

**FLXA202 / FLXA21
2-Wire Analyzer
Safety Precautions**

IM 12A01A02-20E

Introduction

Thank you for purchasing the FLXA™ 202/FLXA™ 21 2-Wire Analyzer.

Please read the following respective documents before installing and using the FLXA202/FLXA21.

When the FLXA21 with the output of FOUNDATION Fieldbus or PROFIBUS PA Communication is used, please refer to the User's Manual, IM 12A01A02-71E or IM 12A01A02-72E, too.

The related documents are as follows.

General Specifications

Contents	Document number	Note
FLXA202 2-wire Analyzer	GS 12A01A03-01EN	For FLXA202. Online manual
FLXA21 2-wire Analyzer	GS 12A01A02-01E	For FLXA21. Online manual
FLXA21 2-wire Analyzer FOUNDATION Fieldbus Communication	GS 12A01A02-71E	For FLXA21. Online manual
FLXA21 2-wire Analyzer PROFIBUS PA Communication	GS 12A01A02-72E	For FLXA21. Online manual

* the "E" or "EN" in the document number is the language code.

User's Manual

Contents	Document number	Note
FLXA202/FLXA21 2-wire Analyzer Start-up Manual	IM 12A01A02-12E	Attached to the product
Safety Instruction Manual	IM00C01C01-01Z1	For type "-AB", "-CB", or "-DB" Attached to the product
FLXA202/FLXA21 2-wire Analyzer Safety Precautions	IM 12A01A02-20E	For intrinsic safety, nonincendive and Type n. Attached to the product (This manual)
FLXA202/FLXA21 2-wire Analyzer Installation and Wiring	IM 12A01A03-01EN	Online manual
FLXA202/FLXA21 2-wire Analyzer Operation of pH/ORP	IM 12A01A03-31EN	For pH/ORP (-P1) selection Online manual
FLXA202/FLXA21 2-wire Analyzer Operation of SC	IM 12A01A03-32EN	For Conductivity (SC) (-C1) selection Online manual
FLXA202/FLXA21 2-wire Analyzer Operation of ISC	IM 12A01A03-33EN	For Inductive conductivity (ISC) (-C5) selection Online manual
FLXA202/FLXA21 2-wire Analyzer Operation of DO	IM 12A01A03-34EN	For Dissolved oxygen (DO) (-D1) selection Online manual
FLXA202 2-wire Analyzer Operation of SENCOM SA-pH/ORP	IM 12A01A03-36EN	For pH/ORP of SENCOM SA (-S5) selection Online manual
FLXA202 2-wire Analyzer Operation of SENCOM SA-SC	IM 12A01A03-37EN	For Conductivity (SC) of SENCOM SA (-S5) selection Online manual
FLXA21 2-wire Analyzer FOUNDATION Fieldbus Communication	IM 12A01A02-71E	For FLXA21, output "-F" Online manual
FLXA21 2-wire Analyzer PROFIBUS PA Communication	IM 12A01A02-72E	For FLXA21, output "-P" Online manual

* The "E" or "EN" in the document number is the language code.

Note: Please read the Safety Precautions (IM 12A01A02-20E) before using the product.

The Safety Precautions includes Control Drawings of intrinsic safety, nonincendive and Type n that describes specific condition for using FLXA202/FLXA21 in hazardous/classified location.

An exclusive User's Manual might be attached to the products whose suffix codes or option codes contain the code "Z" (made to customers' specifications). Please read it along with this manual.

Technical Information

Contents	Document number	Note
FLXA202 2-wire Analyzer Selection Guide for Intrinsic Safety type Associated Apparatus	TI 12A01A02-42EN	Online manual
FLXA202/FLXA21 2-Wire Analyzer HART Communication	TI 12A01A02-60E	Online manual

* The "E" or "EN" in the document number is the language code.

You can download the latest documents from our website. Scan QR code.

<http://www.yokogawa.com/an/flxa202/download/>



Read corresponding user's manual for details about sensors or other related products.

■ Notes on Handling User's Manuals

- Please hand over the user's manuals to your end users so that they can keep the user's manuals on hand for convenient reference.
- Please read the information thoroughly before using the product.
- The purpose of these user's manuals is not to warrant that the product is well suited to any particular purpose but rather to describe the functional details of the product.
- No part of the user's manuals may be transferred or reproduced without prior written consent from YOKOGAWA.
- YOKOGAWA reserves the right to make improvements in the user's manuals and product at any time, without notice or obligation.
- If you have any questions, or you find mistakes or omissions in the user's manuals, please contact our sales representative or your local distributor.

■ Trademark Notices

FLEXA, FLXA, SENCOM and FieldMate are trademarks or registered trademarks of Yokogawa Electric Corporation.

All other company and product names mentioned in this user's manual are trademarks or registered trademarks of their respective companies.

We do not use TM or ® mark to indicate those trademarks or registered trademarks in this user's manual.

◆ Safety Precautions

■ Safety, Protection, and Modification of the Product

- In order to protect the system controlled by the product and the product itself and ensure safe operation, observe the safety precautions described in this user's manual. We assume no liability for safety if users fail to observe these instructions when operating the product.
- If this instrument is used in a manner not specified in this user's manual, the protection provided by this instrument may be impaired.
- If any protection or safety circuit is required for the system controlled by the product or for the product itself, prepare 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.
- Modification of the product is strictly prohibited.
- The following safety symbols are used on the product as well as in this manual.



WARNING

This symbol indicates that an operator must follow the instructions laid out in this manual in order to avoid the risks, for the human body, of injury, electric shock, or fatalities. The manual describes what special care the operator must take to avoid such risks.



CAUTION

This symbol indicates that the operator must refer to the instructions in this manual in order to prevent the instrument (hardware) or software from being damaged, or a system failure from occurring.

CAUTION

This symbol gives information essential for understanding the operations and functions.

NOTE

This symbol indicates information that complements the present topic.



This symbol indicates Function Ground Terminal. Do not use this terminal as the protective ground terminal.

■ Warning and Disclaimer

The product is provided on an "as is" basis. 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.



WARNING

Installation and wiring

The FLXA202/FLXA21 should only be used with equipment that meets the relevant IEC, American or Canadian standards. Yokogawa accepts no responsibility for the misuse of this unit.



WARNING

Don't install "general purpose type" instruments in the hazardous area.



CAUTION

The Instrument is packed carefully with shock absorbing materials, nevertheless, the instrument may be damaged or broken if subjected to strong shock, such as if the instrument is dropped. Handle with care.



CAUTION

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



CAUTION

When you open the front panel, make sure the screws are completely out of the screw holes, and then open the front panel slowly in order not to damage the threaded parts on the housing. If the threaded parts are damaged and the screws cannot be tightened, the waterproof performance will deteriorate.



CAUTION

The HART communication may be influenced by strong electromagnetic field. In this case another trial of the HART communication and/or operation with FLXA202/FLXA21 touch screen can be carried out.



WARNING

- Do not use an abrasive or organic solvent in cleaning the instrument.
 - Substitution of components may impair suitability for Division 2.
Do not remove or replace while circuit is live unless area is known to be non hazardous.
Explosion Hazard – Do not disconnect equipment unless area is known to be non hazardous.
Do not reset circuit breaker unless power has been removed from the equipment or the area is known to be non hazardous.
-



WARNING

Electrostatic discharge

The FLXA202/FLXA21 contains devices that can be damaged by electrostatic discharge. When servicing this equipment, please observe proper procedures to prevent such damage. Replacement components should be shipped in conductive packaging. Repair work should be done at grounded workstations using grounded soldering irons and wrist straps to avoid electrostatic discharge.

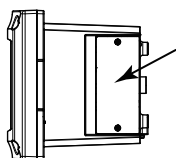
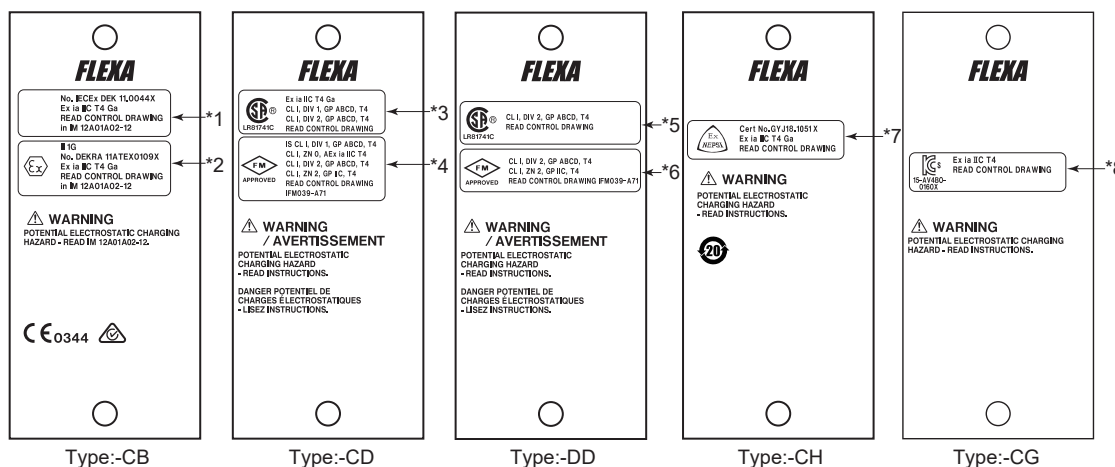
CAUTION

When checking whether ORP meter is functioning properly by using the concentrated sulfuric acid, handle it with care.

■ Mark position of intrinsic safety and nonincendive

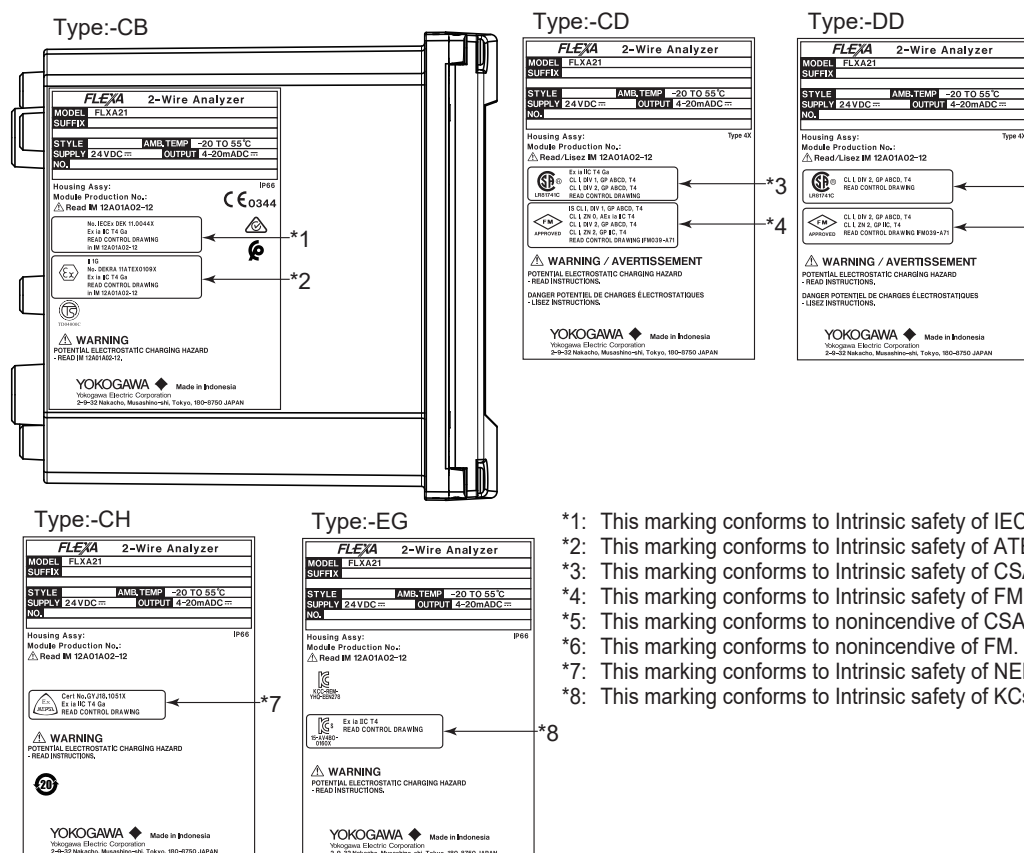
The mark position is shown as follows

FLXA202



- *1: This marking conforms to Intrinsic safety of IECEx.
- *2: This marking conforms to Intrinsic safety of ATEX.
- *3: This marking conforms to Intrinsic safety of CSA.
- *4: This marking conforms to Intrinsic safety of FM.
- *5: This marking conforms to nonincendive of CSA.
- *6: This marking conforms to nonincendive of FM.
- *7: This marking conforms to Intrinsic safety of NEPSI.
- *8: This marking conforms to Intrinsic safety of KCs.

