100 Series Force Measuring Roller

---

**Nominal forces from 6 – 300 N [0.7 – 67.4]**

**Sizes available for every application**

---

**10 times overload protection**

**No recalibration required**

---

**20 : 1 force measuring range**

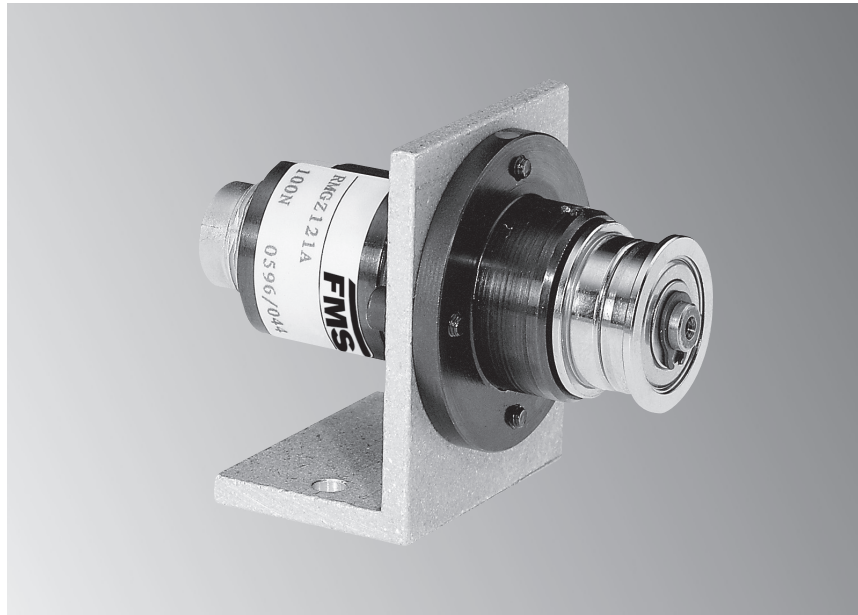
**Wide measuring capability**

---

**Lifetime lubricated ball bearings**

**No maintenance necessary**

---



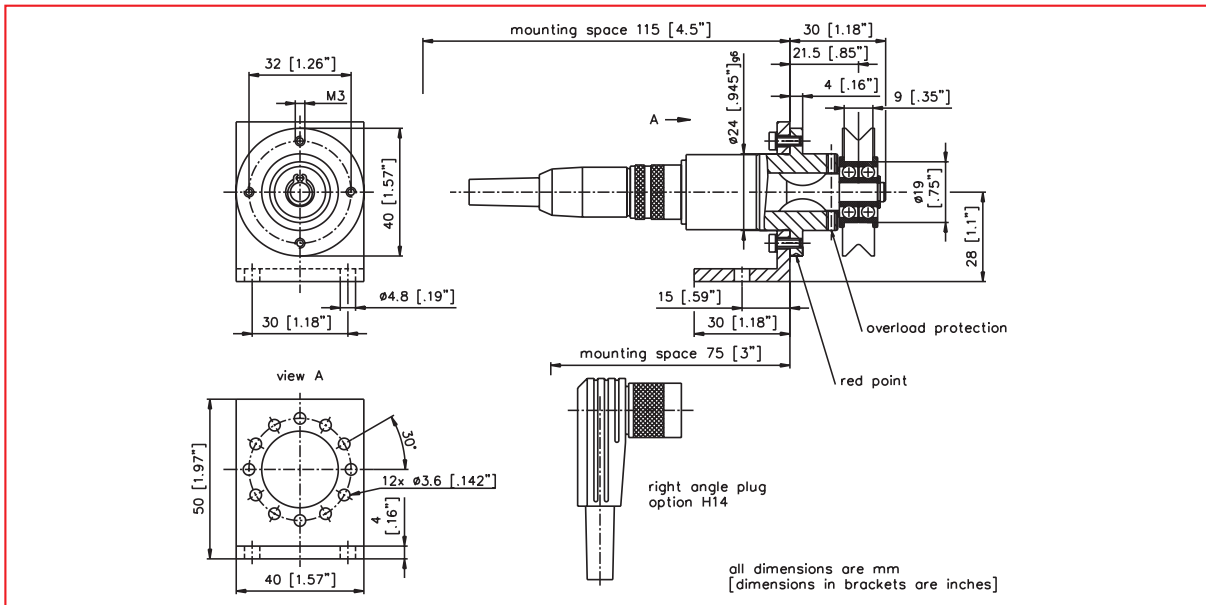
### ● RMGZ 100 Series

The RMGZ 100 Series force measuring roller is used to measure the tension in wire, cable and similar materials. An application specific sheave or pulley is mounted to the two lifetime lubricated ball bearings.

### ● Functional description

The RMGZ 100 Series force measuring rollers utilize the flexion beam principle. When the roller is subjected to a force, bending stress is applied to the measuring web. Four foil-type strain gauges in a full Wheatstone bridge configuration measure the bending and thus the material tension. The position of the red point depends on the application. If the force acts in the direction of the red point, positive values will result from the measuring amplifier output.

**RMGZ 100 Series • Dimensions in mm**



**RMGZ 100 Series • Nominal force**

Sensor Type	Nominal force N [lbf]	Load rating C dyn kN	Speed limit Rev/min	Weight kg [lbs]
RMGZ 106A	6 [1.35]	4.61 [1036]	40 000	0.25
RMGZ 111A	10 [2.25]			0.25
RMGZ 112A	20 [4.5]			0.25 [0.55]
RMGZ 115A	50 [11.2]			0.25
RMGZ 121A	100 [22.5]			0.25
RMGZ 123A	300 [67.4]			0.25

**Options:**

- H14** = Right angle connector
- H16** = Temperature range up to 120 °C

**Order code (example):**



**RMGZ 100 Series • Technical data**

<b>Sensitivity</b>	1.8 mV / V
<b>Tolerance of sensitivity</b>	<± 0.2%
<b>Accuracy class</b>	±0.5% (F <sub>nominal</sub> )
<b>Temperature coefficient</b>	±0.1% / 10 K
<b>Temperature range</b>	-10...+60 °C (option H 16: -10...+120 °C) 14...140 °F (option H 16: 14...248 °F)
<b>Input resistance</b>	350 Ω
<b>Supply voltage</b>	1...12 VDC
<b>Deflection</b>	0.15 mm max.
<b>Overload protection</b>	10-times the rated nominal force
<b>Sensor material</b>	Steel
<b>Mounting bracket material</b>	Aluminium
<b>Protection class</b>	Sealed against dust IP 40

**Scope of delivery:**

Mounting bracket, connector.  
(Sheaves are available options and not typically included)

**World Headquarters:**

**FMS Force Measuring Systems AG**  
 Aspstrasse 6  
 8154 Oberglatt (Switzerland)  
 Phone + 41 44 852 80 80  
 Fax + 41 44 850 60 06  
 info@fms-technology.com

**FMS USA, Inc.**  
 2155 Stonington Avenue  
 Suite 119  
 Hoffman Estates, IL 60169  
 Phone + 1 847 519 4400  
 Fax + 1 847 519 4401  
 fmsusa@fms-technology.com

**FMS UK**  
 Highfield, Atch Lench Road  
 Church Lench  
 Evesham WR 11 4UG  
 Phone + 44 1386 871023  
 Fax + 44 1386 871021  
 fmsuk@fms-technology.com

**FMS Italy**  
 Via Baranzate 67  
 20026 Novate Milanese  
 Phone + 39 02 39487035  
 Fax + 39 02 39487035  
 fmsit@fms-technology.com