new

Vibration analysis

SmartCheck with integrated software

GRAESSNER

Scope of delivery

- SmartCheck device with integrated SmartWeb software
- User manual SmartCheck and SmartWeb on CD-ROM
- SmartUtility Light software with user manual on CD-ROM
- Power cable for SmartCheck; 8-pin M12 socket on free cable end
- Ethernet cable for SmartCheck; M12 plug on RJ45
- Input/output connection cables; 8-pin M12 plug on free cable end

Why vibration analysis?

- Information available regarding lifetime of the gearbox
- Detection of damages on gearset or bearings, impacts, imbalance
- Lifetime extension of the gearbox and prevention of sudden gearbox failures
- Cost savings through prevention of unscheduled machine stops
- Timely maintenance measures before gearbox failure: change of bearings, gearset and other effected parts, replacement gearbox

Advantages

Precise real time monitoring

- Innovative vibration sensor with diagnosis technology
- Intelligent process monitoring by recording different process parameters and correlation with vibration signals
- Reliable alarm system with LED, PC and smart phone app (wireless LAN)

Usability

- Intuitive operation with the aid of the automatic adjustment of alarm thresholds thanks to self-learning mode (plug and play option)
- LED error indication
- Easy retrieval of measuring results → the data can be retrieved directly at the SmartCheck (SmartWeb and SmartUtility Light) via standard web browser on PC

Easy handling

- Easy installation and less wiring
- Compact size
- Easy integration into control system and station → analogue and digital inputs and outputs

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Technical data

Internal sensors

- Acceleration sensor (piezo sensor)
- Frequency range: 0,8 Hz – 10 kHz
- Measurement range vibration: ± 50 g
- Measurement range temperature: -20°C to +70°C (through tests up to +90°C without any problems, for higher temperatures usage of a small heat-dismissive ceramic plate)

Measurement

- Acceleration
- Speed and displacement by integration
- Temperature
- Process parameters (e.g. speed, load)
- Diagnostic methods: time signal, envelope curve, spectrum and trend analysis, speed and frequency tracking

Characteristic values

- DIN/ISO 10816 (standard for evaluating vibrations)
- Not only calculation of defined and calculated characteristic values (e.g. RMS, Peak-to-peak), but making precise statements relating to the damage progress in combination with process parameters such as torque and speed via analogue and digital inputs and outputs

Inputs and outputs

- Inputs: 2 analogue inputs, 1 pulse input
- Outputs: 1 analogue output, 1 switching output

Interfaces

- 2 capacitive buttons for teach mode, alarm reset, restart, default settings
- 1 LED for status and alarm display, 1 LED for confirmation of keys, 2 LEDs for communication display
- Ethernet 100 MB/s
- 3 polarity protected M12 push-fit connectors for power supply, inputs/outputs and Ethernet

Housing/dimensions

- Glass-fibre reinforced plastic
- Support area on gearbox: Ø 25 mm
- Dimensions: 44 x 57 x 55 mm
- Weight: approx. 210 g
- Protection class: IP67

Software

- SmartWeb (integrated software)
- SmartUtility Light

Contact and more information

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