

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.

■ ATEX Documentation

● This is only applicable to the countries in European Union.

- GB** All instruction manuals for ATEX Ex related products are available in English, German and French. Should you require Ex related instructions in your local language, you are to contact your nearest Yokogawa office or representative.
- DK** Alle brugervejledninger for produkter relateret til ATEX Ex er tilgængelige på engelsk, tysk og fransk. Skulle De ønske yderligere oplysninger om håndtering af Ex produkter på eget sprog, kan De rette henvendelse herom til den nærmeste Yokogawa afdeling eller forhandler.
- I** Tutti i manuali operativi di prodotti ATEX contrassegnati con Ex sono disponibili in inglese, tedesco e francese. Se si desidera ricevere i manuali operativi di prodotti Ex in lingua locale, mettersi in contatto con l'ufficio Yokogawa più vicino o con un rappresentante.
- E** Todos los manuales de instrucciones para los productos antiexplosivos de ATEX están disponibles en inglés, alemán y francés. Si desea solicitar las instrucciones de estos artículos antiexplosivos en su idioma local, deberá ponerse en contacto con la oficina o el representante de Yokogawa más cercano.
- NL** Alle handleidingen voor producten die te maken hebben met ATEX explosiebeveiliging (Ex) zijn verkrijgbaar in het Engels, Duits en Frans. Neem, indien u aanwijzingen op het gebied van explosiebeveiliging nodig hebt in uw eigen taal, contact op met de dichtstbijzijnde vestiging van Yokogawa of met een vertegenwoordiger.
- SF** Kaikkien ATEX Ex -tyyppisten tuotteiden käyttöohjeet ovat saatavilla englannin-, saksan- ja ranskankielisinä. Mikäli tarvitsette Ex -tyyppisten tuotteiden ohjeita omalla paikallisella kielellänne, ottakaa yhteyttä lähimpään Yokogawa-toimistoon tai -edustajaan.
- P** Todos os manuais de instruções referentes aos produtos Ex da ATEX estão disponíveis em Inglês, Alemão e Francês. Se necessitar de instruções na sua língua relacionadas com produtos Ex, deverá entrar em contacto com a delegação mais próxima ou com um representante da Yokogawa.
- F** Tous les manuels d'instruction des produits ATEX Ex sont disponibles en langue anglaise, allemande et française. Si vous nécessitez des instructions relatives aux produits Ex dans votre langue, veuillez bien contacter votre représentant Yokogawa le plus proche.
- D** Alle Betriebsanleitungen für ATEX Ex bezogene Produkte stehen in den Sprachen Englisch, Deutsch und Französisch zur Verfügung. Sollten Sie die Betriebsanleitungen für Ex-Produkte in Ihrer Landessprache benötigen, setzen Sie sich bitte mit Ihrem örtlichen Yokogawa-Vertreter in Verbindung.
- S** Alla instruktionsböcker för ATEX Ex (explosionssäkra) produkter är tillgängliga på engelska, tyska och franska. Om Ni behöver instruktioner för dessa explosionssäkra produkter på annat språk, skall Ni kontakta närmaste Yokogawakontor eller representant.