FLXA21 (Output: -A)

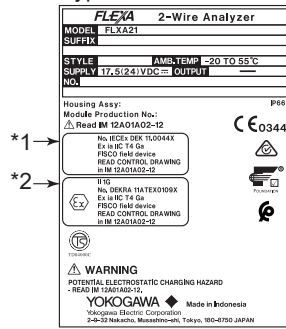


- *1: This marking conforms to Intrinsic safety of IECEx.
- *2: This marking conforms to Intrinsic safety of ATEX.
- *3: This marking conforms to Intrinsic safety of CSA.
- *4: This marking conforms to Intrinsic safety of FM.
- *5: This marking conforms to nonincendive of CSA.
- *6: This marking conforms to nonincendive of FM.
- *7: This marking conforms to Intrinsic safety of NEPSI.
- *8: This marking conforms to Intrinsic safety of KCs.

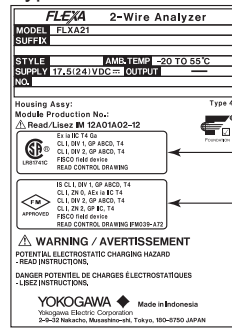
FLXA21 (Output: -F, -P)

-F (FOUNDATION Fieldbus)

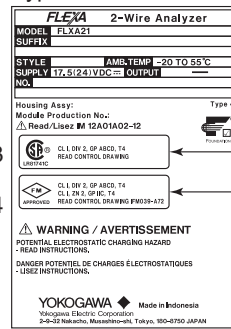
Type: -CB



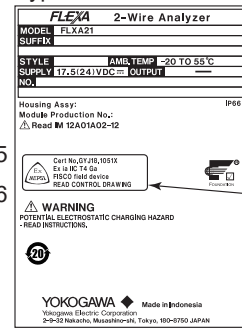
Type: -CD



Type: -DD

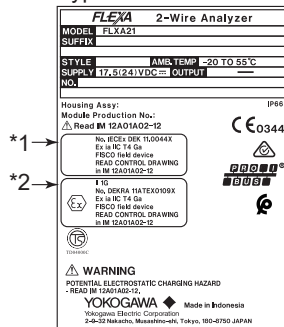


Type: -CH

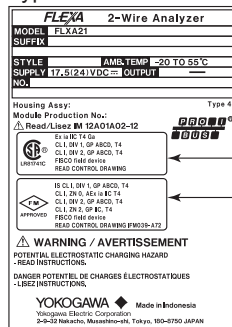


-P (PROFIBUS PA)

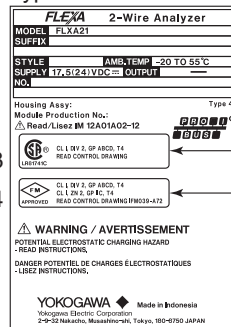
Type: -CB



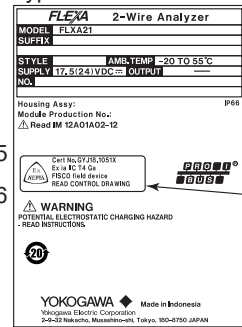
Type: -CD



Type: -DD

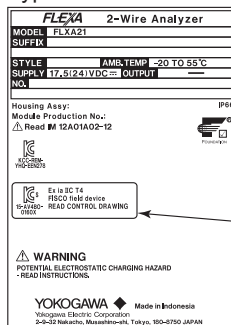


Type: -CH

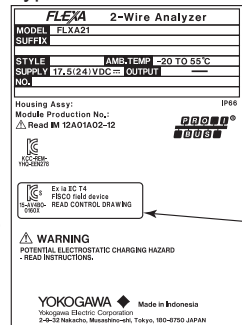


- *1: This marking conforms to Intrinsic safety of IECEx.
- *2: This marking conforms to Intrinsic safety of ATEX.
- *3: This marking conforms to Intrinsic safety of CSA.
- *4: This marking conforms to Intrinsic safety of FM.
- *5: This marking conforms to nonincendive of CSA.
- *6: This marking conforms to nonincendive of FM.
- *7: This marking conforms to Intrinsic safety of NEPSI.
- *8: This marking conforms to Intrinsic safety of KCs.

-F (FOUNDATION Fieldbus) Type: -EG



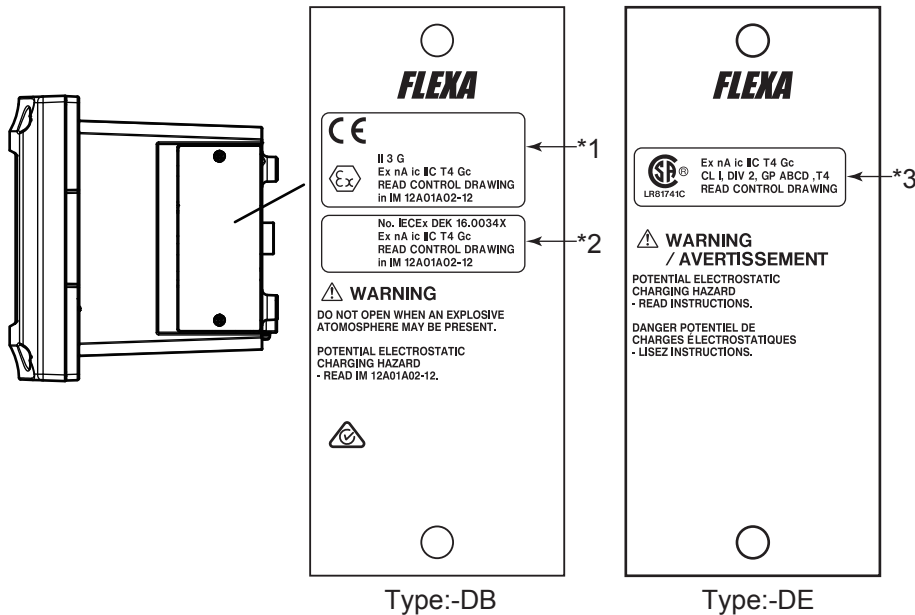
-P (PROFIBUS PA) Type: -EG



■ Mark position of Type n

The mark position is shown as follows

FLXA202



- *1: This marking conforms to Type n of ATEX.
 *2: This marking conforms to Type n of IECEx.
 *3: This marking conforms to Type n of CSA.

■ Regulatory Compliance

● Safety, EMC and RoHS Compliance

Safety: UL 61010-1
 UL 61010-2-030
 CAN/CSA-C22.2 No.61010-1
 CAN/CSA-C22.2 No.61010-2-030
 EN61010-1
 EN61010-2-030

EMC: EN61326-1 Class A, Table 2 (For use in industrial locations)
 Influence of immunity environment (Criteria A): Output shift is specified within $\pm 25\%$ of F.S.

EN61326-2-3

EN61326-2-5 (suffix code Output: -F, -P)

RCM: EN61326-1 Class A, Table 2

Korea Electromagnetic Conformity Standard Class A 한국 전자파적합성 기준

A급 기기 (업무용 방송통신기자재)

이 기기는 업무용 (A급) 전자파적합기기로서 판매자 또는
 사용자는 이 점을 주의하시기 바라며, 가정외의 지역에서
 사용하는 것을 목적으로 합니다.

Russian: TR CU 020/2011 (suffix code Output: -A)

RoHS: EN IEC 63000, FLXA202; 1.06 and later, FLXA21; 3.06 and later

Installation altitude: 2000 m or less

Category based on IEC 61010: I (Note 1)

Pollution degree based on IEC 61010: 2 (Note 2)


Note 1: Installation category, called over-voltage category, specifies impulse withstand voltage.

Equipment with "Category I" (ex. two-wire transmitter) is used for connection to circuits in which measures are taken to limit transient over-voltages to an appropriately low level.

Note 2: Pollution degree indicates the degree of existence of solid, liquid, gas or other inclusions which may reduce dielectric strength. Degree 2 is the normal indoor environment.

● Explosion Protected Type Compliance


FLXA202, FLXA21 (Output: -A)

Item	Description	'Type' in MS code
Europe (ATEX)	<p>FLXA202 and FLXA21: [Intrinsic safety "ia"]</p> <p>Applicable Standard: EN IEC 60079-0, EN 60079-11</p> <p>Certificate No: DEKRA 11ATEX0109X</p> <p>Marking/Rating:  II 1 G Ex ia IIC T4 Ga</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V a.c. r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V d.c. between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.</p> <p>Since the enclosure of the Model FLXA202 is made of aluminium, if it is mounted in an area where the use of EPL Ga (category 1 G) equipment is required, it shall be installed such that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 1.1</p>	-CB
International (IECEx)	<p>FLXA202 and FLXA21: [Intrinsic safety "ia"]</p> <p>Applicable Standard: IEC 60079-0, IEC 60079-11</p> <p>Certificate No: IECEx DEK 11.0044X</p> <p>Marking/Rating: Ex ia IIC T4 Ga</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V a.c. r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V d.c. between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.</p> <p>Since the enclosure of the Model FLXA202 is made of aluminium, if it is mounted in an area where the use of EPL Ga (category 1 G) equipment is required, it shall be installed such that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 1.1</p>	

Item	Description	'Type' in MS code
United States (FM)	<p>FLXA202 and FLXA21: [Intrinsically safe / Nonincendive]</p> <p>Applicable Standard: FM 3600, FM3610, FM3611, FM3810, NEMA 250, ANSI/ISA 60079-0, ANSI/ISA 60079-11, ANSI/UL 121201, ANSI/ISA 61010-1</p> <p>Certificate No: FM20US0046X</p> <p>Marking/Rating: IS CL I, DIV 1, GP ABCD CL I, ZN 0, AEx ia IIC NI CL I, DIV 2, GP ABCD CL I, ZN 2 IIC</p> <p>T4: for ambient temperature: -20 to 55°C</p> <p>Enclosure: Type 4X</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Battery: No replaceable battery</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V DC between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: See the control drawings.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 1.3</p>	-CD
Canada (CSA)	<p>FLXA202 and FLXA21: [Intrinsically safe / Nonincendive]</p> <p>Applicable Standard: C22.2 No.0, CAN/CSA-C22.2 No.94, C22.2 No.213, CAN/CSA-C22.2 No.60079-0, CAN/CSA-C22.2 No.60079-11, CAN/CSA-C22.2 No.61010-1, CAN/CSA-C22.2 No.61010-2-030</p> <p>Certificate No: 2425510</p> <p>Marking/Rating: Ex ia IIC T4 Ga</p> <p>Intrinsically safe for Class I, Division 1, Groups A, B, C, D, T4</p> <p>Nonincendive for Class I, Division 2, Groups A, B, C, D, T4</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Ambient Humidity: 0 – 100% (No Condensation)</p> <p>Enclosure: IP66, NEMA 4X</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V DC. between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: See the control drawings.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 1.2</p>	


Item	Description	'Type' in MS code
United States (FM)	<p>FLXA202 and FLXA21: [Nonincendive] Applicable Standard: FM 3600, FM3611, FM3810, NEMA 250, ANSI/UL 121201, ANSI/ISA 61010-1 Certificate No: FM20US0046X Marking/Rating: NI CL I, DIV 2, GP ABCD ZN 2 IIC T4: for ambient temperature: -20 to 55°C Power Supply / Signals: See the control drawing. Battery: No replaceable battery Electrical parameters: See the control drawing. Dielectric strength: 500 V AC, r.m.s. between - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 700 V DC between - the terminals of PH, SC and ISC Measuring Modules and the earth terminal Specific conditions of use: See the control drawings. On-site assembling: See Use's Manual IM 12A01A03-01EN. Installation and erection: See the control drawing. Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment. Control Drawing: Refer to 1.3</p>	-DD
Canada (CSA)	<p>FLXA202 and FLXA21: [Nonincendive] Applicable Standard: C22.2 No.0, CAN/CSA-C22.2 No.94, C22.2 No.213, CAN/CSA-C22.2 No.61010-1, CAN/CSA-C22.2 No.61010-2-030 2425510 Certificate No: Marking/Rating: Nonincendive for Class I, Division 2, Groups A, B, C, D, T4 Ambient Temperature: -20 to 55°C Ambient Humidity: 0 – 100% (No Condensation) Enclosure: IP66, NEMA 4X Power Supply / Signals: See the control drawing. Electrical parameters: See the control drawing. Dielectric strength: 500 V AC, r.m.s. between - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 700 V DC. between - the terminals of PH, SC and ISC Measuring Modules and the earth terminal Specific conditions of use: See the control drawings. On-site assembling: See Use's Manual IM 12A01A03-01EN. Installation and erection: See the control drawing. Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment. Control Drawing: Refer to 1.2</p>	

