

**Model FLXA202 / FLXA21  
2-Wire Analyzer  
Start-up Manual**



IM 12A01A02-12E

This Start-up Manual explains mainly the installation and wiring of the FLXA202/FLXA21.  
For detailed information and other information, the User's Manual of the FLXA202/FLXA21  
should be referred to.

# ◆ 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	These are included In attached CD-ROM
FLXA21 2-wire Analyzer	GS 12A01A02-01E	
FLXA21 2-wire Analyzer FOUNDATION Fieldbus Communication	GS 12A01A02-71E	
FLXA21 2-wire Analyzer PROFIBUS PA Communication	GS 12A01A02-72E	

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

## User's Manual

Contents	Document number	Note
FLXA202/FLXA21 Start-up Manual	IM 12A01A02-12E	This manual Attached to the product
FLXA202/FLXA21 Safety Precautions	IM 12A01A02-20E	Attached to the product Note
FLXA202/FLXA21 User's Manual	IM 12A01A02-01E	These are included In attached CD-ROM
FLXA21 FOUNDATION Fieldbus Communication	IM 12A01A02-71E	
FLXA21 PROFIBUS PA Communication	IM 12A01A02-72E	

\* the "E" 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.

Please read the General Specifications for Checking the model and suffix code. The General Specifications includes it.

## ■ 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.

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## ■ Drawing Conventions

Some drawings may be partially emphasized, simplified, or omitted, for the convenience of description.

Some screen images depicted in the user's manual may have different display positions or character types (e.g., the upper / lower case). Also note that some of the images contained in this user's manual are display examples.

## ■ Copyright and Trademark Notices

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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.

## ◆ 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.

### ■ 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.

# Model FLXA202 / FLXA21

## 2-Wire Analyzer

### Start-up Manual

IM 12A01A02-12E 9th Edition

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# 1. Instrument Check

Upon delivery, unpack the instrument carefully and inspect it to ensure that it was not damaged during shipment. If damage is found, retain the original packing materials (including the outer box) and then immediately notify the carrier and the relevant Yokogawa sales office.

## ■ Checking the model and suffix code

### ● FLXA202

Make sure the model and suffix code on the nameplate affixed to the left side of the housing.

### NOTE

Be sure to apply correct power to the unit, as detailed on the nameplate.

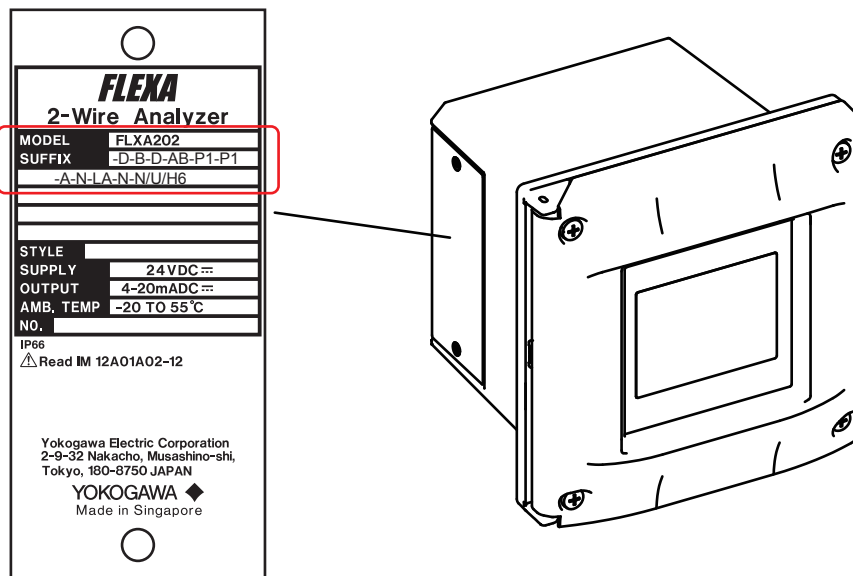


Figure 1.1 Inside of the FLXA202 and example of nameplate

● FLXA21

Make sure the model and suffix code on the nameplate affixed to the left side or inside of the housing.

