

RMGZ 900 Series Force Measuring Roller

10 times overload protection

No recalibration required

20 : 1 force measuring range

Wide measuring capability

Nominal forces from 50 – 1000 N

[11 – 225 lbf]

Sizes available for every application

Stainless steel sensor, anodised roller

Corrosion resistant, ultra-durable



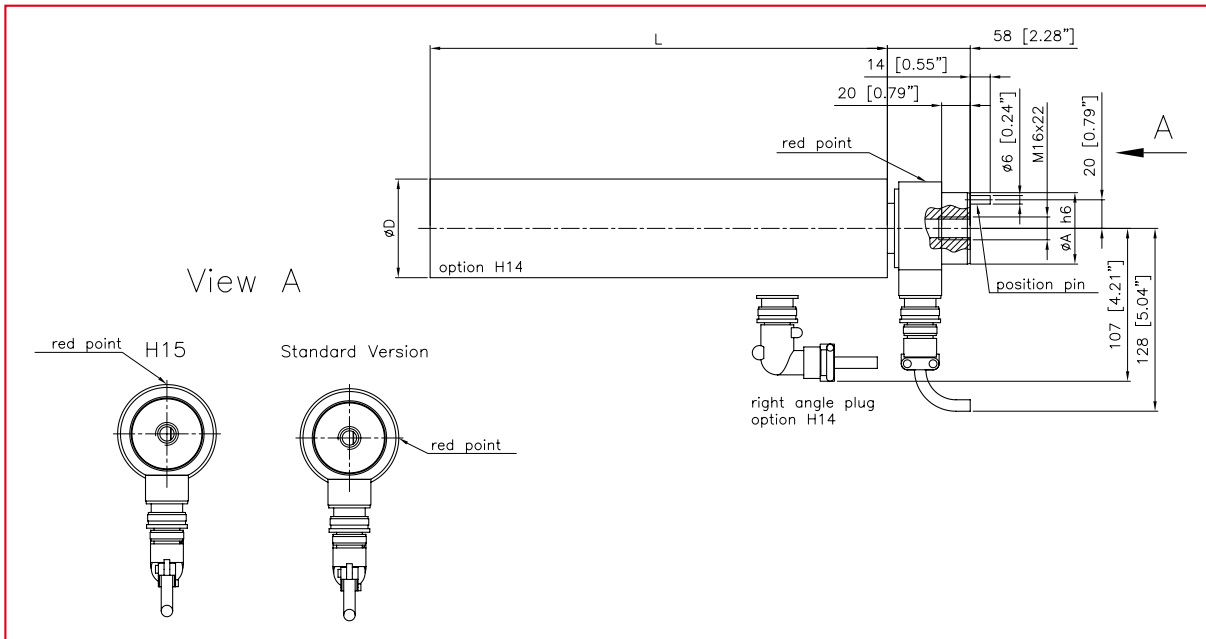
● RMGZ 900

The RMGZ 900 Series force measuring rollers are designed as self contained cantilever mount sensors that minimise machine space requirements in continuous material processing applications. They can be mounted horizontally or vertically directly to the machine frame. The red point on the base of the sensor indicates the positive measuring direction. Even with low material wrap angles, the design of the RMGZ 900 Series offers high accuracy measuring capability.

● Functional Description

Foil type strain gauges mounted in a full Wheatstone bridge configuration perform the actual tension measurement. The dual flexion beam design ensures accurate measurement at any position on the roller while maintaining the parallel position of the material and eliminating angular deflection. A built in mechanical hard-stop provides high overload protection ensuring that frequent calibration is not required.

RMGZ 900 Series • Dimensions in mm or [inch]



RMGZ 900 Series • Dimensions / Nominal force

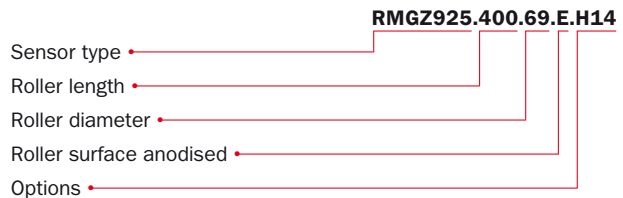
Sensor Type	Nominal force N [lbf]	Dimensions in mm [in]							
		L =	D =	A =					
		250 [9.84]	320 [12.6]	400 [15.75]	500 [19.67]	630 [24.8]	800 [31.5]	900 [34.4]	
		69 [2.72]	69 [2.72]	69 [2.72]	99 [3.9]	99 [3.9]	119 [4.69]	119 [4.69]	
		50 [1.97]	50 [1.97]	50 [1.97]	75 [2.95]	75 [2.95]	75 [2.95]	75 [2.95]	
RMGZ915	50 [11.2]	●	●	—	—	—	—	—	
RMGZ921	100 [22.5]	●	●	●	●	—	—	—	
RMGZ922	200 [45]	●	●	●	●	●	●	●	
RMGZ925	500 [112]	●	●	●	●	●	●	●	
RMGZ928	750 [169]	●	●	●	●	●	●	●	
RMGZ931	1000 [225]	●	●	●	●	●	●	●	

● = Standard

Options:

- H12** = Connector on the rear side
- H14** = Right angle connector
- H15** = Connector opposite to the red point
- H16** = Temperature range up to 120 °C [248 °F]
- H18** = Straight waterproof connector

Order code (example):



Scope of delivery:

