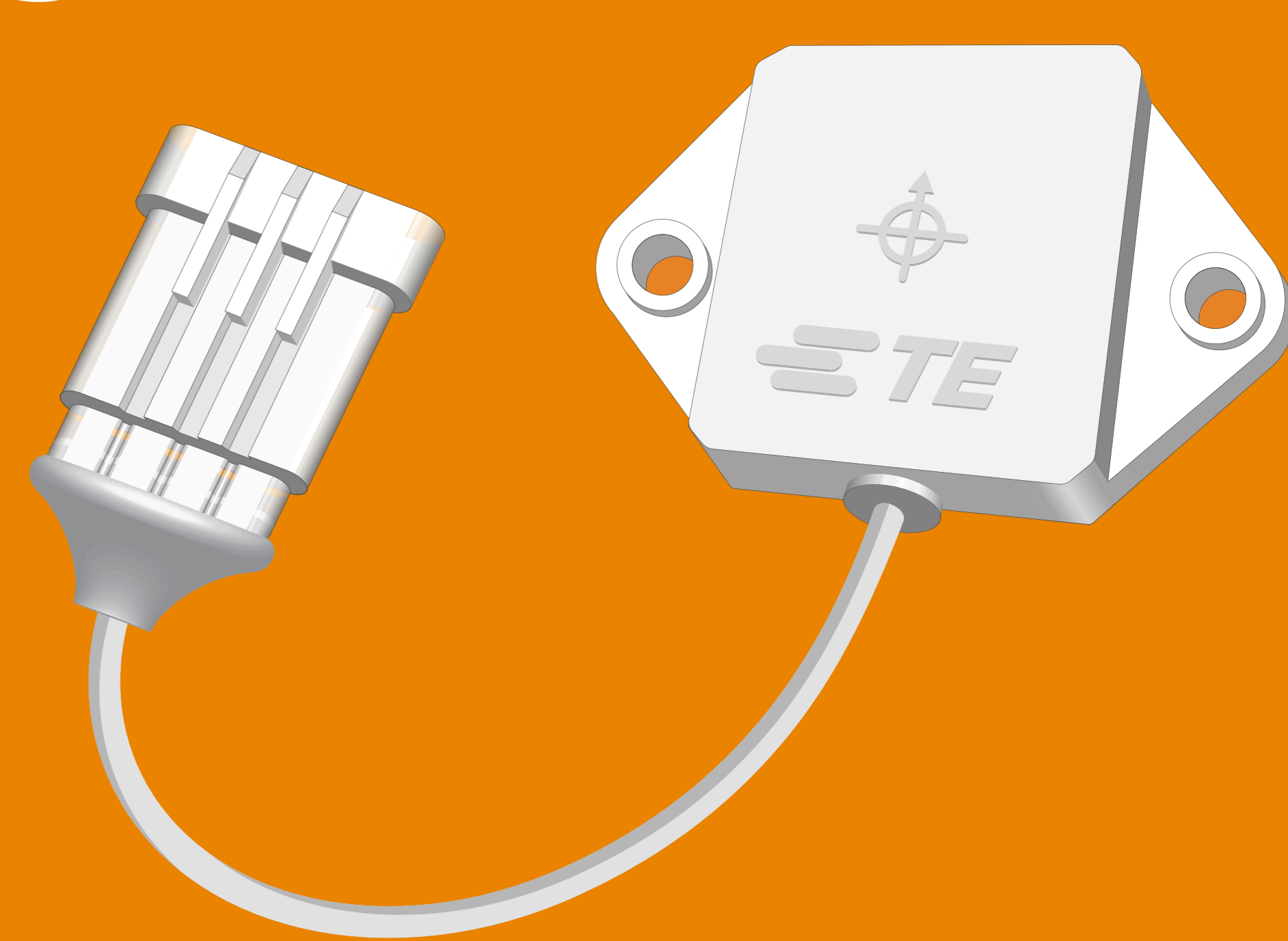


MEMS TILT SENSORS & INCLINOMETERS

Our MEMS tilt sensors and inclinometers offer accurate measurement of inclination, angle and tilt in various applications.

