

YFGW520 Field Wireless Access Point

Read Me First

IM 01W02E02-11EN

This document specifies the important information to use this product correctly and safely and the License Agreement of Attached Software for YFGW520 Field Wireless Access Point.

Before use the product, be sure to read this document first.

The configuration of the field wireless system is described in User's Manual of the YFGW410 Field Wireless Management Station (IM 01W02D01-01EN). Read that document first.

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Introduction

This manual (IM 01W02E02-11EN) describes the safety precautions, explosion protected type specifications and the license agreement of attached software for the YFGW520.

There are three documents including this one for the YFGW520 listed below. Read them along with this manual.

Document No.	Document name	Description
IM 01W02E02-01EN	YFGW520 Field Wireless Access Point	This manual is stored in the attached DVD-ROM for YFGW520. It describes installation, wiring, operation, maintenance and specification of the YFGW520.
IM 01W02E02-11EN	YFGW520 Field Wireless Access Point Read Me First	This manual. It describes the safety precaution, explosion protected type specifications and the license agreement of the attached software for the YFGW520.
GS 01W02E02-01EN	YFGW520 Field Wireless Access Point	Product specification including detailed model and suffix code, optional specifications and accessory of the YFGW520.

■ Regarding This User's Manual

- This manual should be provided to the end user. Please recommend end users to keep this manual at hand and refer to it as needed.
- This manual and the identification tag attached on packing box are essential parts of the product; keep them in a safe place for future reference.
- Before use, read this manual thoroughly to comprehend its contents.
- The purpose of the User's Manual is to describe details of functions provided in this product, not to warrant the product's suitability to the specific purposes of customers.
- No part of this manual may be reproduced in any form without Yokogawa's written permission.
- The contents of this manual may be changed without prior notice.
- All reasonable effort has been made to ensure the accuracy of the contents of this manual. However, if any errors or omissions are found, please inform any of sales offices listed on the back cover or your local distributor.
- 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 this User's Manual may not be revised for any specification changes, construction changes or operating part changes that are not considered to affect function or performance.

Safety Precautions

■ Safety, Protection, and Modification of the Product

- In order to protect the operator, product, and system controlled by the product, observe the safety precautions described in this User's Manual. If users handle contrary to these instructions, we can not guarantee the safety.
- If this instrument is used in a manner not specified in this User's Manual, the protection provided by this instrument may be impaired.
- Modification of the product is strictly prohibited.
- If customers attempt to repair or modify explosion protected type products and fail to return them to their original state, the explosion protected structure of this product will be lost, resulting in a hazardous state. All repairs and modifications of the product must be consulted with Yokogawa.
- If any protection or safety circuit is required for the system controlled by the product or for the product itself, prepares it separately.
- Be sure to use the spare parts approved by Yokogawa Electric Corporation (hereafter simply referred to as Yokogawa) when replacing parts or consumables.
- The following symbols are used in the product and User's Manual to indicate that there are precautions for safety:



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.

TIP

Indicates additional information.

**SEE
ALSO**

Indicates a source to refer to



Indicates a protective grounding terminal. Before using the product, ground the terminal.



Indicates a functional grounding terminal. Before using the product, ground the terminal.



Indicates a DC supply

■ Safe Use of This Product

This product is designed to be used by a person with specialized knowledge. For the safety of the operator and to protect the instrument and the system, please be sure to follow this manual's safety instructions when handling this instrument. If these instructions are not heeded, the protection provided by this instrument may be impaired. In this case, Yokogawa cannot guarantee that the instrument can be safely operated. Please pay special attention to the following points:

(a) Installation

- This instrument may only be installed by an engineer or technician who has an expert knowledge of this device. Operators are not allowed to carry out installation unless they meet this condition.
- All installation shall comply with local installation requirements and the local electrical code.

(b) Wiring

- The instrument must be installed by an engineer or technician who has an expert knowledge of this instrument. Operators are not permitted to carry out wiring unless they meet this condition.

(c) Operation

- Wait 1 min. after the power is turned off, before opening the covers.

(d) Maintenance

- Please carry out only the maintenance procedures described in this manual. If you require further assistance, please contact the nearest Yokogawa office.
- Care should be taken to prevent the build up of dust or other materials on the display glass and the name plate. To clean these surfaces, use a soft, dry cloth.

(e) Explosion Protected Type Instrument

- Users of explosion protected instruments should refer first to "Explosion Protected Type Specifications" section of this manual.
- The use of this instrument is restricted to those who have received appropriate training in the device.

- Take care not to create sparks when accessing the instrument or peripheral devices in a hazardous location.
- Repair or modification to this instrument by customer will cause malfunction of explosion protect function and hazardous situation. If you need to repair or modification, please contact the nearest Yokogawa office.

(f) Modification

- Yokogawa will not be liable for malfunctions or damage resulting from any modification made to this instrument by the customer.

(g) Product Disposal

- The instrument should be disposed of in accordance with local and national legislation/regulations.

■ Warranty

- **The warranty terms of this instrument are described in the quotation. We will make any repairs that may become necessary during the guaranteed term free of charge.**
- **Please contact our sales office or your local distributor if this instrument requires repair.**
- **If the instrument is faulty, contact us with complete details about the problem and the length of time it has been faulty, and state the model and serial number. We would appreciate the inclusion of drawings or additional information.**
- **The results of our examination will determine whether the product will be repaired free of charge or on an at-cost basis.**

■ The guarantee will not apply in the following cases:

- **Damage due to negligence or insufficient maintenance on the part of the customer.**
- **Problems or damage resulting from handling, operation or storage that violates the intended use and specifications.**
- **Problems that result from using or performing maintenance on the instrument in a location that does not comply with the installation location specified by Yokogawa.**
- **Problems or damage resulting from repairs or modifications not performed by Yokogawa or someone authorized by Yokogawa.**
- **Problems or damage resulting from inappropriate installation after delivery.**

- **Problems or damage resulting from disasters such as fires, earthquakes, storms, floods, or lightning strikes and external causes.**

■ **Warranty and Disclaimer**

- **Yokogawa assumes no responsibilities for this product except as stated in the warranty.**
- **Yokogawa shall have neither liability nor responsibility to any person or entity with respect to any direct or indirect loss or damage arising from using the product or any defect of the product that Yokogawa can not predict in advance.**

■ **Authorized Representative in the EEA**

The Authorized Representative for this product in the EEA is: Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort, THE NETHERLANDS.

■ **Notes on Hardware**

● **Appearance and Accessories**

Check the following when you receive the product:

- Appearance
- Standard accessories

Contact our sales representative or your local distributor if the product's coating has come off or any accessories are missing.

● **Model and Suffix Codes**

The name plate on the product contains the model and suffix codes. Verify that the specification indicated in the "MODEL AND SUFFIX CODES" and "OPTIONAL SPECIFICATIONS" in General Specifications "GS 01W02E02-01EN" is in compliance with the specifications written on the order sheet. If you have any questions, contact our sales office or your local distributor.

■ **Notes on Attached Software**

- **Before opening the media package, read YFGW520 Software License Agreement. Once the package is opened, it is thought that the contract is agreed.**
- **Yokogawa assumes no responsibilities for this software except as stated in the warranty.**
- **This software is used with this product exclusively. This can be installed in the computer which connects with this product.**

■ Regulatory Compliance for Radio and Telecommunication

Please confirm that an installation region fulfills a standards, require additional regulatory information and approvals, contact to Yokogawa Electric Corporation.

● Radio Equipment Directive

Hereby, Yokogawa Electric Corporation declares that the radio equipment type YFGW520 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

<http://www.yokogawa.com/fld/>

● EMC Conformity Standards

EN 301 489-1, EN 301 489-17, EN 61326-1, EN 55011 Class A, Group 1, EN 61000-6-2



CAUTION

This equipment is a Class A product.

This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Please use this equipment in the industrial environment only.

● Safety Conformity Standards

Applicable standard: EN 61010-1, EN 62479, EN 60825-1

(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 withstand voltage. “I” applies to electrical equipment which is supplied from the circuit when appropriate transient overvoltage control means (interface) are provided.

(3) Laser Safety

100BASE-FX (Single mode Fiber) model of YFGW520 is compliant with IEC 825-1 Class 1 and CDRH 21-CFR 1040 Class 1 eye safety requirements.



CAUTION

- To avoid eye injury although, please do not see a light source.



CAUTION

- When the maximum operating temperature is more than 60°C, use the wiring cable of 80°C or higher temperature rating.

- **Spectrum Conformity Standard**

EN 300 328

- **FCC compliance**

FCC ID: SGJ-WFC015

FCC Approval (Part 15C)

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.



NOTE

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.

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**

IC: 8999A-WIC014

This device complies with ISED’s applicable licence-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.

