**Non-contact inclination measurement with precision**TMS/TMM inclination sensors from SICK

**Waldkirch, November 2016 –Inclination sensors from SICK’s TMS/TMM family take a non-contact measurement of the inclination angle of an object in relation to the earth's gravity. Thanks to the use of capacitive MEMS technology, inclination sensors are both highly precise and extremely reliable. One-dimensional sensors measure the inclination of an axis to 360°, whereas two-dimensional sensors measure two axes simultaneously to ±90°. Together with the PGT-12-Pro programming solution, they offer application-specific solutions and can be individually adapted to user-specific conditions.**

Inclination sensors are ideally suited for outdoor use and are mainly used in the mobile automation sector. Its applications are diverse: They can be used to reliably level the driver’s cab and chassis in wood harvesters, but also to level the rod of a field sprayer. To optimize the work routine of a digger, the absolute position of the moving parts to each other must be known. The TMS/TMM inclination sensors reliably detect this position by measuring the inclination of the upper and lower carriages and the excavator arm. In addition, they are used for positioning tasks for load torque restriction on the mobile crane to prevent damage caused by overload and overturning.

**Programming solution for PGT-12-Pro inclination sensors**

The PGT-12-Pro is a light and compact programming unit for absolute encoders with CANopen interface as well as inclination sensors with CANopen and analog interface from SICK. Because it has an integrated voltage supply, it is able to work in a fully self-contained manner and is thus particularly suitable for mobile use in customer service. Various parameters for encoders and inclination sensors can be saved in the internal memory bank or on an SD card. Firmware updates make it possible to expand the PGT-12-Pro with future new sensor variants and functions. That is why the PGT-12-Pro has a long operational lifetime, therefore offering an optimal price/performance ratio.

Image: TMM-TMS\_PGT-12-Pro\_IM0065390.jpg  
The compact PGT-12-Pro programming tool for simply programming inclination sensors

SICK is one of the world’s leading producers of sensors and sensor solutions for industrial applications. Founded in 1946 by Dr.-Ing. e. h. Erwin Sick, the company with headquarters in Waldkirch im Breisgau near Freiburg ranks among the technological market leaders. With more than 50 subsidiaries and equity investments as well as numerous agencies, SICK maintains a presence around the globe. In the fiscal year 2015, SICK had more than 7,400 employees worldwide and achieved Group sales of just under EUR 1.3 billion.  
More information about SICK is available on the Internet at http://www.sick.com or by phone on +49 (0) 7681 202-4183.