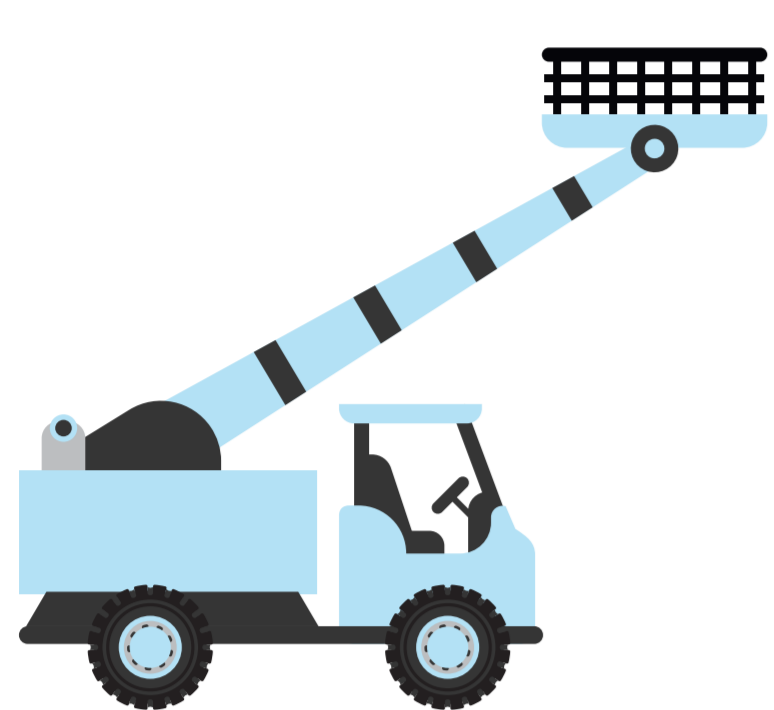


TE Connectivity offers capacitive, conductive electrolytic and MEMS tilt sensing technologies in rugged die-cast aluminum, ceramic, or plastic packages. These products feature many analog and digital input/output options, with linearized and temperature compensated outputs. Standard and customized packaging is available as well as raw sensors for high volume OEM applications.

