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**User's  
Manual**

XS110A  
Wireless Communication Module

***Sushi Sensor***

IM01W06D01-01EN

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# 1. Introduction

Thank you for purchasing XS110A Wireless Communication Module. This manual provides important information and installation and maintenance instructions for using the XS110A Wireless Communication Module (Hereinafter, it is described as XS110A.) correctly and safely.

The XS110A can be connected to an XS-series Measurement Module. The battery mounted on the XS110A supplies power to the connected Measurement Module.

The function description, setting, operation, and maintenance of the XS-series are described in the Sushi Sensor Series Software Edition (IM01W06C01-01EN), so be sure to read it and use it correctly.

The Sushi Sensor Series Software Edition (PDF files) can download from our company home page (<http://www.sushisensor.com/>).

**Table 1.1 Related Documents**

Document Name	Document No.
General Specifications XS110A Wireless Communications Module	GS01W06D01-01EN
User's Manual Sushi Sensor Series Software Edition	IM01W06C01-01EN

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## ■ Regarding This Manual

- This manual should be provided to the end user.
- This manual and the identification tag attached on the packing box are essential parts of the product; keep them in a safe place for future reference.
- The contents of this manual are subject to change without prior notice.
- All rights reserved. No part of this manual may be reproduced in any form without Yokogawa's written permission.
- Yokogawa makes no warranty of any kind with regard to this manual, including, but not limited to, implied warranty of merchantability and fitness for a particular purpose.
- If any question arises or errors are found, or if any information is missing from this manual, please inform the nearest Yokogawa sales office.
- The specifications covered by this manual are limited to those for the standard type under the specified model number break-down and do not cover custom-made instruments. When products whose suffix code or optional codes contain code "Z" and an exclusive document is attached, please read it along with this manual.
- Please note that changes in the specifications, construction, or component parts of the instrument may not immediately be reflected in this manual at the time of change, provided that postponement of revisions will not cause difficulty to the user from a functional or performance standpoint.

## ■ Safety, Protection, and Modification of this Product

- This product is designed to be used by a person with specialized knowledge.
- To protect the operator, product, and system controlled by the product, observe the safety precautions described in this manual. If users handle contrary to these instructions, we cannot guarantee safety.
- The Modification of the product is strictly prohibited.
- Repair or modification to this instrument by customer will cause a malfunction of explosion protect function and hazardous situation. If you need to repair or modification, please contact the nearest Yokogawa office.

- The following safety symbols are used in this manual:



## **WARNING**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



## **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or physical damage. It may also be used to alert against unsafe practices.

## **IMPORTANT**

Indicates that operating the hardware or software in this manner may damage it or lead to system failure.

## **NOTE**

Draws attention to information essential for understanding the operation and features.

### **■ Trademarks**

- Sushi Sensor is a registered trademark of Yokogawa Electric Corporation.
- The registered trademarks or trademarks of the respective companies in the text do not bear the mark of TM or ®.

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## 1.1 Radio Waves

This product is designated as a certification of construction type as a wireless facility for 800 MHz band and 900 MHz band low-power data communication system of the Radio Act.

Refer to “7.6 Regulatory Compliance Statements” for detail.

- Area Code 2: Regional parameter is EU868 and frequency is 863 to 870MHz\*1.
- Area Code 3: Regional parameter is US915 and frequency is 902 to 928MHz\*2.
- Area Code 4: Regional parameter is AS923 and frequency is 919 to 925MHz\*2.

\*1: Sweden and Greece do not allow full use of the 863 to 870 MHz band. Detail of the restrictions, refer to EC Decision 2006/771/EC (as amended).

\*2: Available frequency bands vary depending on the country.

## IMPORTANT

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- Due to the designated certification of construction type, users may be subject to legal punishment in case of disassembling or modifying this product.
  - Preventing interference with other wireless stations Industrial, scientific, and medical equipment, as well as local wireless stations (license required) and specific low power wireless stations (license not required) for identifying mobile objects used in factory production lines, use the same frequency band as this product.
  - Check that local wireless stations and specific low-power wireless stations are not being used in the vicinity before using this product.
  - If this product causes radio interference in a local wireless station, stop the emission of radio waves immediately. For details on how to prevent radio interference, contact our service office
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## 1.2 Warranty

- The warranty shall cover the period noted on the quotation presented to the purchaser at the time of purchase. Problems occurring during the warranty period shall basically be repaired free of charge.
- If any problems are experienced with this product, the customer should contact the Yokogawa representative from which this product was purchased or the nearest Yokogawa office.
- If a problem arises with this product, please inform us of the nature of the problem and the circumstances under which it developed, including the model specification and serial number. Any diagrams, data and other information you can include in your communication will also be helpful.
- The party responsible for the cost of fixing the problem shall be determined by Yokogawa following an investigation conducted by Yokogawa.

