ABB Ability™
Smart Sensors
Digitalize your Motor Maintenance

Smart Sensor Based Motor Monitoring
This service provides setup of Smart Sensor based monitoring for your motors. Various parameters of selected motors are analyzed, monitored in cloud and reported for timely maintenance.

Deliverable: Smart Sensor Monitoring Setup for 10 motors; Remote Assistance and reporting based on conditions detected
Smart Sensor Based Motor Monitoring

ABB Services is introducing this motor monitoring service to get customers started in condition-based maintenance. ABB Ability™ Smart Sensor, acts as a fitness wristband for motors. It fits easily on the surface of the motor, without wiring or machining. It monitors key operating parameters and provides information about the equipment's health and performance via a smartphone or dedicated web portal.

ABB’s Smart Sensor based Motor monitoring enables predictive maintenance through condition monitoring of motors in the plant. Continuous device condition monitoring identifies performance degradation and helps in prioritizing maintenance for the assets that immediately need it, hence removing the need for some preventive maintenance. It increases asset availability and maximizes performance.

The following parameters are monitored:

- **Health Parameters:**
  - Overall condition
  - Overall vibration
  - Bearing Condition
  - Misalignment
  - Skin temperature

- **Operating Parameters:**
  - Vibrations (radial, tangential, axial)
  - Speed
  - Operating hours
  - Number of starts
  - Supply Frequency
  - Output power
  - Regreasing countdown

**Scope of Service:**

**Hardware**

The smart sensors supplied by ABB are mounted on the frames of selected motors with a clamping bracket and 3 screws or adhesive putty. No wiring is required. The installation can be done by the customer or optionally, ABB can perform the installation for additional price.

The supplied gateways have been cyber security tested and can connect to ABB cloud using customer wi-fi connection in the plant or optionally cellular modem link (purchased separately).

10 sensors and 2 gateways shall be supplied.

**Commissioning**

Commissioning and registration of the sensor/motor via the ABB Ability™ Smart Sensor app takes only a couple of minutes. User registration and group management configuration can be done by authorized users via the web portal.

**Monitoring**

Users can check the status of their equipment at any time via the ABB Ability™ Smart Sensor app or web portal. The app includes a ‘traffic light’ display for a quick overview of all the equipment that is being monitored.

The portal is used to show trends and historical data, manage user access rights and set alerts and alarm.

The app gives easy over-views of the status of the assets. It is useful for a technician on the move at the plant.

**Optional Add-ons:**

**Installation and Commissioning**

ABB can provide installation and commissioning of sensors and gateways for monitoring and remote assistance.

**Remote Assistance - 2 years subscription service**

ABB Remote Monitoring is a service offered by ABB to monitor condition of motors and help maintain it better. As part of the monitoring:

- ABB monitors motors remotely
- Provides end users with Up To Date reports on motor condition
- Point out what correction need to be done and when
- Notifies customer if any sudden in machine behavior is detected

**Benefits:**

- Getting motor maintenance scheduled on a priority before a breakdown
- Detecting problems in motors well in advance
- Better inventory control
The Customer
Plants that have critical motors in operation.

The Challenge
Provide maintenance with the right priority to the motors that need it the most based on conditions detected.

The Solution
ABB Ability™ Smart Sensor based monitoring to monitor each motor for various conditions that affect the motor. Also, provide a timely analysis, warning and recommendation to address the affected motor’s maintenance needs and keep plant running without disruptions.

The Value
A quick jump-start on condition-based monitoring maintenance for motors. An easy, inexpensive solution to get critical motors monitored and reported for timely maintenance when needed.
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