

CAN ANGLE SENSOR

## *Compensated inclinometer and gyroscope*

**TK Engineering and Cobo (Finland and Italy) have developed the AMU-GEO 360 CAN angle sensor. It is suitable for boom mounting, with gyro-aided compensation of vibration, linear acceleration, and shock.**

The CAN angle sensor is intended for excavator type, fast moving crane booms where the centrifugal forces and shocks are considerable and accelerometer-based sensors cannot be used. With its CANopen interface and a CiA 410 inclinometer device profile, the sensor is suited for integration into new and existing systems. The AMU-GEO 360 uses a 6-axis-of-freedom sensor (solid state accelerometer and gyroscope) and software algorithms to create a 360° angle measurement free of shock, vibration, and centrifugal acceleration.

Using these techniques, the sensor's accuracy is better/equal to  $\pm 0,7^\circ$  in dynamic conditions and in static conditions  $\pm 0,3^\circ$  can be achieved in the entire working range (0° to 360°). Due to its operating temperature of -40 °C to +80 °C and power supply range of 8 VDC to 32 VDC, the IP67-rated sensor is suitable for harsh mobile applications.

The basic communication services comply with CiA 301 and CiA 305. The inclinometer-specific interface complies with the CANopen device profile for inclinometers, CiA 410. The physical layer meets ISO 11898-2 and the M12 connector follows the CiA 303-1 pinout. The standardized interface enables an upgrade of the existing uncompensated inclinometers.



*The CAN angle sensor  
(Photo: TKE)*

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