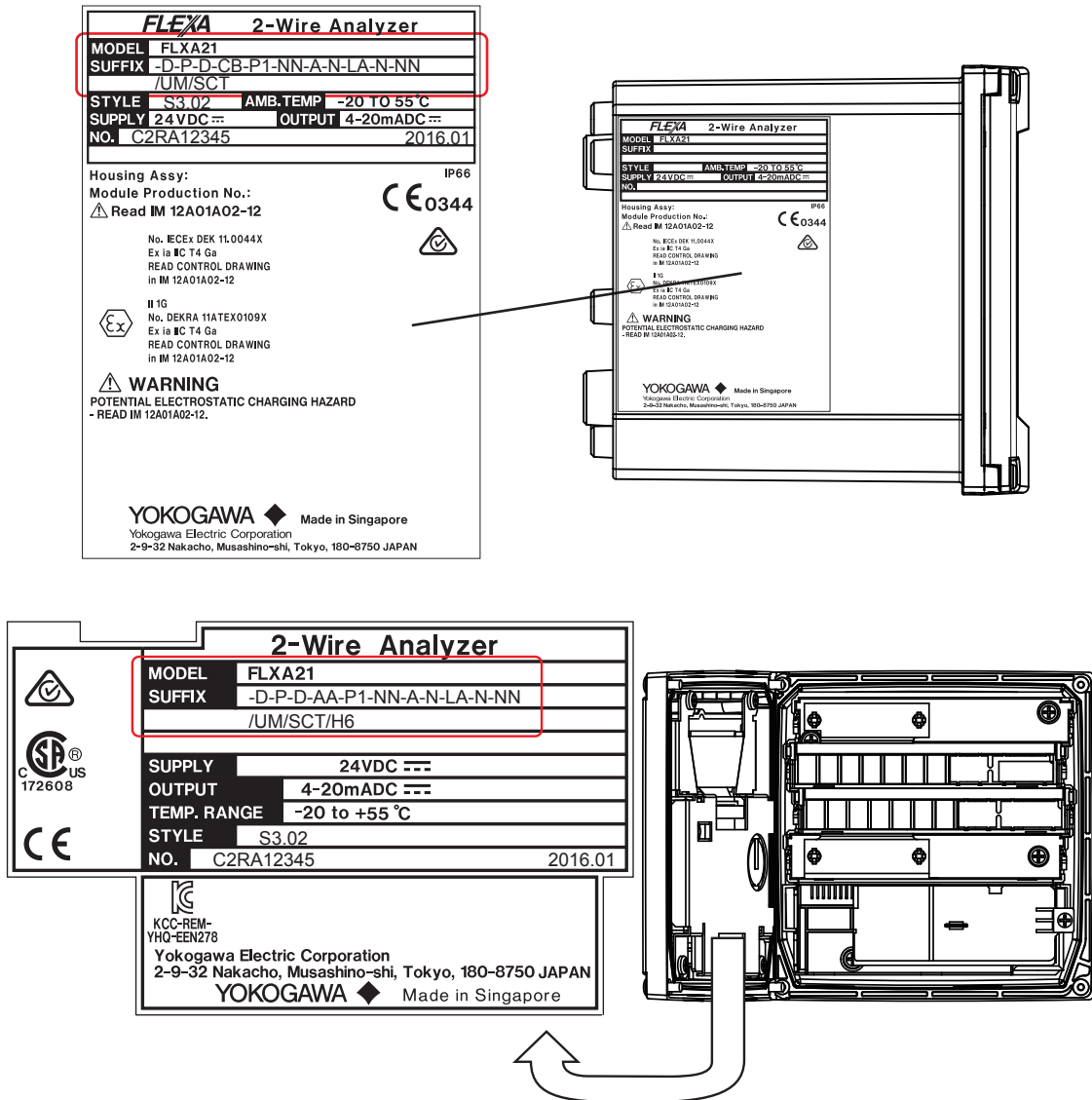


Figure 1.2 Example of nameplate (FLXA21)

- **Checking the accessories**

Make sure the accessories in Table 1.1 are included.

**Table 1.1 Accessories**

Product Name		Quantity	Remark
Cable glands	FLXA202	3 sets	One rubber plug attachment.
	FLXA21	3 or 4 sets	4 sets when 2 sensors are used. One grommet for grounding attachment.
pH analyzer	Jumper	2 pcs/module	
	Grommet set	1 set/module	
SENCOM™ pH analyzer	Grommet	1	
Option	Bracket	1 set	Option code /UM*, /U, /PM
	Sun shade hood	1 set	Option code /H6, /H7, /H8
	Tag plate	1	Option code /SCT
	Adapter for conduit work	3 or 4 sets	Option code /CB4, /CD4, /CF4 4sets when FLXA21 are used.
Instruction Manual (CD-ROM)		1 copy	
Startup Manual		1 copy	This manual
Safety Precautions		1 copy	

\*: The universal mounting kit (/UM) contains the brackets for both /U and /PM options.



