

# ABB Ability™ Smart Sensor for mounted bearings

## Installation Instructions

This instruction manual provides information regarding installation of the ABB Ability Smart Sensor for mounted bearings. Read these instructions in their entirety before attempting to install your ABB Ability Smart Sensor for mounted bearings.



Review instructions thoroughly before installing your ABB Ability Smart Sensor for mounted bearings.

### Getting Started

Items included in the ABB Ability Smart Sensor kit

- ABB Ability Smart Sensor for mounted bearings
- Installation tool
- Rubber cover (use is optional)

Additional item (required):

- Smartphone
- Computer

Additional item (optional):

- Sensor adapter
- Gloves
- Clean shop rag
- 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 see [www.abb.com/smartsensor](http://www.abb.com/smartsensor).



#### Step 2

#### On your computer, register in the ABB ability platform

<https://smartsensor.abb.com/Login>

#### Step 3

#### Mount sensor on the bearing

##### Step 3.1

Clean bearing surface to be free of dirt and debris. Determine if pipe plug is present, located 30° from top of housing, opposite of the grease fitting

##### Step 3.2

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

Activate sensor by pressing the silicone button. You should see LED light blink.



#### Step 5

Log into ABB ABilty Smart Sensor application with the myABB account created in step 2.

Follow the screen instructions.

Please refer to the video link as a first time user:



#### Step 6

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

Required

- Asset Name
- Description
- Plant
- Bearing date code (refer to bearing name plate)
- Bearing part number
- Shaft nominal speed

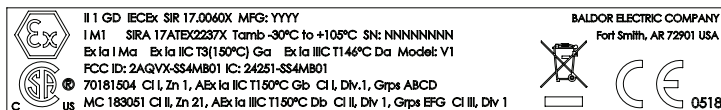
#### Step 7

Congratulations, you are done!

Go to ABB ABilty Smart sensor portal to manage your registered assets:

<https://smartsensor.abb.com/Login>

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 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. 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](http://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:** 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 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.

**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.

**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.

**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

**DRAFT EU Declaration of Conformity**

The undersigned, representing the following supplier and authorised representative

**Baldor Electric Company**  
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 I M1 Ex ia IIC Ga T3 (150°C) (Tamb= -30°C - +105°C)**  
**Ex ia IIC T146°C Da Model V1- (consult product marking for details)**  
**SIRA 17ATEX2237X**

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 I  
Sira Certification Services Ltd -0518  
Unit 6  
Hawarden Industrial Park  
Hawarden  
DEESIDE  
CH5 3US

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Conformance via a Technical File (TF) 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 301 489-1:2017-03	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 301 489-17:2017-03	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

EMC Technical File - TF No:  
Notified Body Statement of Compliance Reference No.  
Maintained at:  
ABB Automation Products GmbH  
Oberhausener Straße 33  
40472 Ratingen, Germany  
Supplier:  
Signature



Name: L. Evans Massey  
Position: Mgr. Standards and Certification  
Date: 11 July 2018 Greenville, SC USA

TBD (UL)  
TBD (UL)  
Notified Body:  
TBD (UL)

Authorised representative:  
Signature



Name: Michael Klein  
Position: Regional Sales and Marketing Manager  
Date: 11 July 2018 Ratingen, Germany

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