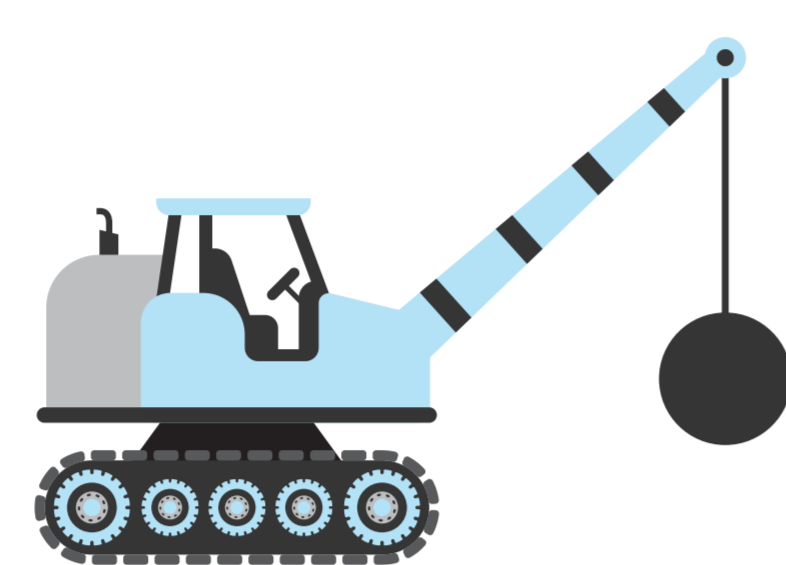
APPLICATIONS

Automatic Tip-over Protection

Prevent Accidents



Chassis, Boom, Bucket Angle



Mast Angle



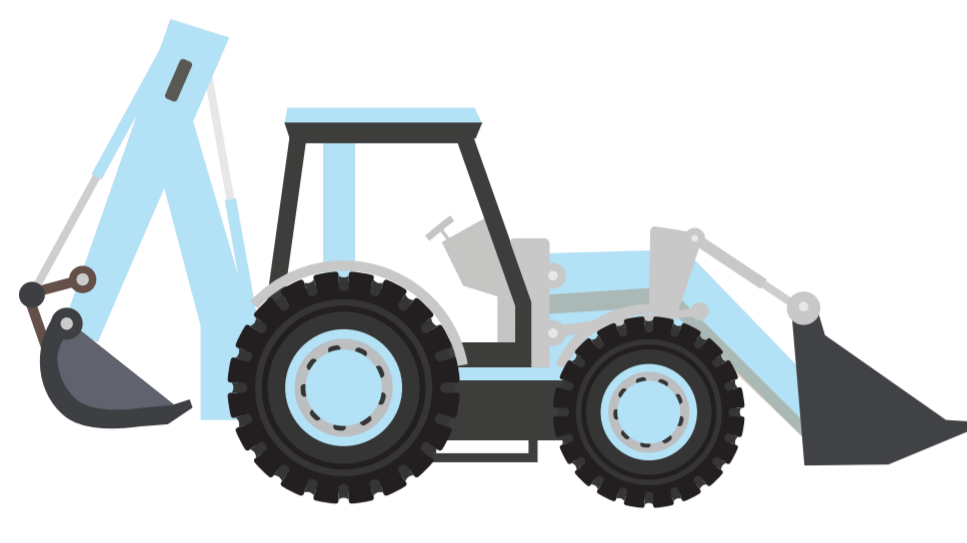
Load & Unload Tilt Monitoring



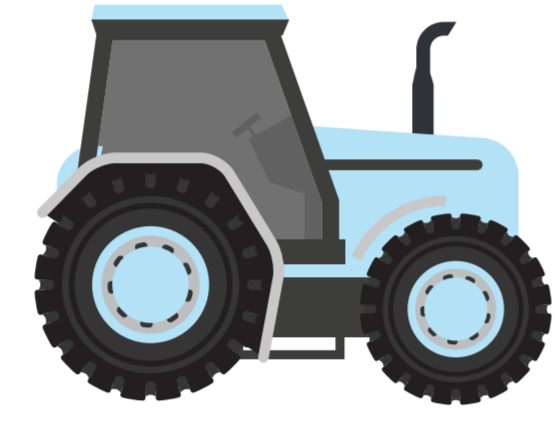