### ■ **The purchaser shall bear the responsibility for repair costs, even during the warranty period, if the malfunction is due to:**

- Improper and/or inadequate maintenance by the purchaser.
- Malfunction or damage due to a failure to handle, use, or store this product in accordance with the design specifications.
- Use of this product in question in a location not conforming to the standards specified by Yokogawa, or due to improper maintenance of the installation location.
- Failure or damage due to modification or repair by any party except Yokogawa or an approved representative of Yokogawa.
- Malfunction or damage from improper relocation of this product in question after delivery.
- Reason of force majeure such as fires, earthquakes, storms/floods, thunder/lightening, or other natural disasters, or disturbances, riots, warfare, or radioactive contamination.

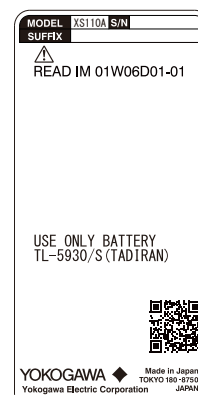
## 2. Notes on Handling

The XS110A is fully factory-tested before shipment. When the XS110A is delivered, check the appearance for damage.

This section describes the precautions required to handle this product. Before use, read this section thoroughly. For information about other items, refer to the relevant sections.

### 2.1 Check the Model and Specifications

The model name and specifications are written on the nameplate attached to the case. Verify that the specification indicated in the “Model and Suffix Code” in General Specifications “GS 01W06D01-01EN” complies with the specifications written on the order sheet.



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### 2.2 Transport

To prevent damage while in transit, leave the XS110A in the original shipping container until it reaches the installation site.

### 2.3 Storage

When an extended storage period is expected, observe the following precautions.

- (1) Choose a storage location that satisfies the following requirements.
  - A location that is not exposed to rain or water.
  - A location subject to a minimum of vibration or impact.
  - The following temperature and humidity range are recommended.
    - Temperature: -40°C to 85°C (-4 to 185°F)
    - Humidity: 0 to 100% RH (non-condensation)
- (2) If at all possible, store the transmitter in factory-shipped condition, that is, in the original shipping container.
- (3) Preferably remove the batteries for storage. For maximum battery life, the storage temperature should not exceed 30°C.



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## NOTE

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When storing this product over a long period, it is recommended to put the instrument in OFF Mode to conserve the battery. This product is shipped in OFF Mode from the factory. For details on how to switch to OFF Mode, refer to “IM 01W06C01-01EN”.

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## 2.4 Selecting the Installation Location

This product is designed to withstand severe environmental conditions. However, to ensure that it will provide years of stable and accurate performance, take the following precautions when selecting the installation location.

### ■ Wireless Communication

Install where there are no obstacles for radio waves such as walls or pipes around the product as possible.

### ■ Ambient Temperature

Avoid locations subject to wide temperature variations or a significant temperature gradient. If the location is exposed to radiant heat from plant equipment, provide adequate thermal insulation and/or ventilation.

### ■ Ambient Atmospheric

Do not install the product in a location with a corrosive atmosphere. If this cannot be avoided, ensure there is adequate ventilation.

### ■ Shock and Vibration

It is designed to be resistant to shock and vibration. However, it is recommended that the XS110A be installed in a location that is subject to a minimum amount of impact and vibration.

## 2.5 Restrictions on Use of Radio Transceivers

### IMPORTANT

Although this product has been designed to resist high frequency electrical noise, if a radio transceiver is used near this product or its external wiring, this product may be affected by high frequency noise pickup. To test this, start from a distance of several meters and slowly approach this product with the transceiver while observing the measurement loop for noise effects. Thereafter use the transceiver outside the range where the noise effects were first observed.

## 2.6 Explosion Protected Instrument

### 2.6.1 ATEX

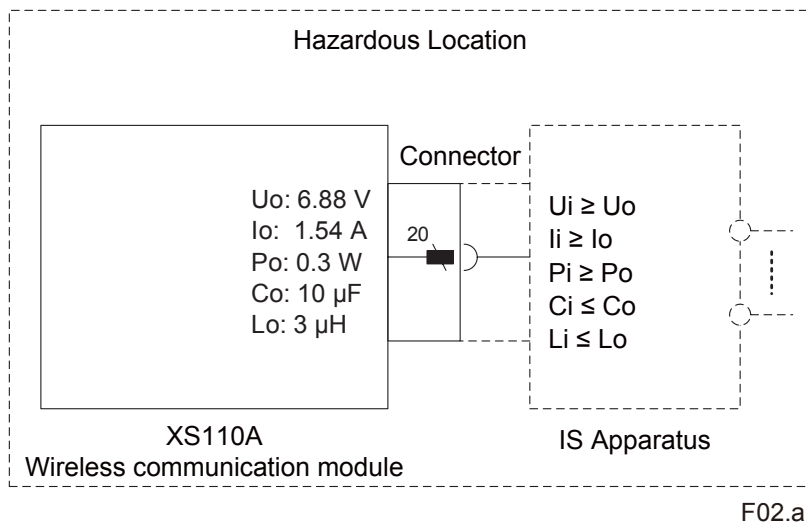
Certification information:



### WARNING

A modification of the equipment would no longer comply with the construction described in the certificate documentation.

