

With CANopen for mobile applications

Ifm Electronic (Germany) has released the JN2100 and JN2101 inclination sensors. The sensors offer an accuracy of $\leq \pm 0,5^\circ$ and $\leq \pm 0,1^\circ$ respectively across the total angular range in two axes and a temperature drift of $\pm 0,002^\circ\text{K}$, as well as CANopen interfaces.

THE JN TYPE SENSORS FOR MOBILE APPLICATIONS feature an adjustable zero point, as well as adjustable counting direction and limit frequency. The sensors with CANopen interface and network capability allow complete CAN integration according to the communication profile CANopen CiA 301 and the device profile CiA 410. Connection is made using M12 connectors with clearly visible LEDs. Enabling the terminating resistor is optional. In addition, the sensors have E1 approval and provide the signals, among others, as perpendicular or Euler angle. Both sensors feature a self-test function, Heartbeat, emergency messages, and reverse polarity protection.

The products are designed for leveling mobile machinery (2-axis position detection and zero-point leveling), automatic adjustment of solar panels or leveling of wind turbines, for example. Because the zero point, direction of counting ($\pm 180^\circ$ or $0\dots 360^\circ$), and limit frequency can be set for a stable output signal (20, 10, 5, 1, 0,5 Hz), the sensor can be adapted for different applications. The sensors have a protection level of IP 65, IP 67, IP 68, IP 69K.

The JN2100 sensor has an angular range of $\pm 180^\circ$, a resolution of $0,05^\circ$, and a repeatability of $\leq \pm 0,1^\circ$. Its linearity deviation lies at $\pm 0,2^\circ$. The JN2101 offers an angular range of $\pm 45^\circ$, a resolution of $0,01^\circ$, and a repeatability of $\leq \pm 0,05^\circ$. This sensor has a linearity deviation of $\pm 0,05^\circ$.

