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
- Gloves
- Plant
- 7/8” (22mm) wrench
- Shaft nominal speed

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/mechanical-power-transmission/mounted-bearings/smart-sensor-for-mounted-bearings and search for video instructions.

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. (08.-1.4 Nm).

Step 4 Begin activation
Press the silicone button located on the sensor to begin activation. The LED light will blink once.

Step 5 Register sensor
Log in to ABB Ability Smart Sensor application with the myABB account created in Step 2.

Follow the on-screen instructions.

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 brgpttechsupport@abb.com for assistance.

Go to ABB Ability Smart sensor portal to manage your registered assets:
smartsensor.abb.com/Login

NOTE: This sensor is intended for application in hazardous location, typical marking shown below:

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. New ABB products, Declaration 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: 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.
WARNING: To ensure the drive is not unexpectedly started, turn off and lock-out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

WARNING: Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed. Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by ABB nor are the responsibility of ABB. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

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

Le présent appareil est conforme aux CNR d’Industrie Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes : (1) l’appareil ne doit pas produire de brouillage, et (2) l’utilisateur de l’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

Country of Origin: Japan

HS Code (H7S): 8503.00.9520

WEEE EU Directive 2012/19/EU

Products that are marked with the crossed-out wheeled bin symbol as shown here; shall be handled by following information:

- The crossed-out wheeled bin symbol on the product(s) and / or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste.
- For professional users in the European Union, please contact your dealer or supplier for more information on how to discard electrical and electronic equipment (EEE).

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