## 2. Wiring and Installation

Open the front panel and remove the plastic wiring covers, and then install the cable glands (refer to the Appendix A1). The wiring covers will be re-installed after the wiring is completed.

### 2.1 Installation site

The FLXA202/FLXA21 is weatherproof and can be installed both inside and outside. It should, however, be installed as close as possible to the sensor to avoid long cable runs between the instrument and sensor. When a pH sensor is used, the cable length including the sensor cable should not exceed 20 meters (65.6 feet); 60 meters (197 feet) when using BA10 extension box and WF10 cable. For a conductivity sensor the cable run should not exceed 60 meters (197 feet). For dissolved oxygen the sensor cable run should not exceed 30 meters (100 feet). For SENCOM pH/ORP the sensor cable run should not exceed 20 meters (65.6 feet).

Select an installation site that meets the following conditions.

- Mechanical vibrations and shocks are negligible
- No relay switch and power switch are installed close to the converter
- There is space for cable connection beneath the cable glands
- Not exposed to direct sunlight or severe weather conditions
- Maintenance is possible
- No corrosive atmosphere
- Ambient Operating Temperature: -20 to +55 °C
- Humidity: 10 to 90% RH at 40 °C (Non-condensing)
- Water Protection: IP66 (except Canada), NEMA 4X (except Canada), Type 3S/4X (Canada)

If the instrument is installed outside and exposed to direct sunlight, a sun shade hood should be used.

The FLXA202/FLXA21 can be mounted on a wall, pipe or panel when the mounting kit is ordered. For dimensional information please refer to the Appendix, Mounting methods.

### 2.2 Wiring the power supply

FLXA202/FLXA21 is a 2-wire analyzer and can be powered by a DC power supply.

- Output is FOUNDATION Fieldbus and PROFIBUS PA option  
The Power Supply voltage is 9 to 32V DC.
- Output is mA with HART  
The load resistance: impedance of electronic equipment: typically 250 Ohm  
Number of input modules: 1-sensor measurement or 2-sensor measurement.

One (1) Sensor module (1 input):

16 to 40 V DC (for pH/ORP, SC and DO)

17 to 40 V DC (for ISC)

21 to 40 V DC (SENCOM pH/ORP)

Two (2) Sensor modules (2 inputs):

22.8 to 40 V DC (for pH/ORP, SC and DO)

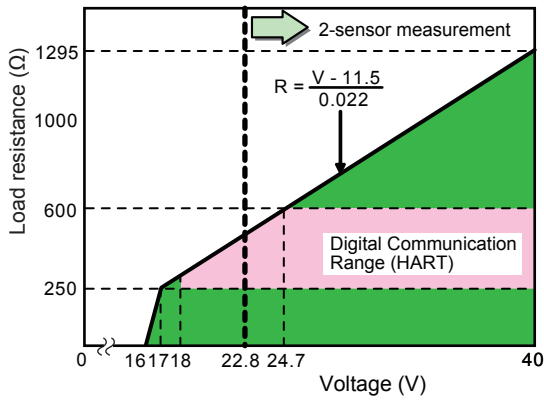


Figure 2.1 Supply Voltage and Load Resistance for pH/ORP (analog sensor), SC and DO

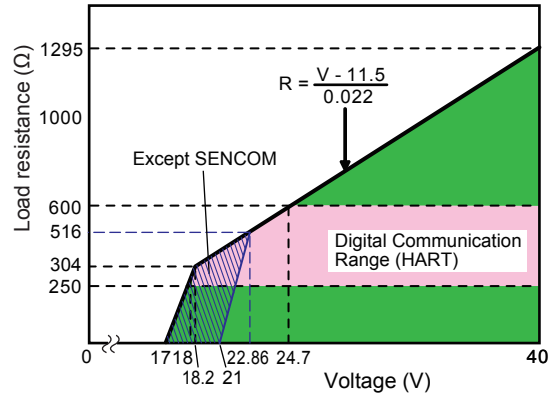


Figure 2.2 Supply Voltage and Load Resistance for ISC and pH/ORP SENCOM sensor

## 2.2.1 Cables, terminals and glands for FOUNDATION Fieldbus or PROFIBUS PA

Wire and install the system by referring to chapter 2 in the FLXA21 instruction manual (IM 12A01A02-01E).

The FOUNDATION Fieldbus or PROFIBUS PA power supply is 9 to 32 V DC. The wiring is the same.

However, for the FOUNDATION Fieldbus or PROFIBUS PA cables, see Table 2.1.