Road Grade Monitoring

Autonomous Control/Comfort Features

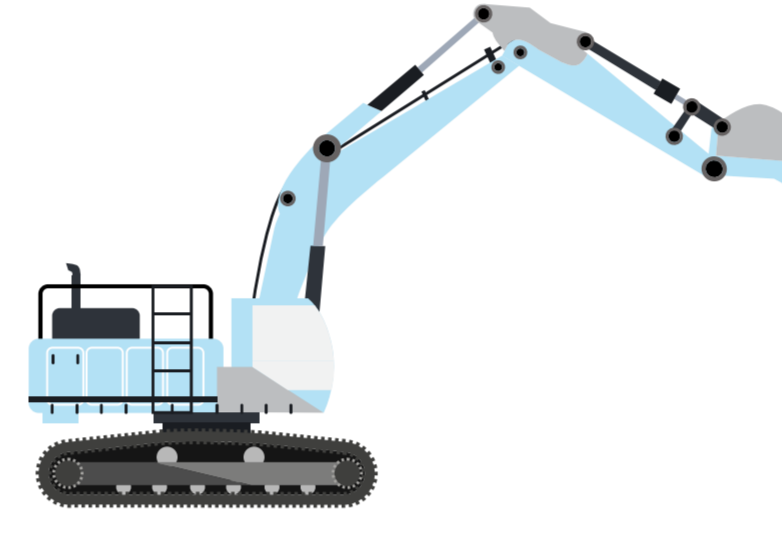
Make Operator's Life Easier



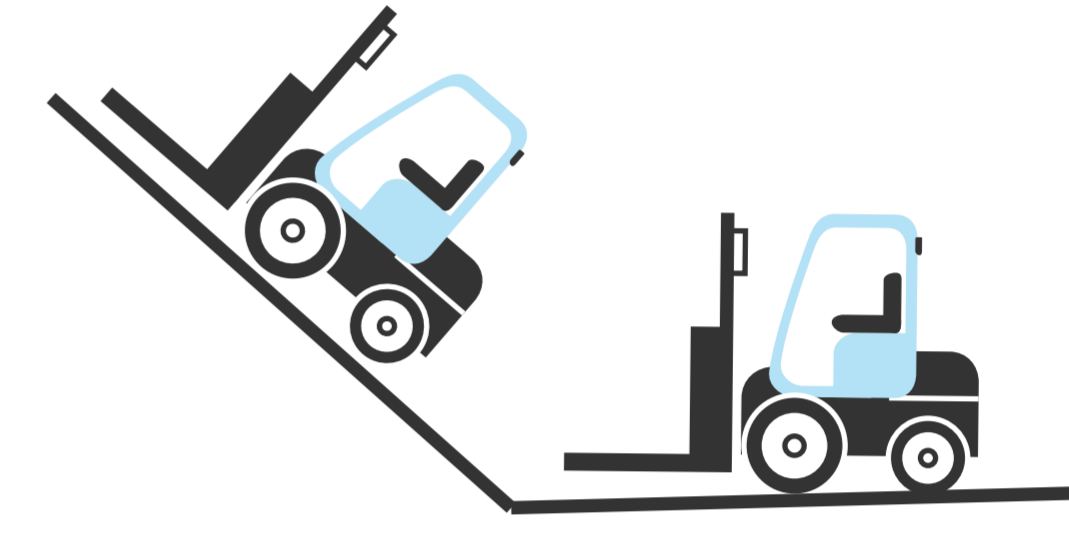
Bucket Angle



Cabin Leveling



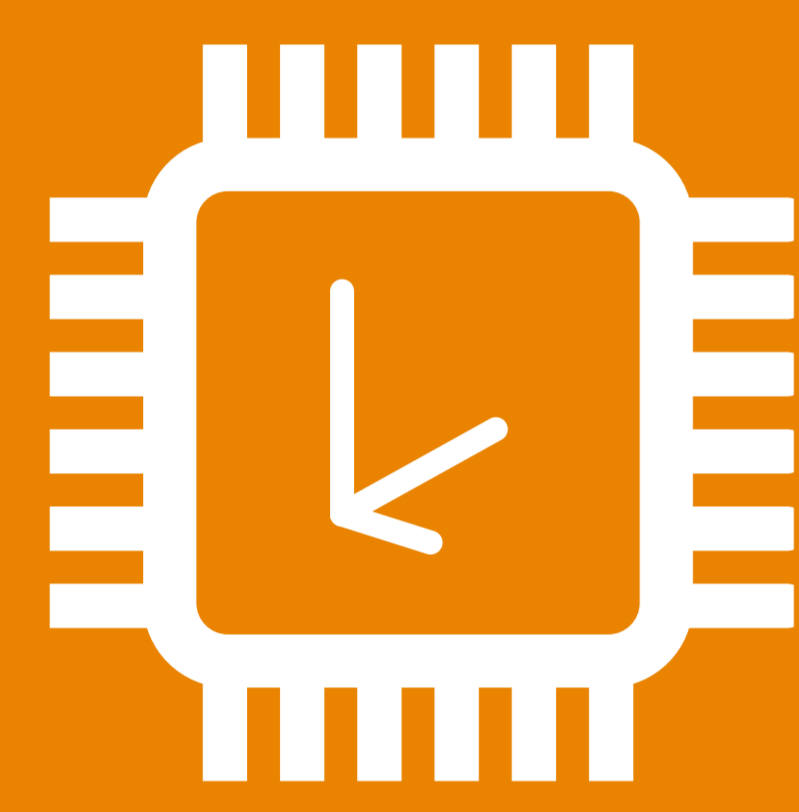
Depth Control



