



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 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

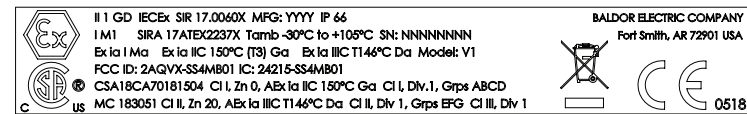
Installation complete

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:

- 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 specified in safety codes should be provided, and are neither provided by Baldor Electric Company nor are the responsibility of Baldor Electric Company. 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 (HTS): 8503.00.9520


EU Declaration of Conformity

The undersigned, representing the following supplier and authorised representative:

Baldor Electric Company	ABB Automation Products GmbH
5711 R. S. Boreham, Jr. Street	Oberhausenstraße 33
Fort Smith, Arkansas 72901	40472 Ratingen, Germany
USA	USA

This declaration is issued under the sole responsibility of the manufacturer.

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 174TEX2237X**

are in conformity with the provisions of the following EC Directives when installed in accordance with the installation instructions contained in the product documentation:

<small>2014/34/EU</small>	<small>ATEX Directive</small>
<small>2014/53/EU</small>	<small>Radio Equipment (RED) Directive</small>
<small>2011/65/EU</small>	<small>RoHS Directive</small>

and that the standards and/or technical specifications referenced below have been applied (Safety only):

<small>EN 61010-1:2010</small>	<small>Safety requirements for electrical equipment for measurement, control, and laboratory use</small>
<small>EN 50581:2012</small>	<small>Part 1: General requirements</small>
	<small>Technical documentation for the assessment of electrical and electronic products with respect to restriction of hazardous substances</small>

and that the following harmonized standards and/or technical specifications referenced below have been applied for 2014/34/EU:

<small>EN 60079-0:2012/A1:2013</small>	<small>Explosive atmospheres - Part 0: Equipment - General requirements</small>
<small>EN 60079-11:2012</small>	<small>Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i'</small>

ATEX Notified Body for Category 1

Sira Certification Services Ltd-0518

Unit 6

Hawarden Industrial Park

Hawarden

DEESIDE

CH5 3J5

Conformance via a Technical File (TDF) is declared using all or parts of the following standards (RED Directive only):

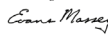
<small>EN 61010-1:2010</small>	<small>Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements</small>
<small>EN 61326-1:2013</small>	<small>Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements</small>
<small>EN 301 489-1 V2.2.0: Draft</small>	<small>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 2014/20/EU</small>
<small>EN 301 489-17 V3 2.0: Draft</small>	<small>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</small>
<small>EN 300 328 V2.1.1</small>	<small>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</small>
<small>EN 62311: 2008</small>	<small>Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)</small>

EMC Technical File - TDF No: **AN18C1127**

EU-type examination certificate: **AN18C1127**

Maintained at: **ABB Automation Products GmbH**

Supplier: **Oberhausenstraße 33**
40472 Ratingen, Germany

Signature: 

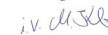
Name: **L. Evans Massey**

Position: **Mgr. Standards and Certification**

Date: **20 November 2018 Greenville, SC USA**

Notified Body: **The notified body: U.E. Verifications Services Inc. 0984**

performed an assessment of Article 3.1a, 3.1b and 3.2 and issued EU-type examination certificate AN18C1127

Authorised representative: **Signature:** 

Name: **Michael Klein**

Position: **Regional Sales and Marketing**

Date: **20 November 2018 Ratingen, Germany**

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