FMS Tension Control / Force Sensors

**RMGZ 200 Compact Force Sensor for Stranding Machines with Low Wire Tensions**

- **Special design for rotating applications:**
  Precise measuring results even at high revolutions

- **Integrated Angle Adjustment Mechanism:**
  Quick and reliable mechanical compensation of measured centrifugal force

- **Nominal forces from 10 to 200 N (2.25 to 45 lbf):**
  Provides for strand tensions from a few Newtons to several kilonewtons

**RMGZ 200**

Designed to meet the requirements of smaller and higher-revolution cage and tubular type stranders, the RMGZ 200 sensor is also applicable to bunchers and twisters. The innovative dual flexion beam construction provides the foundation for accurate and reproducible measurements in difficult operating conditions. Once the load rating and housing configuration are properly specified for the application, the sensor is easily mounted to the machine with two fasteners. A single cable (power in/signal out) is connected at the sensor housing. The pulley (purchased separately) will accommodate the full range of materials used on machine.

**Functional Description**

The RMGZ 200 Force Sensor utilizes a dual flexion beam design and strain gauges, in a full Wheatstone Bridge configuration, to measure the applied forces. This measuring principal ensures high performance... even at low tensions, small wrap angles, and high revolutions.

After being mounted, the angle adjustment mechanism is used to zero-out any centrifugal force that may have an influence on the tension measurement. The integrated overload protection is designed to prevent damage to the sensor during reel loading or machine upset conditions.

www.fms-technology.com
**RMGZ 200 | Technical Data**

- **Sensitivity**: 1.8 mV/V
- **Tolerance of the sensitivity**: < ±0.2%
- **Accuracy class**: ±0.5% (F<sub>nom</sub>)
- **Measuring range**: 20:1
- **Temperature coefficient**: ±0.1%/10K
- **Temperature range**: –10 to +60°C (14 to 140°F)
- **Input resistance**: 350 Ω
- **Excitation voltage**: 1 to 12 VDC
- **Overload protection**: 10 times nominal force F<sub>nom</sub>
- **Material sensor body**: High-strength aluminum
- **Protection Rating**: IP 42
- **Load limit centrifugal force**: min. 600g – with a pulley weight of max. 0.1 kg (0.22 lb)
- **Repeatability error**: 0.5%
- **Weight**: 0.3 kg (0.66 lbs)