

RMGZ 300 Series Force Measuring Roller

Engineered to work in high revolution applications

Resistant against Centrifugal and Coriolis forces

10 times overload protection
No recalibration required

20: 1 force measuring range
Wide measuring capability

Nominal forces from 50 – 1000 N
Sizes available for every application



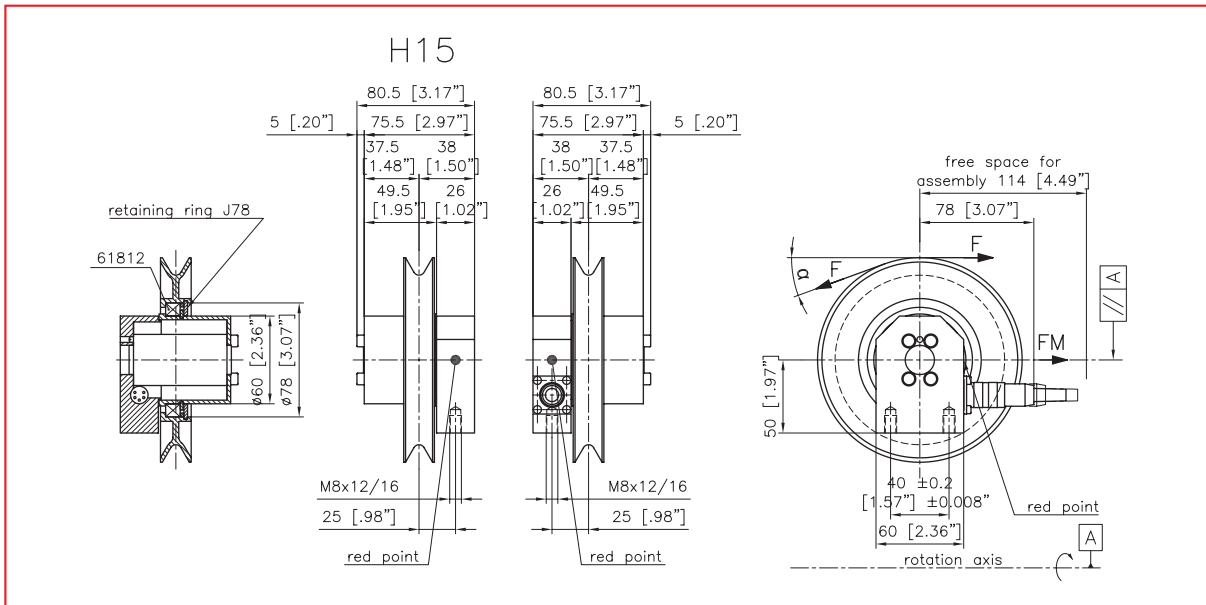
● RMGZ 300 Series

The RMGZ 300 Series force measuring roller is used to measure the tension in wires, cables and similar materials. This dedicated measuring roller family was developed to work in rotating applications with high revolutions. Its special design enables very effectively the compensation of centrifugal and coriolis forces. The sensor can accept a wide range of sheaves. The red point on the sensor body indicates the positive measuring direction.

● Functional Description

Foil type strain gauges mounted in a full Wheatstone Bridge configuration in each sensor perform the actual tension measurement. The dual flexion beam design eliminates angular deflection under load and ensures tension measurement with the highest accuracy and reliability under the most stringent requirements. A built in mechanical hard-stop provides high overload protection and ensures that frequent calibration is not required.

RMGZ 300 Series • Dimensions in mm



RMGZ 300 Series • Forces

Sensor Type	N	Nominal Force [lbf]	G-limits* g
RMGZ 315	50	11.2	30
RMGZ 321	100	22.5	40
RMGZ 322	200	45.0	56
RMGZ 325	500	112.4	90
RMGZ 331	1000	224.8	125

* with a sheave weight of 1 kg [2.2 lbs]

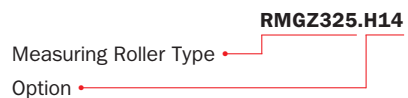
RMGZ 300 Series • Technical data

Sensitivity	1.8 mV / V
Sensitivity tolerance	< ± 0.2 %
Accuracy class	± 0.5 % (F _{nominal})
Temperature coefficient	± 0.1 % / 10 K
Temperature range	- 10...+ 60°C
Input resistance	350 Ω
Supply voltage	1...12 VDC
Maximum overload	10 times rated nominal force
Sensor material	Stainless steel
Protection class	Protected against dust IP 40
Weight	0.6 kg [1.32 lbs]

Options:

- H14 = Right angle connector
- H15 = 180° offset connector
- H21 = PG-gland connection

Order code (example):



Scope of delivery:

- Force measuring roller
- Distance ring and Snap ring
- Straight connector

Not included:

- Bearing 61812
- Sheave

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