ABB Ability™ Smart Sensor for mounted bearings

Installation instructions

Review these instructions in their entirety before attempting to install your ABB Ability Smart Sensor for mounted bearings.

Scan the QR code to obtain information and video instructions regarding the registration process for the ABB Ability Smart Sensor for mounted bearings.

Please navigate to new.abb.com/motors-generators/service/advanced-services/smart-sensor.

Getting Started

Necessary equipment:
- items included in the ABB Ability Smart Sensor kit:
  - ABB Ability Smart Sensor for mounted bearings
  - Installation tool
  - Rubber cover (optional)
- Additional items (required):
  - Smartphone
  - Computer

Additional items (optional):
- Sensor adapter
- Gloves
- Clean soft cloth
- Torque wrench
- 7/8” (22mm) wrench
- 7/16” (11mm) socket
- Socket wrench

Step 1 Install ABB Ability Smart Sensor application

Note: In some countries these stores may not be accessible. For more information navigate to new.abb.com/motors-generators/service/advanced-services/smart-sensor.

Step 2 On your computer, register in the ABB ability platform

smartsensor.abb.com/Login

Step 3 Mount sensor on the bearing

Step 3.1 Clean bearing surface to be free of dirt and debris.

Step 3.2 Determine if pipe plug is present, located 30° from top of housing, opposite of the grease fitting. If present, remove pipe plug from mounted bearing assembly.

Step 3.3 Thread sensor by hand and tighten using the installation tool. If desired, tighten sensor using a torque wrench, applying 7-12 in-lbs. (0.8-1.4 Nm).

Step 4 Begin activation

Press the silicone button located on the sensor to begin activation. The LED light will blink three times.

Step 5 Register sensor

Log in to ABB Ability Smart Sensor application with the myABB account created in Step 2.

Step 6 Complete installation

In the ABB Ability Smart Sensor application, assign the sensor to the mounted bearing by adding the following information:

Required
- Asset Name
- Description
- Plant
- Bearing date code
- Bearing part number
- Shaft nominal speed

Step 7 Installation complete

After completing the installation process, the application should function properly. If there are any problems, please contact support at brgptechsupport@abb.com for assistance.

Installation should conform to appropriate codes and practices. Failure to follow these instructions could result in serious personal injury, death and/or property damage.

NOTE: These instructions must be read thoroughly before installation or operation. This instruction manual was accurate at the time of printing. Please see new.abb.com/mechanical-power-transmission for updated instruction manuals.

CAUTION: The sensor should be installed by technically qualified personnel. Failure to install the sensor in compliance with applicable codes and regulation and according to the manufacturer’s recommendations may result in unsatisfactory performance or equipment failure, and may void the sensor warranty.

WARNING: Only qualified individuals who are familiar with appropriate national codes, local codes and sound practices should install, repair or modify mounted bearings and/or related accessories. Installation should conform to appropriate codes and practices. Failure to follow these instructions could result in serious personal injury, death and/or property damage.

Specific conditions of use for this application are as follows:

1. The ambient range of the sensor is -30°C to 105°C. The installer is responsible for ensuring that the sensor is used between these limits. The assessment of the sensor’s functionality and its role in stopping the bearing in the event of bearing failure is not implied by the certification, which is related to its hazardous area compliance only.

2. Under certain extreme circumstances, the non-metallic cap may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge. In addition, the equipment shall only be cleaned with a damp cloth. Additionally, to avoid the build-up of electrostatic charge on the metal case, the sensor shall be effectively connected to earthed metal when installed.

NOTE: The manufacturer of these products, Baldor Electric Company, became ABB Motors and Mechanical Inc. on 1 March 2018. Replacements of Conformity and other collateral material may contain the company name of Baldor Electric Company and the brand names of Baldor-Dodge and Baldor-Reliance until such time as all materials have been updated to reflect our new corporate identity.

NOTE: For ABB Ability Smart Sensor portal to manage your registered assets:

smartsensor.abb.com/Login

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CAUTION: Mounted bearing surface temperature hazard. The external surface of a mounted bearing may reach temperatures which can cause discomfort, burns or injuries to individuals.

FCC Compliance Statement: CAUTION: Changes or modifications not expressly approved could void your authority to use this equipment. This device complies with Part 15 of the FCC Rules. Operation to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: Frequency band(s) in which the radio equipment operates: 2402 MHz – 2480 MHz. Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates: 0dBm.

Industry Canada Statement: This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

EU Declaration of Conformity

The undersigned, representing the following suppliers and manufacturers of the product stated below, declares that the product(s) conforms to the following directive(s) and/or standards and/or technical specifications referenced below: (Safety only):

- 2014/30/EU and the essential requirements of article 6 of Directive 2014/30/EU
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- 2014/53/EU
- 2014/30/EU
- 2014/30/EU
- 2014/30/EU
- 2014/30/EU

Conformance via a Technical File (TDF) is declared using all or part of the following harmonised standards and/or technical specifications referenced below: (Safety only):

- EN 61326-1:2010
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