Item	Description	'Type' in MS code
Canada (CSA)	<p>FLXA202: [Type of protection 'n' / Nonincendive]</p> <p>Applicable Standard: C22.2 No.0, CAN/CSA-C22.2 No.94, C22.2 No.213, CAN/CSA-C22.2 No.60079-0, CAN/CSA-C22.2 No.60079-11, CAN/CSA-22.2 No.60079-15, CAN/CSA-C22.2 No.61010-1, CAN/CSA-C22.2 No.61010-2-030</p> <p>Certificate No: 2425510</p> <p>Marking/Rating: Ex nA ic IIC T4 Gc Nonincendive for Class I, Division 2, Groups A, B, C, D, T4</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Ambient Humidity: 0 – 100% (No Condensation)</p> <p>Enclosure: IP66, NEMA 4X</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 700 V DC. between - the terminals of PH, SC and ISC Measuring Modules and the earth terminal</p> <p>Specific conditions of use: See the control drawings.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 1.2</p>	-DE

Item	Description	'Type' in MS code
Europe (ATEX)	<p>FLXA202: [Type of protection 'n']</p> <p>Certificate: Not Applicable as per Annex VIII to ATEX 2014/34/EU</p> <p>Applicable Standard: EN IEC 60079-0, EN 60079-11, EN60079-15, EN60529</p> <p>Marking/Rating:  II 3 G Ex nA ic IIC T4 Gc</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Enclosure: IP66</p> <p>Cable entry: See the control drawing.</p> <p>Pollution degree: Pollution degree 2 shall be maintained inside the enclosure. See the control drawing.</p> <p>Overvoltage category: I</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 700 V DC between - the terminals of PH, SC and ISC Measuring Modules and the earth terminal</p> <p>Specific conditions of use: Electrostatic charges on the non-metallic or coated parts of the 2-wire analyzer shall be avoided. Additional clamping of the cable shall be provided to ensure that pulling or twisting is not transmitted to the terminals. Alternatively, a certified Ex d, Ex e, or Ex n cable gland which provides sufficient clamping shall be used instead of accompanying cable gland. The 2-wire analyzer shall be installed in such a way that the air vent is physically protected from any possible impact.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 1.4</p>	-DB

Item	Description	'Type' in MS code
International (IECEx)	<p>FLXA202: [Type of protection 'n'] Applicable Standard: IEC 60079-0, IEC 60079-11, IEC 60079-15 Certificate No: IECEx DEK 16.0034X Marking/Rating: Ex nA ic IIC T4 Gc Ambient Temperature: -20 to 55°C Enclosure: IP66 Cable entry: See the control drawing. Pollution degree: Pollution degree 2 shall be maintained inside the enclosure. See the control drawing.</p> <p>Overvoltage category: I Power Supply / Signals: See the control drawing. Electrical parameters: See the control drawing. Dielectric strength: 500 V AC, r.m.s. between - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 700 V DC between - the terminals of PH, SC and ISC Measuring Modules and the earth terminal</p> <p>Specific conditions of use: Electrostatic charges on the non-metallic or coated parts of the 2-wire analyzer shall be avoided. Additional clamping of the cable shall be provided to ensure that pulling or twisting is not transmitted to the terminals. Alternatively, a certified Ex d, Ex e, or Ex n cable gland which provides sufficient clamping shall be used instead of accompanying cable gland. The 2-wire analyzer shall be installed in such a way that the air vent is physically protected from any possible impact.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN. Installation and erection: See the control drawing. Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 1.5</p>	-DB
China (NEPSI)	<p>FLXA202 and FLXA21: [Intrinsic safety "ia"] Applicable Standard: GB3836.1-2010, GB3836.4-2010, GB 3836.20-2010 Certificate No: GYJ18.1051X Marking/Rating: Ex ia IIC T4 Ga Ambient Temperature: -20 to 55°C Control Drawing: Refer to 1.6</p>	-CH
Korea (KCs)	<p>FLXA202: [Intrinsic safety "ia"] Applicable Standard: Notice of Ministry of Labor No. 2016-54 Certificate No: 15-AV4BO-0160X Marking/Rating: Ex ia IIC T4 Ga Ambient Temperature: -20 to 55°C Control Drawing: Refer to 1.6</p>	-CG
	<p>FLXA21: [Intrinsic safety "ia"] Applicable Standard: Notice of Ministry of Labor No. 2016-54 Certificate No: 15-AV4BO-0160X Marking/Rating: Ex ia IIC T4 Ambient Temperature: -20 to 55°C Control Drawing: Refer to 1.6</p>	-EG

FLXA21 (Output: -F, -P)

Item	Description	'Type' in MS code
Europe (ATEX)	<p>[Intrinsic safety "ia"]</p> <p>Applicable Standard: EN IEC 60079-0, EN 60079-11</p> <p>Certificate No: DEKRA 11ATEX0109X</p> <p>Marking/Rating:  II 1 G Ex ia IIC T4 Ga, FISCO field device</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V a.c. r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V d.c. between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.</p> <p>Since the enclosure of the Model FLXA202 is made of aluminium, if it is mounted in an area where the use of EPL Ga (category 1 G) equipment is required, it shall be installed such that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 2.1</p>	-CB
International (IECEx)	<p>[Intrinsic safety "ia"]</p> <p>Applicable Standard: IEC 60079-0, IEC 60079-11</p> <p>Certificate No: IECEx DEK 11.0044X</p> <p>Marking/Rating: Ex ia IIC T4 Ga, FISCO field device</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V a.c. r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V d.c. between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.</p> <p>Since the enclosure of the Model FLXA202 is made of aluminium, if it is mounted in an area where the use of EPL Ga (category 1 G) equipment is required, it shall be installed such that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 2.1</p>	

Item	Description	'Type' in MS code
United States (FM)	<p>[Intrinsically safe / Nonincendive]</p> <p>Applicable Standard: FM 3600, FM3610, FM3611, FM3810, NEMA 250, ANSI/ISA 60079-0, ANSI/ISA 60079-11, ANSI/UL 121201, ANSI/ISA 61010-1</p> <p>Certificate No: FM20US0046X</p> <p>Marking/Rating: IS CL I, DIV 1, GP ABCD CL I, ZN 0, AEx ia IIC NI CL I, DIV 2, GP ABCD CL I, ZN 2 IIC FISCO field device</p> <p>T4: for ambient temperature: -20 to 55°C</p> <p>Enclosure: Type 4X</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Battery: No replaceable battery</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V DC between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: See the control drawings.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 2.2</p>	-CD

Item	Description	'Type' in MS code
Canada (CSA)	<p>Applicable Standard: [Intrinsically safe / Nonincendive] C22.2 No.0, CAN/CSA-C22.2 No.94, C22.2 No.213, CAN/CSA-C22.2 No.60079-0, CAN/CSA-C22.2 No.60079-11, CAN/CSA-C22.2 No.61010-1, CAN/CSA-C22.2 No.61010-2-030</p> <p>Certificate No: 2425510</p> <p>Marking/Rating: Ex ia IIC T4 Ga, FISCO field device Intrinsically safe for Class I, Division 1, Groups A, B, C, D, T4 Nonincendive for Class I, Division 2, Groups A, B, C, D, T4</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Ambient Humidity: 0 – 100% (No Condensation)</p> <p>Enclosure: IP66, NEMA 4X</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 700 V DC. between - the terminals of PH, SC and ISC Measuring Modules and the earth terminal</p> <p>Specific conditions of use: See the control drawings.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 2.3</p>	-CD

Item	Description	'Type' in MS code
United States (FM)	<p>[Nonincendive]</p> <p>Applicable Standard: FM 3600, FM3611, FM3810, NEMA 250, ANSI/UL 121201, ANSI/ISA 61010-1</p> <p>Certificate No: FM20US0046X</p> <p>Marking/Rating: NI CL I, DIV 2, GP ABCD ZN 2 IIC</p> <p>T4: for ambient temperature: -20 to 55°C</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Battery: No replaceable battery</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V DC between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: See the control drawings.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 2.2</p>	-DD
Canada (CSA)	<p>[Nonincendive]</p> <p>Applicable Standard: C22.2 No.0, CAN/CSA-C22.2 No.94, C22.2 No.213, CAN/CSA-C22.2 No.61010-1, CAN/CSA-C22.2 No.61010-2-030</p> <p>Certificate No: 2425510</p> <p>Marking/Rating: Nonincendive for Class I, Division 2, Groups A, B, C, D, T4</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Ambient Humidity: 0 – 100% (No Condensation)</p> <p>Enclosure: IP66, NEMA 4X</p> <p>Power Supply / Signals: See the control drawing.</p> <p>Electrical parameters: See the control drawing.</p> <p>Dielectric strength: 500 V AC, r.m.s. between</p> <ul style="list-style-type: none"> - Supply terminals and the earth terminal - the terminals of Measuring Modules excluding PH, SC and ISC and the earth terminal - Supply terminals and the terminals of Measuring Modules - the terminals of Measuring Module 1 and the terminals of Measuring Module 2 <p>700 V DC. between</p> <ul style="list-style-type: none"> - the terminals of PH, SC and ISC Measuring Modules and the earth terminal <p>Specific conditions of use: See the control drawings.</p> <p>On-site assembling: See Use's Manual IM 12A01A03-01EN.</p> <p>Installation and erection: See the control drawing.</p> <p>Maintenance and Repair: Warning: A modification of the equipment would no longer comply with the construction described in the certificate documentation. Only personnel authorized by Yokogawa Electric Corporation can repair the equipment.</p> <p>Control Drawing: Refer to 2.3</p>	
China (NEPSI)	<p>[Intrinsic safety "ia"]</p> <p>Applicable Standard: GB3836.1-2010, GB3836.4-2010, GB 3836.20-2010</p> <p>Certificate No: GYJ18.1051X</p> <p>Marking/Rating: Ex ia IIC T4 Ga, FISCO field device</p> <p>Ambient Temperature: -20 to 55°C</p> <p>Control Drawing: Refer to 2.4</p>	-CH

Item	Description	'Type' in MS code
Korea (KCs)	[Intrinsic safety "ia"] Applicable Standard: Notice of Ministry of Labor No. 2016-54 Certificate No: 15-AV4BO-0160X Marking/Rating: Ex ia IIC T4, FISCO field device Ambient Temperature: -20 to 55°C Control Drawing: Refer to 2.4	-EG

■ Product Disposal:

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

■ Warranty and service

Yokogawa products and parts are guaranteed free from defects in workmanship and material under normal use and service for a period of (typically) 12 months from the date of shipment from the manufacturer.

Individual sales organisations can deviate from the typical warranty period, and the conditions of sale relating to the original purchase order should be consulted. Damage caused by wear and tear, inadequate maintenance, corrosion, or by the effects of chemical processes are excluded from this warranty coverage.

In the event of warranty claim, the defective goods should be sent (freight paid) to the service department of the relevant sales organisation for repair or replacement (at Yokogawa discretion). The following information must be included in the letter accompanying the returned goods:

- Part number, model code and serial number
- Original purchase order and date
- Length of time in service and a description of the process
- Description of the fault, and the circumstances of failure
- Process/environmental conditions that may be related to the failure of the device.
- A statement whether warranty or nonwarranty service is requested
- Complete shipping and billing instructions for return of material, plus the name and phone number of a contact person who can be reached for further information.

Returned goods that have been in contact with process fluids must be decontaminated/ disinfected before shipment. Goods should carry a certificate to this effect, for the health and safety of our employees.

Material safety data sheets should also be included for all components of the processes to which the equipment has been exposed.

◆ CE marking products

■ Authorised Representative in EEA

The Authorised Representative for this product in EEA is Yokogawa Europe B.V. (Euroweg 2, 3825 HD Amersfoort, The Netherlands).

■ Identification Tag

This manual and the identification tag attached on a packing box are essential parts of the product.

Keep them together in a safe place for future reference.

■ Users

This product is designed to be used by a person with specialized knowledge.

■ How to dispose the batteries:

This is an explanation about the EU Battery Directive. This directive is only valid in the EU.

