



9AKK107296 09/02/2020 © ABB Motors and Mechanical



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

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.



Smart Sensor Platform
ABB Ability™
ABB Information Systems AG
Free



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.

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:

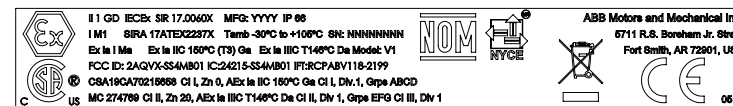
- Required
- Asset Name
 - Description
 - Plant
 - Bearing date code
 - Bearing part number
 - Shaft nominal speed

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:

- 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.
- 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. Nameplates, 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.

EU Declaration of Conformity

The undersigned, representing the following supplier and authorised representative
ABB Motors and Mechanical Inc.
 5711 R. S. Boreham, Jr. Street
 Fort Smith, Arkansas 72901
 USA

ABB Automation Products GmbH
 Oberhausener Straße 33
 40472 Ratingen, Germany

This declaration is issued under the sole responsibility of the manufacturer.
 herewith declare that the Products

Smart Sensor for Mounted Bearings V1



Product identification (brand and catalogue number/part number):
ATEX II 1 G D Ex Ia IIC 150°C (T3) Ga Ex Ia IIC T146°C Da (T amb = -30°C - +105°C) ATEX I MI Ex Ia I Ma Model V1 - (consult product marking for details) SIRA 17A/ATEX223X Note: The manufacturer of these products, Baldor Electric Company, became ABB Motors and Mechanical Inc. on 1 March 2018. Nameplates may contain the company name 'Baldor Electric Company' for a period until such time as they have been updated to reflect the new corporate identity'.

are in conformity with the provisions of the following EC Directive(s) when installed in accordance with the installation instructions contained in the product documentation:
 2014/34/EU ATEX Directive
 2014/53/EU Radio Equipment (RED) Directive
 2011/65/EU RoHS Directive
 and that the standards and/or technical specifications referenced below have been applied (Safety only):
 EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements
 EN 50581:2012 Technical documentation for the assessment of electrical and electronic products with respect to restriction of hazardous substances
 and that the following harmonized standards and/or technical specifications referenced below have been applied for 2014/34/EU:
 EN 60079-0:2012/A11:2013 Explosive atmospheres- Part 0: Equipment – General requirements
 EN60079-11:2012 Explosive atmospheres – Part 11: Equipment protection by intrinsic safety 'i'

ATEX Notified Body for Category 1
 Sira Certification Services Ltd -0518
 Unit 6
 Hawarden Industrial Park
 Hawarden
 DEESIDE
 CH5 3US

Conformance via a Technical File (TDF) is declared using all or parts of the following standards (RED Directive only):
 EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements
 EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
 EN 301 489-1 V2.2.0: Draft ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU
 EN 301 489-17 V3.2.0: Draft Electro Magnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
 EN 300 328 V2.1.1 Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
 EN 62311: 2008 Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

EMC Technical File - TDF No: AN18C11127
 EU-type examination certificate: AN18C11127
 Maintained at: Notified Body:
 ABB Automation Products GmbH The notified body, UL Verifications Services Inc. 0984
 Oberhausener Straße 33 performed an assessment of Article 3.1a, 3.1b and 3.2 and issued EU-type examination certificate AN18C11127
 40472 Ratingen, Germany
 Supplier: Authorised representative:
 Signature: Signature

Evans Massey
 Name: L. Evans Massey
 Position: Mgr. Standards and Certification
 Date: 28 May 2019 Greenville, SC USA

M. Klein
 Name: Michael Klein
 Position: Regional Sales and Marketing Manager
 Date: 28 May 2019 Ratingen, Germany

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.

IFETEL Statement:
 La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.



Country of Origin: Japan
 HS Code (HTS): 9031.80.8085



Complies with
 IMA Standards
 DA102209

WEEE EU Directive 2012/19/EU
 Products that are marked with the crossed-out wheeled bin symbol as shown here; shall be handled by applying 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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new.abb.com/mechanical-power-transmission