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Knowledge Base Article

Product Group: Sensors
Product: CMSS200 – Machine Condition Indicator (MCI)
Version: N/A

Abstract

This article lists a few FAQs related to the SKF CMSS200 Machine Condition Indicator (MCI).

Overview

If the machine is running below 3mm/s can it generate an envelope alarm?
- If either velocity is greater than 3mm/s **or** the enveloping is greater than 0.5gE, the machine is considered to be running and further evaluation against alarm criteria for vibration and temperature will occur.

How do MCI temperature alarms work?
- In general, alarming on temperature is not a trusted method since variability in ambient temperatures and process (steam, hot water, hot product) temperatures can vary dramatically. For this reason, SKF designed the sensor to be extremely difficult to generate a temperature alarm in the MCI. The purpose is to avoid false alarms.

Why only alarms above 7mm/s of 4gE for rigid mounted machines? ISO10816-3 says vibration is critical above 4.5mm/s. 4gE is quite a lot!
- The MCI only features one alarm level, so it was decided to go with the alarm value for machines with flexible foundation (7.1 mm/s). The decision was based on the general avoidance of false alarms. SKF can customize the alarming, but would need a large quantity assurance (1000+) in order to do so.

If a machine is running below <0.5gE, can it generate a velocity alarm?
- Yes, in this case the measurements are independent.

If the machine is running below 3mm/s, can it generate an envelope alarm?
- No, it will go automatically back to sleep.

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The first paragraph of the MCI documentation states that the sensor is intended for non-critical or balance of plant machines. Page 10 states if the machines are more critical, perform daily checks. This looks a contradiction.

- What is meant by "more critical" is <u>more critical than other non-critical machines</u>. In other words, if the machine is more important, perform daily checks.

What happens if a machine runs <8 hours per day? Will the MCI be able to generate an alarm as it will try to confirm during 12 hours?

- It will take fewer measurements before going into alarm if the measurement is high. So for small vibration/acceleration/temperature, it would verify 12 times and not give an alarm for a machine that only runs eight hours. For higher vibration/acceleration/temperature, it will go into alarm after several hours (see page 9), so it would alarm a machine running only 8 hours.

What if a detected alarm cannot be corrected before next overhaul (two months later, for example)? What should the customer do with the MCI?

- When the customer sees the alarm, in order to save battery life, the MCI should be reset. It should be removed and used somewhere else or reinstalled after the problem is fixed. If the MCI is not reset, the LEDs will stop blinking after seven (7) days. It can be left there and reset after the repair is made.

What if the operator performs a ROUTE every Monday, sometimes in the morning and sometimes in the afternoon? Strictly taken, it could be more than seven days. Should all MCIs be checked with the magnet key?

- Yes

What is the minimal distance to keep between a MCI and a magnetic Microlog/WMCD sensor?

- The WMCD magnet can affect the MCI from about three inches.

For further assistance, please contact the Technical Support Group by phone at 1-800-523-7514 option 8, or by email at TSG-Americas@skf.com.

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