

## Weighting angle compensation

### The challenge:

Weighting apparatus gives inaccurate reading due to angle between measurement device and earth's gravitational vector.

### Customer challenges:

Angle between earth's gravitational vector and measurement device (load cell sensitivity axis) causes error to output reading. This error can be caused by movement of the device or positioning on an uneven surface. To get accurate reading this angle needs to be either balanced or known and compensated accordingly.



### The Murata Solution:

#### The Product:

SCL3300 inclinometers, SCA3300 accelerometers and SCC2000 series gyro combo sensors

#### How it works:

MEMS sensors offer reasonable priced opportunity to build system for both measuring the angle or build system for scale balancing. MEMS accelerometers and inclinometers can be used to get accurate angle reading and in a dynamic environment gyroscope can be used to achieve reliable measurement readings during movement.

Murata MEMS sensors have options for the highest possible accuracy in most demanding application and robust sensing solutions to solve issues in moving machine environment.

Murata sensors have excellent stability, resolution and linearity to measure smallest possible angles in all situations.

### Product features:



#### SCL3300

- High temperature stability ranging from -40 to +125 degrees C
- $\pm 15$  mg typical temperature offset performance
- Robustness against shocks and vibrations
- Excellent bias stability over time
- High resolutions with noise density of  $0.001^\circ/\sqrt{\text{Hz}}$
- The single-chip 12-pin MEMS package measures just  $8.6 \times 7.6 \times 3.3$  mm



### Contact info:

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### More info:

For further information about Murata solutions, please contact your local sales manager.

Data sheets and application notes for Murata products can be found at

[www.murata.com](http://www.murata.com)