Control drawing:



Specific conditions of use:

Precautions shall be taken to minimize the risk from electrostatic discharge of non-metallic parts.

**WARNING**

- POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
- USE ONLY SPECIFIED BATTERY – SEE INSTRUCTIONS

## Installation:

The equipment must be installed in accordance with EN 60079-14, local requirements, and the control drawing.

## Operation:

**WARNING**

- When the equipment is used in hazardous locations, avoid any actions which generate electrostatic charges, such as rubbing with a dry cloth.
- When using Sushi Sensor APP to the explosion protected instrument, the Android device must comply with the following.
  - When using the NFC link in a non-hazardous area, the maximum magnetic field strength generated by the Android device is 18 [A/m (r.m.s.)] or less (Compliant with ISO / IEC 14443).
  - When using NFC link in a hazardous area, only Android devices confirmed by Yokogawa Electric Corporation can be used.
  - If additional information and approvals for Android device are required, contact a Yokogawa representative.

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Maintenance and repair:



## **WARNING**

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Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.

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Replacing the Battery:



## **WARNING**

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Be sure to replace the battery in a safe location. Doing so in an explosive area could cause an explosion.

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Use the following batteries.

TL-5930/S, SL-2780/S (Tadiran) or SB-D02 (Vitzrocell)

### **2.6.2 IECEx**

Certification information:



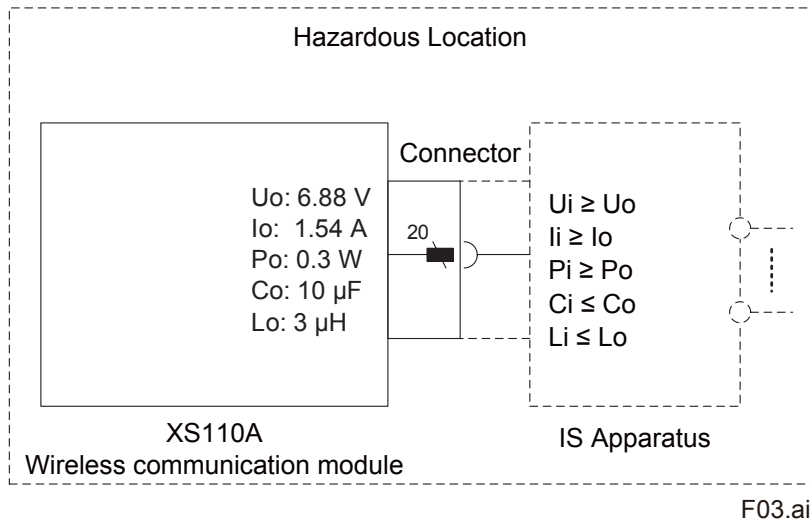
## **WARNING**

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A modification of the equipment would no longer comply with the construction described in the certificate documentation.

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Control drawing:



Specific conditions of use:

Precautions shall be taken to minimize the risk from electrostatic discharge of non-metallic parts.



## WARNING

- POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
- USE ONLY SPECIFIED BATTERY – SEE INSTRUCTIONS

Installation:

The equipment must be installed in accordance with IEC 60079-14, local requirements, and the control drawing.

Operation:



## WARNING

- When the equipment is used in hazardous locations, avoid any actions which generate electrostatic charges, such as rubbing with a dry cloth.
- When using Sushi Sensor APP to set the parameter of the explosion protected instrument, the Android device must comply with the following.
  - When using the NFC link in a non-hazardous area, the maximum magnetic field strength generated by the Android device is 18 [A/m (r.m.s.)] or less (Compliant with ISO / IEC 14443).
  - When using NFC link in a hazardous area, only Android devices confirmed by Yokogawa Electric Corporation can be used.
  - If additional information and approvals for Android device are required, contact a Yokogawa representative.

Maintenance and repair:



## WARNING

Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.

