

QG series



Application example

The tilt of mobile machinery is usually monitored using inclinometers. An inclinometer designed as a tilt switch can trigger warning and/or alarm signals when one or more pre-programmed angles is exceeded for a certain period of time.

This is also a simple but effective way to prevent abuse of the machines in a rental fleet.

SIL1 tilt switch

The QG40N Safety Tilt switch is a non-contact MEMS technology tilt switch for standard & safety applications (the device is SIL1/PLC). It has up to three PNP outputs and is available in both 1-axis $\pm 170^\circ$ and 2-axis $\pm 80^\circ$. This sensor can be customized for a specific application by using the optional configurator tool to modify its factory settings, e.g. switching points, filter/bandwidth and on/off delay timers.

Tilt switches

A tilt switch is in fact an inclinometer (a sensor) with a switching output, and with gravity serving as a reference. The tilt switches from DIS Sensors are based on MEMS technology and intelligent microcontroller algorithms. As a result, single or twin axis switches can be implemented with any desired switching angle.

The standard enclosure for these sensors is a QG40 housing. The QG65 variant offers the possibility to incorporate tilt switches with even higher precision and temperature stability.

Specifications:

single axis measurement range:	up to 360°
double axis measurement range:	$\pm 1^\circ$ to $\pm 80^\circ$
energy supply:	5 V dc or 10 - 30 V dc
output:	single or dual NPN/PNP
level of protection:	IP67, IP68 or IP69K
precision:	depending on model and range: as high as $\pm 0.2^\circ$
programmable:	switching angle, on/off delays, filtering
housing:	(reinforced) plastic

Functions:

replacement for mercury switches, tilt and tip over protection

Applications:

elevated work platforms, agricultural machinery, forklift trucks, stackers