Batteries are included in this product. Batteries incorporated into this product cannot be removed by yourself. Dispose them together with this product.

When you dispose this product in the EU, contact your local Yokogawa Europe B.V.office. Do not dispose them as domestic household waste.

Battery type: Manganese dioxide lithium battery



Notice:

The symbol (see above) means they shall be sorted out and collected as ordained in the EU Battery Directive.

■ Information of the WEEE Directive

This product is purposely designed to be used in a large scale fixed installations only and, therefore, is out of scope of the WEEE Directive. The WEEE Directive does not apply. This product should be disposed in accordance with local and national legislation/regulations.

The WEEE Directive is only valid in the EU.

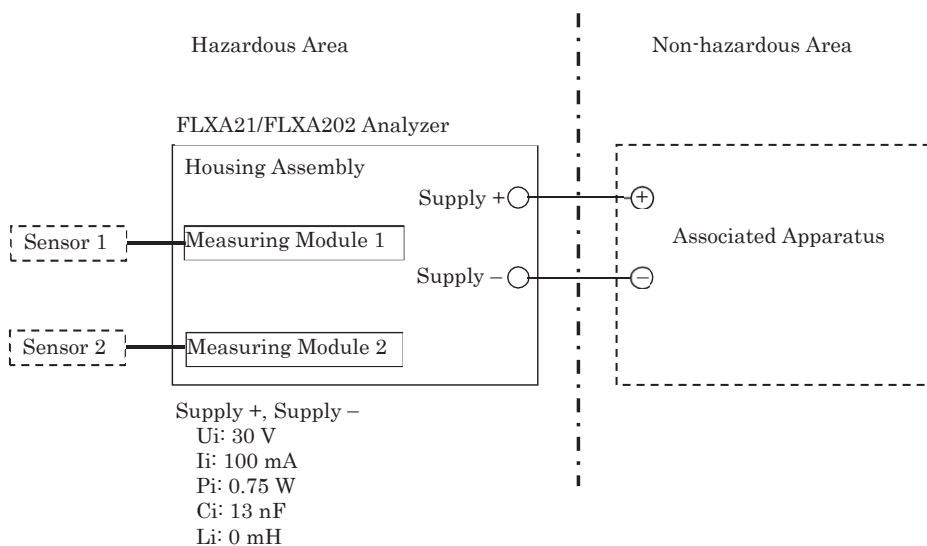
Control Drawings

1. FLXA202, FLXA21 (Output: -A)

1.1 ATEX and IECEx

FLXA202/FLXA21: Intrinsic safety “ia”

Yokogawa Electric Corporation			Model		FLXA21 / FLXA202			
Title	Control drawing (for 4–20mA type)							
No.	IKE039-A31	Page	1	Revision	0	Date	2019-10-18	



Measuring Module 1, 2

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM, SSA
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μ F
Lo	1.7 mH	8 mH	0.45 mH

Notes:

1. The associated apparatus must be a linear source.
2. “Measuring Module 2” is not always installed.
3. ISC module, SENCOM module and SSA module are not installed as “Measuring Module 2”.
4. Sensor 1 and Sensor 2 may be simple apparatus or intrinsically safe apparatus.
5. In case of SSA module, Sensor 1 is SENCOM SA (SENCOM Smart Adaptor).
6. When accessing the display window or other non-metallic parts of the enclosure of FLXA202/FLXA21, take the following measures to minimize the risk of explosion from electrostatic discharges, in addition to avoiding any actions that cause the generation of electrostatic charges, such as rubbing with a dry cloth.

To avoid electrostatic charge on the operator,

- Earth the operator through a wrist-strap, or
- Operate FLXA202/FLXA21 on the conductive floors, wearing anti-static work clothes and electrostatic safety shoes, or
- Neutralize the operator and FLXA202/FLXA21 by a static elimination bar which has a metal part earthed through resistor from 100k Ω to 100M Ω .

In case that those measures cannot be taken or static electricity cannot be suppressed, bring a gas detector and make sure there is no ignition capable atmosphere around FLXA202/FLXA21 before the operation.

DEKRA Certification B.V.
 Meander 1051, 6825 MJ Arnhem
 P.O. Box 5185, 6802 ED Arnhem
 The Netherlands
 T +31 88 96 83000 F +31 88 96 83100

1.2 CSA

FLXA202/FLXA21:
FLXA202:

Intrinsic safety, Nonincendive,
Type of protection 'n'

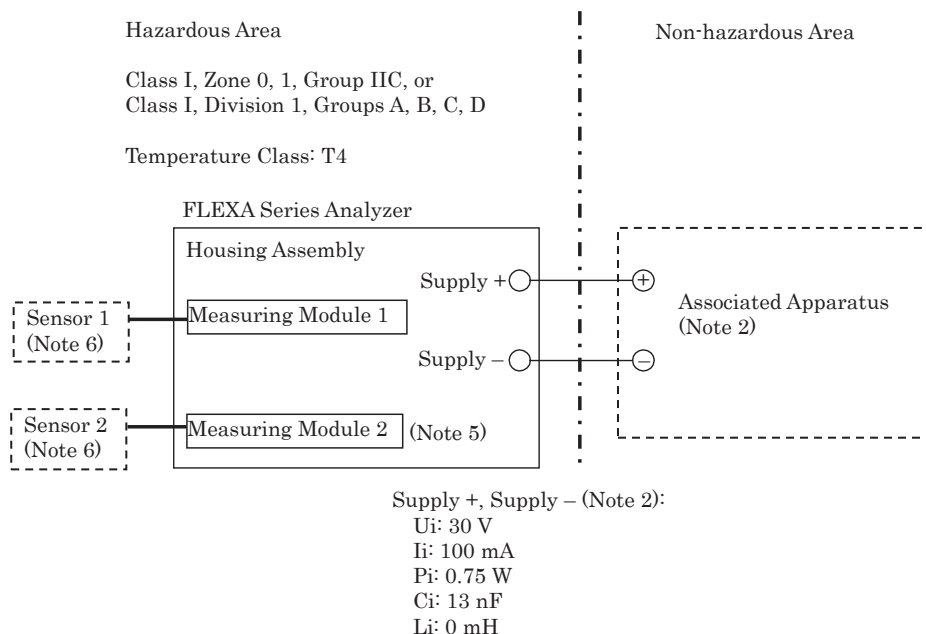
Model: FLXA21 / FLXA202

Date: May 29, 2017

Control drawing (4-20mA type)

Installation for Zone 0, 1 / Division 1

Applicable models: FLXA21-D-x-x-CD-xx-xx-A-..., FLXA202-D-x-x-CD-xx-xx-A-...



Measuring Module 1, 2 (Note 6):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM, SSA
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μ F
Lo	1.7 mH	8 mH	0.45 mH

Specific conditions of use

- Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.
- If FLXA202 is mounted in Zone 0, it must be installed such that, even in the event of rare incidents, an ignition source due to impact and/or friction sparks is excluded.

Rev.1: Dec. 26, 2019

Doc. No.: ICS032-A71 P.1

Yokogawa Electric Corporation

Master Contract: 172608
 Report / Certificate: 2425510 Ed. 5
 Project: 80044517

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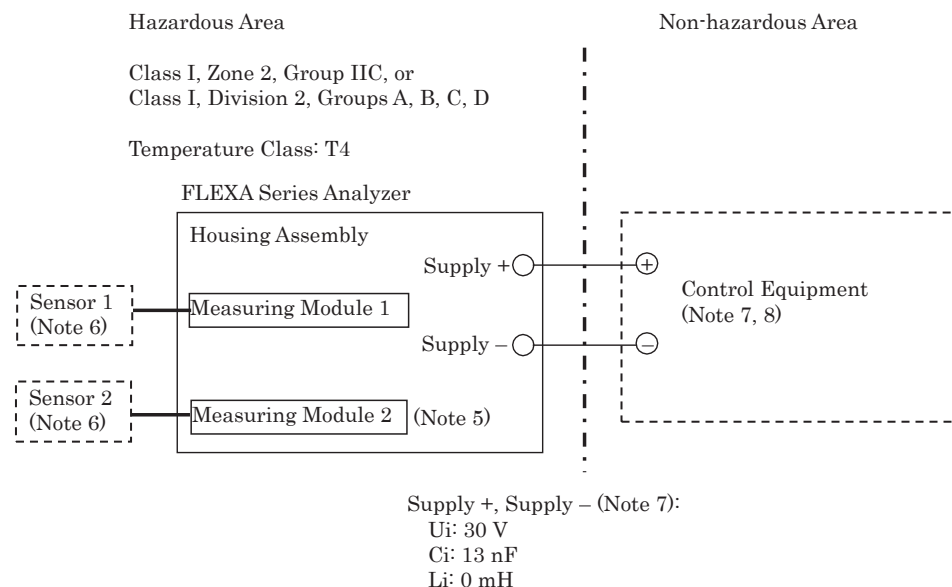
Attachment 1

Model: FLXA21 / FLXA202

Date: May 29, 2017

Installation for Zone 2 / Division 2

Applicable models: FLXA21-D-x-x-CD-xx-xx-A-..., FLXA21-D-x-x-DD-xx-xx-A-...;
 FLXA202-D-x-x-CD-xx-xx-A-..., FLXA202-D-x-x-DD-xx-xx-A-...
 FLXA202-D-x-x-DE-xx-xx-A-...



Measuring Module 1, 2 (Note 6):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM, SSA
U_o	11.76 V	11.76 V	5.36 V
I_o	116.5 mA	60.6 mA	106.16 mA
P_o	0.3424 W	0.178 W	0.1423 W
C_o	100 nF	100 nF	31 μ F
L_o	1.7 mH	8 mH	0.45 mH

Specific condition of use

- Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.

Specific conditions of use for FLXA202-D-x-x-DE-xx-xx-A-... when it is used as “Ex nA ic”

- The cable glands accompanying the equipment may not provide sufficient clamping. Additional clamping of the cable shall be provided to ensure that pulling and twisting are not transmitted to the termination. Alternatively, Ex d, Ex e, or Ex n cable glands which provide sufficient clamping shall be used instead of the accompanying cable gland.
- The gaskets of the cable glands shall be protected from light.
- Analyzer must be installed in such a way that the air vent is physically protected from any possible impact.

Rev.1: Dec. 26, 2019

Doc. No.: ICS032-A71 P.2

Yokogawa Electric Corporation

Master Contract: 172608
 Report / Certificate: 2425510 Ed. 5
 Project: 80044517

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Attachment 1

Model: FLXA21 / FLXA202

Date: May 29, 2017

Notes:

1. Installation must be in accordance with the Canadian Electric Code Part I (C22.1), ANSI/ISA-RP12.06.01 and relevant local codes.
2. The associated apparatus must be a linear source meeting the following conditions.

$$\begin{aligned}U_o \text{ (or } V_o) &\leq U_i \\I_o \text{ (or } I_{sc}) &\leq I_i \\P_o &\leq P_i \\C_o \text{ (or } C_a) &\geq C_i + C_{cable} \\L_o \text{ (or } L_a) &\geq L_i + L_{cable}\end{aligned}$$

3. Control equipment connected to the associated apparatus must not use or generate a voltage which exceeds U_m of the associated apparatus.
4. The control drawing of the associated apparatus must be followed when installing the equipment.
5. Measuring Module 2 is not always installed.
6. **ISC module, SENCOM module and SSA module are not installed as "Measuring Module 2".**
7. When installed in Zone 0 or 1, or Division 1, Sensor 1 and Sensor 2 may be simple apparatus or intrinsically safe apparatus meeting the conditions below.
When installed in Zone 2 or Division 2, Sensor 1 and Sensor 2 may be simple apparatus or non-incendive field wiring apparatus meeting the conditions below, or alternatively, they may be equipment suitable for Zone 2 or Division 2 respectively, if a suitable wiring method other than non-incendive field wiring is employed.

$$\begin{aligned}U_i \text{ (or } V_{max}) &\geq U_o \\I_i \text{ (or } I_{max}) &\geq I_o \\P_i &\geq P_o \\C_i &\leq C_o - C_{cable} \\L_i &\leq L_o - L_{cable}\end{aligned}$$

8. The control equipment must be an associated non-incendive field wiring apparatus meeting the conditions below. Alternatively, it may be general-purpose equipment, if a suitable wiring method other than non-incendive field wiring is employed.

$$\begin{aligned}U_o \text{ (or } V_o) &\leq U_i \\C_o \text{ (or } C_a) &\geq C_i + C_{cable} \\L_o \text{ (or } L_a) &\geq L_i + L_{cable}\end{aligned}$$

9. When FLXA202-D-x-x-DE-xx-xx-A-... is used as "Ex nA ic", it must be installed in accordance with one of the following:
 - a) in a SELV or PELV system, or
 - b) via a safety isolating transformer complying with the requirements of IEC 61558-2-6, or a technically equivalent standard, or
 - c) directly connected to apparatus complying with IEC60950 series, IEC61010-1, or a technically equivalent standard, or
 - d) fed directly from cells or batteries.
10. When FLXA202-D-x-x-DE-xx-xx-A-... is used as "Ex nA ic" and with the accompanying cable glands, cable with an external diameter of 6 to 12 mm must be used for field wiring. The cable glands must be secured with a tightening torque of 6 Nm so that they can be released only with the aid of a tool. Unused cable gland shall be sealed with the accompanying metal plug.

