

SGAM and DGAM 3-Axis Inclinometers

Single and Dual Module Options



The Joral inclinometer offers easy mounting and the ability to sense true position regardless of orientation, thanks to its 3-axis sensing capabilities (X, Y, and Z). It is totally sealed to meet IP69K standards, depending on the connector, ensuring durability even in harsh environments. The device operates within a wide temperature range of -40°C to +85°C and provides CAN OPEN output for seamless integration. Additionally, 'Electronic Bubble' LEDs display the level status, and configuration is available through CAN messaging for sensitivity and angular range settings.

This advanced sensor integrates a triaxial 12-bit accelerometer with a range of $\pm 8g$, a triaxial 16-bit gyroscope with a range of ± 2000 degrees per second, a triaxial geomagnetic sensor, a 32-bit ARM Cortex-M0+ microcontroller, and a 16-bit communications processor for CAN and J1939 protocols. The data from the MEMS sensors (accelerometer, gyroscope, and geomagnetic) are fused in the Joral Motion Fusion Engine (JMFE) firmware, providing a vibration-tolerant and motion-stabilized platform ideal for hydraulic machine control. JMFE is a digital signal processing software that takes raw motion data from the MEMS sensors and translates it into precise information.

