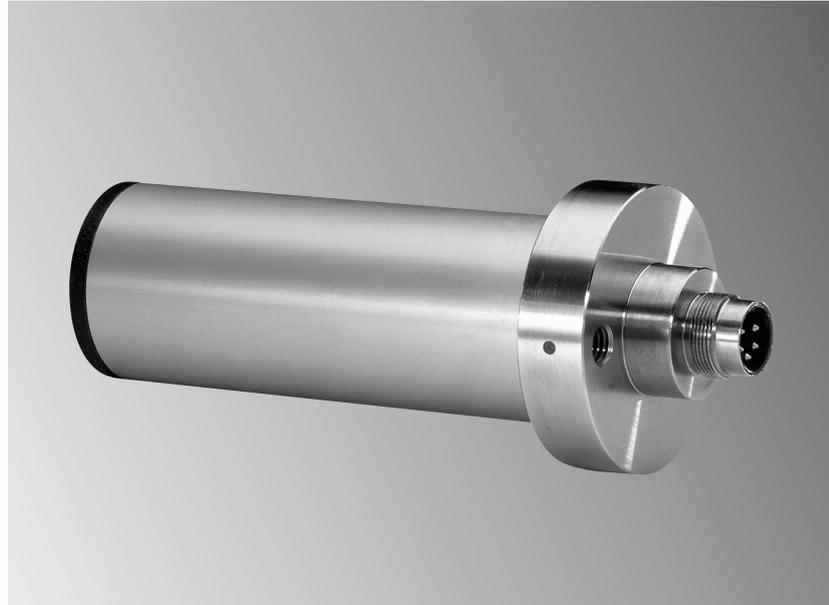


FMS Tension Control / Force Sensors

RMGZ9M-Series Small cantilever force measuring roller in standard sizes with short delivery times

- **For a wide range of applications**
Nominal forces from 20 to 500 N
(4.5 to 110 lbf.)
- **Robust and durable**
Overload protection up to 10-times
nominal force, measuring body from high
strength aluminum
- **Precise performance even at low tension
values**
Measuring range 30:1
Accuracy class $\pm 0.5\%$



RMGZ9M-Series

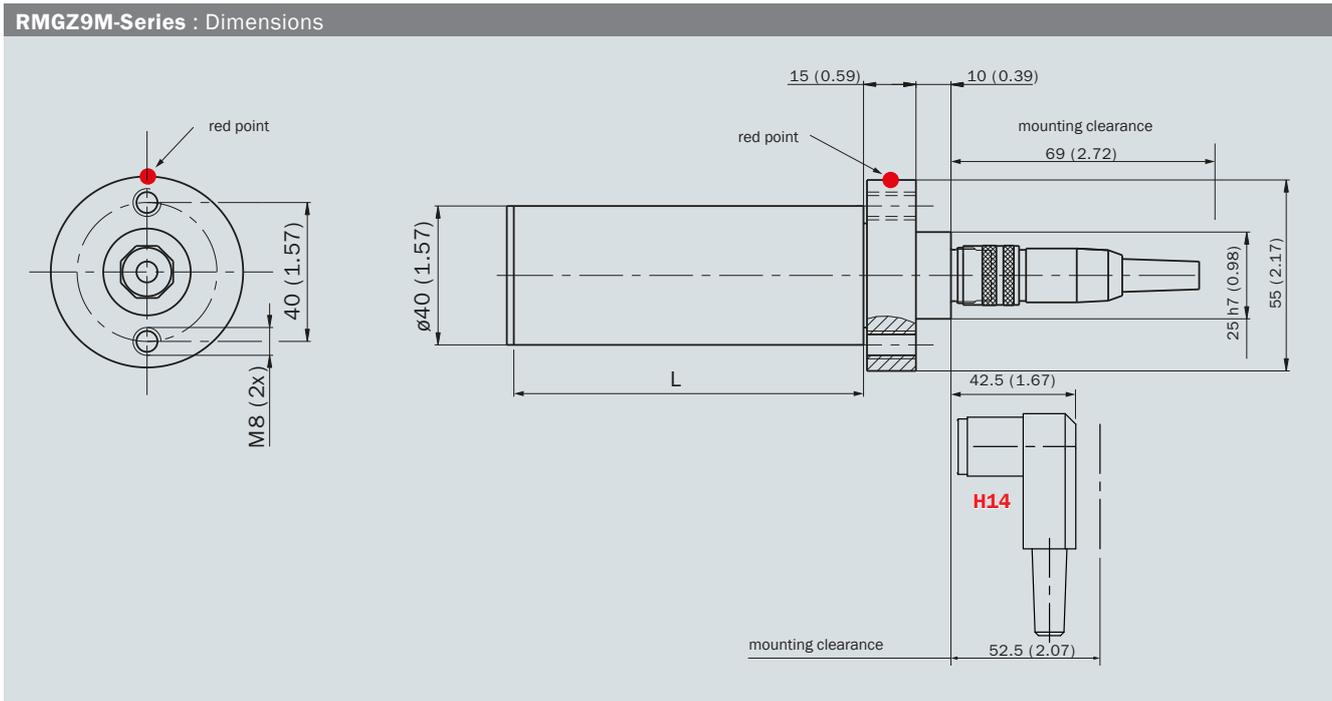
The RMGZ9M-Series force measuring rollers are designed as self-contained cantilever mount sensors that minimise machine space requirements in continuous material processing applications. They can be mounted horizontally or vertically directly to the machine frame. Force measuring rollers of the RMGZ9M-Series can be delivered off the shelf.