- GR** Όλα τα εγχειρίδια λειτουργίας των προϊόντων με ATEX Ex διατίθενται στα Αγγλικά, Γερμανικά και Γαλλικά. Σε περίπτωση που χρειάζεστε οδηγίες σχετικά με Ex στην τοπική γλώσσα παρακαλούμε επικοινωνήστε με το πλησιέστερο γραφείο της Yokogawa ή αντιπρόσωπο της.
- SK** Všetky návody na obsluhu pre prístroje s ATEX Ex sú k dispozícii v jazyku anglickom, nemeckom a francúzskom. V prípade potreby návodu pre Ex-prístroje vo Vašom národnom jazyku, skontaktujte prosím miestnu kanceláriu firmy Yokogawa.
- CZ** Všechny uživatelské příručky pro výrobky, na něž se vztahuje nevybušné schválení ATEX Ex, jsou dostupné v angličtině, němčině a francouzštině. Požadujete-li pokyny týkající se výrobků s nevybušným schválením ve vašem lokálním jazyku, kontaktujte prosím vaši nejbližší reprezentační kancelář Yokogawa.
- LT** Visos gaminių ATEX Ex kategorijos Eksploatavimo instrukcijos teikiama anglų, vokiečių ir prancūzų kalbomis. Norėdami gauti prietaisų Ex dokumentaciją kitomis kalbomis susisiekiate su artimiausiu bendrovės "Yokogawa" biuru arba atstovu.
- LV** Visas ATEX Ex kategorijas izstrādājumu Lietošanas instrukcijas tiek piegādātas angļu, vācu un franču valodās. Ja vēlaties saņemt Ex ierīšu dokumentāciju citā valodā, Jums ir jāsasina ar firmas Jokogava (Yokogawa) tuvāko ofisu vai pārstāvi.
- EST** Kõik ATEX Ex toodete kasutamishendid on esitatud inglise, saksa ja prantsuse keeles. Ex seadmete muukeelse dokumentatsioon saamiseks pöörduge lähima lokagava (Yokogawa) kontori või esindaja poole.
- PL** Wszystkie instrukcje obsługi dla urządzeń w wykonaniu przeciwwybuchowym Ex, zgodnych z wymaganiami ATEX, dostępne są w języku angielskim, niemieckim i francuskim. Jeżeli wymagana jest instrukcja obsługi w Państwa lokalnym języku, prosimy o kontakt z najbliższym biurem Yokogawa.
- SLO** Vsi predpisi in navodila za ATEX Ex sorodni pridelki so pri roki v angleščini, nemščini ter francoščini. Če so Ex sorodna navodila potrebna v vašem tujejnem jeziku, kontaktirajte vaš najbliži Yokogawa office ili predstavnika.
- H** Az ATEX Ex műszerek gépkönyveit angol, német és francia nyelven adjuk ki. Amennyiben helyi nyelven kéri az Ex eszközök leírásait, kérjük keressék fel a legközelebbi Yokogawa irodát, vagy képviselőt.
- BG** Всички упътвания за продукти от серията ATEX Ex се предлагат на английски, немски и френски език. Ако се нуждаете от упътвания за продукти от серията Ex на родния ви език, се свържете с най-близкия офис или представителство на фирма Yokogawa.
- RO** Toate manualele de instructiuni pentru produsele ATEX Ex sunt in limba engleza, germana si franceza. In cazul in care doriti instructiunile in limba locala, trebuie sa contactati cel mai apropiat birou sau reprezentant Yokogawa.
- M** Il-manwali kollha ta' l-istruzzjonijiet għal prodotti marbuta ma' ATEX Ex huma disponibbli bil-Ingliż, bil-Ġermaniż u bil-Franċiż. Jekk tkun teħtieġ struzzjonijiet marbuta ma' Ex fil-lingwa lokali tiegħek, għandek tikkuntattja lill-eqreb rappreżentant jew uffičċju ta' Yokogawa.