Rev.1: Dec. 26, 2019

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Project: 80044517

Attachment 1

Model: FLXA21 / FLXA202Date: May 29, 2017

11. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD
AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES
12. WARNING – SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY
AVERTISSEMENT – LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA
SÉCURITÉ INTRINSÈQUE.
13. WARNING – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR
ZONE 2 / DIVISION 2
AVERTISSEMENT – LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATÉRIEL
INACCEPTABLE POUR LES EMPLACEMENTS DE ZONE 2 / DIVISION 2

Rev.1: Dec. 26, 2019

Doc. No.: ICS032-A71 P.4

Yokogawa Electric Corporation
Page 260 of 410Master Contract: 172608
Report / Certificate: 2425510 Ed. 5
Project: 80044517

Attachment 1

1.3 FM

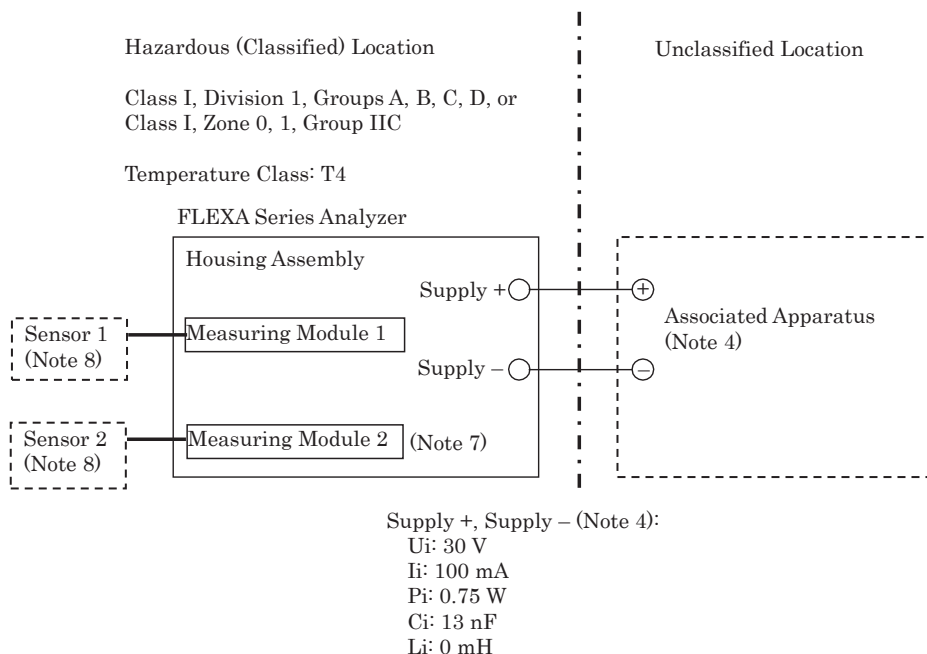
FLXA202/FLXA21: Intrinsic safety, Nonincendive

Model: FLEXA Series Date: April 17, 2015

Control drawing (4–20 mA type)

Installation for Division 1 / Zone 0, 1

Applicable models: FLXA21-D-x-x-CD-xx-xx-A-..., FLXA202-D-x-x-CD-xx-xx-A-...



Measuring Module 1, 2 (Note 8):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM, SSA
U _o	11.76 V	11.76 V	5.36 V
I _o	116.5 mA	60.6 mA	106.16 mA
P _o	0.3424 W	0.178 W	0.1423 W
C _o	100 nF	100 nF	31 μF
L _o	1.7 mH	8 mH	0.45 mH

Specific conditions of use:

- Precautions shall be taken to minimize the risk of non-metallic parts and painted parts of the enclosure. When the equipment is used in hazardous locations, avoid any action which generates electrostatic discharge such as rubbing with a dry cloth.
- In the case where the enclosure of the analyzer is made of Aluminum, if it is mounted in ZONE 0, it must be installed such that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.

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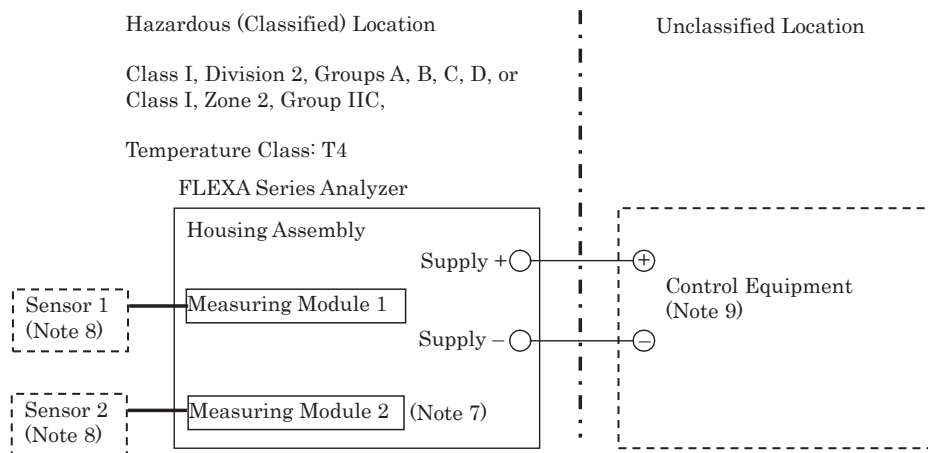
Yokogawa Electric Corporation

Model: FLEXA Series

Date: April 17, 2015

Installation for Division 2 / Zone 2

Applicable models: FLXA21-D-x-x-CD-xx-xx-A-..., FLXA21-D-x-x-DD-xx-xx-A-...;
 FLXA202-D-x-x-CD-xx-xx-A-..., FLXA202-D-x-x-DD-xx-xx-A-...



Supply +, Supply – (Note 9):
 Ui: 30 V
 Ci: 13 nF
 Li: 0 mH

Measuring Module 1, 2 (Note 8):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM, SSA
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	4 μ F	4 μ F	31 μ F
Lo	4.5 mH	19 mH	0.45 mH

Specific condition of use:

- Precautions shall be taken to minimize the risk of non-metallic parts and painted parts of the enclosure. When the equipment is used in hazardous locations, avoid any action which generates electrostatic discharge such as rubbing with a dry cloth.

Rev.3: Dec. 26, 2019

Doc. No.: IFM039-A71 P.2

Yokogawa Electric Corporation

Model: FLEXA Series

Date: May 29, 2017

Notes:

1. This drawing replaces the former control drawing IKE039-A12.
2. No revision to this drawing without prior approval of FM.
3. Installation must be in accordance with the National Electric Code (NFPA 70), ANSI/ISA-RP12.06.01 and relevant local codes.
4. The associated apparatus must be an FM-approved linear source meeting the following conditions.

$$\begin{aligned}
 U_o \text{ (or } V_o) &\leq U_i \\
 I_o \text{ (or } I_s) &\leq I_i \\
 P_o &\leq P_i \\
 C_o \text{ (or } C_a) &\geq C_i + C_{\text{cable}} \\
 L_o \text{ (or } L_a) &\geq L_i + L_{\text{cable}}
 \end{aligned}$$

5. Control equipment connected to the associated apparatus must not use or generate a voltage which exceeds U_m of the associated apparatus.
6. The control drawing of the associated apparatus must be followed when installing the equipment.
7. Measuring Module 2 is not always installed.
8. **ISC module, SENCOM module and SSA module are not installed as "Measuring Module 2".**
9. When installed in Division 1, Zone 0 or Zone 1, Sensor 1 and Sensor 2 may be simple apparatus or intrinsically safe apparatus meeting the conditions below.
When installed in Division 2 or Zone 2, Sensor 1 and Sensor 2 may be simple apparatus or nonincendive field wiring apparatus meeting the conditions below, or alternatively, they may be equipment suitable for Division 2 or Zone 2 respectively, if a suitable wiring method other than nonincendive field wiring is employed.

$$\begin{aligned}
 U_i \text{ (or } V_{\text{max}}) &\geq U_o \\
 I_i \text{ (or } I_{\text{max}}) &\geq I_o \\
 P_i &\geq P_o \\
 C_i &\leq C_o - C_{\text{cable}} \\
 L_i &\leq L_o - L_{\text{cable}}
 \end{aligned}$$

10. The control equipment must be an FM-approved associated nonincendive field wiring apparatus meeting the conditions below. Alternatively, it may be general-purpose equipment, if a suitable wiring method other than nonincendive field wiring is employed.

$$\begin{aligned}
 U_o \text{ (or } V_o) &\leq U_i \\
 C_o \text{ (or } C_a) &\geq C_i + C_{\text{cable}} \\
 L_o \text{ (or } L_a) &\geq L_i + L_{\text{cable}}
 \end{aligned}$$

11. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – WHEN THE EQUIPMENT IS USED IN HAZARDOUS LOCATIONS, AVOID ANY ACTION WHICH GENERATE ELECTROSTATIC DISCHARGE SUCH AS RUBBING WITH A DRY CLOTH.
12. WARNING – IN THE CASE WHERE THE ENCLOSURE OF THE ANALYZER IS MADE OF ALUMINUM, IF IT IS MOUNTED IN ZONE 0, IT MUST BE INSTALLED SUCH THAT, EVEN IN THE EVENT OF RARE INCIDENTS, IGNITION SOURCES DUE TO IMPACT AND FRICTION SPARKS ARE EXCLUDED
13. WARNING – SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY AND SUITABILITY FOR DIVISION 2 / ZONE 2.

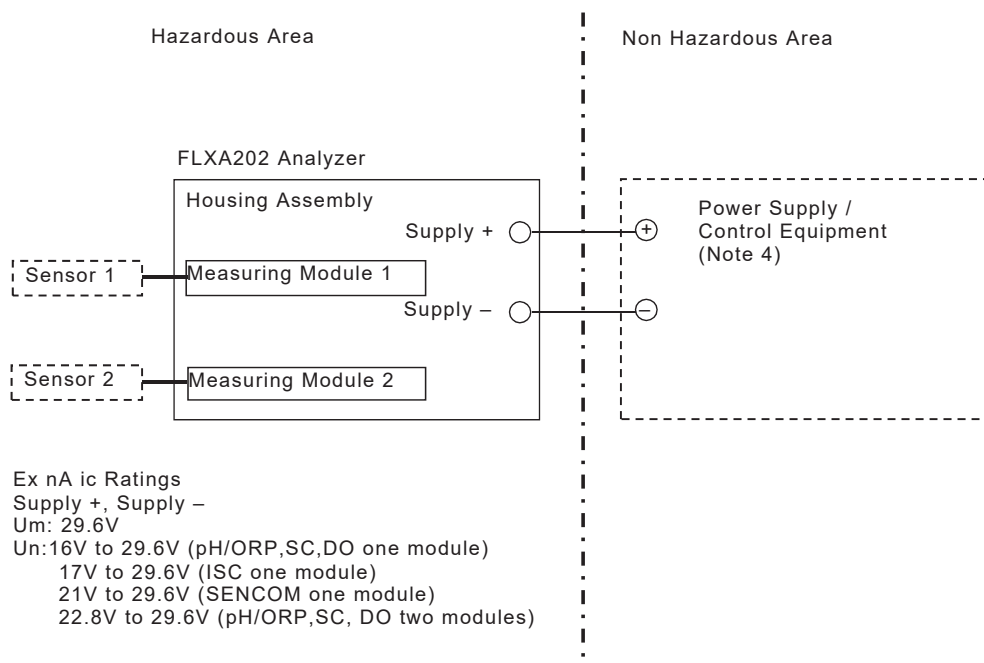
Rev.1: Dec. 26, 2019

Doc. No.: IFM039-A71 P.3

Yokogawa Electric Corporation

1.4 ATEX (Type n) FLXA202: Type of protection 'n'

Yokogawa Electric Corporation			Model		FLXA202			
Title	Control drawing							
No.	NKE053-A71	Page	1	Revision	2	Date	2020-07-31	



Measuring Module 1, 2

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM, SSA
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μF
Lo	1.7 mH	8 mH	0.45 mH

Specific condition of use

- Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.
- The cable gland accompanying the equipment may not provide sufficient clamping. Additional clamping of the cable shall be provided to ensure that pulling and twisting are not transmitted to the termination. Alternatively, an Ex d, Ex e, or Ex n cable gland which provides sufficient clamping shall be used instead of the accompanying cable gland.
- Analyzer must be installed in such a way that the air vent is physically protected from any possible impact.