This radio transmitter 8999A-WIC014 has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Antenna type	Gain
Sleeve	2.14 dBi
Collinear	9 dBi
Hybrid patch	15 dBi

French:

Le présent appareil est conforme aux CNR d’ISDE 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.

Le présent émetteur radio 8999A-WIC014 a été approuvé par Industrie Canada pour fonctionner avec les types d’antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d’antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l’exploitation de l’émetteur.

Type d’antenne	Gain
Sleeve	2.14 dBi
Collinear	9 dBi
Hybrid patch	15 dBi

RF Exposure Compliance:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC 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’IC. Cet équipement doit être installé et utilisé en gardant une distance de 20 cm ou plus entre le radiateur et le corps humain.

● **RRA compliance**

This product complies with the Radio Waves Act (Republic of Korea).



Registration No: R-R-YHQ-WRA011, R-C-YHQ-WRA013
 Equipment Name: Field Wireless Access Point
 Model name: YFGW520
 Trade Name: Yokogawa Electric Corp.
 Manufacturer: Yokogawa Electric Corp.
 Country of Origin: Japan

■ Control of Pollution Caused by the Product

● EU RoHS

This product is in conformity with the following standard:

EN 50581:2012 (Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances)

● China RoHS

This is an explanation for the product based on “Control of Pollution caused by Electronic Information Products” in the People’s Republic of China.

電子情報製品污染制御管理弁法（中国版 RoHS）

产品中有害物质或元素的名称及含量

型号	部件名称	有害物质					
		铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
YFGW520 现场无线接入点	壳体	×	○	○	○	○	○
	基板组件	×	○	○	○	○	○
	电源连接线	×	○	○	○	○	○
	天线组件	×	○	○	○	○	○

○：表示该部件的所有均质材料中的有害物质的含量均在GB/T26572 标准中所规定的限量以下。
 ×：表示至少该部件的某些均质材料中的有害物质的含量均在GB/T26572 标准中所规定的限量以上。

环保使用期限：



该标识适用于SJ/T11364 中所述，在中华人民共和国销售的电子电气产品的环保使用期限。

注) 该年数为“环保使用期限”，并非产品的质量保证期。

Explosion Protected Type Specifications

■ Optional Specifications (For Explosion Protected Type)

Item		Description	Code
Factory Mutual (FM) *1*2*3	United States	FM Nonincendive Approval (United States) Certificate: FM17US0294X Applicable standard: FM Class 3600:2018, FM Class 3611:2018, FM Class 3810:2018, NEMA 250:2014 Nonincendive for Class I, Division 2, Groups A, B, C and D. Class I, Zone 2, Group IIC. Suitable for Class II, Division 2, Groups F and G, and Class III, Division 1 Enclosure: Type 4X Amb. Temp.(Tamb): -40 to 70°C (-40 to 158°F), Altitude: Up to 3000 m	FN17
	Canada	FM Non-Incendive and Type n Approval (Canada) Certificate: FM17CA0150X Applicable standard: C22.2 No. 94-2:2015, C22.2 No. 213:2017, CAN/CSA-C22.2 No. 60079-0:2015, CAN/CSA-C22.2 No. 60079-11:2014, CAN/CSA-C22.2 No. 60079-15:2016, CAN/CSA-C22.2 No. 60529:2016, CAN/CSA-C22.2 No. 61010-1-12:R2017 Non-incendive for Class I, Division 2, Groups A, B, C, D Suitable for Class II, Division 2, Groups F, G; Class III, Division 1 Ex nA [ic] IIC T4 Gc Enclosure: Type 4X, IP66 Amb. Temp.(Tamb): -30 to 70°C (-22 to 158°F), Altitude: Up to 3000 m	CN17
ATEX *1*2		ATEX Type n declaration Applicable standard: EN 60079-0: 2012+A11:2013, EN 60079-11:2012, EN 60079-15:2010 II 3 G Ex nA [ic] IIC T4 Gc X Enclosure: IP66 according to EN 60079-15 Amb. Temp.(Tamb): -30 to 70°C (-22 to 158°F) Atmospheric pressure: 70 kPa to 110 kPa (Altitude: Up to 3000 m)	KN27
		ATEX Flameproof Approval Certificate: DEKRA 15ATEX0042 X Applicable Standard: EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-11:2012 II 2 G Ex db [ib] IIC T4 Gb Um: 250 V Amb. Temp.(Tamb): -40 to 70°C (-40 to 158°F)	KF27
IECEX *1*2*3		IECEX Type n Approval Certificate: IECEX DEK 14.0028X Applicable standard: IEC 60079-0:2011, IEC 60079-11:2011, IEC 60079-15:2010 Ex nA [ic] IIC T4 Gc Enclosure: IP66 according to IEC 60079-15 Amb. Temp.(Tamb): -30 to 70°C (-22 to 158°F)	SN27
		IECEX Flameproof Approval Certificate: IECEX DEK 15.0021X Applicable Standard: IEC 60079-0:2011, IEC 60079-1:2014, IEC 60079-11:2011 Ex db [ib] IIC T4 Gb Um: 250 V Amb. Temp.(Tamb): -40 to 70°C (-40 to 158°F)	SF27

*1: G1/2 electrical connection (Electrical connection code: 0) cannot be selected.

*2: Applies only English manual language (Manual language code: 1).

*3: CE marking is omitted from the product when this option is selected

■ Installation of an Explosion Protected Instrument

If a customer makes a repair or modification to an explosion protected instrument and the instrument is not restored to its original condition, its explosion protected construction may be compromised and the instrument may be hazardous to operate. Please contact Yokogawa before making any repair or modification to an instrument.



CAUTION

The installation of the devices should be carried out by the engineers or other professional personnel of the related expertise. The installation should not be carried out by operators or other unprofessional personnel.



CAUTION

This instrument has been tested and certified as being explosion protected. Please note that severe restrictions apply to this instrument's construction, installation, external wiring, maintenance and repair. A failure to abide by these restrictions could make the instrument a hazard to operate.



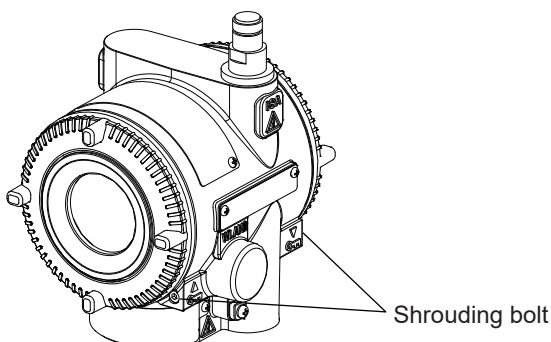
WARNING

- A modification of the equipment would no longer comply with the construction described in the certificate documentation.
- To preserve the safety of Flameproof equipment requires great care during mounting, wiring, and piping. Safety requirements also place restrictions on maintenance and repair activities. Please read the following sections very carefully.



NOTE

- The front and rear cover are locked by an Allen head bolt (a shrouding bolt) on Flameproof type instruments. When the shrouding bolt is driven clockwise by an Allen wrench, it is going in and cover lock is released, and then cover can be opened by hand.
- When a cover is closed, it is the must turn the shrouding bolt counterclockwise and lock the cover. Tighten the shrouding bolt to a torque of 0.7 N·m.



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**NOTE**

- YFGW520 should be installed in upright position.
- YFGW520 does not have a power switch inside. Prepare a dedicated breaker for the external power line to turn ON/OFF the device.
- Make sure that the breakers are installed in the power supply circuits located in non-hazardous areas so that the power can be shutoff when abnormality occurs.
- Electrostatic charge may cause an explosion hazard. Avoid any actions that cause the generation of electrostatic charge, such as rubbing with a dry cloth on the non-metallic parts (excluding glass parts) or coated parts of product.
- Take care not to generate mechanical sparking when access to the instrument and peripheral devices in hazardous area.
- The antenna and surge protective device provided with YFGW520 are simple apparatus in accordance with IEC 60079-11 or EN 60079-11.
 - They are passive components and their internal inductance and capacitance are negligible regarding intrinsically safe installation.
 - They do not contain any voltage and/or current-limiting devices.
 - They do not contain any means of increasing voltage or current, such as DC-DC converters.
 - Surge protective device is not separated from the earth and must earthed together with YFGW520 in accordance with IEC 60079-14 or EN 60079-14.
 - Surge protective device has metallic enclosures and no risk for electrostatic discharges.
 - As for the temperature class, they are classified as T4 for $T_a \leq 70^\circ\text{C}$, since the power applied to them is $\leq 130\text{ mW}$ and their surface area is $> 20\text{ mm}^2$.
 - Lc of the provided cable is $0.21\ \mu\text{H/m}$.
 - Cc of the provided cable is 83 pF/m .