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

(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

- **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)

Explosion Protected Type Specifications

Optional Specifications (For Explosion Protected Type)

Item		Description	Code
Factory Mutual (FM) *1	United States	Nonincendive Approval	—
		Explosionproof Approval	—
	Canada	Nonincendive Approval	—
		Flameproof Approval	—
ATEX *1	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: IP 66 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
	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	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: IP 66 according to IEC 60079-15 Amb. Temp(Tamb): -30 to 70°C (-22 to 158°F)		SN27
	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.

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.



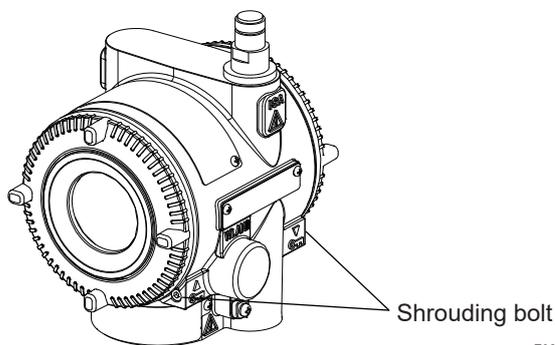
WARNING

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.



F02.ai



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 .

■ 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.

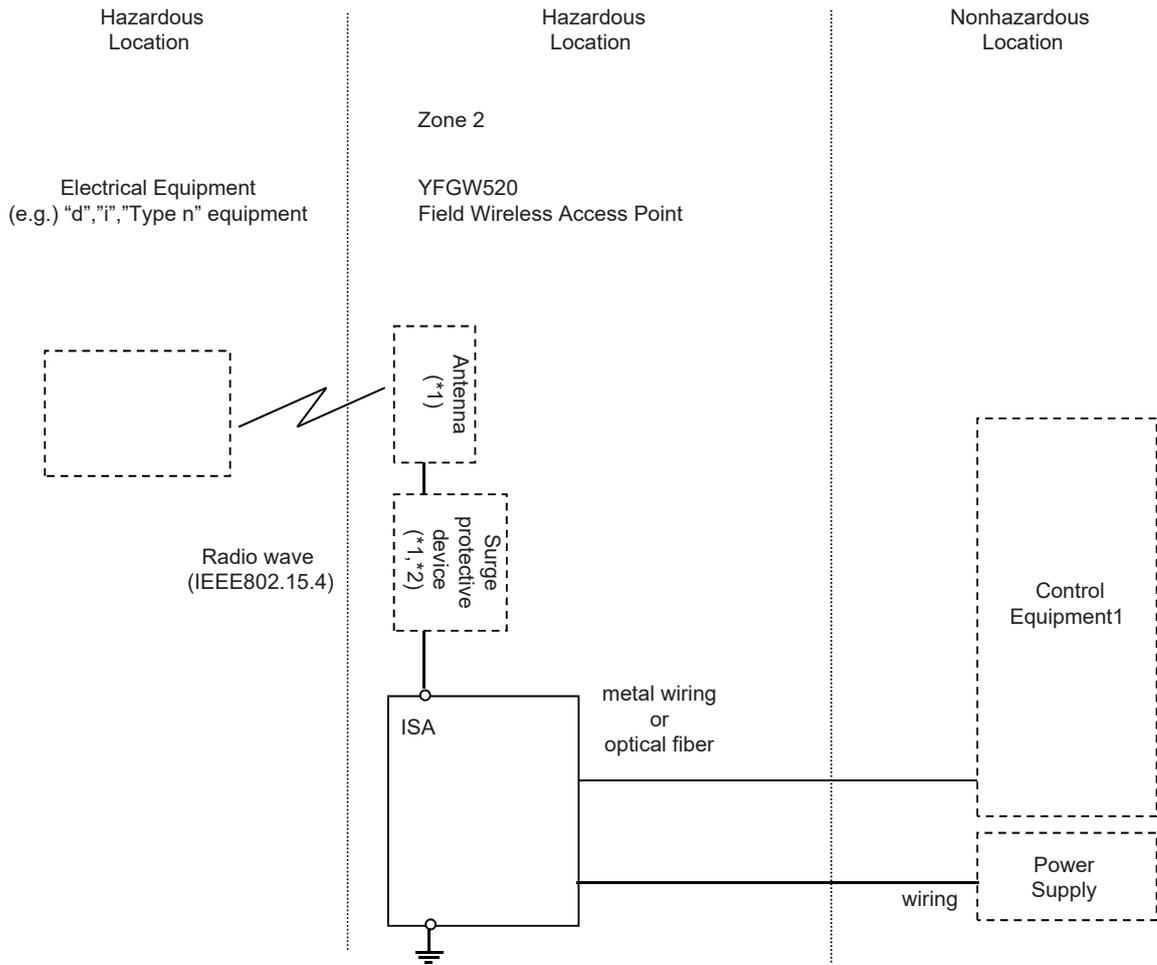
Note 3. Warning



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



F03.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.