Yokogawa Electric Corporation			Model		FLXA202		
Title	Control drawing						
No.	NKE053-A71	Page	2	Revision	2		

Notes:

- Installation must be in accordance with EN60079-14 and relevant local codes.
- Measuring Module 2 is not always installed. **ISC module, SENCOM module and SSA module are not installed as "Measuring Module 2".**
- When installed in an area where the use of Category 3 G equipment is required, Sensor 1 and Sensor 2 may be simple apparatus, intrinsically safe apparatus meeting conditions below, or other Category 3 G equipment.
 - $U_i \text{ (or } V_{\max}) \geq U_o$
 - $I_i \text{ (or } I_{\max}) \geq I_o$
 - $P_i \geq P_o$
 - $C_i \leq C_o - C_{\text{cable}}$
 - $L_i \leq L_o - L_{\text{cable}}$
- FLXA202 Analyzer must be installed in accordance with one of the following:
 - in a SELV or PELV system, or
 - via a safety isolating transformer complying with the requirements of IEC 61558-2-6, or a technically equivalent standard, or
 - directly connected to apparatus complying with IEC60950 series, IEC61010-1, or a technically equivalent standard, or
 - fed directly from cells or batteries.
- When FLXA202 Analyzer is installed with accompanying cable glands, cable with an external diameter of 6 mm to 12 mm must be used for field wiring. The cable glands must be secured with a tightening torque of 6 Nm so that they can be released only with the aid of a tool. Unused cable gland shall be sealed with the accompanying metal plug.
- The gaskets of the cable glands shall be protected from light.

1.5 IECEx (Type n)

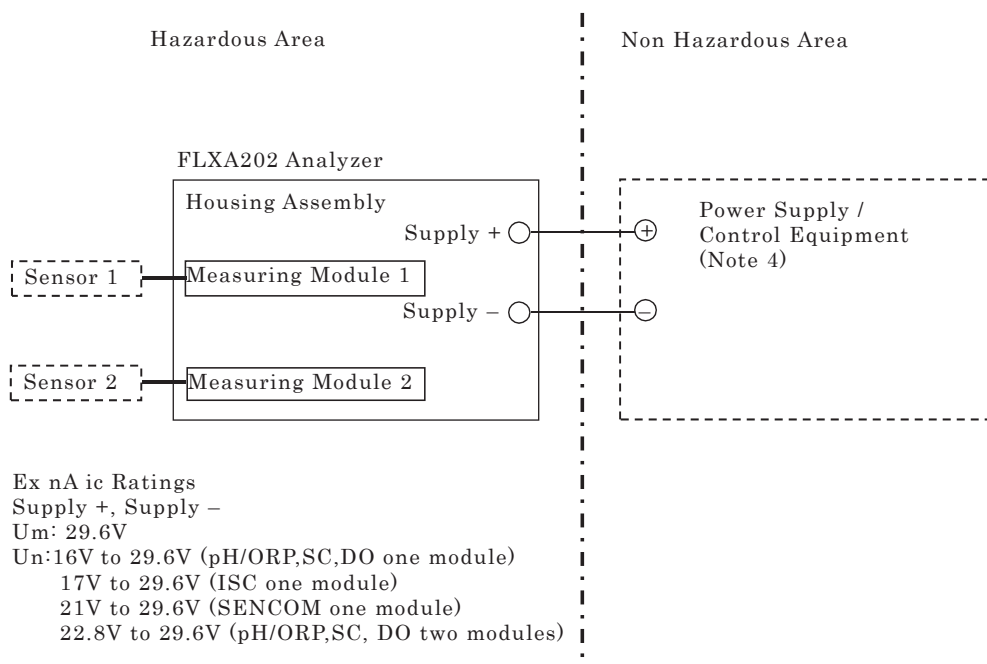
FLXA202:

Type of protection 'n'

Model: FLXA202

Date: March 31, 2016

Control Drawing



Measuring Module 1, 2

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM, SSA
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μ F
Lo	1.7 mH	8 mH	0.45 mH

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Rev.1: Oct. 18, 2019

Doc. No.: NIE015-A71 P.1

Yokogawa Electric Corporation

Model: FLXA202

Date: March 31, 2016

Notes:

1. Installation must be in accordance with IEC60079-14 and relevant local codes.
2. Measuring Module 2 is not always installed.
3. ISC module, SENCOM module and SSA module are not installed as “Measuring Module 2”.
4. When installed in an area where EPL Gc is required, Sensor 1 and Sensor 2 may be simple apparatus, intrinsically safe apparatus meeting conditions below, or other EPL Gc equipment.

$$U_i \text{ (or } V_{\max}) \geq U_o$$

$$I_i \text{ (or } I_{\max}) \geq I_o$$

$$P_i \geq P_o$$

$$C_i \leq C_o - C_{\text{cable}}$$

$$L_i \leq L_o - L_{\text{cable}}$$

5. In case of SSA module, Sensor 1 is SENCOM SA (SENCOM Smart Adaptor).
6. FLXA202 Analyzer must be installed in accordance with one of the following:
 - a) in a SELV or PELV system, or
 - b) via a safety isolating transformer complying with the requirements of IEC 61558-2-6, or a technically equivalent standard, or
 - c) directly connected to apparatus complying with IEC60950 series, IEC61010-1, or a technically equivalent standard, or
 - d) fed directly from cells or batteries.
7. When FLXA202 Analyzer is installed with accompanying cable glands, cable with an external diameter of 6 mm to 12 mm must be used for field wiring. The cable glands must be secured with a tightening torque of 6 Nm so that they can be released only with the aid of a tool. Unused cable gland shall be sealed with the accompanying metal plug.

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Rev.1: Oct. 18, 2019

Doc. No.: NIE015-A71 P.2

Yokogawa Electric Corporation

1.6 NEPSI and KCs**FLXA202/FLXA21: Intrinsic safety “ia”**

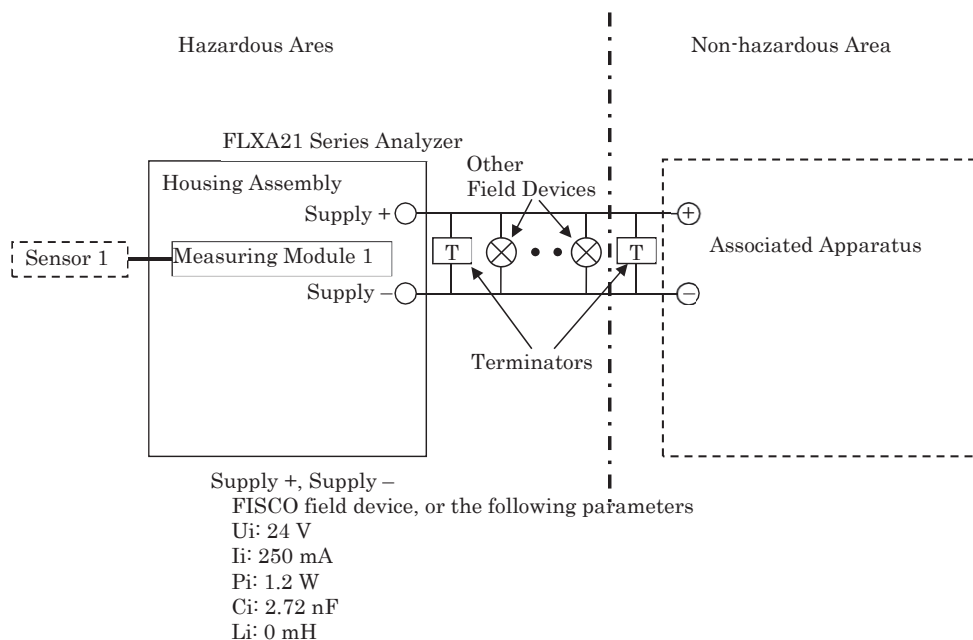
(Refer to 1.1 ATEX and IECEx Control Drawing)

2. FLXA21 (Output: -F, -P)

2.1 ATEX and IECEx

FLXA21: Intrinsic safety “ia”

Yokogawa Electric Corporation				Model		FLXA21			
Title	Control drawing (FOUNDATION Fieldbus / PROFIBUS PA type)								
No.	IKE039-A32			Page	1	Revision	0	Date	2019-10-18



Measuring Module 1

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μ F
Lo	1.7 mH	8 mH	0.45 mH

Notes:

1. The associated apparatus must be a linear source or a FISCO power supply.
2. Sensor 1 may be simple apparatus or intrinsically safe apparatus.
3. When accessing the display window or other non-metallic parts of the enclosure of FLXA21, take the following measures to minimize the risk of explosion from electrostatic discharges, in addition to avoiding any actions that cause the generation of electrostatic charges, such as rubbing with a dry cloth.

To avoid electrostatic charge on the operator,

- Earth the operator through a wrist-strap, or
- Operate FLXA21 on the conductive floors, wearing anti-static work clothes and electrostatic safety shoes, or
- Neutralize the operator and FLXA21 by a static elimination bar which has a metal part earthed through resistor from 100k Ω to 100M Ω .

In case that those measures cannot be taken or static electricity cannot be suppressed, bring a gas detector and make sure there is no ignition capable atmosphere around FLXA21 before the operation.

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2.2 FM

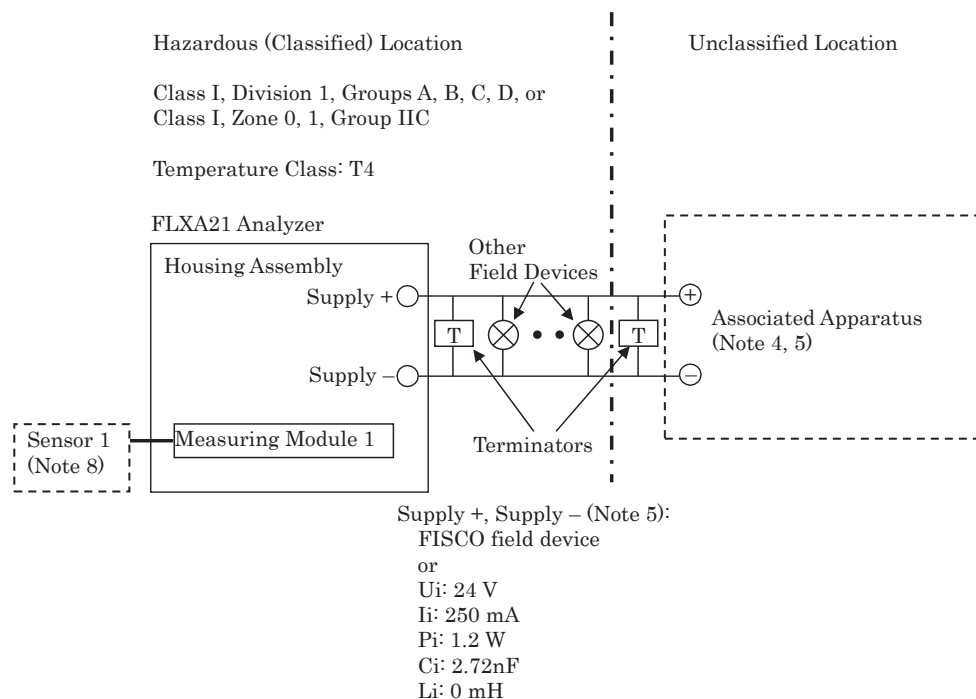
FLXA21: Intrinsic safety, Nonincendive

Model: FLEXA Series Date: April 17, 2015

Control drawing (FOUNDATION Fieldbus / PROFIBUS PA type)

Installation for Division 1 / Zone 0, 1

Applicable models: FLXA21-D-x-x-CD-xx-xx-F-..., FLXA21-D-x-x-CD-xx-xx-P-...



