

## ZMGZ Series Force Measuring Journal

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**10 times overload protection**

**No recalibration required**

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**20:1 force measuring range**

**Accuracy class 0.5%**

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**Nominal forces from 22 lbs. - 674 lbs.**

**Sizes available for every application**

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**Stainless steel sensor**

**Corrosion resistant, ultra durable**

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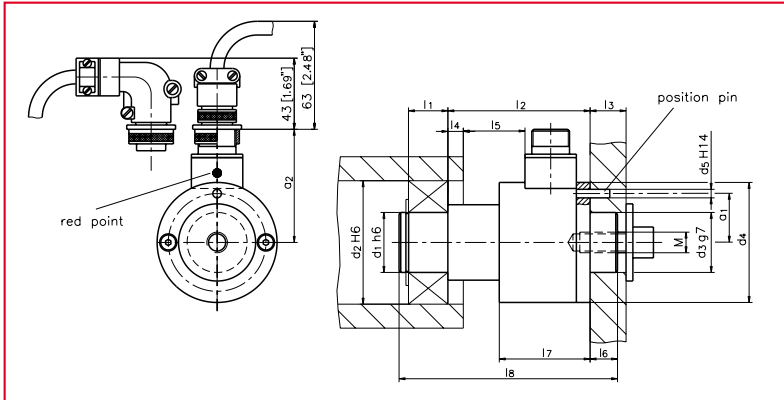
● **ZMGZ Series**

The ZMGZ Series Force Measuring Journals are used to measure the tension in continuous material processing. Force Measuring Journals are utilized with rollers that have an internal bearing. A bearing mounts to the bearing seat of the load cell and fits inside the roller. Thus the ZMGZ Series load cells become the roller journal saving machine mounting space and providing a compact tension measuring roller assembly.

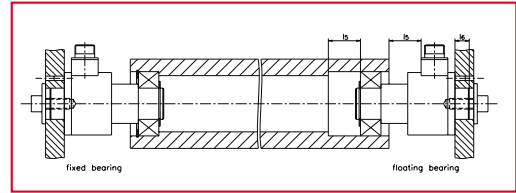
● **Functional Description**

The ZMGZ Series Force Measuring Journals utilize the flexion beam principle. When the Journal 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.

**ZMGZ Series ● Dimensions in mm [inch]**



**ZMGZ Series ● Cross section**



**ZMGZ Series ● Dimensions in mm [inch]**

FMS Order code	Dimensions																Weight	
	d1	d2	d3	d4	d5	l1	l2	l3	l4	l5	l6	l7	l8	M	a1	a2	kg	lbs
<b>ZMGZ205</b>	25 [.98]	52 [2.05]	30 [1.18]	50 [1.97]	4 [.157]	18 [.709]	68.5 [2.70]	15 [.591]	9 [.354]	23 [.905]	10 [.394]	43.5 [1.71]	100 [3.94]	M10	20 [.787]	56 [2.20]	0.9	1.98
<b>ZMGZ207</b>	35 [1.38]	72 [2.83]	35 [1.38]	70 [2.96]	5 [.197]	23 [.905]	83 [3.27]	20 [.787]	9 [.354]	36 [1.42]	16 [.630]	53 [2.09]	127.5 [5.02]	M12	28.5 [1.12]	67 [2.64]	1.9	4.18

**ZMGZ Series ● Technical Data**

<b>Sensitivity</b>	1.8 mV/V
<b>Tolerance of sensitivity</b>	< ± 0.2 %
<b>Accuracy class</b>	± 0.5 %
<b>Temperature coefficient</b>	± 0.1 % / 10 K [± 0.0055 % / °F]
<b>Temperature range</b>	-10...+ 60 °C [14 °F...140 °F]
<b>Input resistance</b>	350 Ω
<b>Supply voltage</b>	1...12 VDC
<b>Deflection</b>	0.1mm
<b>Overload protection</b>	10 times rated nominal force
<b>Sensor material</b>	Stainless steel

**ZMGZ Series ● Nominal Force**

FMS Order Code	Nominal Force	
	N	lbs
<b>ZMGZ205.100</b>	100	22
<b>ZMGZ205.200</b>	200	45
<b>ZMGZ205.375</b>	375	84
<b>ZMGZ205.750</b>	750	169
<b>ZMGZ205.1500</b>	1500	337
<b>ZMGZ207.100</b>	100	22
<b>ZMGZ207.200</b>	200	45
<b>ZMGZ207.375</b>	375	84
<b>ZMGZ207.750</b>	750	169
<b>ZMGZ207.1500</b>	1500	337
<b>ZMGZ207.3000</b>	3000	674

**Options:**

- H14** = right angle plug
- H15** = connection plug opposite to the red point
- H16** = temperature range up to 150 °C [300 °F]
- H18** = straight waterproof plug
- H29** = modified wiring and sealing for use in aggressive media and high temperatures to 150 °C [300 °F]
- H30** = modified wiring and sealing for oil based environments

**Order code:**

**ZMGZ205.375.H14.H16**



**Scope of delivery:**

Connection plug, mounting screw, washer, snap ring

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