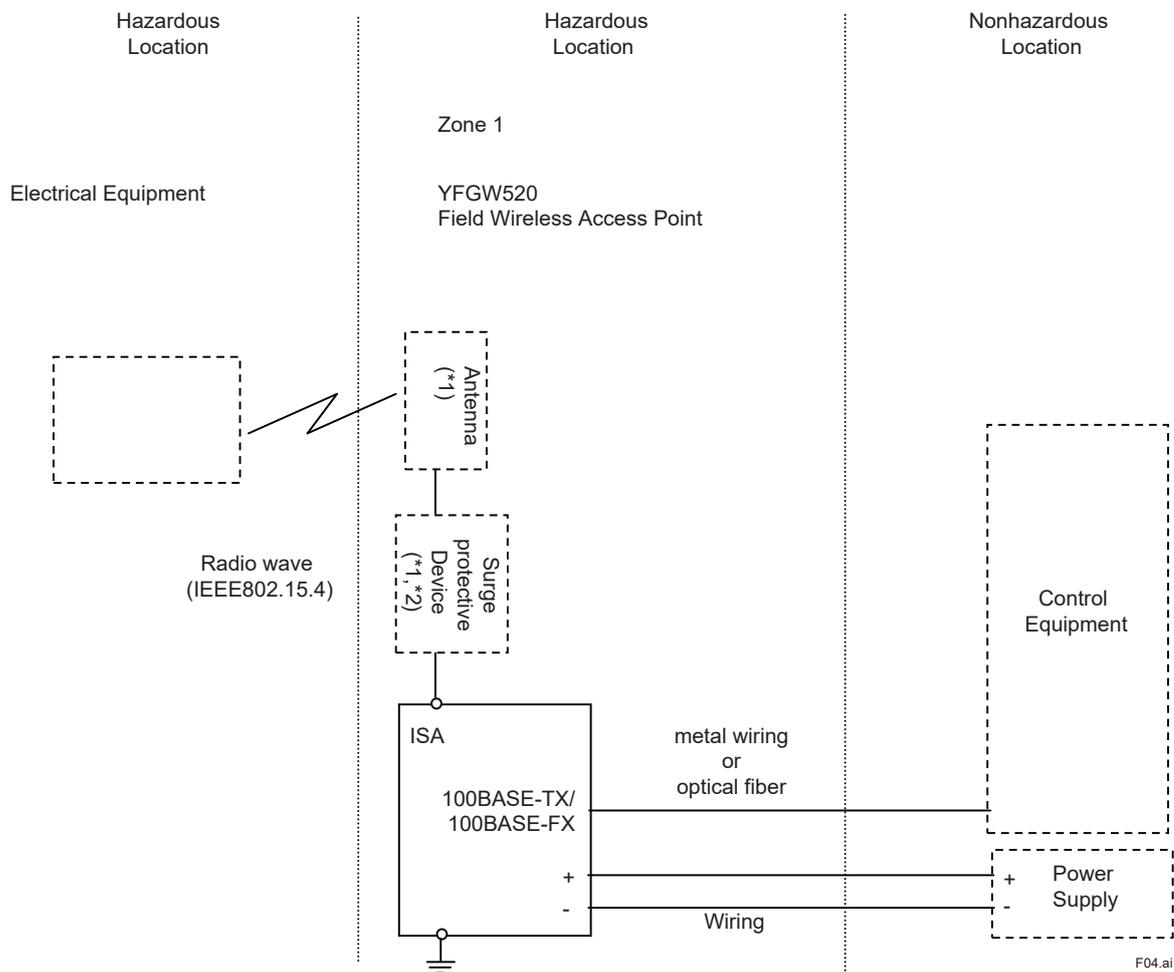
Note 3. Warning



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**

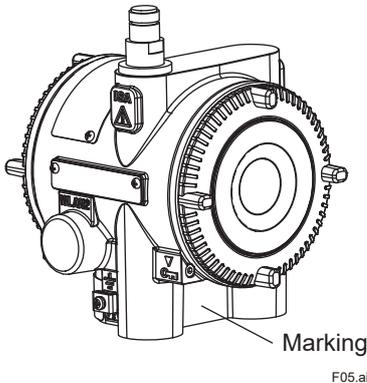
- The equipment must be installed in accordance with EN 60079-14 and relevant local codes.
- The equipment must be installed in accordance with the user's manual.
- Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point must be avoided.
- 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