Functional description

The force measuring rollers of the RMGZ9M-Series combine force sensor and roller. The RMGZ9M-Series design, incorporating dual bending beams, eliminates the load-specific influences of torque and ensures accurate measurement at any position on the roller while maintaining the parallel position of the material and eliminating angular deflection. The movement of the bending beams is detected by a set of strain gages arranged in a full bridge circuit. The resulting electrical signal, which is proportional to the applied force, is then amplified for use in monitoring or controlling web tension. With the superior performance of the RMGZ9M-Series, accurate tension readings are obtained even with low web wrap angles and low material tension.

DATA SHEET

FMS Tension Control | Force Sensors | **RMGZ9M-Series**



RMGZ9M-Series : Dimensions, Weight

Size Type	Dimensions mm (.in)		Weight	
	L		kg (.lbs)	
RMGZ9M-100-40	100	(3.94)	0.8	(1.76)
RMGZ9M-150-40	150	(5.91)	0.9	(1.98)
RMGZ9M-200-40	200	(7.87)	1.0	(2.20)
RMGZ9M-250-40	250	(9.84)	1.1	(2.42)

RMGZ9M-Series : Nominal forces, Deflection

Size Type	Nominal force		Deflection	
	N (.lbf)		mm (.in)	
RMGZ9M-100-40	20	(4.50)	0.15	(0.0059)
	50	(11.24)	0.15	(0.0059)
	100	(22.48)	0.13	(0.0051)
RMGZ9M-150-40	200	(44.96)	0.16	(0.0063)
	500	(112.40)	0.15	(0.0059)
	50	(11.24)	0.15	(0.0059)
RMGZ9M-200-40	100	(22.48)	0.13	(0.0051)
	200	(44.96)	0.16	(0.0063)

RMGZ9M-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 °C to +60 °C (14 F to 140 F)
Input resistance	350 Ω
Power supply	1 to 10 VDC
Overload protection	10-times nominal force F _{Nom}
Material main body	Stainless steel
Protection class	IP42
Electrical connection	Male connector M16x0.75, 5-pole
Repeatability error	0.05%
Measuring range	30:1