■ FM Approval (United States)

Caution for FM Nonincendive Approval (United States).

(1) Technical Data

Note 1. Model YFGW520 Field Wireless Access Point with optional code FN17 is applicable for use in hazardous (classified) locations.

- Applicable standards: FM Class 3600:2018, FM Class 3611:2018, FM Class 3810:2018, NEMA 250:2014
- Nonincendive for Class I, Division 2, Groups A, B, C and D; Class I, Zone 2, Group IIC Suitable for Class II, Division 2, Groups F and G, and Class III, Division 1
- Locations: Indoor and Outdoor use
- Enclosure: Type 4X
- Temperature Class: T4
- Ambient Temperature: -40 to 70°C (-40 to 158°F)
- Altitude: Up to 3000 m
- Power Supply: Rated Voltage: 24 V DC
Voltage Range*1: 10.0-26.4 V DC
- *1: The equipment shall not be operated outside the range.
- Power dissipation: ≤ 3.5 W
- RF Power: ≤ 60 mW

(2) Electrical Parameters

Refer to Control Drawing (NFM027-A15).

(3) Operation

Refer to Control Drawing (NFM027-A15).

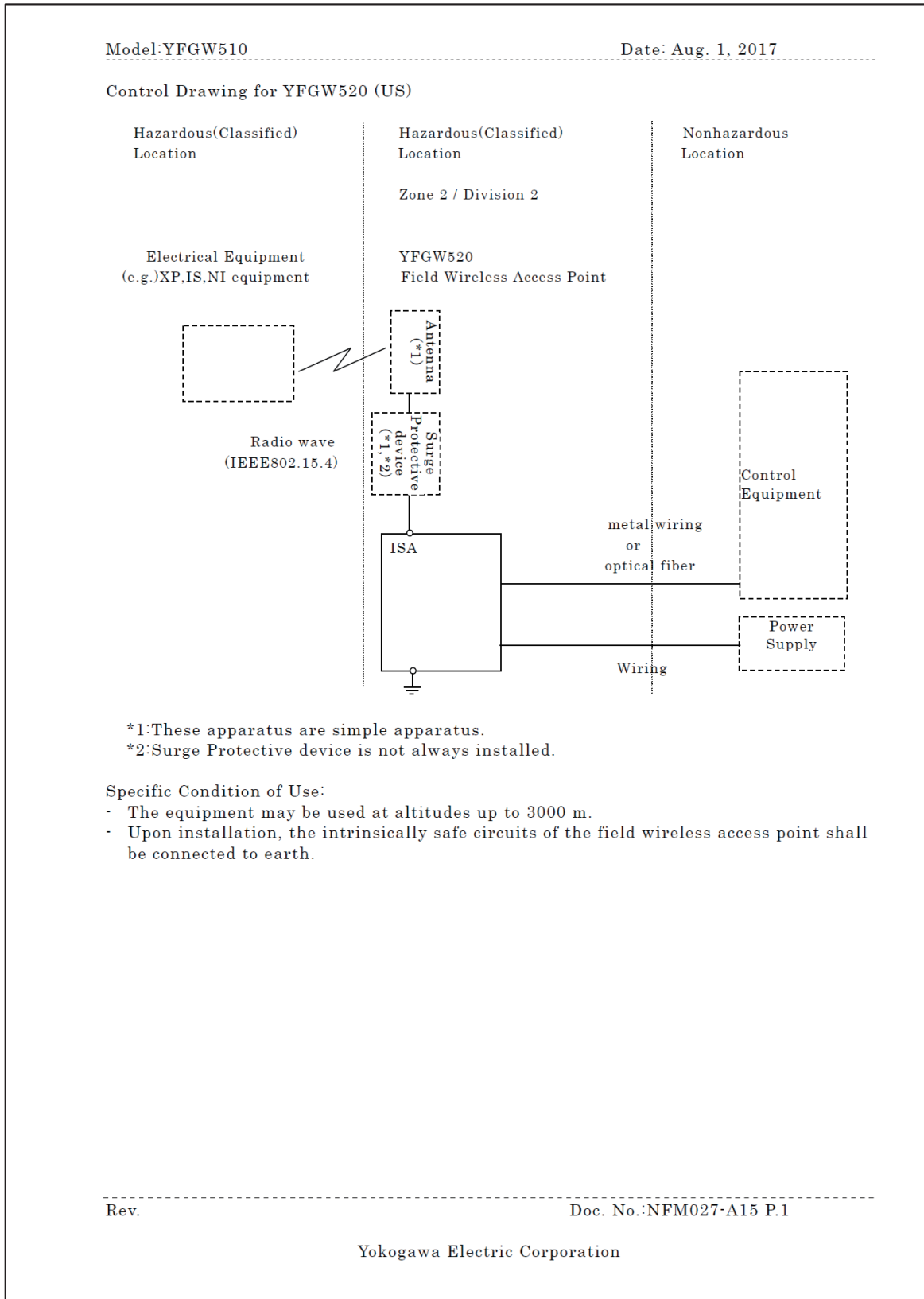
(4) Maintenance and Repair



WARNING

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

(5) Control Drawing



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Model:YFGW510

Date: Aug. 1, 2017

Notes:

1. The installation must be in accordance with the National Electrical Code (NFPA 70) and/or relevant local codes.
2. The antenna and the surge protective devices must be simple apparatus in accordance with NFPA 70. Their maximum temperature must be determined from $P_o = 60 \text{ mW}$ for the ISA connection.
3. Nonincendive field wiring of the antenna and/or the surge protective devices must meet the following conditions:
 $(\text{total Li of simple apparatuses}) + (\text{total Lcable}) \leq 3 \text{ mH}$
 $(\text{total Ci of simple apparatuses}) + (\text{total Ccable}) \leq 0.8 \mu\text{F}$
4. The equipment must be grounded in accordance with NFPA 70.

WARNING:

- DO NOT REMOVE COVER WHILE CIRCUIT IS LIVE WHEN A FLAMABLE OR COMBUSTIBLE ATMOSPHERE IS PRESENT.

Rev.

Doc. No.:NFM027-A15 P.2

Yokogawa Electric Corporation

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NOTE

The equipment must be installed in accordance with the user's manual.

■ FM Approval (Canada)

Caution for FM Nonincendive Approval (Canada).

(1) Technical Data

Note 1. Model YFGW510 Field Wireless Access Point with optional code CN17 is applicable for use in hazardous area.

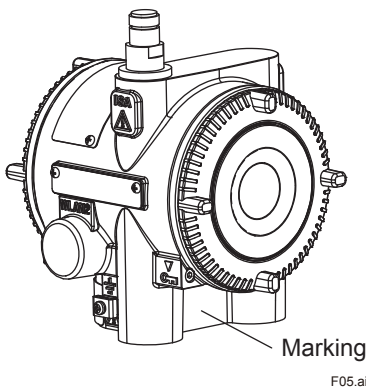
- Certificate: FM17CA0150X
- Applicable standards:
C22.2 No. 94-2:2015, C22.2 No. 213:2017, CAN/CSA-C22.2 No. 60079-0:2015, CAN/CSA-C22.2 No. 60079-11:2014, CAN/CSA-C22.2 No. 60079-15:2016, CAN/CSA-C22.2 No. 60529:2016, CAN/CSA-C22.2 No. 61010-1-12
- Hazardous Location Ratings:
Nonincendive for Class I, Division 2, Groups A, B, C, D;
Suitable for Class II, Division 2, Groups F,G; Class III, Division 1
Ex nA [ic] IIC T4 Gc
- Temperature Class: T4
- Ambient Temperature: -30 to 70°C (-22 to 158°F)
- Altitude: ≤ 3000 m
- Enclosure: Type 4X, IP66
- Power Supply: Rated Voltage: 24 V DC
Voltage Range*1 : 10.0-26.4 V DC
*1: The equipment shall not be operated outside the range.
- Power dissipation: ≤ 3.5 W
- RF Power: ≤ 60 mW

(2) Electrical Connection

The type of electrical connection depends on the marking below on YFGW520.

Marking	The type of electrical connection	Note
M	M20 (ISO)	M20 X 1.5
A or N	ANSI 1/2 NPT	1/2-14 NPT

- This marking is incused at the back side of the electrical connection block.



(3) Operation

The equipment shall be installed so that pollution degree 2 in accordance with IEC 60664-1 is maintained inside the enclosure.



WARNING

- Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point shall be avoided.
 - Take care not to generate mechanical sparking when accessing to the equipment and peripheral device in hazardous locations.
-

(4) Maintenance and Repair

The maintenance of the equipment must be in accordance with the user's manual.

When opening the cover, the enclosure should be dry and clean to prevent the ingress of water and dust.