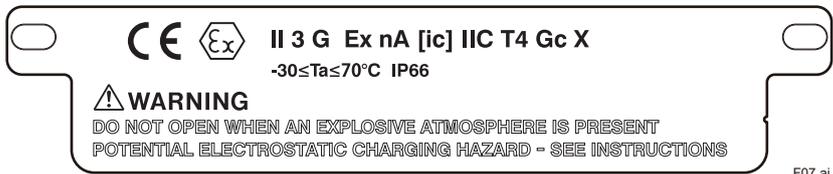


F06.ai

- 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.

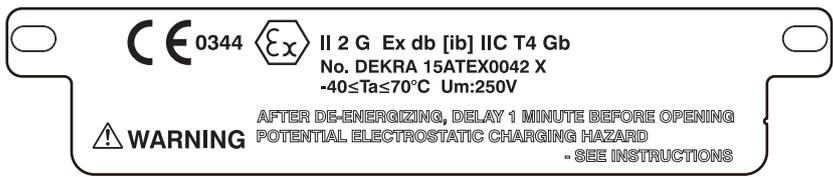
*1: Production year and month are shown as yyyy.mm.
For example, 2013.01 denotes January 2013.
*2: "180-8750" is a zip code which represents the following address.
2-9-32 Nakacho, Musashino-shi, Tokyo Japan

- Hazardous class name plate for Type n



F07.ai

- Hazardous class name plate for Frameproof type



F08.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.