Replacing the Battery:



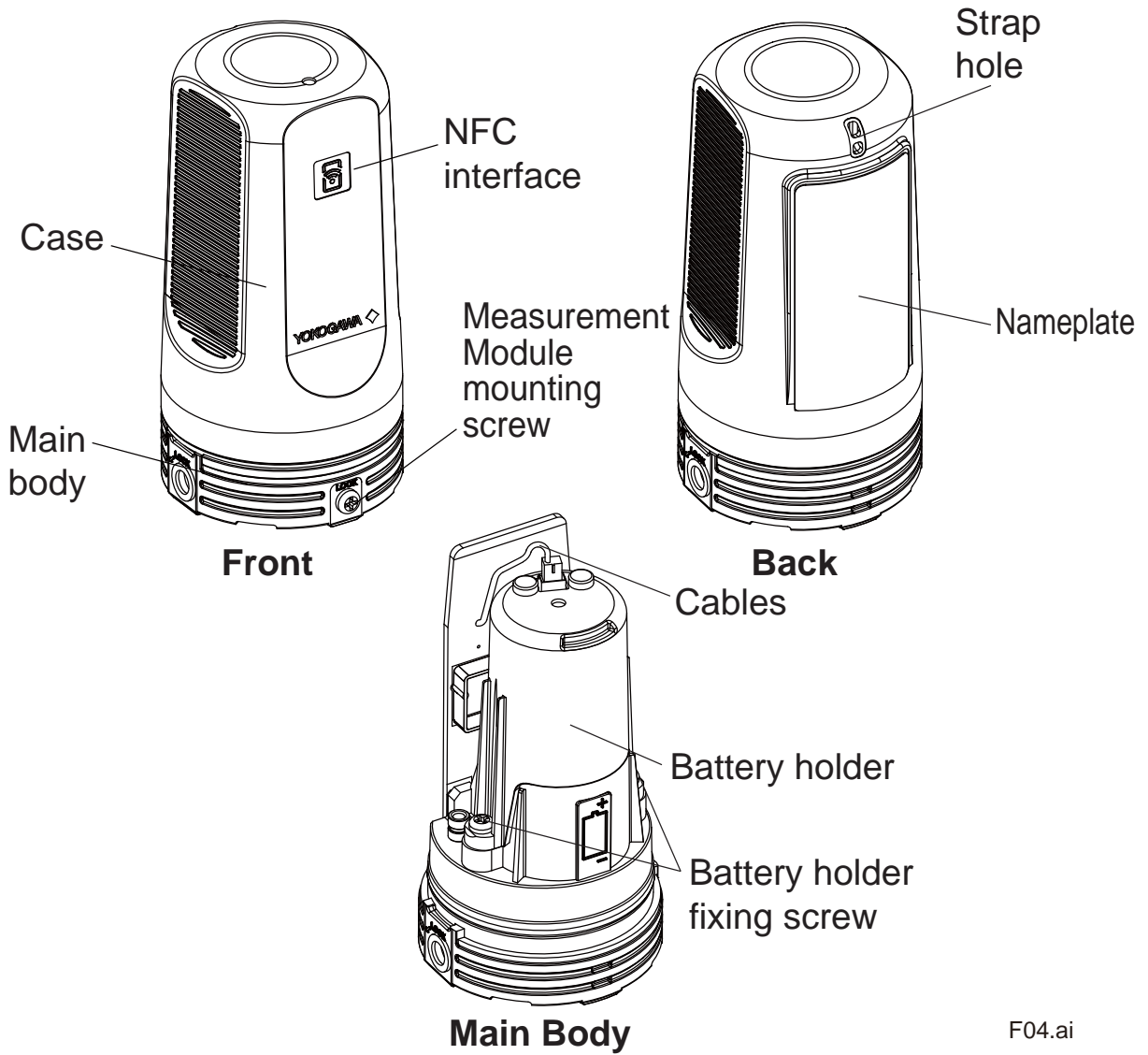
## WARNING

Be sure to replace the battery in a safe location. Doing so in an explosive area could cause an explosion.

Use the following batteries.

TL-5930/S, SL-2780/S (Tadiran) or SB-D02 (Vitzrocell)

### 3. Component Names



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## 4. Installation

The XS110A does not include batteries when shipped from the factory. Install the battery to the XS110A according to the procedure in Section 6.1. After installing the battery, mount the Measurement Module on the XS110A. Refer to the User's Manual of the Measurement Module connected to the XS110A for installation precautions.

Refer to Chapter 7 "General Specifications" for the ambient conditions of the installation site.



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## 5. Operation

To perform the setting and status check of the product, use an Android device with the NFC interface. Download Sushi Sensor App from Google Play.

Sushi Sensor App provides the following functions.

- Network setting
- Sensor setting
- Status check of communication, sensor, battery life, etc.
- Switch to OFF Mode

For details, refer to “IM 01W06C01-01EN”.

Check the firmware version of Measurement Module with Sushi Sensor App and update it to the latest firmware before use.

## 6. Maintenance

### 6.1 Replacing the Battery

The XS110A can be replaced with a new battery. The XS110A does not include batteries when shipped from the factory. Install the battery in the XS110A according to the procedure in this section. If the XS110A is installed on the Measurement Module, remove the XS110A according to the user manual of the Measurement Module. Refer to 6.2 for the battery that can be mounted on the XS110A.