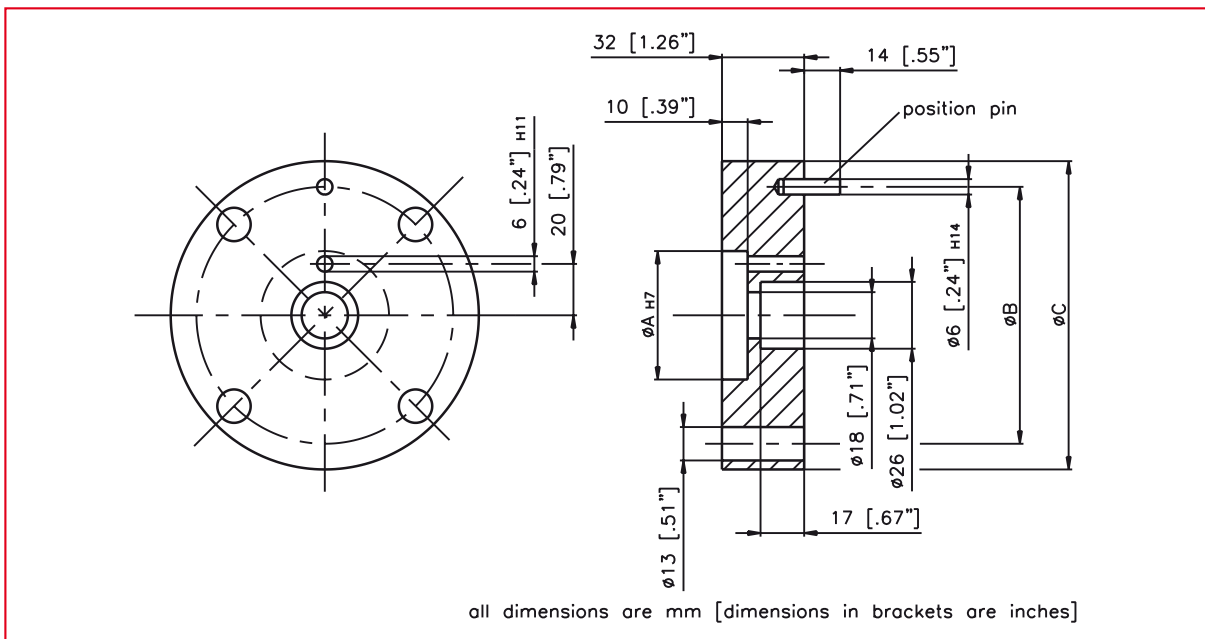
Straight connector, fixing screw.
 Special sizes and roller surface treatments available on request.

RMGZ 900 Series • Technical data	
Sensitivity	1.8 mV / V
Tolerance of sensitivity	< ± 0.2 %
Accuracy class	± 0.5 % (F _{nominal})
Tolerance concentricity	0.15 mm
Temperature coefficient	± 0.1 % / 10 K
Temperature range	- 10...+ 60 °C [14...140 °F]
Input resistance	350 Ω
Supply voltage	1...12 VDC
Overload protection	10-times the rated nominal force
Sensor material	Stainless steel
Roller material	Anodised aluminium

Mounting options

The RMGZ 900 Series force measuring rollers can be mounted in 2 different ways. Either directly with a location hole to the machine or with a mounting flange which can be ordered separately.

RMGZ 900 Series • Mounting flange in mm or [inch]



RMGZ 900 Series • Mounting flange dimensions

D	Mounting flange	A	B	C
mm [in]	Bestellcode FMS	mm [in]	mm [in]	mm [in]
69 [2.72]	RMGZ900.581699	50 [1.97]	100 [3.94]	120 [4.72]
99 [3.9]	RMGZ900.582185	75 [2.95]	125 [4.92]	150 [5.91]
119 [4.69]	RMGZ900.582185	75 [2.95]	125 [4.92]	150 [5.91]

FMS' Product Portfolio and System Solutions



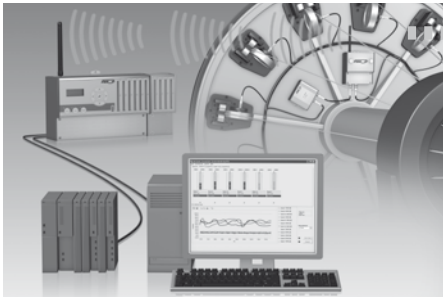
The product line **Force Sensors** provides products, solutions and related services that increase industrial productivity, energy efficiency and high quality output. Its force sensors, tension measuring rollers and pillow block based designs are of premium quality and ultra durable.



The product line **Electronics** facilitates tension monitoring, close loop tension control and web guiding systems. Key technologies include high-performance tension amplifiers and PID-controllers, as well as products to accurately and consistently control material position in continuously manufactured products.



The main focus of the **FMS Web Guiding business** is to provide customers with products and solutions for web detection and web positioning. Its steering frames, drives, controllers and material sensors provide an excellent coverage of the most important applications. The industries served include converting, printing, label processing and packaging.



RTM (Radio Transmitted Tension Monitoring) delivers system solutions across the cable production value chain. These innovative systems utilise force measuring rollers to capture the tension of individual wires or strands, and then securely transmit this data from the rotating to the static part of the machine. The systems are designed with fully compatible components. Production rates and product quality on rotating strand-handling machinery are significantly improved.



Special Application Fields facilitates solutions in **vacuum** applications or in potentially explosive atmospheres. A sophisticated range of interface options including systems such as **PROFINET, Ethernet/IP, Profibus** and **CAN-bus** provide quick and efficient integration of FMS products into the existing communication and control infrastructure of your company.

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