WARNING

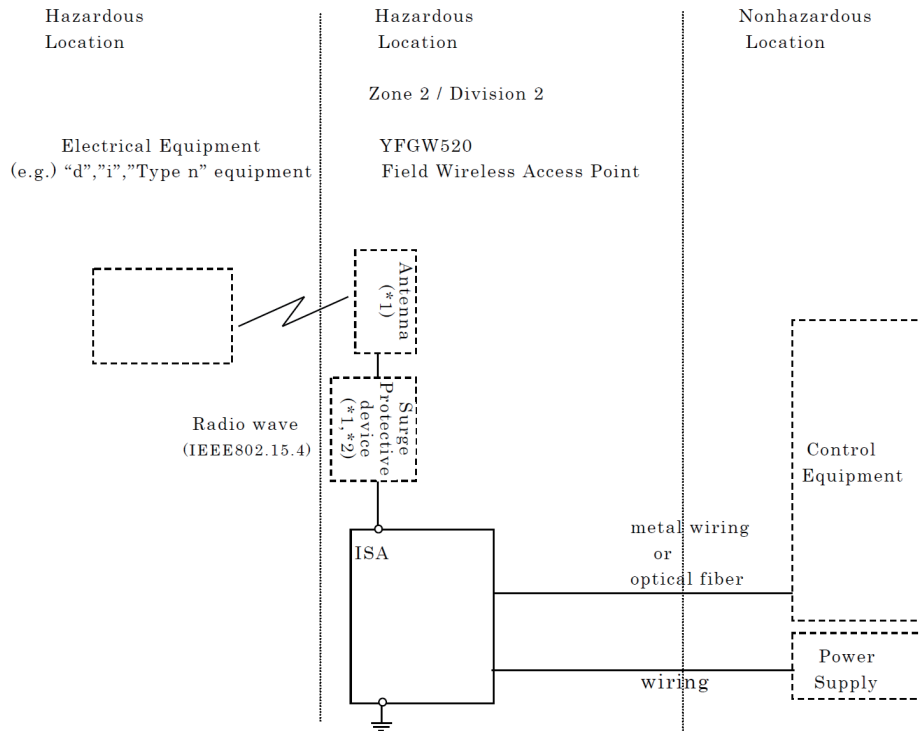
- Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.
-

(5) Control Drawing

Model:YFGW510

Date: Aug. 1, 2017

Control Drawing for YFGW520 (Canada)



*1:These apparatus are simple apparatus.
 *2:Surge Protective device is not always installed.

Specific Condition of Use:

- The equipment shall be installed so that pollution degree 2 in accordance with IEC 60664-1 is maintained inside the enclosure.
- The equipment may be used at altitudes up to 3000 m.
- Upon installation, the intrinsically safe circuits of the field wireless access point shall be connected to earth.

Rev.

Doc. No.:NFM027-A15 P.3

Yokogawa Electric Corporation

Model:YFGW510

Date: Aug. 1, 2017

Notes:

1. The installation must be in accordance with the Canadian Electric Code Part I (C22.1) and/or relevant local codes.
2. The antenna and the surge protective devices must be simple apparatus in accordance with the relevant standard. Their maximum temperature must be determined from $P_o = 60 \text{ mW}$ for the ISA connection.
3. Nonincendive field wiring or "ic" wiring of the antenna and/or the surge protective devices must meet the following conditions:
 $(\text{total } L_i \text{ of simple apparatuses}) + (\text{total } L_{\text{cable}}) \leq 3 \text{ mH}$
 $(\text{total } C_i \text{ of simple apparatuses}) + (\text{total } C_{\text{cable}}) \leq 0.8 \mu\text{F}$
4. The equipment must be grounded in accordance with C22.1 and ANSI/ISA-RP12.06.01. A cable lug or a similar device must be used to maintain the secureness of the grounding connection. Care should be taken to avoid multi-point grounding since the equipment is not galvanically isolated from the power supply.
5. Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point must be avoided.
6. The thread type of the cable entries must be confirmed according to the user's manual.
7. When the ambient temperature is $\geq 50 \text{ }^\circ\text{C}$, use heat-resisting cables and cable glands with rated temperatures of $\geq 80 \text{ }^\circ\text{C}$
8. Cable glands, adapters and/or blanking elements must be installed so as to maintain the specified degree of protection (IP Code and/or Type 4X) of the equipment.
9. Screws of power supply terminals must be tightened with specified torque values: 1.2 Nm to 1.4Nm. The size of the connected conductors must be No. 14 AWG (2 mm²).
10. Keep the cap attached to the antenna connector (N type) until the installation of the antenna or antenna cables to protect the inside of the connector from exposure of light. In case the antenna or antenna cables are removed from the connector, the inside of the antenna connector should be protected from exposure of light.

WARNING/AVERTISSEMENT:

- POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS
- DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES – VOIR INSTRUCTIONS
- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
- NE PAS OUVRIR EN PRÉSENCE D'UNE ATMOSPHERE EXPLOSIVE

Rev.

Doc. No.:NFM027-A15 P.4

Yokogawa Electric Corporation

F07.ai



NOTE

The equipment must be installed in accordance with the user's manual.

■ ATEX

(1) Technical Data

a. Caution for ATEX Type n declaration

Note 1. Model YFGW520 Field Wireless Access Point with optional code /KN27 is applicable for use in hazardous area.

- Applicable standard: EN 60079-0: 2012+A11:2013, EN 60079-11: 2012, EN 60079-15: 2010
- Marking: Ex II 3 G Ex nA [ic] IIC T4 Gc X
- Ambient temperature: -30 to 70°C (-22 to 158°F)
- IP code: IP66 according to EN 60079-15
- Power supply: Rated voltage: 24 V d.c.
Voltage Range(Note): 10.0 V d.c. to 26.4 V d.c.
Note: The equipment shall not be operated outside the range.
- Overvoltage Category: I
- Power consumption: ≤ 3.5 W
- RF power: ≤ 60 mW
- Name plate : See (5) Name plate.
- Atmospheric pressure: 70 kPa to 110 kPa (Altitude: Up to 3000 m)
- Antenna Connection: The following condition must be met.

$$(\text{Total Li of simple apparatuses}) + (\text{Total Lc}) \leq 3 \text{ mH}$$

$$(\text{Total Ci of simple apparatuses}) + (\text{Total Cc}) \leq 0.8 \mu\text{F}$$

Note 2. Specific condition of use

The equipment shall be installed so that pollution degree 2 in accordance with IEC 60664-1 is maintained inside the enclosure.