Measuring Module 1 (Note 8):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μ F
Lo	1.7 mH	8 mH	0.45 mH

Specific condition of use

- Precautions shall be taken to minimize the risk of non-metallic parts and painted parts of the enclosure. When the equipment is used in hazardous locations, avoid any action which generates electrostatic discharge such as rubbing with a dry cloth.

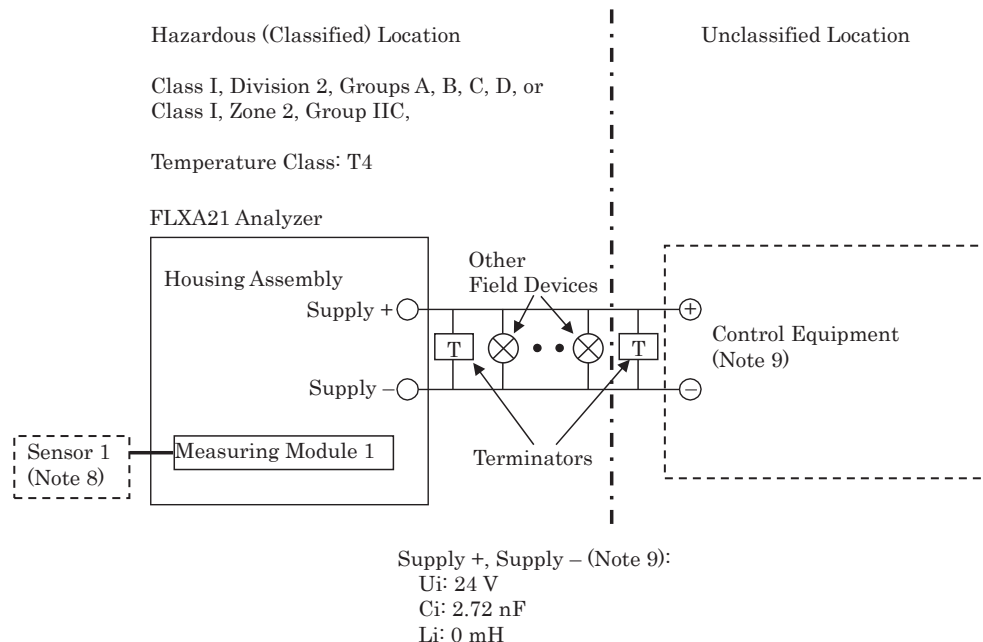
Rev.2: Dec. 26, 2019

Doc. No.: IFM039-A72 P.1

Yokogawa Electric Corporation

Installation for Division 2 / Zone 2

Applicable models: FLXA21-D-x-x-CD-xx-xx-F-..., FLXA21-D-x-x-CD-xx-xx-P-...
 FLXA21-D-x-x-DD-xx-xx-F-..., FLXA21-D-x-x-DD-xx-xx-P-...



Measuring Module 1 (Note 8):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	4 μ F	4 μ F	31 μ F
Lo	4.5 mH	19 mH	0.45 mH

Specific condition of use:

- Precautions shall be taken to minimize the risk of non-metallic parts and painted parts of the enclosure. When the equipment is used in hazardous locations, avoid any action which generates electrostatic discharge such as rubbing with a dry cloth.

Model: FLEXA Series

Date: May 29, 2017

Notes:

1. No revision to this drawing without prior approval of FM.
2. Installation must be in accordance with the National Electric Code (NFPA 70), ANSI/ISA-RP12.06.01 and relevant local codes.
3. FISCO installation must be in accordance with ANSI/UL-60079-25.
4. The associated apparatus must be FM-approved.
5. The associated apparatus must be a FISCO power supply or a linear source meeting the following conditions.

$$\begin{aligned}U_o \text{ (or } V_{oc}) &\leq U_i \\I_o \text{ (or } I_{sc}) &\leq I_i \\P_o &\leq P_i \\C_o \text{ (or } C_a) &\geq C_i + C_{cable} \\L_o \text{ (or } L_a) &\geq L_i + L_{cable}\end{aligned}$$

6. Control equipment connected to the associated apparatus must not use or generate a voltage which exceeds U_m of the associated apparatus.
7. The control drawing of the associated apparatus must be followed when installing the equipment.
8. When installed in Division 1, Zone 0 or Zone 1, Sensor 1 may be a simple apparatus or an intrinsically safe apparatus meeting the conditions below.
When installed in Division 2 or Zone 2, Sensor 1 may be a simple apparatus or a nonincendive field wiring apparatus meeting the conditions below, or alternatively, it may be equipment suitable for Division 2 or Zone 2 respectively, if a suitable wiring method other than nonincendive field wiring is employed.

$$\begin{aligned}U_i \text{ (or } V_{max}) &\geq U_o \\I_i \text{ (or } I_{max}) &\geq I_o \\P_i &\geq P_o \\C_i &\leq C_o - C_{cable} \\L_i &\leq L_o - L_{cable}\end{aligned}$$

9. The control equipment must be an FM-approved FISCO power supply, FNICO power supply or an associated nonincendive field wiring apparatus meeting the conditions below. Alternatively, it may be general-purpose equipment, if a suitable wiring method other than nonincendive field wiring is employed.

$$\begin{aligned}U_o \text{ (or } V_{oc}) &\leq U_i \\C_o \text{ (or } C_a) &\geq C_i + C_{cable} \\L_o \text{ (or } L_a) &\geq L_i + L_{cable}\end{aligned}$$

10. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – WHEN THE EQUIPMENT IS USED IN HAZARDOUS LOCATIONS, AVOID ANY ACTION WHICH GENERATE ELECTROSTATIC DISCHARGE SUCH AS RUBBING WITH A DRY CLOTH.
11. WARNING – IN THE CASE WHERE THE ENCLOSURE OF THE ANALYZER IS MADE OF ALUMINUM, IF IT IS MOUNTED IN ZONE 0, IT MUST BE INSTALLED SUCH THAT, EVEN IN THE EVENT OF RARE INCIDENTS, IGNITION SOURCES DUE TO IMPACT AND FRICTION SPARKS ARE EXCLUDED
12. WARNING – SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY AND SUITABILITY FOR DIVISION 2 / ZONE 2.

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Doc. No.: IFM039-A72 P.3

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2.3 CSA

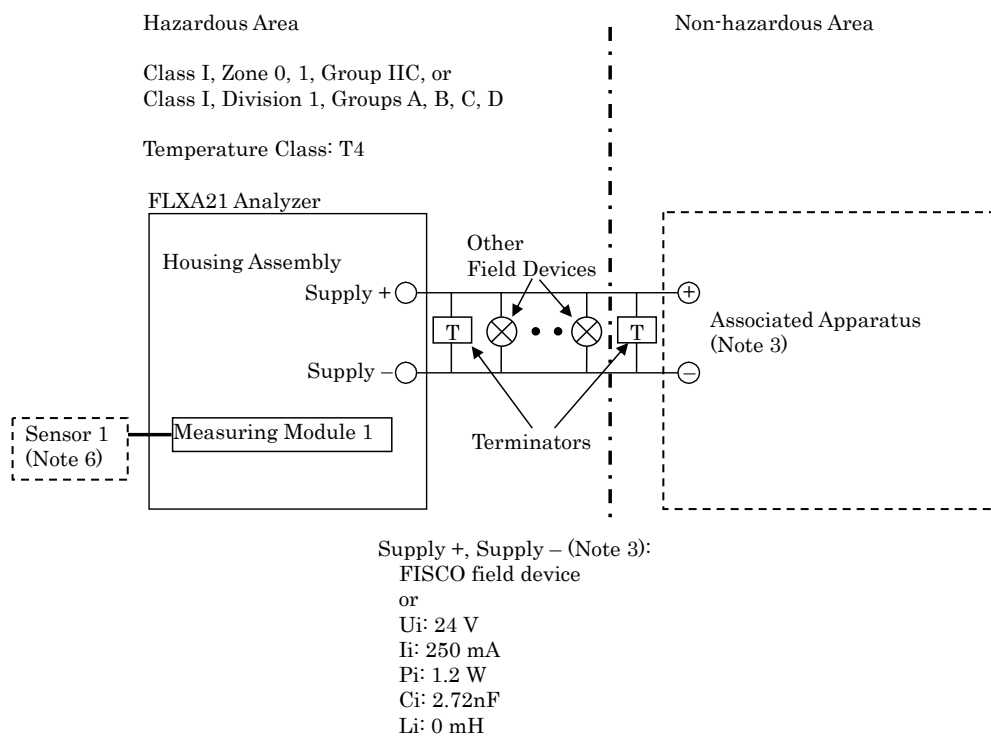
FLXA21: Intrinsic safety, Nonincendive

Model: FLXA21 / FLXA202 Date: May 29, 2017

Control drawing (FOUNDATION Fieldbus / PROFIBUS PA type)

Installation for Zone 0, 1 / Division 1

Applicable models: FLXA21-D-x-x-CD-xx-xx-F-..., FLXA21-D-x-x-CD-xx-xx-P-...



Measuring Module 1 (Note 6):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μ F
Lo	1.7 mH	8 mH	0.45 mH

Specific condition of use

- Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.

Rev.

Doc. No.: ICS032-A72 P.1

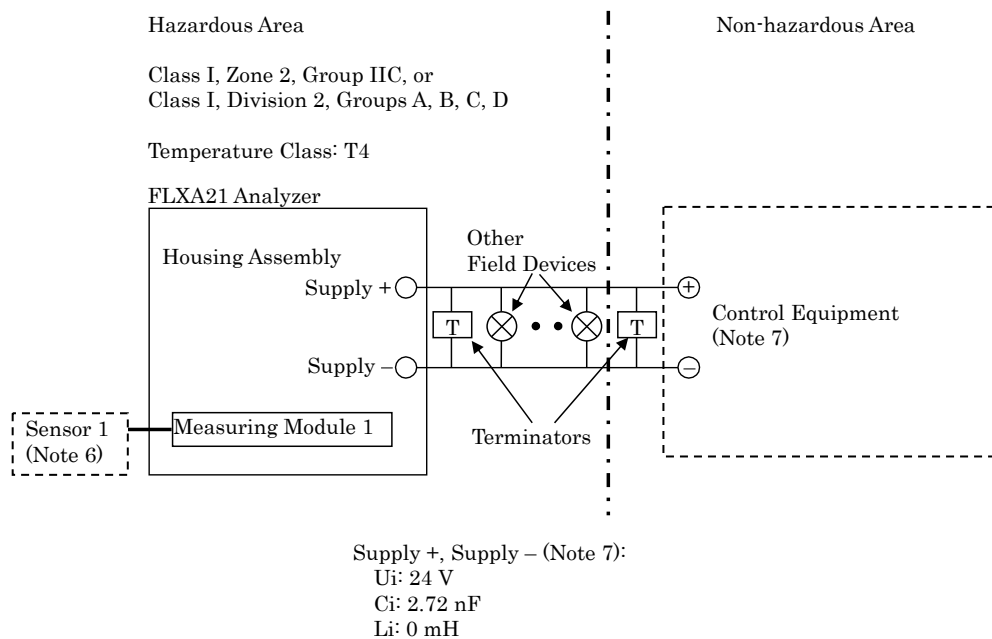
Yokogawa Electric Corporation

Model: FLXA21 / FLXA202

Date: May 29, 2017

Installation for Zone 2 / Division 2

Applicable models: FLXA21-D-x-x-CD-xx-xx-F-..., FLXA21-D-x-x-CD-xx-xx-P-...,
FLXA21-D-x-x-DD-xx-xx-F-..., FLXA21-D-x-x-DD-xx-xx-P-...



Measuring Module 1 (Note 6):

	Type of Measuring Module		
	pH, SC, DO	ISC	SENCOM
Uo	11.76 V	11.76 V	5.36 V
Io	116.5 mA	60.6 mA	106.16 mA
Po	0.3424 W	0.178 W	0.1423 W
Co	100 nF	100 nF	31 μ F
Lo	1.7 mH	8 mH	0.45 mH

Specific condition of use

- Electrostatic charges on the non-metallic or coated parts of the two wire analyzer shall be avoided.

Rev.