## ■ Workflow

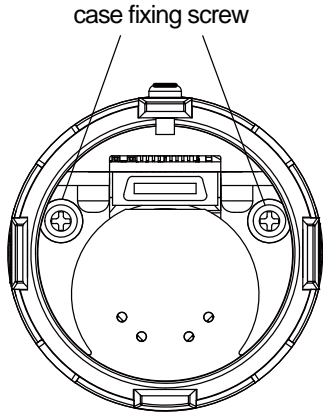
### IMPORTANT

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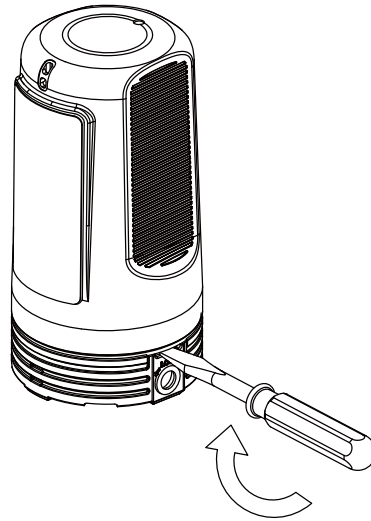
- This product contains parts that can be damaged by static electricity. When replacing a battery, take precautions such as using a grounded wrist strap to avoid handling electronic parts or touching the board circuit patterns.
  - When putting on or removing the Case, pay great attention to the environmental conditions to prevent dust and water droplets entering the product.
  - Take sufficient care not to apply excessive force to the circuit board, hit the board with tools, or stick foreign objects or dirt to the board.
  - Be careful not to force the cable to scratch it, break it, or pull it out of the battery holder.
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Follow the procedure below to replace the battery.

1. Loosen the case retaining screw (2 places) on the underside of the XS110A.
2. Remove the case and body. If it is difficult to open the case by hand, use a flat blade screwdriver as shown in Fig. 6-2. The case can be easily opened by holding it in the groove between the case and the body and pushing it upward.
3. While holding the top surface of the battery holder with your hand, loosen the battery holder fixing screw (2 places) alternately.
4. If the battery is stored, remove it by lifting the battery that is stored with the battery holder.
5. Insert the new replacement battery into the battery holder with the positive electrode facing up, as shown in Figure 6-3.
6. With the top of the battery holder held down by hand, alternately tighten the battery holder fixing screw (2 places) with a torque of 1.4 N·m.
7. Put the case into the body without any gap.
8. Tighten the case fixing screw (2 places) on the bottom of the XS110A to fix the case with a torque of 1.4 N·m.
9. Initialize the battery life using Sushi Sensor App. For details about how to initialize the battery life, refer to “IM 01W06E01-11EN”.



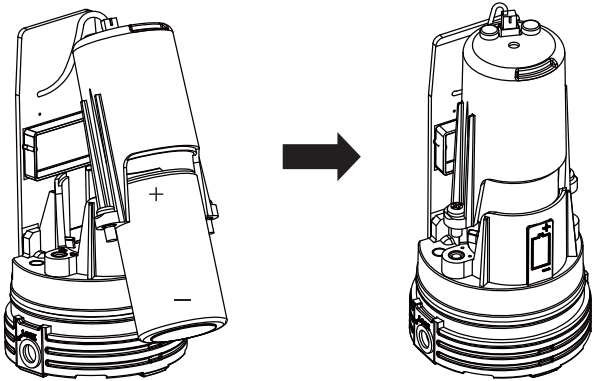
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Figure 6-1 Bottom of XS110A

Figure 6-2 Removing the case and body



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Figure 6-3 How to insert the battery

## 6.2 Handling the Battery

This product uses one lithium thionyl chloride primary battery. A single battery contains approximately 5 grams of lithium.

Under normal conditions, the battery materials are self-contained and are not reactive as long as the battery integrity is maintained. Care should be taken to prevent thermal, electrical or mechanical damage. Battery should be stored in a clean and dry area. For maximum battery life, storage temperature should not exceed 30°C.



### WARNING

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#### handling of batteries

The following precautions must be observed to safely and effectively use a battery pack. Improper use may lead to fluid leakage, excessive heat, ignition, or explosion.

- Never charge it.
  - Don't cut short-circuit it.
  - Do not disassemble, transform, or modify it.
  - Do not heat it or throw it in a fire.
  - Do not soak it in fresh water or seawater.
- 



### CAUTION

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#### Observe the following precautions for the safe disposal of battery.

- Do not incinerate the battery, and do not expose it to a high temperature of 100°C or more. This may lead to fluid leakage or explosion.
  - Dispose of the battery according to laws and regulations.
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## ■ Batteries

Part No.: F9915NR (2 batteries)\*1\*2

Alternatively, following batteries may be purchased and used.