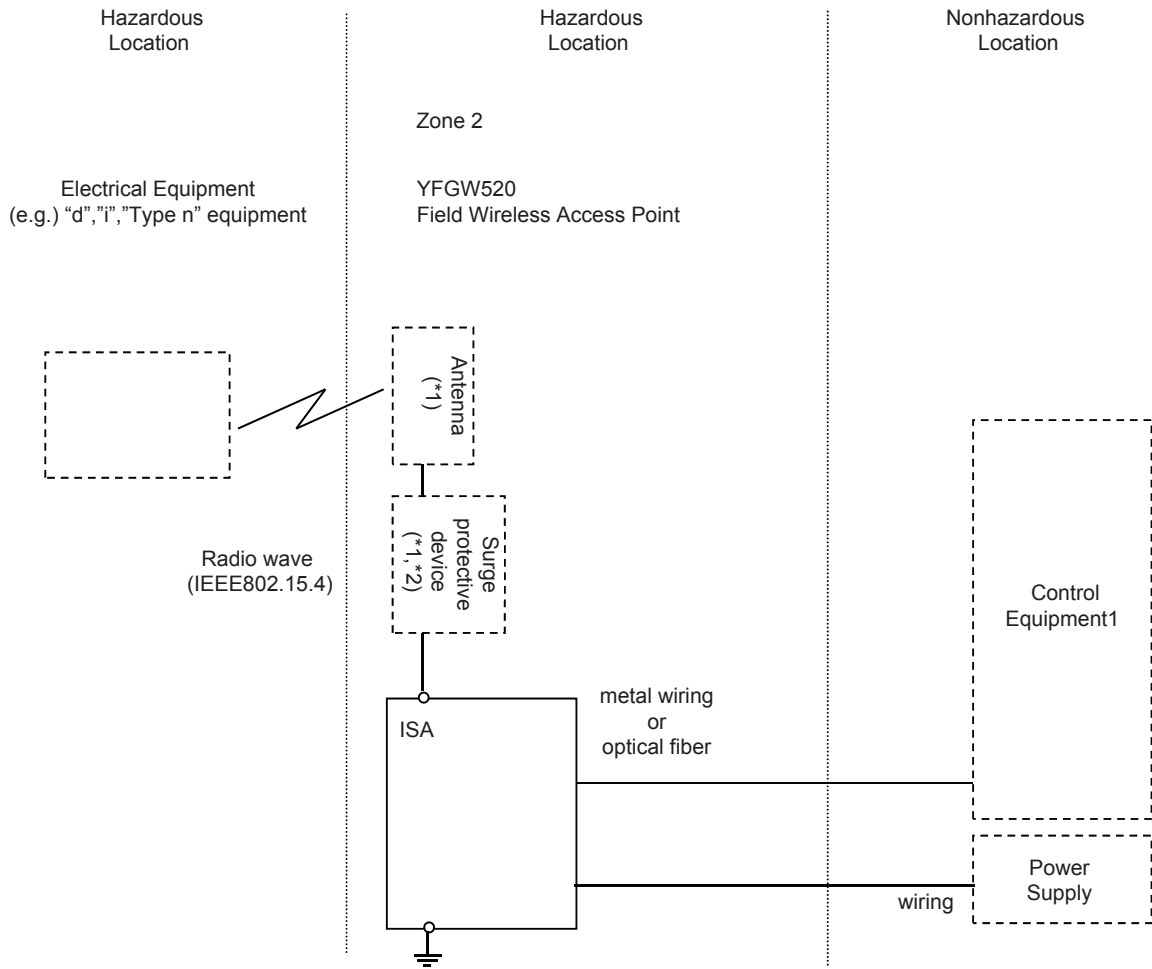
Note 3. Warning



WARNING

- POTENTIAL ELECTROSTATIC CHARGEING HAZARD– SEE INSTRUCTIONS.
- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
- WHEN THE AMBIENT TEMPERATURE IS $\geq 60^\circ\text{C}$, USE HEAT-RESISTING CABLES AND CABLE GLANDS WITH RATED TEMPERATURES OF $\geq 80^\circ\text{C}$.

Note 4. Installation



F08.ai

*1:These apparatus are simple apparatus.
*2:Surge protective device is not always installed.



NOTE

- The equipment must be installed in accordance with EN 60079-14 and relevant local codes.
- The equipment must be installed in accordance with the user’s manual.
- Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point must be avoided.
- The thread type of the cable entries must be confirmed according to the user’s manual.
- Screws of power supply terminals must be tightened with specified torque values: 1.2 Nm to 1.4 Nm.
- Cable glands, adapters must be of Ex “n”, Ex “e” or Ex “d” and must be installed so as to maintain the specified degree of protection (IP code) according to the environmental conditions. IP must be least IP54.
- Keep the cap attached to the antenna connector (N type) until the installation of the antenna or antenna cables to protect the inside of the connector from exposure of light. In case the antenna or antenna cables are removed from the connector, the inside of the antenna connector must be protected from exposure of light.
- The antenna and the surge protective device are simple apparatus. Li and Ci of the simple apparatus shall be negligible.

**NOTE**

- The temperature class of the antennas and the surge protective devices must be determined in accordance with EN 60079-14, using $P_o = 60$ mW for ISA antenna connector.
- The following conditions must be met for the connections to ISA
 (total L_i of simple apparatuses) + (total L_c) ≤ 3 mH
 (total C_i of simple apparatuses) + (total C_c) ≤ 0.8 μ F
- The equipment must be earthed in accordance with EN 60079-14, in order to maintain intrinsic safety. A cable lug or a similar device shall be used to maintain the secureness of the earth connection to the equipment. Care must be taken to avoid multi-point earthing since the equipment is not galvanically isolated from the power supply.

b. Caution for ATEX Flameproof Certification

Note 1. Model YFGW520 Field Wireless Access Point with optional code KF27 is applicable for use in hazardous locations.

- Certification: DEKRA 15ATEX0042 X
- Applicable Standards:
EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-11:2012
- Type of Protection and Marking: Ex II 2 G Ex db [ib] IIC T4 Gb
- Ambient temperature: -40 to 70°C (-40 to 158°F)
- Power supply: Rated voltage: 24 V d.c.
Voltage Range(Note): 10.0 V d.c. to 26.4 V d.c.
Note: The equipment shall not be operated outside the range.
- Power dissipation: ≤ 3.5 W
- U_m : 250 V
- RF power: ≤ 130 mW
- Antenna Connection: The following conditions shall be met.
 (total L_i of simple apparatuses) + (total L_c) ≤ 0.5 mH
 (total C_i of simple apparatuses) + (total C_c) ≤ 0.09 μ F

Note 2. Specific condition of use

- The flame paths differ from the standard values in EN 60079-1. Only personnel authorized by Yokogawa Electric Corporation may repair the equipment.
- From the safety point of view, the intrinsically safe circuit of the Field Wireless Access Point model YFGW520 shall be assumed to be connected to earth.

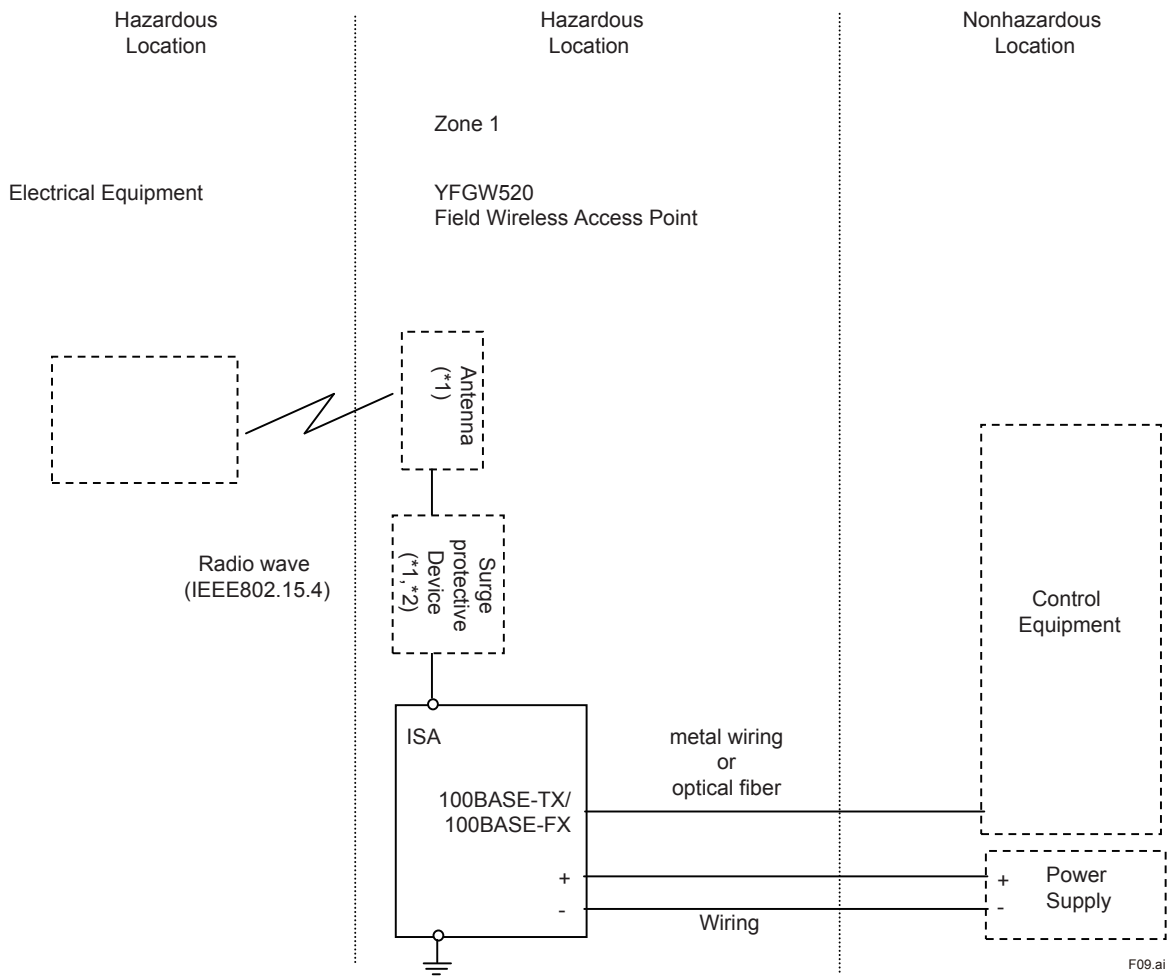
Note 3. Warning



WARNING

- DO NOT REMOVE COVER WHILE CIRCUIT IS LIVE WHEN A FLAMABLE OR COMBUSTIBLE ATMOSPHERE IS PRESENT.
- AFTER DE-ENERGIZING, DELAY 1 MINUTE BEFORE OPENING.
- POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.
- WHEN THE AMBIENT TEMPERATURE IS $\geq 60^{\circ}\text{C}$, USE HEAT-RESISTING CABLES AND CABLE GLANDS WITH RATED TEMPERATURES OF $\geq 80^{\circ}\text{C}$.