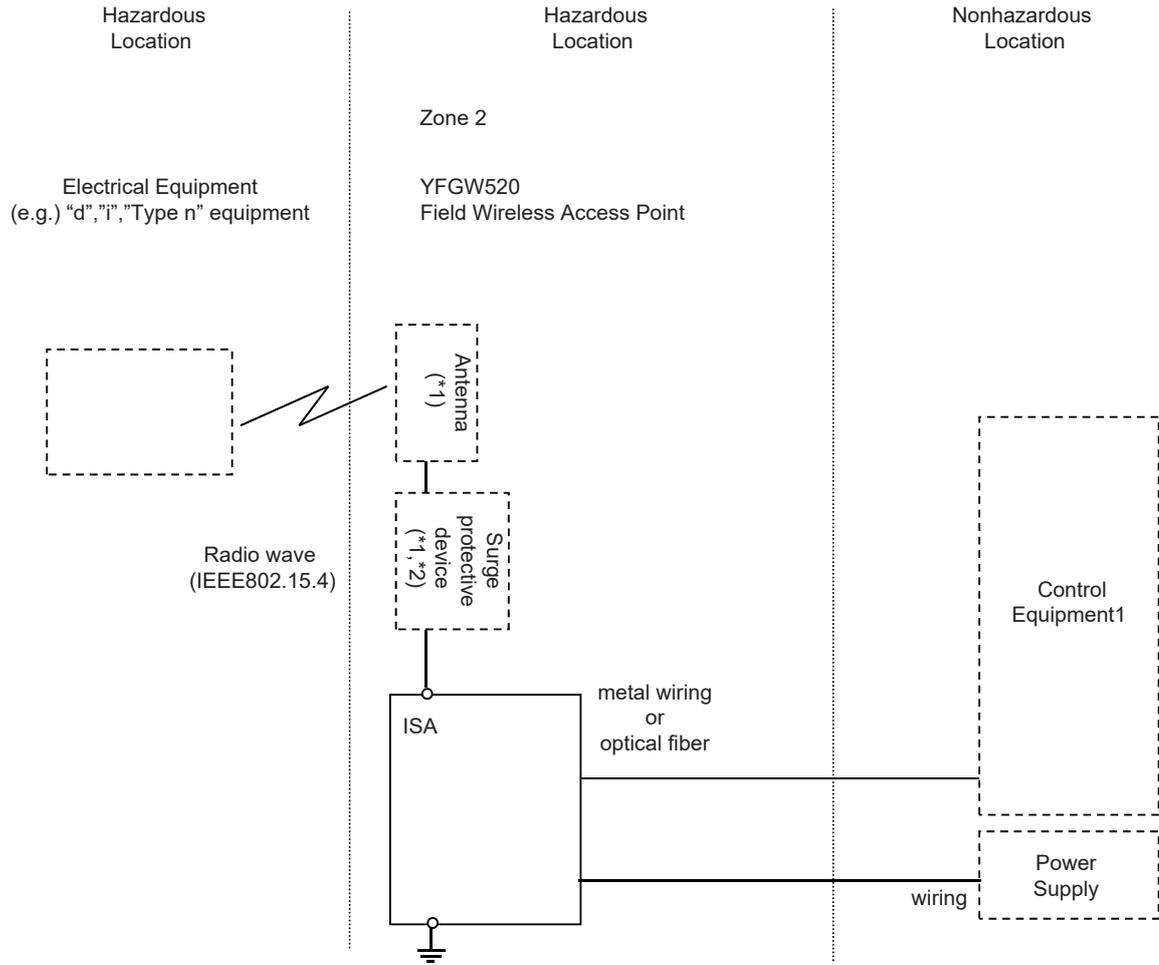
Note 3. Warning



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



F09.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

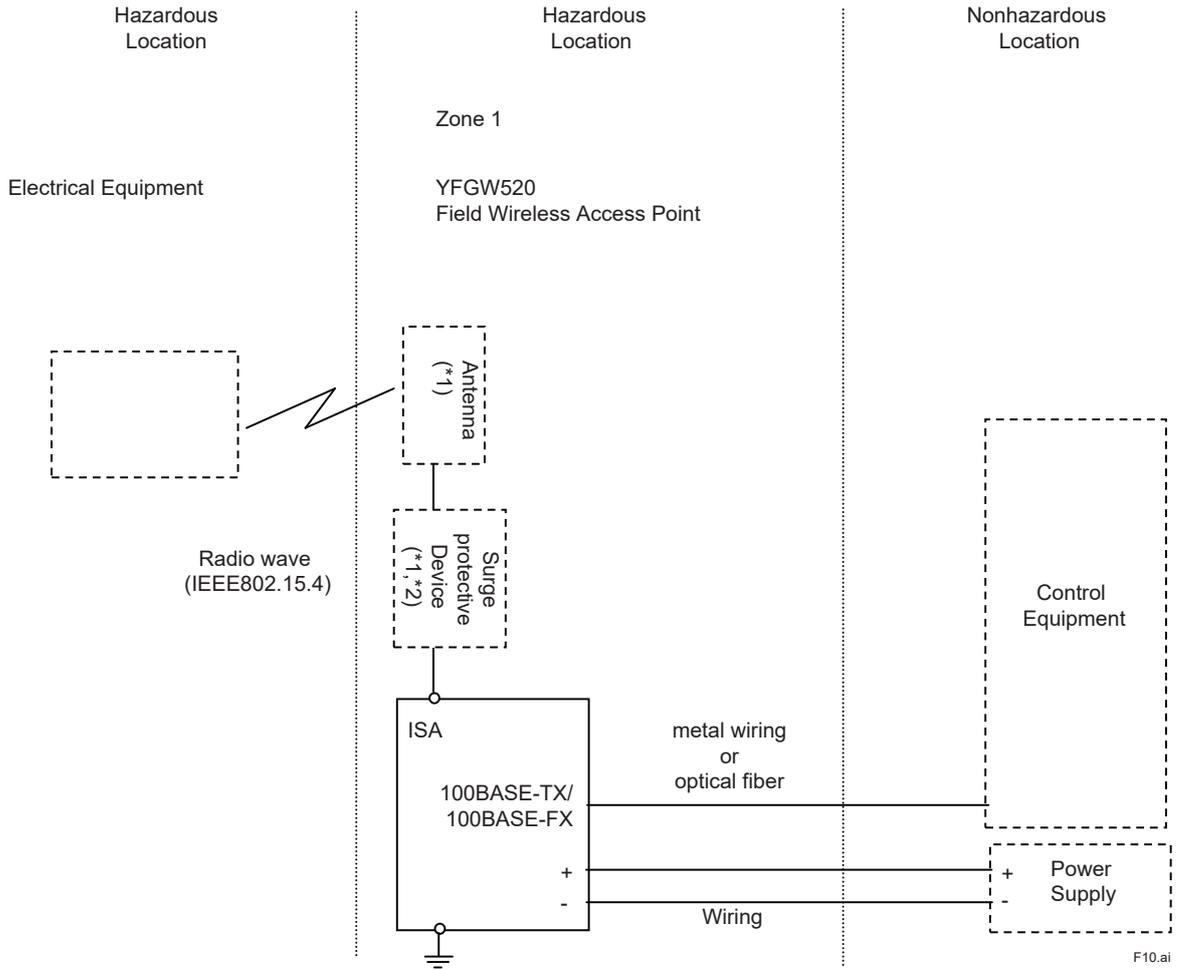
Note 2. Specific condition of use

- 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**

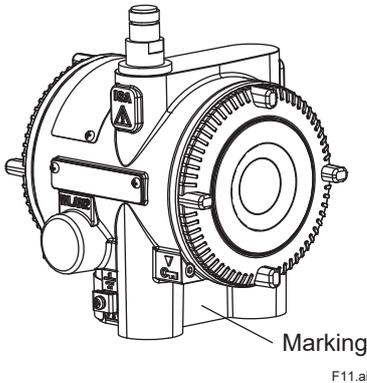
- The equipment must be installed in accordance with IEC 60079-14 and relevant local codes.
- The equipment must be installed in accordance with the user's manual.
- Electrostatic charges on the non-metallic parts (excluding glass parts) or coated parts of the Field Wireless Access Point must be avoided.
- 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



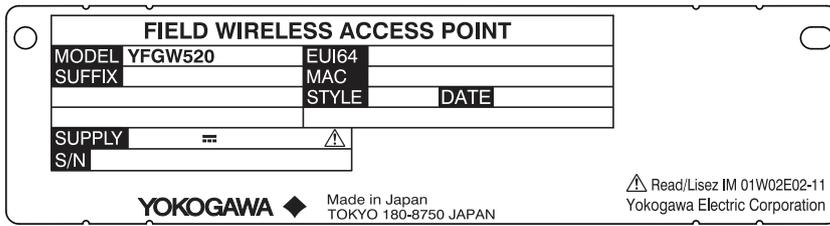
WARNING

- After De-Energizing, delay 1 minute before opening.
- The instrument modification or parts replacement by other than authorized Representative of Yokogawa Electric Corporation is prohibited and will void the certification.

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



F12.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



F14.ai

- Hazardous class name plate for Frameproof type



F15.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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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

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 - f) the Software Product or the results arising therefrom is precise, reliable or up-to-date.
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- 6.2 If the infringement is attributable to Yokogawa, Yokogawa will defend Licensee from the Claim at Yokogawa's expense and indemnify Licensee from the damages finally granted by the court or otherwise settled