- Tadiran TL-5930/S or SL-2780/S
- VITZROCELL SB-D02

### **Transportation of products containing a lithium battery:**

This product contains a lithium battery. When transporting this product with the battery installed, set this product to OFF mode to prevent the battery from draining. For details about how to change to OFF mode, refer to “IM 01W06C01-01EN”. Transportation of primary lithium batteries is restricted by regulations issued by the U.S. Department of Transportation, the International Air Transport Association (IATA), the International Civil Aviation Organization (ICAO), and the European Ground Transportation of Dangerous Goods (ARD). It is the responsibility of the shipper to ensure compliance with these and any other local requirements. Consult current regulations and requirements before shipping.

## 7. General Specifications

Please refer to “GS 01W06D01-01EN” for the latest information.

### 7.1 STANDARD SPECIFICATIONS

#### ■ WIRELESS SPECIFICATIONS

**Communication protocol:**

LoRaWAN Class A,  
EU868, AS923, US915

**Data Rate:**

250 to 11000 bps\*

\*: Available data rate vary  
depending on the country.

**Frequency:**

[[Area code 2] 863 to 870 MHz\*<sup>1</sup>

[Area code 3] 902 to 928 MHz\*<sup>2</sup>

[Area code 4] 919 to 925 MHz\*<sup>2</sup>

\*1: This wireless frequency can  
be used throughout, Europe,  
although there are some  
restrictions in Sweden and  
Greece.

\*2: Available frequency bands  
vary depending on the country.

**Radio Security:**

AES 128-bit encryption

**RF Transmitter Power:**

Max. 7 dBm

**Antenna:**

Built-in Omnidirectional antenna

#### ■ POWER SUPPLY SPECIFICATIONS

**Battery:**

Lithium thionyl chloride battery

(size D) : 1 unit

Rated voltage: 3.6 V

Rated capacity: 19 Ah

#### ■ PERFORMANCE SPECIFICATION

**Update Time:**

1 minute to 3 days

**Battery characteristics:**

Measurement Module connected  
to XS110A Battery life varies  
depending on the battery level.

Refer to the General  
Specifications of each  
Measurement Module.

#### ■ FUNCTIONAL SPECIFICATION

**Output signal:**

LoRaWAN

(EU868; EU, AS 923; Southeast  
Asia, US915; North America)

**NFC Interface:**

NFC Forum Type 2 Tag

**Diagnostics Function:**

Battery alarm, internal temperature, wireless communication failures, memory failures, Measurement Module connection failure

**Software Download Features:**

Allows the user to update the software of the sensor via the NFC interface.

**Power supply to the Measurement Module:**

Supply voltage: 3.3 V  
Supply current: 50 mA

**■ INSTALLATION ENVIRONMENT****Ambient Temperature Limits:**

Operating: -40 to 85°C  
(-4 to 185°F)  
Storage: -40 to 85°C  
(-4 to 185°F)

**Ambient Humidity:**

0 to 100% RH (non-condensing)

**Temperature Gradient:**

Operating: Within  $\pm 10^\circ\text{C/h}$   
Storage: Within  $\pm 20^\circ\text{C/h}$

**Altitude:**

Up to 3000 m

**Vibration Resistance:**

0.21 mmP-P (10 to 60 Hz),  
3 G (60 to 2 kHz)

**Shock Resistance:**

50 G 11 ms

**■ REGULATORY COMPLIANCE STATEMENTS**

This device satisfies the following standards.

\*: Please confirm that an installation region fulfills an applicable standard. If additional regulatory information and approvals are required, contact a Yokogawa representative.

**Telecommunication Compliance:**

RE Directive (EEA and EFTA Countries),  
FCC Approval (United States)

**CE Conformity:**

RoHS Directive:  
EN50581  
RE Directive:  
Safety: EN61010-1 (Indoor/Outdoor use), EN62479  
EMC: EN 301 489-1, EN 301 489-3, EN61326-1 Class A Table 2, EN61326-2-3, EN55011 Class A  
Radio Spectrum: EN 300 220-2 (Band h1.3 in the table 1 of CEPT ERC Rec. 70-03), EN 300 330  
ATEX Intrinsically Safety declaration:  
Certificate number:  
DEKRA 20ATEX0024X  
Applicable standards:  
EN IEC 60079-0:2018,  
EN 60079-11:2012



Ex marking: II 2 G Ex ib IIC

T4 Gb

Ambient temperature: -40 to 85°C\*

\*: Additionally, limited by the ambient temperature range of the equipment connected to XS110A.

Electrical parameters:

Connector

$U_o = 6.88 \text{ V}$ ,  $I_o = 1.54 \text{ A}$ ,

$P_o = 0.3 \text{ W}$ ,  $C_o = 10 \text{ }\mu\text{F}$ ,

$L_o = 3 \text{ }\mu\text{H}$

Enclosure: IP66/IP67

when accordance with EN 60529 when combined with certified equipment.

