

CANopen sensor measures boom angle

Tecsis' Model LPI inclination sensor determines angles relative to the horizon. It is highly accurate and suitable for the monitoring of boom deflection on cranes, and angles on derricks, platforms, and lifts.

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The inclination sensor Model LPI from Tecsis LP is Atex- and IECEx-approved (Photo: Tecsis)

As part of the Oil and Sour Gas Series, Tecsis (US) offers the Model LPI inclination sensor to measure inclination in the x, y, or both x and y directions (2-dimensional). It is used to measure the tilt angle of objects with respect to the horizontal. The sensor can be configured to provide dynamic or static incline or tilt angles between 0° to 360° (single axis) or ±45° (dual axis) with a resolution of 0,01°. Pre-defined measuring ranges can be selected to suit the application and switch outputs provide control based on limit angles.

The sensor is designed for use in harsh industrial environments and outdoor areas with an IP67-rated aluminum housing. The unit is stable across ambient temperatures from -40 °C to +85 °C and experiences no gravitational error. Standard output is CSA approved intrinsically safe 4 mA to 20 mA, with 0 V_{DC} to 5 V_{DC} and CANopen also available. The thermal effect for CANopen amounts to 0,15° and the linearity to ≤0,1°.

This sensor is useful as a safety component for measuring the boom angle on construction cranes, platforms, and lifts. It also provides accurate data for leveling agricultural and commercial vehicles, monitoring drilling angles and derricks, recording pitch and roll of ships, and enables continuous tracking of rotational movements like those found on solar power arrays as they track the angle of the sun.

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