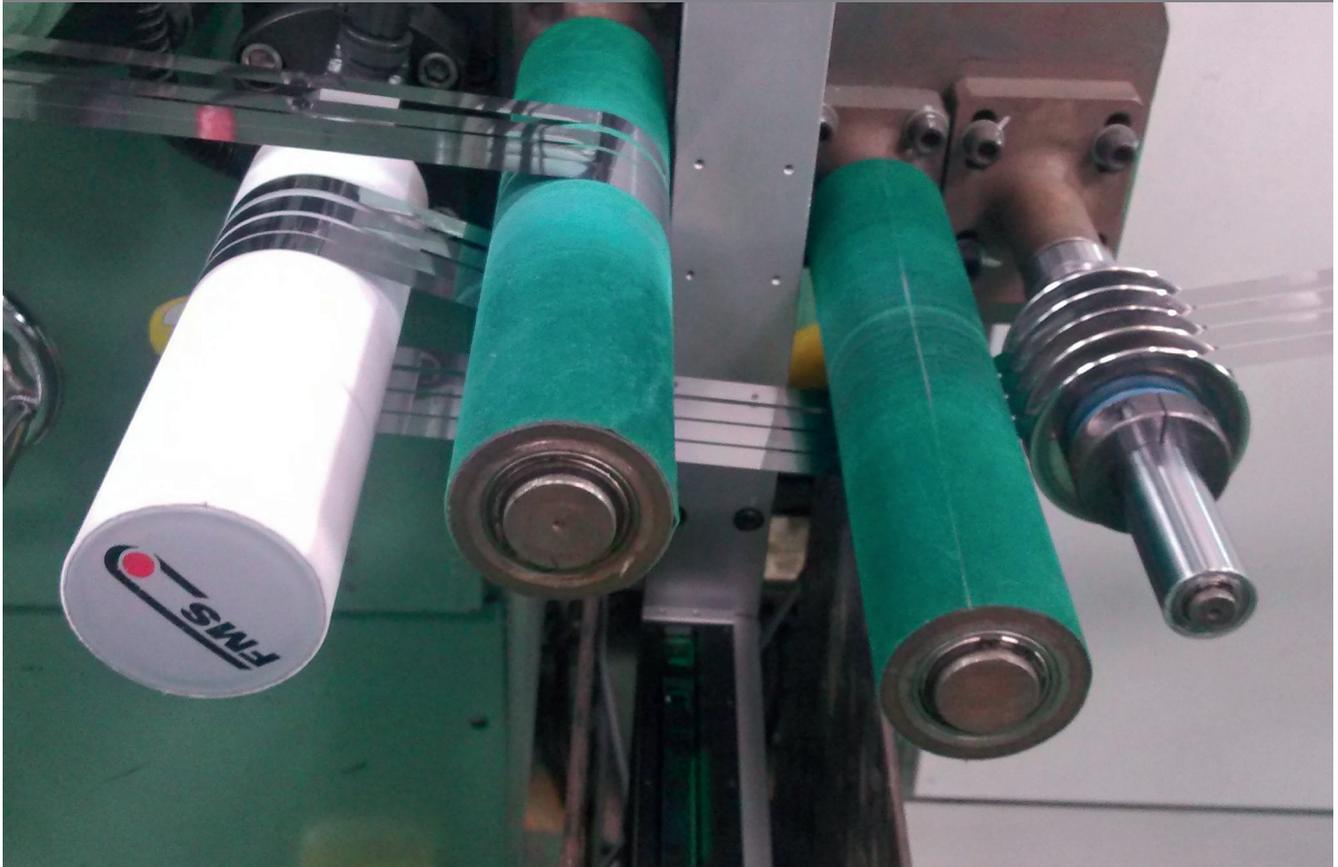
RMGZ9M-Series : Order code	
RMGZ9M-200-40.E.50.H14	
	Options
	Nominal force rating in N
	Roll material and surface finish Aluminum, clear anodized
	Size: Roll length - roll ø in mm
	Series

RMGZ9M-Series : Options	
H14	right-angle connector in scope of supply, replaces straight connector
H31	for vacuum applications to 1E-7 hPa 1E-5 Torr, temperature range up to 120 °C (248 °F)
E	material aluminium, surface clear anodized

RMGZ9M-Series : Scope of supply	
● force sensor ● straight connector (female)	

RMGZ9M-Series : Accessories	
● cable, 1 m (3.25 ft.) without connector ● cable, 10 m (32.8 ft.) without connector ● cable, 5 m (16.4 ft.) without connector ● cable, 2 m (6.5 ft.) without connector	

RMGZ9M-Series : Typical application



Other products : Tension Control

Measuring Amplifiers	Tension Controllers	Intrinsically Safe Barrier
		

About us

FMS Force Measuring Systems AG is the market leader in the field of web tension measurement, control and specialist for web guiding solutions. For the wire industry we are the only manufacturer offering a complete range of technologies for force measurement, data processing and radio transmission of signals.

Our in house developed products are used in the manufacturing industry, converting, metals, paper, textiles, as well as in cable and wire rope production. Utilising the latest technology, high quality components and a firm understanding of customer applications, FMS supports customers worldwide in the effort to maximize the productivity of their machines. Since 1993, our highly qualified employees have been creating high-end solutions for machine builders and plant operators. As an owner-managed company, we pride ourselves on being personal and approachable with the ability to make decisive moves fast.

World Headquarters: FMS Force Measuring Systems AG

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