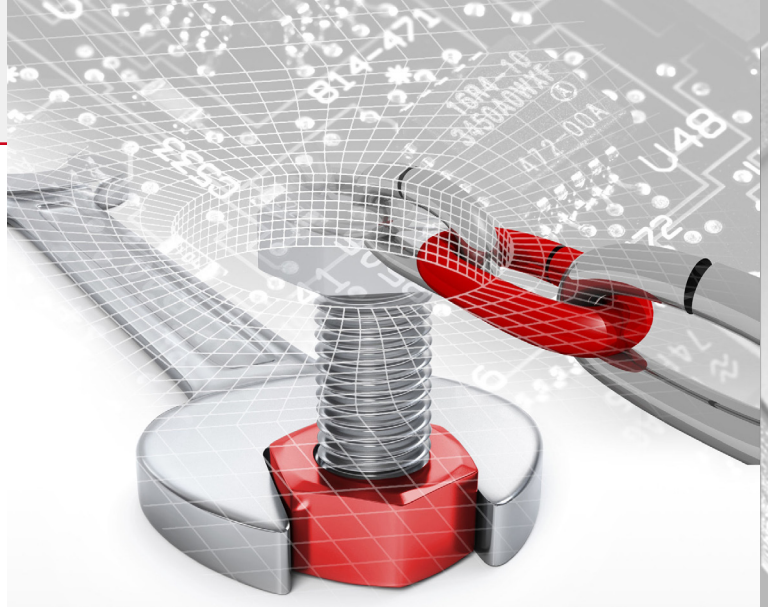
Overload warning

It is used in Telehandlers, Construction and Agricultural Machinery.

Thanks to its reliability and simple installation, the measuring system capaTEC® nano is ideal for monitoring stability of machines with loads on telescopic booms.

The overload warning device measures deformation of the rear axle caused by the tilt moment in real time and warns in time before the critical load is reached.

As soon as a critical point is reached, the driver is immediately visually warned via his display as well as audibly that a dangerous condition has occurred. Once the tilt moment has been reached the hydraulic system is automatically switched off.



Our enthusiasm for engineering and our constant strive to improve our technologies have helped us to develop product solutions for our customers and maintain a competitive edge. We also have the right sensor for your application and we are glad to give your our expert advice.

EBE
sensors and motion

Kontakt:

EBE Elektro-Bau-Elemente GmbH
Sales
Sielminger Strasse 63
70771 Leinfelden-Echterdingen
Phone: +49 711 79986-0
Fax: +49 711 79986-250
E-Mail: vertrieb@ebe-gmbh.de
www.ebe-gmbh.de

Monitoring of the tilt moment of commercial vehicles

EBE GROUP
we create solutions

Overload warning

Properties

Overload warning with capaTEC® nano

- strain measurement on capacitive length measurement
- basic principle „plate capacitor“
- highly specialized measurement principle (correlation measurement technique with pseudo-random signals)
- contactless, wear-free
- simple application to the target structure on screw connection 2 x M10 at a distance of 50 mm
- extreme resolution (< 0.01 µm)
- accuracy 1% of EW
- programmable switching thresholds for hydraulic shut-off
- fully-redundant design of sensor and the display-unit

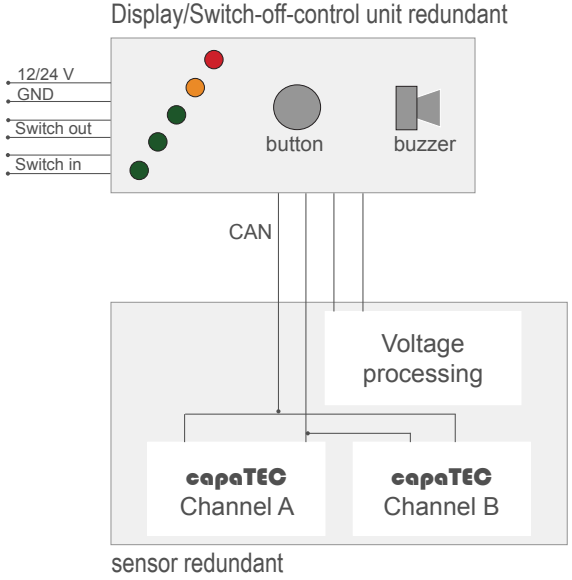
Advantages over DMS-based systems:

- less sensitive to disturbing forces / disturbing moments from other load directions
- up to a factor of 4 higher resolution
- temperature stable
- long-term stability
- application without adhesive

Overload warning capaTEC® nano

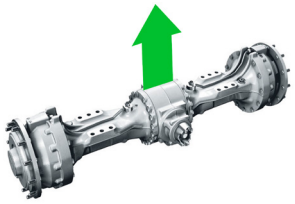
Display-unit with
switch-off (redundant)

capaTEC® nano
strain sensor (redundant)



sensor redundant

Insensitiveness to disturbing forces



Desired sensitivity
for overload warning

Unwanted
sensitivity to disturbance
forces and torques

As in herent to their functional principle the capaTEC-strain sensor is insensitive to disturbance torques. Disturbing forces in the x-direction cause opposing signal change in two channels and compensate each other in the sum signal. Only forces in the z-direction lead to a (desired) change in the sum signal.