Control at Ramp Condition

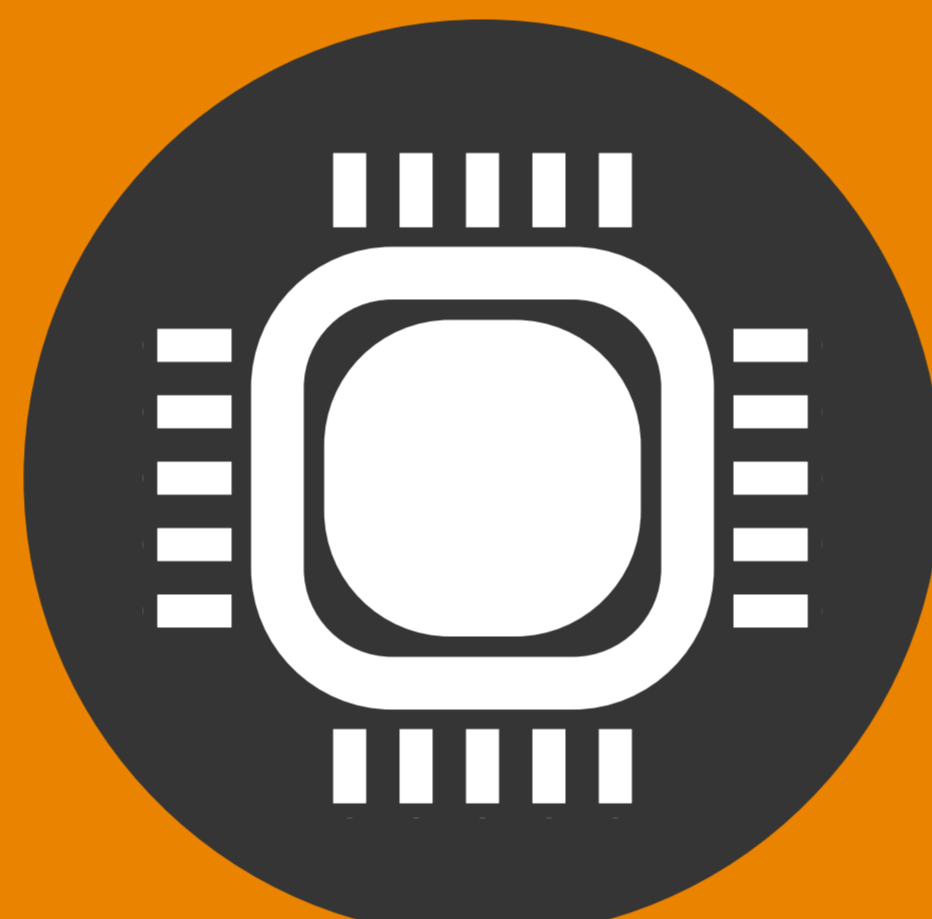
DESIGN

MEMS SENSORS



- Accelerometer
- Micromachined
- Signal Conditioning

SIGNAL PROCESSING



- Microprocessor
- Algorithms
- Temperature Compensation
- Calibration
- Calculation of Angles
- Customer Interface