#### Canadian Safety Standards:

CAN/CSA-C22.2 No.61010-1

CSA-C22.2 No.94.2

IEC 60529

Pollution degree 2

Overvoltage category I

#### Degrees of Protection:

IP66/IP67 and Type 4X

Apply when connected to the Measurement Module.

#### IECEX Intrinsically Safe Approval:

Certificate number:

IECEX DEK 19.0027X

Application Standard:

IEC 60079-0:2017,

IEC 60079-11:2011,

Certificate: IECEX DEK 19.0072

Ex ic IIB T4 Gc

Ambient temperature:

-20 to 75°C (-4 to 167°F)

Electrical parameters:

Connector

$U_o = 6.88 \text{ V}$ ,  $I_o = 1.54 \text{ A}$ ,

$P_o = 0.3 \text{ W}$ ,  $C_o = 10 \text{ }\mu\text{F}$ ,

$L_o = 3 \text{ }\mu\text{H}$

Enclosure: IP66/IP67 when accordance with EN 60529 when combined with certified equipment.

## ■ PHYSICAL SPECIFICATIONS

#### Housing:

Plastic (PC)

#### Weight:

300 g (0.66 lb)\*

\*: Without battery

## 7.2 Software Specifications

### ■ Sushi Sensor App

This software is used to perform the setting and status check of this product via the NFC interface.

#### Operating Environment:

Item	Recommended System Requirements
OS	Android 5.1.1 or higher
CPU	Snapdragon 800 or better
Resolution	1280 x 720 dots or more
NFC	Readers, Writer
GPS	Optional

#### Note of Available Android Device:

When using Sushi Sensor APP to the Android device must comply with the following.

- When using an NFC link in a non-hazardous area, the maximum magnetic field strength generated by the Android device is 18 A/m (r.m.s.) or less (Compliant with ISO / IEC 14443).
- When using an NFC link in a hazardous area, only an Android device confirmed by Yokogawa Electric Corporation can be used.
- If additional information and approvals for Android devices are required, contact a Yokogawa representative.

## 7.3 MODEL AND SUFFIX CODES

Model	Suffix Codes	Description
XS110A		Wireless Communication Module
Inter-module Communication	-A	XS-series dedicated digital communication
Area Code	2	Europe EU868
	3	North America US915
	4	Southeast Asia AS923
Type	00	General Purpose <sup>*1</sup>
	K2	ATEX intrinsic safety <sup>*2</sup>
	S2	IECEX intrinsic safety <sup>*3</sup>
—	-A.	Always A
Housing material	5	Plastic (PC)
Power source	D	Battery powered
—	A	Always A

\*1: Applicable when Area Code is 2 or 3.

\*2: Applicable when Area Code is 2.

\*3: Applicable when Area Code is 4

## 7.4 OPTIONAL ACCESSORIES

Item	Parts Number	Description
Batteries <sup>*1</sup>	F9915NR	Lithium-thionyl chloride batteries <sup>*2</sup> , 2 pieces <sup>*3</sup>

\*1: Alternatively, Tadiran TL-5930/S, SL-2780/S or VITZROCELL SB-D02 batteries can be purchased from your local distributor.

