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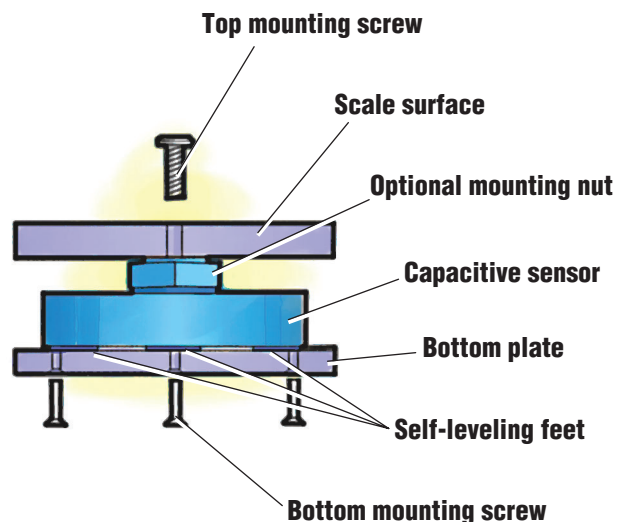
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IN THE NEWS Scanning for ideas

Capacitive load cells simplify sensing

Most load cells on the market use a cantilever outfitted with strain gages to measure loads. Such cells also need a bulky and expensive signal conditioner to make them useful. Engineers at **Loadstar Sensors**, Mountain View, Calif. (loadstarsensors.com), use a capacitive sensing scheme in their CS Series sensors. They also combine the signal conditioner and sensor in a package that measures 0.89-in. thick and has a 2.5-in. diameter.

The sensor uses a 5-V input signal and outputs a 0 to 5-V analog signal that is proportional to the load. Full-scale output range is typically 2,000 mV, 10 times that of traditional strain-gage load cells. Typical sensitivity is 40 mV/lb, with response times of 20 msec and large signal-to-noise ratios. Accuracy is 1% of full-scale output (FSO), and long-term drift is 0.3% of FSO per 30 min. It operates in temperatures from 0 to 70°C. The sensor is housed in a weather-resistant, stainless-steel enclosure.



Circle 402