

Industrial Automation

INCLINOMETER FOR SLOPE ANGLES

Advantages

- **Small and compact rectangular housing**
- **High measuring speed**
- **Sensitive and precise**
- **Long-term stability and reliability**
- **Zero-point calibration**
- **High degree of protection**
- **Extremely robust**
- **Optimum mounting possibilities**

By inclination is meant, the relative angular tilt to the horizon or perpendicular. Any deviation from this home position (perpendicular) can be detected quickly and precisely with inclinometers made by the sensor specialist TURCK. Inclinometers make use of the local gravity i.e. acceleration of gravity for the measurement of angular tilt. The MEMS technology (Micro-Electro-Mechanical-Systems) on which the inclinometer is based, enables multiple application solutions for machines, robots, vehicles and airplanes, agricultural and construction machinery, solar plants, transport devices or automatically adjustable furniture.

The core piece of the new inclinometer is a micromechanical capacitive sensor element. A capacitive accelerometer basically consists of two parallel arranged "plate" electrodes with a dielectric placed in the middle. If the sensor is accelerated, the dielectric moves and thus the capacity relation between both electrodes is changed. The dielectric in inclinometers made by TURCK are designed as resilient pendulum.

The TURCK product portfolio currently comprises inclinometers in rectangular housing Q20L60 for angular ranges of $\pm 10^\circ$, $\pm 45^\circ$ and $\pm 60^\circ$. All sensors feature analog voltage or current outputs.