by Yokogawa out of court. The foregoing obligation and indemnity of Yokogawa shall be subject to i) Licensee promptly notifying Yokogawa of the Claim in writing as provided above, ii) Licensee granting to Yokogawa and its designees the full authority to control the defense and settlement of such Claim and iii) Licensee to give every and all necessary information and assistance to Yokogawa upon Yokogawa's request.
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- 6.4 Notwithstanding the foregoing, Yokogawa shall have no obligation nor liability for, and Licensee shall defend and indemnify Yokogawa and its suppliers from and against, the Claim, if the infringement is arising from, based on or caused by a) any modification of or addition to the Software Product or related documentation not provided or approved by Yokogawa, b) a combination of the Software Product and other equipment, software or systems, whether or not Yokogawa supplied or suggested such use of combination, c) design or instruction provided by or on behalf of Licensee, d) not complying with Yokogawa's suggestion, e) an act or omission of Licensee, its customers or any other persons than Yokogawa, except those carried out on the express instruction of Yokogawa, or f) any other causes not attributable to Yokogawa.
- 6.5 This section states the entire liability of Yokogawa and its suppliers and the sole remedy of Licensee with respect to any claim of infringement of third party's intellectual property rights. Notwithstanding anything to the contrary stated herein, with respect to the claims arising from or related to the Third Party Software or OSS, the special terms and conditions separately provided for such Third Party Software or OSS shall prevail.