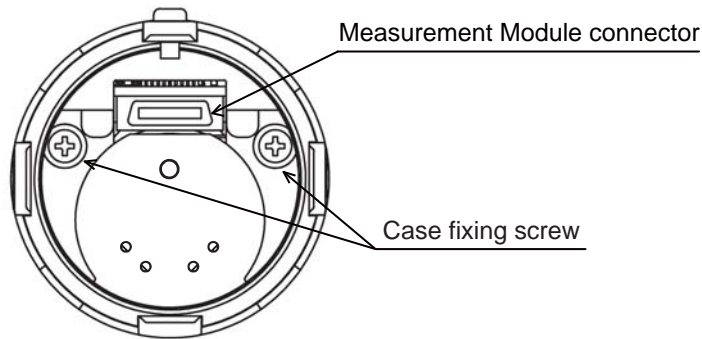
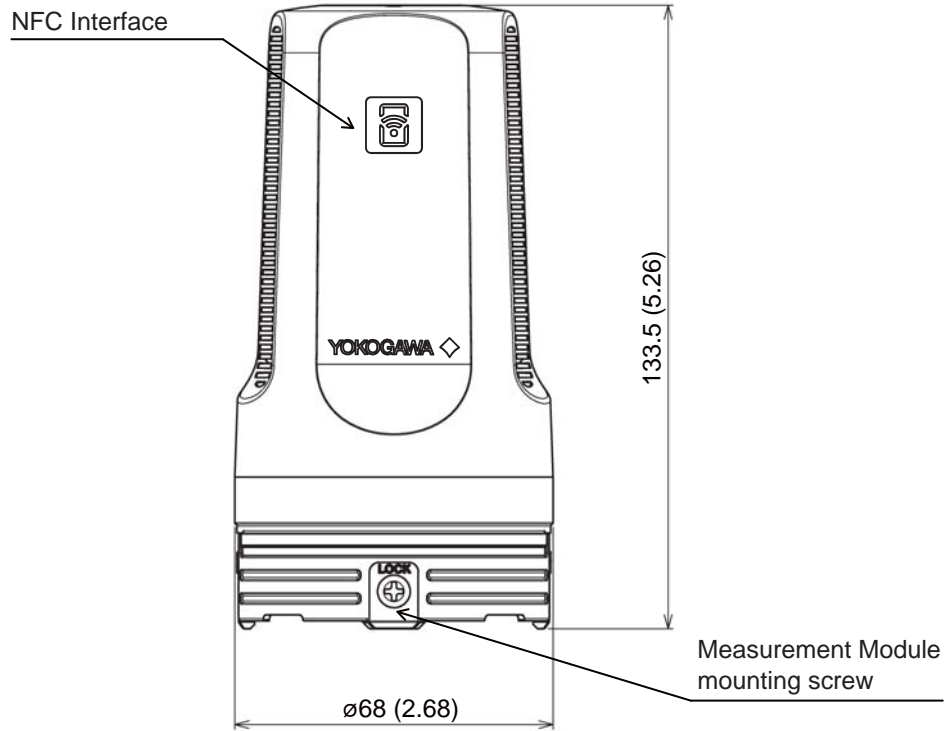
\*2: Tadiran TL-5930/S

\*3: This product works with one size D battery, but the accessory is a set of two.

## 7.5 Outline

### ● Main body

Units: mm (Approx. inch)



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## 7.6 Regulatory Compliance Statements

This product satisfies the following standards.

- \* Please confirm that an installation region fulfills an applicable standard. If additional regulatory information and approvals are required, contact a Yokogawa representative.

### Telecommunication Compliance:

#### ■ RE Directive (EU Countries)

Hereby, Yokogawa Electric Corporation declares that the radio equipment type XS110A complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

<https://partner.yokogawa.com/global/>

#### ■ FCC compliance (United States)

FCC ID: SGJ-WFC017

##### FCC Approval

This device complies with part 15 of the FCC Rules. Operation is subject 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.

##### Co-located:

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

##### FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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## NOTE

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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### **RF Exposure Compliance:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 20 cm or more away from person's body.

### **■ ISED compliance (Canada)**

IC: 8999A-WIC016

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

French:

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**RF Exposure Compliance:**

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20 cm or more away from person's body.

French:

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISDE. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le radiateur et le corps humain.

**CE Conformity:**

The Authorized Representative for this product in the EEA is:

Yokogawa Europe B.V. Euroweg 2, 3825 HD Amersfoort, THE  
NETHERLANDS.

RoHS Directive:

EN50581

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RE Directive:

Safety: EN61010-1 (Indoor/Outdoor use), EN62479

(1) Pollution Degree 2

“Pollution degree” describes the degree to which a solid, liquid, or gas which deteriorates dielectric strength or surface resistivity is adhering. “2” applies to normal indoor atmosphere. Normally, only non-conductive pollution occurs. Occasionally, however, temporary conductivity caused by condensation must be expected.

(2) Installation Category I

“Overvoltage category (Installation category)” describes a number which defines a transient overvoltage condition. It implies the regulation for impulse with stand voltage. “I” applies to electrical equipment which is supplied from the circuit when appropriate transient overvoltage control means (interfaces) are provided.

EMC:

EN 301 489-1, EN 301 489-3, EN61326-1 Class A Table 2,  
EN61326-2-3, EN55011 Class A



## CAUTION

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This instrument is a Class A product, and it is designed for use in the industrial environment. Please use this instrument in the industrial environment only.

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Radio Spectrum:

EN 300 220-2 (Band h1.3 in table 1 of CEPT ERC Rec. 70-03),  
EN 300 330



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## ■ Waste Electrical and Electronic Equipment (WEEE), Directive

(This directive is valid in the EU member states.)

This product complies with the WEEE Directive marking requirement.

The following marking indicates that you must not discard this electrical/ electronic product in domestic household waste.

Product Category

With reference to the equipment types in the WEEE directive, this product is classified as

“Small equipment”.

Do not dispose of this product in domestic household waste.

When disposing of products in the EU, contact your local Yokogawa Europe B. V. office.



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## Revision Information

**Title:** XS110A Wireless Communication Module

**Reference Number:** IM 01W06D01-01EN

Edition	Date	Page	Revision Item
1st	July 2020	—	New publication



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