Note 4. Installation



*1: These apparatus are simple apparatus.

*2: Surge protective Device is not always installed.

**NOTE**

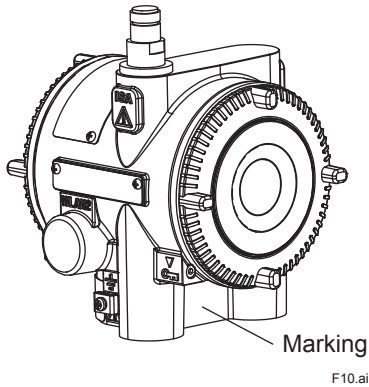
- The equipment must be installed in accordance with EN 60079-14 and relevant local codes.
- The equipment must be installed in accordance with the user's manual.
- Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point must be avoided.
- The thread type of the cable entries must be confirmed according to the user's manual.
- Screws of power supply terminals must be tightened with specified torque values: 1.2 Nm to 1.4 Nm.
- Cable glands and adapters must be of Ex "d" (or "db") for Ex "d" (or "db") installations.
- The antenna and the surge protective device are simple apparatus. L_i and C_i of the simple apparatus shall be negligible.
- The temperature class of the antenna and the surge protective device must be determined in accordance with EN 60079-14, using $P_o = 130$ mW for ISA antenna connector.
- The following conditions must be met for the connections to ISA
(total L_i of simple apparatuses) + (total L_c) ≤ 0.5 mH
(total C_i of simple apparatuses) + (total C_c) ≤ 0.09 μ F
- The equipment must be earthed in accordance with EN 60079-14, in order to maintain intrinsic safety. A cable lug or a similar device must be used to maintain the secureness of the connection to the equipment. Care must be taken to avoid multi-point earthing since the equipment is not galvanically isolated from the power supply.
- A marking to indicate type of electrical connection is at the back side of the electrical connection block.
 - marking M : M20(ISO) pitch 1.5
 - marking N : 1/2 NPT
- In order to prevent the earthing conductor from loosening, the conductor must be secured to the terminal, tightening the screw with appropriate torque. Care must be taken not to twist the conductor.

(2) Electrical Connection

- The type of electrical connection depends on the marking below on YFGW520.

Marking	The type of electrical connection	Note
M	M20 (ISO)	M20 X 1.5
A or N	ANSI 1/2 NPT	1/2-14 NPT

This marking is incused at the back side of the electrical connection block.



(3) Operation



WARNING

Take care not to generate mechanical sparking when access to the instrument and peripheral devices in hazardous area.

- Electrostatic charge may cause an explosion hazard.
- Avoid any actions that cause the generation of electrostatic charge, such as rubbing with dry cloth on coating face of product.

(4) Maintenance and Repair



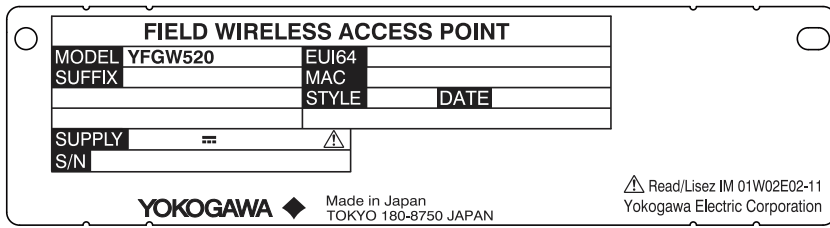
WARNING

- After De-Energizing, delay 1 minute before opening.
- Only personnel authorized by Yokogawa Electric Corporation can repair the equipment and will void the EHSRs.

When opening the cover, the enclosure should be dry and clean to prevent the ingress of water and dust.

(5) Name Plate

- Main name plate for Frameproof type and Type n

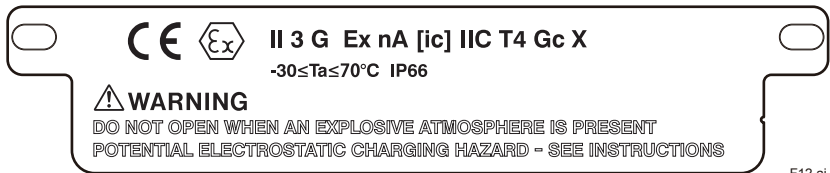


F11.ai

- MODEL: Specified model code.
- SUFFIX: Specified suffix code.
- STYLE: Style code.
- SUPPLY: Specified supply voltage and wattage.
- NO.: Serial number and year of production *1.
- YOKOGAWA ◆ TOKYO 180-8750 JAPAN: The manufacturer name and the address *2.

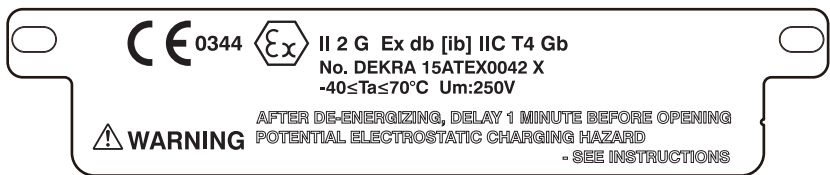
*1: Production year and month are shown as yyyy.mm.
For example, 2013.01 denotes January 2013.
*2: "180-8750" is a zip code which represents the following address.
2-9-32 Nakacho, Musashino-shi, Tokyo Japan

- Hazardous class name plate for Type n



F12.ai

- Hazardous class name plate for Frameproof type



F13.ai

■ IECEx

(1) Technical Data

a. Caution for IECEx Type n Certification

Note 1. Model YFGW520 Field Wireless Access Point with optional code SN27 is applicable for use in hazardous area.

- No. IECEx DEK 14.0028X
- Applicable standards: IEC 60079-0:2011, IEC 60079-11:2011, IEC 60079-15:2010
- Type of Protection and Marking code: Ex nA [ic] IIC T4 Gc
- Ambient Temperature: –30 to 70°C (–22 to 158°F)
- IP code: IP66 according to IEC 60079-15
- Power Supply: Rated Voltage: 24 V d.c.
Voltage Range(Note): 10.0 V d.c. to 26.4 V d.c.
Note: The equipment shall not be operated outside the range.
- Overvoltage Category: I
- Power consumption: ≤ 3.5 W
- RF power: ≤ 60 mW
- Name plate : See (5) Name plate.
- Antenna Connection: The following condition shall be met.
(Total Li of simple apparatuses) + (Total Lc) ≤ 3 mH
(Total Ci of simple apparatuses) + (Total Cc) ≤ 0.8 μF

Note 2. Specific condition of use

The equipment shall be installed so that pollution degree 2 in accordance with IEC 60664-1 is maintained inside the enclosure.

