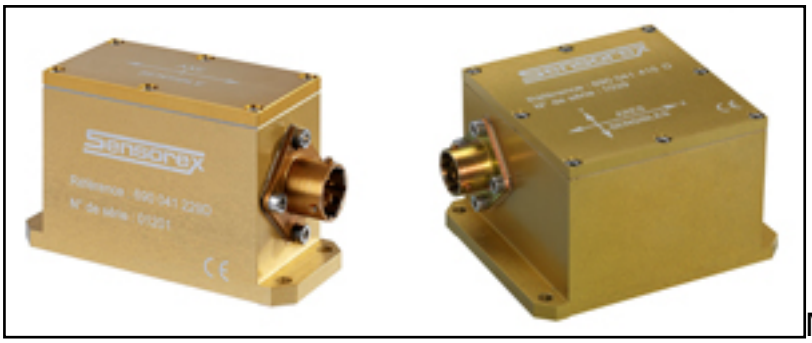
Closed loop servo inclinometers/accelerometers perform in harsh environments



Meggitt Sensing Systems introduced its Sensorex SX41200 and SX41400 families of rugged, gravity referenced closed-loop servo inclinometers/accelerometers, designed to provide high-reliability tilt or acceleration measurements within harsh environments, and particularly, those characterized by high shock and vibration inputs. Available in 12 individual models per series, with angular measurement ranges from ±3° to ±90°, and choices of single axis (SX41200) and twin axis (SX41400) versions, their design incorporates a galvanometric pendulum sensing element with hydromechanical damping, combined with an optical position sensor, with 4-20 mA or ±5 VDC (±5 percent) output, proportional to sine of the angle of tilt. Inertial sensing elements are contained within rugged, watertight IP65 sealed aluminum housings for added durability. They are powered by a single, unregulated voltage supply and feature a bidirectional output. Additional options, available upon customer request, include a ±0.02 percent non-linearity error specification (excluding ±90° range), special bandwidth, zero offset (unipolar output) and special range and output signals. In addition, all Sensorex SX41200 and SX41400 Series models conform to both European EMC and railway testing standards.

The series are appropriate for high-precision angular or acceleration measurements within structural alignment, offshore platform safety, railway leveling and monitoring, radar antenna positioning, and ship roll and pitch applications, as well as offshore barge ballast transfer systems, bore-hole mapping, geophysical measurements, level control and calibration systems, marine environment tilt measurements, crane overturning moment alarms, and large machinery installation and electronic leveling.

Meggitt Sensing Systems
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[1] http://www.meggittsensingsystems.com