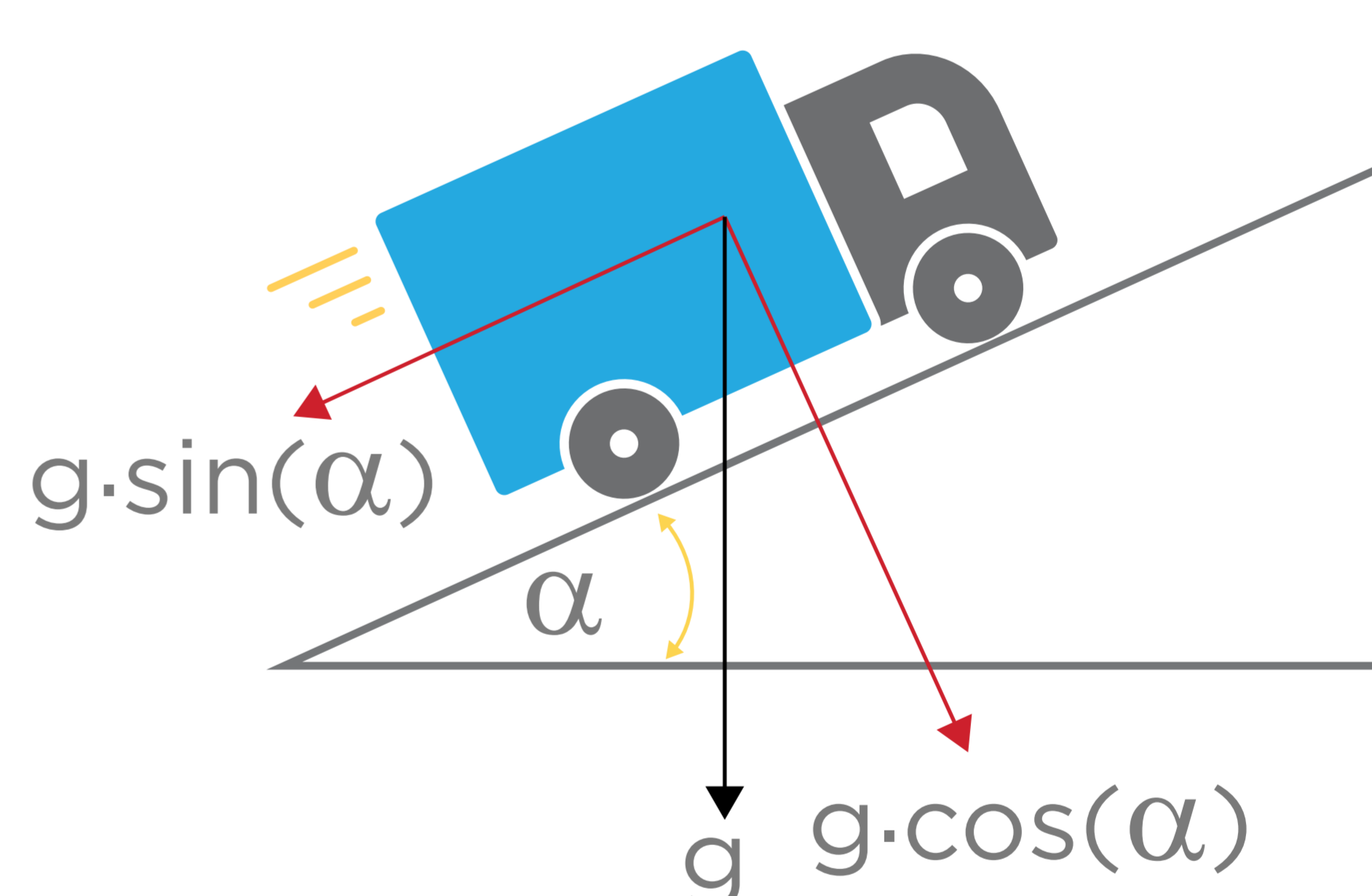
HOUSING & CONNECTOR



- PA6.6 GF 30 Housing
- Cable Assembly
- Robustness
- Reliability
- Compression Limiters

FEATURES

- Range typ. $\pm 25^\circ$, $\pm 45^\circ$, $\pm 90^\circ$ or $\pm 180^\circ$ single axis (customized ranges in option)
- Accuracy, absolute incl. non-linearity, offsets and temperature
- Better than 0.15° , at 25°C
- Better than 0.5° , at $-40 \sim 85^\circ\text{C}$
- Low noise level $< 0.03^\circ$
- 14 Bit resolution on digital output, 12 Bit on analog output
- Interface options:
 - **Analog:** Voltage 0.5 ~ 4.5 V
 - **Digital:** CAN J1939, CANopen, USB, RS485
- Supply Voltage 8-30 VDC, 5 VDC or USB powered
- Excellent cross sensitivity, better than 0.5% FS



MODEL OPTIONS

	G-NSDOG2-200	G-NSDOG2-207
Size	W-70.5 mm, L-45 mm H-15 mm	W-70.5 mm, L-45 mm H-15 mm
Power Supply	8V to 30V	8V to 30V
Operating Range	$\pm 90^\circ$ Dual axis	$\pm 90^\circ$ Dual axis
Accuracy @ 25°C	$\pm 0.15^\circ$	$\pm 0.15^\circ$
Accuracy -40°C to 85°C	$\pm 0.5^\circ$	$\pm 0.5^\circ$
Interface Source Address	0xc2 (Fixed)	0xC0 (default) 0x80 to 0xF7 (Set)
CAN Speed	250 kbps	250 kbps

Beside CAN J1939 other interfaces are available, e.g. voltage output.

© 2018 TE Connectivity

TE Connectivity, TE and TE connectivity (logo), are trademarks. Other logos, product and company names mentioned herein may be trademarks of their respective owners.

TE's only obligations are those stated in TE's General Terms and Conditions of Business (<http://www.te.com/aboutus/tandc.asp>). TE expressly disclaims any implied warranty regarding the information contained herein, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose.

