MOTOR VIBRATION

IMI SENSORS
A PCB PIEZOTRONICS DIV.

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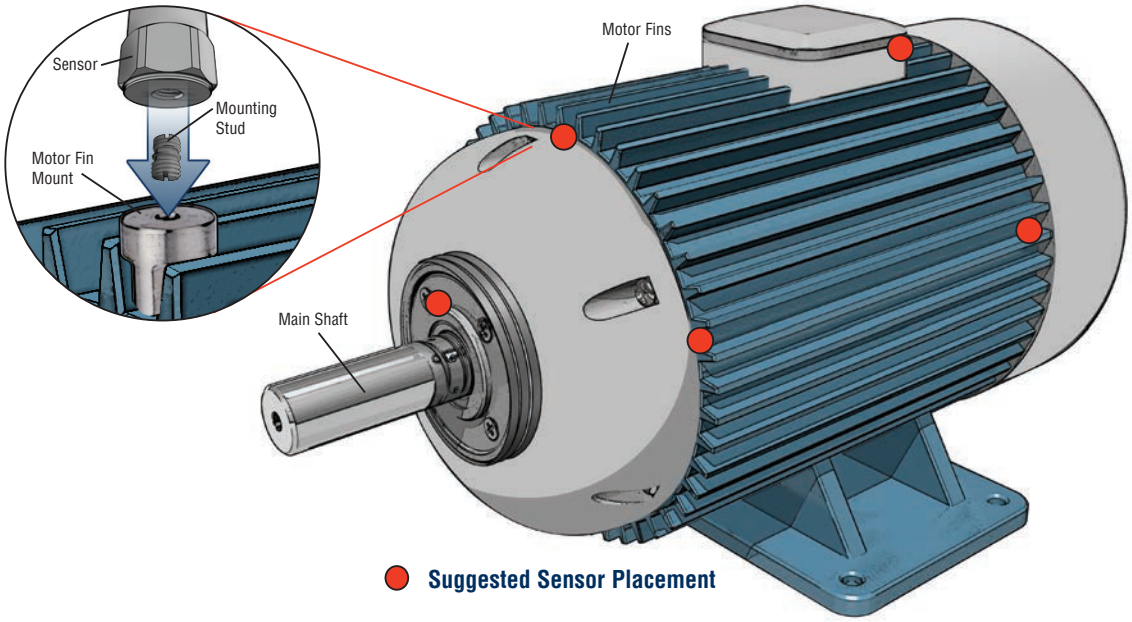
MOTOR VIBRATION

Monitoring vibration on induction motors is at the core of any predictive maintenance program. Typical applications demand vibration measurements in the horizontal, vertical and axial direction on both the inboard and outboard motor bearings. Aside from typical mechanical issues, such as misaligned couplings and unbalance, the vibration analyst can also detect electrical issues that cause mechanical vibrations. Some common electrical faults include air gap variation, broken rotor bars and bearing fluting.

Vibration analysts can use one accelerometer, mounted magnetically and rotate it around the motor to capture various data collection points. In some cases the motor is in an inaccessible location and thus permanent mount sensors are used and routed to a junction box for walk up data collection. Accelerometers are permanently mounted by drilling and tapping into the motor housing or they can be adhesively affixed or welded using a mounting pad.

Electric motors driving capital machinery and ancillary equipment are critical plant processes. Unscheduled shutdowns or failures result in costly downtime, equipment damage and possible safety hazards for personnel. Although your maintenance engineers can't be everywhere at once, IMI® vibration and fault transmitters provide continuous protection and early detection of issues such as soft foot, imbalance, bearing faults, bearing fluting and misalignment. Using a 4-20 mA signal, our transmitters directly communicate with customer PLC, PI, SCADA, or DCS systems and data can be easily trended, managed, with proper alerts and notifications to keep your process up and running.



SINGE AXIS ICP® ACCELEROMETERS

LOW COST SIDE EXIT ACCELEROMETER
MODEL 602D01

- Easy installation in tight spaces
- Through-bolt aides in cable orientation
- Low profile, less than 1 in. height
- M12 connector version available

LOW COST TOP EXIT ACCELEROMETER
MODEL 603C01

- General purpose, hermetically sealed
- IMI's most popular accelerometer
- Small footprint
- M12 connector version available

PRECISION TOP EXIT ACCELEROMETER
MODEL 622B01

- Full frequency sweep calibration: 5% sensitivity deviation tolerance
- 15 kHz high frequency response ideal for early detection of bearing fluting conditions
- Ideal for route-based data collection

TRIAXIAL ICP® ACCELEROMETERS

LOW COST ACCELEROMETER
MODEL 604B31

- General purpose, hermetically sealed accelerometer
- Perfect for permanent mount applications

PRECISION ACCELEROMETER
MODEL 629A31

- Ideal for route-based data collection, magnet mount
- Full frequency sweep calibration, superior frequency response

HIGH FREQUENCY ACCELEROMETER
MODEL 639A91

- Sensitivity: (±10%) 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 g pk (±491 m/s² pk)
- Frequency Range: (±3dB) 0.5 to 13 kHz

VIBRATION TRANSMITTERS

BEARING FAULT DETECTOR
MODEL 682C05

- Provides early warning of bearing and gear faults
- Operates with PLC, DCS, SCADA, alarm and control systems
- Outputs 4-20 mA signals for peak acceleration and overall vibration

VIBRATION TRANSMITTER
MODEL 682C03

- Outputs 4-20 mA signal proportional to acceleration, velocity, or displacement
- ICP® accelerometer input
- Analog vibration output via front BNC

4-20 MA OUTPUT SENSOR
MODEL 640B01

- Peak velocity
- Side exit housing available
- Intrinsically safe/explosion proof versions available

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IMI Sensors, a division of PCB Piezotronics, Inc. manufactures industrial vibration monitoring instrumentation, such as accelerometers, vibration transmitters and switches that feature rugged stainless steel housings and survive in harsh environments like paper and steel mills, mines, gas turbines, water treatment facilities and power plants. Integrating with portable analyzers and PLC's, IMI instrumentation helps maintenance departments reduce downtime and protect critical machinery. Visit IMI Sensors at www.pcb.com. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corporation. Additional information on MTS can be found at www.mts.com.

IMI-App-Motors-0819

MTS SENSORS

MTS Sensors, a division of MTS Systems Corporation (NASDAQ: MTSC), vastly expanded its range of products and solutions after MTS acquired PCB Piezotronics, Inc. in July, 2016. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corp.; IMI Sensors and Larson Davis are divisions of PCB Piezotronics, Inc.; Accumetrics, Inc. and The Modal Shop, Inc. are subsidiaries of PCB Piezotronics, Inc.