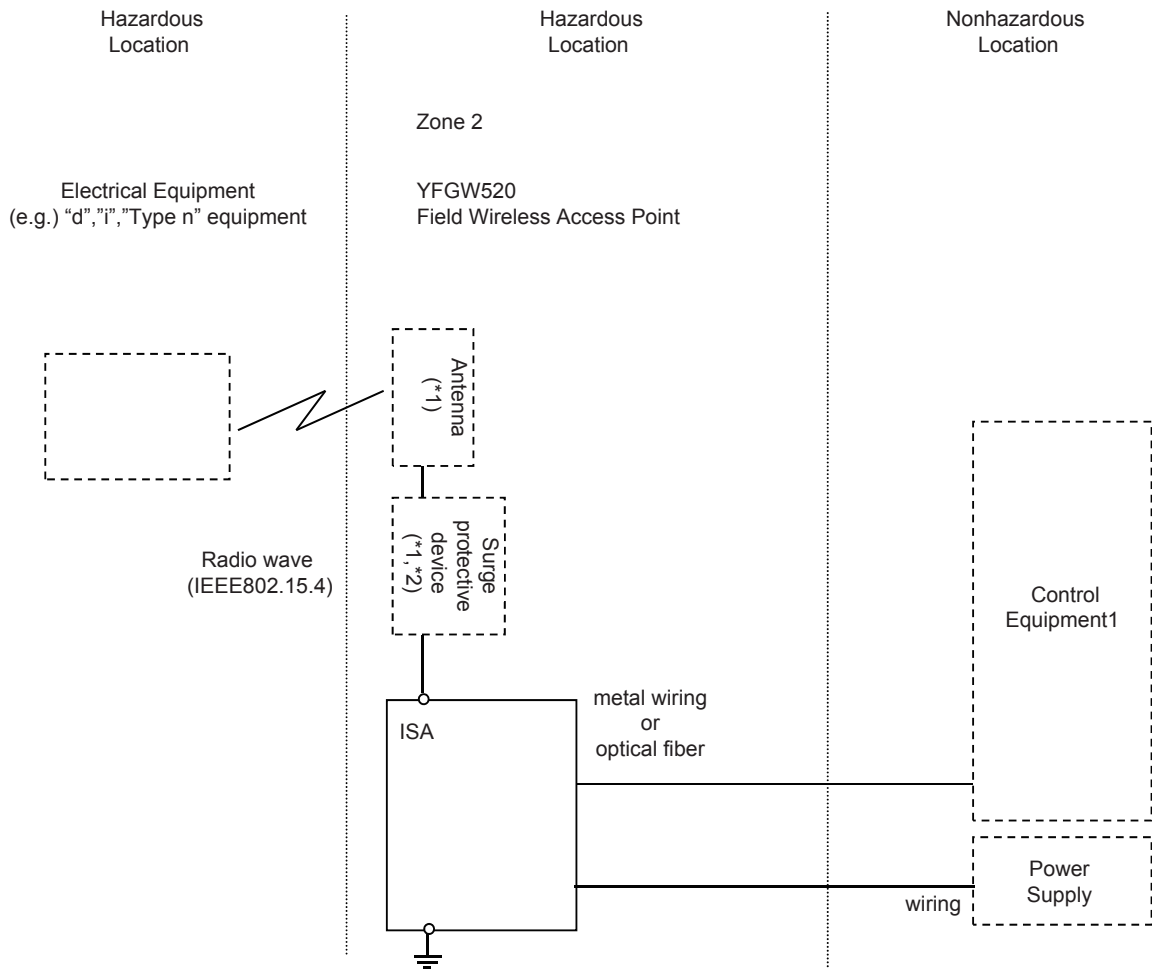
Note 3. Warning



WARNING

- POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.
- DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
- WHEN THE AMBIENT TEMPERATURE IS ≥ 60°C, USE HEAT-RESISTING CABLES AND CABLE GLANDS WITH RATED TEMPERATURES OF ≥ 80°C.

Note 4. Installation



F14.ai

*1:These apparatus are simple apparatus.

*2:Surge protective device is not always installed.

**NOTE**

- The equipment must be installed in accordance with IEC 60079-14 and relevant local codes.
- The equipment must be installed in accordance with the user's manual.
- Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point must be avoided.
- The thread type of the cable entries must be confirmed according to the user's manual.
- Screws of power supply terminals must be tightened with specified torque values: 1.2 Nm to 1.4 Nm.
- Cable glands, adapters must be of Ex "n", Ex "e" or Ex "d" and must be installed so as to maintain the specified degree of protection (IP Code) according to the environmental conditions. IP must be at least IP54.
- Keep the cap attached to the antenna connector (N type) until the installation of the antenna or antenna cables to protect the inside of the connector from exposure of light. In case the antenna or antenna cables are removed from the connector, the inside of the antenna connector must be protected from exposure of light.
- The antenna and the surge protective device are simple apparatus. L_i and C_i of the simple apparatus shall be negligible.
- The temperature class of the antennas and the surge protective devices must be determined in accordance with IEC 60079-14, using $P_o = 60$ mW for ISA antenna connector.
- The following conditions must be met for the connections to ISA.
(Total L_i of simple apparatuses) + (Total L_c) ≤ 3 mH
(Total C_i of simple apparatuses) + (Total C_c) ≤ 0.8 μ F
- The equipment must be earthed in accordance with IEC 60079-14, in order to maintain intrinsic safety. A cable lug or a similar device shall be used to maintain the secureness of the earth connection. Care must be taken to avoid multi-point earthing since the equipment is not galvanically isolated from the power supply.

b. Caution for IECEx Flameproof Certification

Note 1. Model YFGW520 Field Wireless Access Point with optional code SF27 is applicable for use in hazardous locations.

- Certification: IECEx DEK 15.0021X
- Applicable Standards: IEC 60079-0:2011, IEC 60079-1:2014, IEC 60079-11:2011
- Type of Protection and Marking code : Ex db [ib] IIC T4 Gb
- Ambient Temperature: -40 to 70°C
- Power supply: Rated Voltage: 24 V d.c.
Voltage Range(Note): 10.0 V d.c. to 26.4 V d.c.
Note: The equipment shall not be operated outside the range.
- Power dissipation: ≤ 3.5 W
- Um: 250 V
- RF power: ≤ 130 mW
- Antenna Connection: The following conditions shall be met.
(total Li of simple apparatuses) + (total Lc) ≤ 0.5 mH
(total Ci of simple apparatuses) + (total Cc) ≤ 0.09 μ F

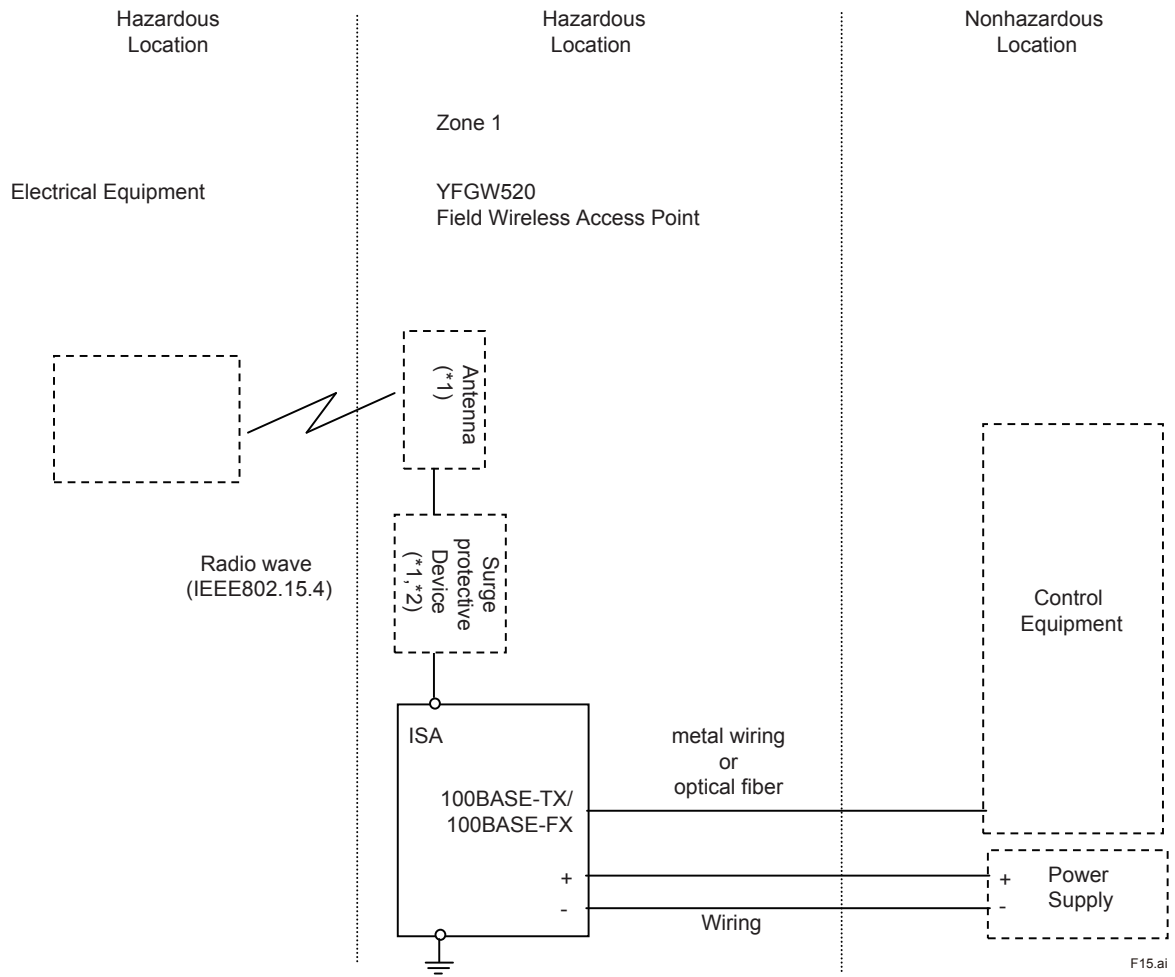
Note 2. Specific condition of use

- The flame paths differ from the standard values in IEC 60079-1. Only personnel authorized by Yokogawa Electric Corporation may repair the equipment.
- From the safety point of view, the intrinsically safe circuit of the Field Wireless Access Point model YFGW520 shall be assumed to be connected to earth.

Note 3. Warning**WARNING**

- DO NOT REMOVE COVER WHILE CIRCUIT IS LIVE WHEN A FLAMABLE OR COMBUSTIBLE ATMOSPHERE IS PRESENT.
- AFTER DE-ENERGIZING, DELAY 1 MINUTE BEFORE OPENING.
- POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS.
- WHEN THE AMBIENT TEMPERATURE IS $\geq 60^{\circ}\text{C}$, USE HEAT-RESISTING CABLES AND CABLE GLANDS WITH RATED TEMPERATURES OF $\geq 80^{\circ}\text{C}$.