Doc. No.: ICS032-A72 P.2

Yokogawa Electric Corporation

Model: FLXA21 / FLXA202

Date: May 29, 2017

Notes:

1. Installation must be in accordance with the Canadian Electric Code Part I (C22.1), ANSI/ISA-RP12.06.01 and relevant local codes.
2. FISCO installation must be in accordance with CAN/CSA-C22.2 No. 60079-25.
3. The associated apparatus must be a FISCO power supply or a linear source meeting the following conditions.

$$\begin{aligned}U_o \text{ (or } V_{oc}) &\leq U_i \\I_o \text{ (or } I_{sc}) &\leq I_i \\P_o &\leq P_i \\C_o \text{ (or } C_a) &\geq C_i + C_{cable} \\L_o \text{ (or } L_a) &\geq L_i + L_{cable}\end{aligned}$$

4. Control equipment connected to the associated apparatus must not use or generate a voltage which exceeds U_m of the associated apparatus.
5. The control drawing of the associated apparatus must be followed when installing the equipment.
6. When installed in Zone 0 or 1, or Division 1, Sensor 1 may be a simple apparatus or an intrinsically safe apparatus meeting the conditions below.
When installed in Zone 2 or Division 2, Sensor 1 may be a simple apparatus or a non-incendive field wiring apparatus meeting the conditions below, or alternatively, it may be equipment suitable for Zone 2 or Division 2 respectively, if a suitable wiring method other than non-incendive field wiring is employed.

$$\begin{aligned}U_i \text{ (or } V_{max}) &\geq U_o \\I_i \text{ (or } I_{max}) &\geq I_o \\P_i &\geq P_o \\C_i &\leq C_o - C_{cable} \\L_i &\leq L_o - L_{cable}\end{aligned}$$

7. The control equipment must be a FISCO power supply, FNICO power supply or an associated non-incendive field wiring apparatus meeting the conditions below.
Alternatively, it may be general-purpose equipment, if a suitable wiring method other than non-incendive field wiring is employed.

$$\begin{aligned}U_o \text{ (or } V_{oc}) &\leq U_i \\C_o \text{ (or } C_a) &\geq C_i + C_{cable} \\L_o \text{ (or } L_a) &\geq L_i + L_{cable}\end{aligned}$$

8. WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD
AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES
9. WARNING – SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY
AVERTISSEMENT – LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SÉCURITÉ INTRINSÈQUE.
10. WARNING – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR ZONE 2 / DIVISION 2.
AVERTISSEMENT – LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATÉRIEL INACCEPTABLE POUR LES EMPLACEMENTS DE ZONE 2 / DIVISION 2.

Rev.

Doc. No.: ICS032-A72 P.3

Yokogawa Electric Corporation

2.4 NEPSI and KCs

FLXA21: Intrinsic safety “ia”

(Refer to 2.1 ATEX and IECEx Control Drawing)

Revision Record

- Manual Title : FLXA202 / FLXA21 2-Wire Analyzer Safety Precautions
- Manual No. : IM 12A01A02-20E

June 2022/9th Edition

Changed the EU-Doc for FLEXA202, and EU-Doc for FLEXA21.

Dec. 2021/8th Edition

Change KOSHA to KCs.

Jun. 2021/7th Edition

Change the standards, nameplates, EU-Doc for FLEXA202, and EU-Doc for FLEXA21.

Jan. 2021/6th Edition

Revised overall

Mar. 2018/5th Edition

Revised overall

Oct. 2015/4th Edition

Addition of FLXA202.
Regulatory Compliance (P.4)

Apr. 2015/3rd Edition

Regulatory Compliance (P.4)

Oct. 2014/2nd Edition

Addition of NEPSI and ATEX/IECEX (SENCOM module).

Sep. 2013/1st Edition

Newly published

Yokogawa Electric Corporation
2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750, JAPAN
<http://www.yokogawa.com/>





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EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan

declare under our sole responsibility that the Products identified as:

Model code	Model name
FLXA202	2-Wire Analyzer

further specified with model suffix and option codes:

as listed in General Specification: GS 12A01A03-01EN (Ed.10)
See Appendix 2 for additional information.

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 3 and Appendix 4.

Subject products are:

- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2015**.

Signature:

(Manufacturer)

Tokyo, 20 April 2022

Tetsuo Ooshita
General Manager
Analyzer Dept., Development Div.,
Sensing Center, Yokogawa Product HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 09 May 2022

DocuSigned by:

890E67B935F149E...
Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **FLXA202**-b-c-d-ee-ff-gg-h-i-jj-k-ll / x
(Distinctive combinations of suffix and option codes as indicated per table).

EU Directive	Standards	-Suffix
2014/30/EU (EMC)	EN 61326-1:2013 Class A Table 2 Electrical equipment for measurement, control and laboratory use – EMC requirements Part 1: General requirements EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use – EMC requirements Part 2-3: Particular requirements – Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning	ee = AB, CB or DB
2011/65/EU *1 (RoHS)	EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.	

*1: Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.

EU Directive	Standards	-Suffix
2014/34/EU (ATEX)	EN IEC 60079-0:2018 Explosive atmospheres - Part 0: Equipment - General requirements EN 60079-11:2012 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" see Note The marking of the equipment or protective system:  II 1 G Ex ia IIC T4 Ga	ee = CB
	The Name of the Notified Body: DEKRA Certification B.V. The Identification Number of the Notified Body: 0344 The Address of the Notified Body: Meander 1051 6825 MJ Arnhem, The Netherlands The Number of the EU Type-Examination Certificate: DEKRA 11ATEX0109 X The Number of Quality Assurance Notification: DEKRA 11ATEXQ0127 EN IEC 60079-0:2018 Explosive atmospheres - Part 0: Equipment - General requirements EN 60079-11:2012 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" EN 60079-15:2010 Explosive atmospheres - Part 15: Equipment protection by type of protection 'n' The marking of the equipment or protective system:  II 3 G Ex nA ic IIC T4 Gc	ee = DB

Note: The listed standards have been compared to the standards EN 60079-0:2012+A11:2013, EN 60079-11:2012, EN 60079-11:2012 and EN 60079-15:2010 used for certification purposes, but no clauses containing changes in state-of-art apply to this product.

Other Normative Standards	-Suffix
EN 61010-1:2010+A1:2019 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements EN 61010-2-030:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits EN 60529:1991+A1:2000+A2:2013 Degrees of protection provided by enclosures (IP Code)	ee = AB, CB or DB

Appendix 2

In case the Product model code contains the option code "Z", it means that the Product is produced with a customer specific modification. Such customer specific modifications never affect to the conformity of the product. Any such Product - in case produced after the date of signing this document by the Manufacturer - is also in scope of this EU-Declaration of Conformity. Each customized product is identified by a unique number such as XJFLXA202.#### (where #### is number) and this number is indicated in the name plate. The option code "Z"- specific application notes and this unique number of customized products are listed in a dedicated document, of which original is a part of the Technical Documentation. A copy of that document is accompanying each product at delivery.

Appendix 3

The product has no accessories.

IM 12A01A02-12E has CE-marking significant compliance relevance as the essential part of the product. Instructions relevant for safe use are described in **IM 12A01A03-01EN** guided by **IM 12A01A02-12E**.

Appendix 4

External View of FLXA202



Image of Nameplate
(Typical example; details may differ)

Type code: -AB

FLEKA
2-Wire Analyzer

MODEL FLXA202
SUFFIX -D-B-D-AB-S5-NN-A
-N-LA-N-NN/U

STYLE S1.06
SUPPLY 24VDC
OUTPUT 4-20mA
AMB. TEMP -20 TO 55°C
NO. C2T400718 2020.08
IP66
Read IM 12A01A02-12

CE

Yokogawa Electric Corporation
2-9-32 Nakacho, Musashino-shi,
Tokyo, 180-8750 JAPAN
YOKOGAWA
Made in Singapore

To be affixed
on Side-A

Type code: -CB or -DB

Type code: -CB

FLEKA
2-Wire Analyzer

MODEL FLXA202
SUFFIX -D-B-D-CB-S5-NN-A
-N-LA-N-NN/U

STYLE S1.06
SUPPLY 24VDC
OUTPUT 4-20mA
AMB. TEMP -20 TO 55°C
NO. C2T400718 2020.08
IP66
Read IM 12A01A02-12

CE 0344

Yokogawa Electric Corporation
2-9-32 Nakacho, Musashino-shi,
Tokyo, 180-8750 JAPAN
YOKOGAWA
Made in Singapore

To be affixed
on Side-B

Type code: -DB

FLEKA
2-Wire Analyzer

MODEL FLXA202
SUFFIX -D-B-D-DB-S5-NN-A
-N-LA-N-NN/U

STYLE S1.06
SUPPLY 24VDC
OUTPUT 4-20mA
AMB. TEMP -20 TO 55°C
NO. C2T400718 2020.08
IP66
Read IM 12A01A02-12

CE

Yokogawa Electric Corporation
2-9-32 Nakacho, Musashino-shi,
Tokyo, 180-8750 JAPAN
YOKOGAWA
Made in Singapore

To be affixed
on Side-B

-/-



Doc No: AEN101-C04

EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan

declare under our sole responsibility that the Products identified as:

Model code	Model name
FLXA21	2-Wire Analyzer

further specified with model suffix and option codes:

as listed in General Specification: GS 12A01A02-01E (Ed.18),
GS 12A01A02-71E (Ed.10) for FOUNDATION Fieldbus Communication,
GS 12A01A02-72E (Ed.10) for PROFIBUS PA Communication
See Appendix 2 for additional information.

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 3 and Appendix 4.

Subject products are:

- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2010**.

Signature:

(Manufacturer)

Tokyo, 20 April 2022

Tetsuo Ooshita
General Manager
Analyzer Dept., Development Div.,
Sensing Center, Yokogawa Product HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 09 May 2022

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QHSE Manager – Regional Business Owner
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P.O.Box 163, 3800 AD Amersfoort,
The Netherlands


Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **FLXA21**-b-c-d-ee-ff-gg-h-i-jj-k-ll / x
(Distinctive combinations of suffix and option codes are indicated per table. Unless otherwise stated, all defined codes are relevant.)

EU Directive	Standards	-Suffix
2014/30/EU (EMC)	EN 61326-1:2013 Class A Table 2 (For use in industry locations) Electrical equipment for measurement, control and laboratory use – EMC requirements Part 1: General requirements	ee = AB or CB and h = A
	EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use – EMC requirements Part 2-3: Particular requirements – Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning	
	EN 61326-1:2013 Class A Table 2 (For use in industry locations) Electrical equipment for measurement, control and laboratory use – EMC requirements Part 1: General requirements EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use – EMC requirements Part 2-3: Particular requirements – Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning EN 61326-2-5:2013 Electrical equipment for measurement, control and laboratory use – EMC requirements Part 2-5: Particular requirements Test configurations, operational conditions and performance criteria for devices with field bus interfaces according to IEC 61784-1	ee = AB or CB and h = F or P
2011/65/EU *1 (RoHS)	EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.	ee = AB or CB

*1: Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.

EU Directive	Standards	-Suffix
2014/34/EU (ATEX)	EN IEC 60079-0:2018 Explosive atmospheres - Part 0: Equipment - General requirements EN 60079-11:2012 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i" see Note	ee = CB
	The marking of the equipment or protective system:  II 1 G Ex ia IIC T4 Ga	
	The Name of the Notified Body: DEKRA Certification B.V. The Identification Number of the Notified Body: 0344 The Address of the Notified Body: Meander 1051 6825 MJ Arnhem, The Netherlands The Number of the EU Type-Examination Certificate: DEKRA 11ATEX0109 X The Number of Quality Assurance Notification: DEKRA 11ATEXQ0127	

Note: The listed standards have been compared to the standards EN 60079-0:2012+A11:2013 and EN 60079-11:2012 used for certification purposes, but no clauses containing changes in state-of-art apply to this product.

Other Normative Standards	-Suffix
EN 61010-1:2010+A1:2019 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements EN 61010-2-030:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits EN 60529:1991+A1:2000+A2:2013 Degrees of protection provided by enclosures (IP Code)	ee = AB or CB

Appendix 2

In case the Product model code contains the option code "Z", it means that the Product is produced with a customer specific modification. Such customer specific modifications never affect to the conformity of the product. Any such Product - in case produced after the date of signing this document by the Manufacturer - is also in scope of this EU-Declaration of Conformity. Each customized product is identified by a unique number such as XJFLXA21.### (where ### is number) and this number is indicated in the name plate. The option code "Z" - specific application notes and this unique number of customized products are listed in a dedicated document, of which original is a part of the Technical Documentation. A copy of that document is accompanying each product at delivery.

Appendix 3

The product has no accessories.

IM 12A01A02-12E has CE-marking significant compliance relevance as the essential part of the product. Instructions relevant for safe use are described in **IM 12A01A03-01EN** guided by **IM 12A01A02-12E**.