7. Limitation of Liability

EXCEPT TO THE EXTENT THAT LIABILITY MAY NOT LAWFULLY BE EXCLUDED OR LIMITED BY CONTRACT, YOKOGAWA AND SUPPLIERS SHALL NOT BE LIABLE TO ANY PERSON OR LEGAL ENTITY FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF MATERIALS OR PRODUCTS, LOSS OF PRODUCTION, LOSS OF CONTRACTS, LOSS OR DESTRUCTION OF DATA, LOSS OF AVAILABILITY AND THE LIKE, OR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, OR OTHER SIMILAR DAMAGES OF ANY KIND, ARISING OUT OF THE USE OR INABILITY TO USE OF THE SOFTWARE PRODUCT, OR ARISING OUT OF ITS GENERATED APPLICATIONS OR DATA, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER BASED IN WARRANTY (EXPRESS OR IMPLIED), CONTRACT, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER LEGAL OR EQUITABLE GROUNDS. IN NO EVENT YOKOGAWA AND SUPPLIER'S AGGREGATE LIABILITY FOR ANY CAUSE OF ACTION WHATSOEVER (INCLUDING LIABILITY UNDER CLAUSE 5) SHALL EXCEED THE BOOK VALUE OF THE LICENSE FEE PAID TO YOKOGAWA FOR THE USE OF THE CONCERNED PART OF THE SOFTWARE PRODUCT.

If the product delivered by Yokogawa is altered, modified or combined with other software or is otherwise made different from Yokogawa's General Specifications, basic specifications, functional specifications or manuals without Yokogawa's prior written consent, Yokogawa shall be exempted from its obligations and liabilities under this Agreement or by law.

8. Assignment

Licensee shall not assign its rights or obligations under this Agreement without prior written consent of Yokogawa. If Licensee novates or assigns this Agreement and the Software Product with Yokogawa's consent, Licensee shall transfer all copies and whole part of the Software Product to the assignee and shall delete any and all copy of the Software Product in possession irretrievably. This Agreement shall inure to the benefit of and shall be binding on the successors of the parties.

9. Export Control

Licensee agrees to comply with the export control and related laws, regulations and orders of Japan, the United States of America, and any other applicable countries and, if Licensee exports or re-exports the Software Product, to obtain export/import permit and take all necessary procedures under Licensee's own responsibility and at Licensee's own expense.

10. Audit; Withholding

- 10.1 Yokogawa shall have the right to access and audit Licensee's facilities and any of Licensee's records, including data stored on computers, in relation to the use of the Software Product as may be reasonably necessary to verify that the requirements of this Agreement are being met.
- 10.2 Even after the license being granted under this Agreement, should there be any change in circumstances or environment of use which was not foreseen at the time of delivery and, in Yokogawa's reasonable opinion, is not appropriate for using the Software Product, or if Yokogawa otherwise reasonably believes it is inappropriate for Licensee to continue using the Software Product, Yokogawa may suspend or withhold the license provided hereunder.

11. Termination

Yokogawa shall have the right to terminate this Agreement with immediate effect upon notice to Licensee, if Licensee or end users breach any of the terms and conditions hereof. Upon termination of this Agreement, Licensee shall, and make end users, promptly cease using the Software Product and, in accordance with sub-clause 2.5, return or irretrievably delete all copies of the Software Product, certifying the same in writing. In this case the license fee paid by Licensee for the Software Product shall not be refunded. Clauses 2.4 and 2.5, 6, 7 and 12 shall survive any termination of this Agreement.

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.