Note 4. Warning



*1: These apparatus are simple apparatus.
*2: Surge protective Device is not always installed.

**NOTE**

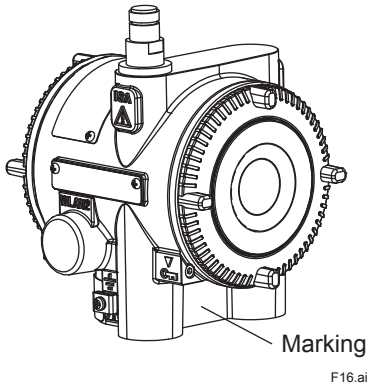
- The equipment must be installed in accordance with IEC 60079-14 and relevant local codes.
- The equipment must be installed in accordance with the user's manual.
- Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point must be avoided.
- The thread type of the cable entries must be confirmed according to the user's manual.
- Screws of power supply terminals must be tightened with specified torque values: 1.2 Nm to 1.4 Nm.
- Cable glands and adapters must be of Ex "d" (or "db") for Ex "d" (or "db") installations.
- Cable glands, adapters and/or blanking elements shall be installed so as to maintain the specified degree of protection (IP Code) of the equipment.
- The antenna and the surge protective device are simple apparatus. Li and Ci of the simple apparatus shall be negligible.
- The temperature class of the antenna and the surge protective device must be determined in accordance with IEC 60079-14, using $P_o = 130 \text{ mW}$ for ISA antenna connector.
- The following conditions must be met for the connections to ISA.
(total Li of simple apparatuses) + (total Lc) $\leq 0.5 \text{ mH}$
(total Ci of simple apparatuses) + (total Cc) $\leq 0.09 \mu\text{F}$
- The equipment must be earthed in accordance with IEC 60079-14, in order to maintain intrinsic safety. A cable lug or a similar device must be used to maintain the secureness of the connection to the equipment. Care must be taken to avoid multi-point earthing since the equipment is not galvanically isolated from the power supply.
- A marking to indicate type of electrical connection is at the back side of the electrical connection block.
marking M : M20(ISO) pitch 1.5
marking N : 1/2 NPT
- In order to prevent the earthing conductor from loosening, the conductor must be secured to the terminal, tightening the screw with appropriate torque. Care must be taken not to twist the conductor.

(2) Electrical Connection

- The type of electrical connection depends on the marking below on YFGW520.

Marking	The type of electrical connection	Note
M	M20 (ISO)	M20 X 1.5
A or N	ANSI 1/2 NPT	1/2-14 NPT

This marking is incused at the back side of the electrical connection block.



(3) Operation



WARNING

Take care not to generate mechanical sparking when access to the instrument and peripheral devices in hazardous location.

- Electrostatic charge may cause an explosion hazard.
- Avoid any actions that cause the generation of electrostatic charge, such as rubbing with dry cloth on coating face of product.

(4) Maintenance and Repair



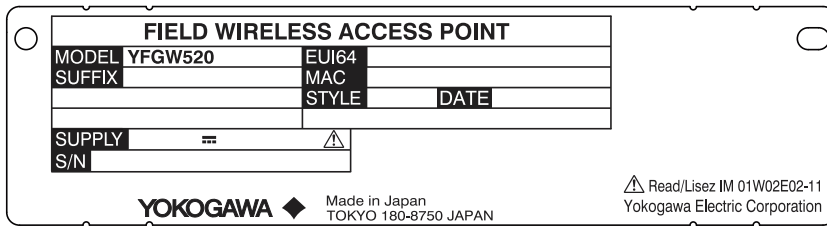
WARNING

- After De-Energizing, delay 1 minute before opening.
- Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.

When opening the cover, the enclosure must be dry and clean to prevent from ingress water or dust.

(5) Name plate

- Main name plate for Frameproof type and Type n



F17.ai

- MODEL: Specified model code.
- SUFFIX: Specified suffix code.
- STYLE: Style code.
- SUPPLY: Specified supply voltage and wattage.
- NO.: Serial number and year of production *1.
- YOKOGAWA ◆ TOKYO 180-8750 JAPAN: The manufacturer name and the address *2.

*1: Production year and month are shown as yyyy.mm.
 For example, 2015.01 denotes January 2015.
 *2: "180-8750" is a zip code which represents the following address.
 2-9-32 Nakacho, Musashino-shi, Tokyo Japan

- Hazardous class name plate for Type n



F18.ai

- Hazardous class name plate for Frameproof type



F19.ai

■ Ground Cable Connection

The grounding terminals are located on the inside and outside of the terminal area. Connect the cable to grounding terminal in accordance with wiring procedure 1) or 2).

1) Internal grounding terminal

If the power supply cable is a shielded cable, connect the grounding cable to the ground terminal next to the power supply terminal.

For details of the connection, see C5.1 Power Supply Cable Connection of IM 01W02E02-01EN.

2) External grounding terminal

To connect the grounding cable to YFGW520 directly, use the ground terminal on the right side of the housing.

For details of the connection, see C5.2 Grounding Cable Connection of IM 01W02E02-01EN.

How to Use Online Manual

It is necessary to install Adobe Acrobat Reader to read the instruction manual (YFGW520 Field Wireless Access Point: IM 01W02E02-01EN).

Install the following Adobe Reader by the administrator authority.

- Adobe Reader 9.3 or later

TIP

Adobe Reader can be downloaded from the Web site of Adobe Systems Incorporated.

- **Reading of Online Manual**

The online manual is stored in the attached DVD-ROM. The file is not installed in the PC even if the attached software is installed to PC. Open the file by Adobe Reader to read the manual.

DVD-ROM Drive:\YFGW520\Document\en\IM01W02E02-01EN.pdf

Preparation to Use YFGW520 Attached Software

To use YFGW520 Attached Software, any of the following operating systems must have been installed in the PC.

Supported OS ^{*1*2}	Type
Windows 10 Pro / Home	32/64 bit
Windows 7 Professional / Home Premium SP1	32/64 bit

*1: Japanese or English version is supported.

*2: Microsoft .NET Framework 4.6.1 is required.

For details on how to install YFGW520 Attached Software, see User's Manual (IM 01W02E02-01EN)

The details of attached DVD-ROM, refer to the Readme_en.txt

DVD-ROM Drive:\YFGW520\Readme_en.txt

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For module names and source codes of open source software that is used in this product, please contact us.

About User's Manual

■ Composition of User's Manual

This chapter explains the composition of User's Manual.

The following printed user's manual is attached to YFGW520 hardware.

- IM 01W02E02-11EN: YFGW520 Field Wireless Access Point Read Me First

The following online user's manual is stored in the attached DVD-ROM for YFGW520.

- IM 01W02E02-01EN: YFGW520 Field Wireless Access Point

Information of User's Manual Revision

Material Name: YFGW520 Field Wireless Access Point Read Me First

Material Number: IM 01W02E02-11EN

Edition	Date	Page	Revised Item
1st Edition	March 2018		New Issue
2nd Edition	Aug. 2018	— —	Add FCC and ISED compliance Add FM Approvals (United States and Canada)
3rd Edition	Mar. 2019	9 10	Add RPA compliance Add China RoHS

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12. Governing Law; Dispute Resolution

This Agreement shall be governed by and construed in accordance with the laws of Japan. If you are a Japanese individual or entity, all disputes, controversies or differences which may arise between the parties hereto, out of, in relation to or in connection with this Agreement ("Dispute") shall be brought exclusively in the Tokyo District Court (The Main Court) in Japan. If you are not a Japanese individual or entity, any Dispute shall be finally settled by arbitration in Tokyo, Japan in accordance with the Commercial Arbitration Rules of the Japan Commercial Arbitration Association. All proceedings in arbitration shall be conducted in the English language, unless otherwise agreed. The award of arbitration shall be final and binding upon both parties, however, each party may make an application to any court having jurisdiction for judgment to be entered on the award and/or for enforcement of the award.

13. Miscellaneous

- 13.1 This Agreement supersedes all prior oral and written understandings, representations and discussions between the parties concerning the subject matter hereof to the extent such understandings, representations and discussions should be discrepant or inconsistent with this Agreement.
- 13.2 If any part of this Agreement is found void or unenforceable, it shall not affect the validity of the balance of the Agreement, which shall remain valid and enforceable according to its terms and conditions. The parties hereby agree to attempt to substitute for such invalid or unenforceable provision a valid or enforceable provision that achieves to the greatest extent possible the economic, legal and commercial objectives of the invalid or unenforceable provision.
- 13.3 Failure by either party to insist on performance of this Agreement or to exercise a right does not prevent such party from doing so at a later time, either in relation to that default or any subsequent default.