



WEBINAR

ifm Condition Monitoring - Part 1

New IO Link Vibration sensor with Temperature Monitoring
- Easy implementation
online Webinar



Questions & Answers

Business Development Manager - Condition Monitoring

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Host



ifm – close to you!

Q & A

Temperature – Is the surface temperature enough to monitor the bearing condition?

This depends on how critical the application is and how accurate the temperature reading needs to be, as the surface temperature will only indicate a change in outside bearing housing temperature and can be influenced by ambient conditions. An internal bearing temperature is normally preferred and is a much more accurate and faster response temperature indicator of the internal friction in the bearing.

Vibration – Am I able to determine the type of bearing defect with the IO-Link vibration sensor?

The VVB sensor does not have a speed input therefore it cannot indicate if the bearing has an outer raceway, inner raceway or rolling element defect, although by using the time waveform (raw data) recording function, the data can be analyzed by a vibration analyst and the type of bearing defect can be indicated.

Vibration – What values would you see in the PLC?

The values of the Velocity RMS, Acceleration RMS, Acceleration Peak, Crest factor and Surface Temperature are transmitted to the PLC as 16bit integer values, the Device status as a 4bit unsigned integer value and the Output 1 & 2 status as boolean values.

Vibration – In what direction can I mount the sensor, and do I need two sensors for horizontal and vertical?

The sensors can be mounted in Horizontal or Vertical direction and in the case of thrust bearings they can be mounted in the Axial direction. If you require Horizontal and Vertical measurements you would need to install 2 sensors, alternatively you can then consider the VSM101 Tri-axial accelerometer and connect it to a VSExxx analysis module.

Vibration – Do I use one sensor for all applications?

There are currently 5 different part numbers in the range, all being the same sensor just with different factory settings. The factory settings are based on the ISO10816 standard defining the sensors in 2 categories (High or Low Speed) and 2 sub-categories (Large or Small KW).

Vibration – How do I set the setpoints of the sensor?

All settings and recording of the BLOB can be done by connecting the sensor to an IO-Link Master or an IO-Link USB interface (E30390) and using the Line Recorder Device Software (QA0011)

Where are the raw vibration data stored?

The BLOB (Binary Large Object) is a 4 second time waveform (raw data) recording that, on a command via the IO-Link protocol, is saved on the sensor itself and can be downloaded via the IO-Link Master or IO-Link USB interface using the Line Recorder Software.

Will ifm combine IO Link with the VSE Units?

There is currently no planning for this as there are a lot of IO-Link Masters options available and the VSE is designed to process high frequency raw vibration, analogue and digital data as fast as possible.

Thank you for Participation in our Webinar

Do you have any questions about the products featured?



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