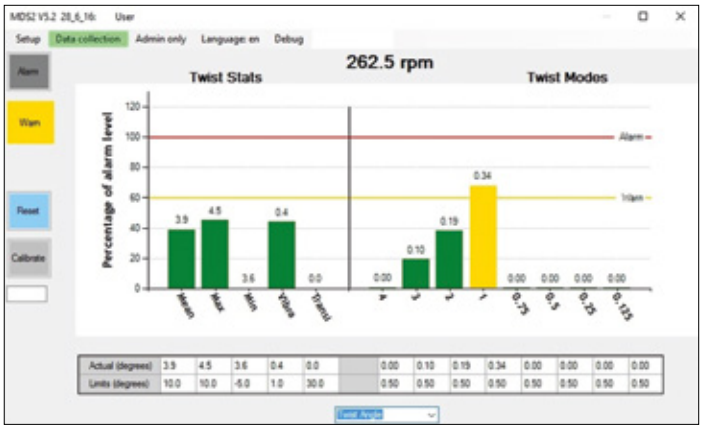
MDS 2

VULKAN MDS 2 TWIST ANGLE MONITOR OFFERS TORQUE LOAD ANALYSIS OVER THE DYNAMIC TWIST ANGLE OF FLEXIBLE COUPLINGS OR COMPOSITE SHAFTS. WARNING AND ALARM SIGNALS RANGE FROM OPTICAL DISPLAY TO ACTIVE INTERVENTION IN THE PROPULSION DRIVE TRAIN.

KEY FEATURES

- Monitoring of mean twist angle up 60 degree twist.
- Monitoring of dynamic vibratory twist angle and torsional amplitudes, drive side and driven side, up to 30 degree.
- Measuring and monitoring of the drive side and driven side torsional vibrations.
- Measuring and monitoring of transient operating conditions, like starting/stopping, manoeuvring.
- Order-dependant frequency analysis of the measuring signal with simultaneous monitoring of up to 8 engine orders.
- Graphical display on connected PC.
- Alarm trigger for all monitoring thresholds with alarm indication over 2 x LED´s and 2 x Relays suitable for up to 30 volts, current up to 3 amps.
- Alarm thresholds up to four speed ranges.
- Automatic protocol of alarms and current values of the monitored parameters with actual Limit-value on an internal storage medium.
- Limits can be set via ethernet connected Laptop, password protected.
- Data logging of events, stored for subsequent analysis using graphic viewer or export.
- Power input from 18 to 34 V DC.
- ABS type approved.



BENEFITS

- MDS 2 twist angle monitor enables operators to plan maintenance work on the monitored drive train based on measured condition status, reducing downtime and cost.
- Sensors measuring against existing bolt heads.
- MDS 2 in combination with a clutch is approved by ABS to disengage the drive train in case of overload, reaction time 80 ms.
- Worldwide VULKAN aftersales service by internet connection via PC to MDS 2.

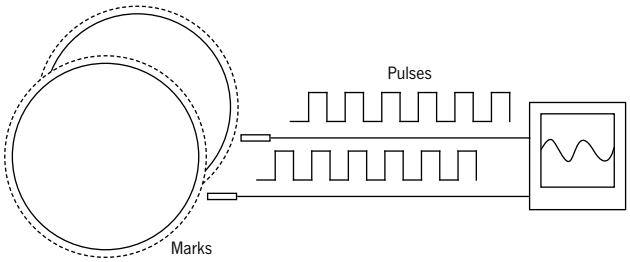
SCOPE OF SUPPLY

- 1 x MDS 2 Main control box
- 1 x MDS 2 Distribution box
- 1 x ethernet cable kit with varying length between 10 and 60 m.
- 4 x inductive sensors

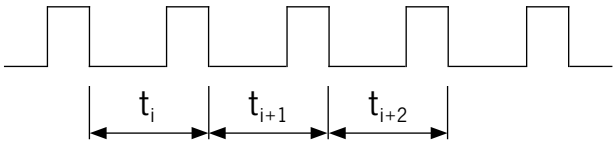
MDS 2

PRINCIPLE

Equi-spaced impulses from boltheads on drive and driven side generate electric pulses under rotation.

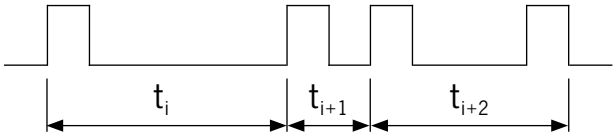


A uniform rotating speed generates a pulse sequence with constant time distances ti, phase shifted from drive to driven side due to elastic deformation (twist).



$$t_i = t_{i+1} = t_{i+2}$$

When uniform rotation is superimposed by periodic twist-angle change, an impulse sequence with variable time distances results.

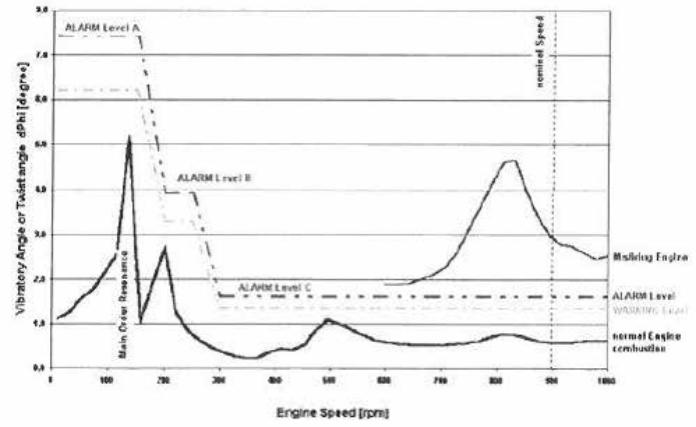


$$t_i \neq t_{i+1} \neq t_{i+2}$$

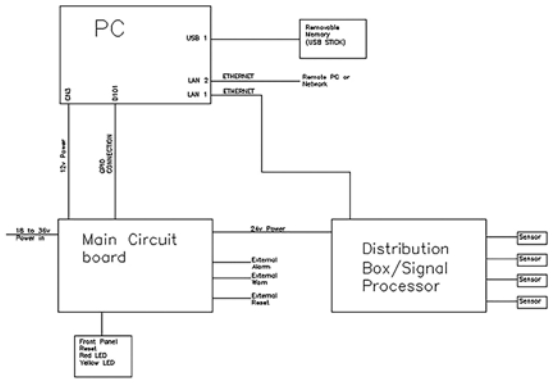
Specific for the (over)load monitoring the mean twist angle is calculated from the pulse signals. The fast overload is detected and alarmed from the fast time distance change.

MONITORING & ALARM

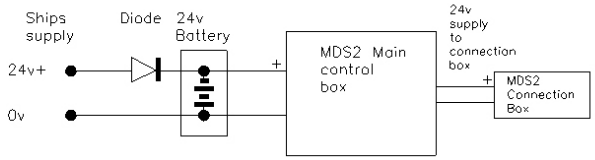
A warning followed by an alarm is triggered once the thresholds for the speed range are exceeded. Thresholds can be set for 4 speed ranges.



HARDWARE SCHEME



Redundant (back up) power supply for MDS2



VULKAN COUPLINGS

Head Office:
VULKAN Kupplungs- und Getriebebau Bernhard Hackforth GmbH & Co. KG | Heerstraße 66 | 44653 Herne | Germany
Phone + 49 (0) 2325 922-0 | **Fax** + 49 (0) 2325 71110 | **Mail** info.vkg@vulkan.com

0102/80