Table 2.1 FOUNDATION Fieldbus or PROFIBUS PA Cables and transmissible Length

Parameters	Conditions	Type A	Type B	Type C	Type D
Max DC Resistance, Ω/km	per conductor	22	56	132	20
Max Attenuation, dB/km	1.25 f, (39 kHz)	3.0	5.0	8.0	8.0
Gauge	—	#18 AWG (0.82 mm <sup>2</sup> )	#22 AWG (0.32 mm <sup>2</sup> )	#26 AWG (0.13 mm <sup>2</sup> )	#16 AWG (1.25 mm <sup>2</sup> )
Max Length, meters	—	1,900	1,200	400	200

Note: 1900 m is trunk + sum of Spurs (Max length type A cable)

Yokogawa recommends the use of Type A.

Usage of Type B and D is restricted.

Yokogawa does not recommend the use of Type C.

Table 2.2 Recommended length of Spur Cables

Number of spur cables	Length of a non-intrinsically safe spur cable
15-16	60 m
13-14	90 m
1-12	120 m

Note: • 1 device per spur.  
• Keep as short as possible (min 1 m)

● **When using a SENCOM module**

When using a SENCOM module, you need to use the supplied cable clamp to fix the sensor cables in place. Attach the supplied cable clamp as shown in Figure 2.3.

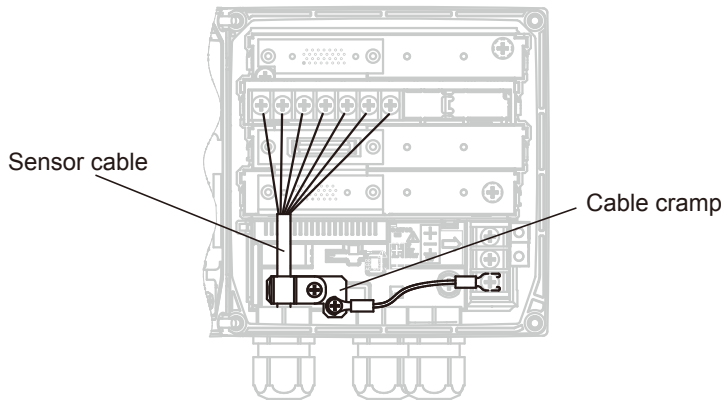


Figure 2.3 When using a SENCOM module

● **DIP switches**

Figure 2.4 shows the DIP switches for setting the address and write protection. Normally, you do not have the change them from the default settings.

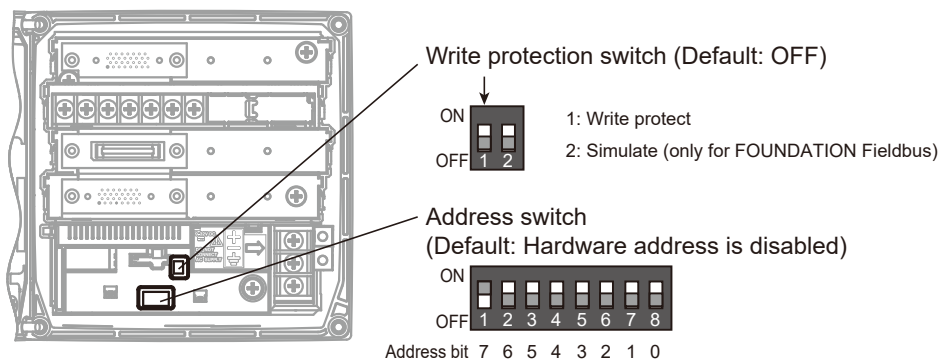
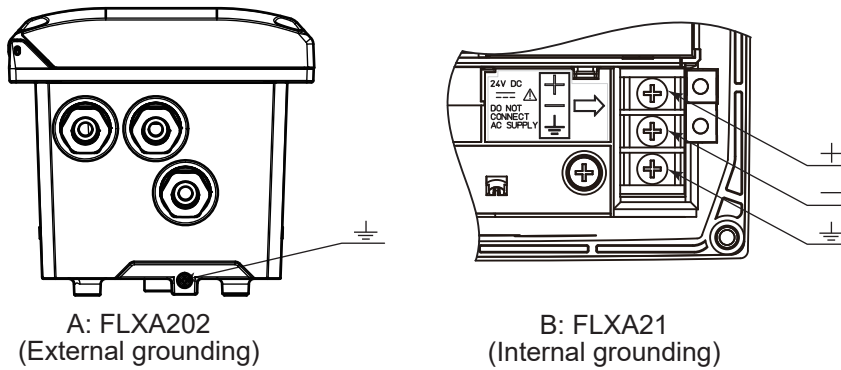


Figure 2.4 DIP switches

## 2.2.2 Grounding

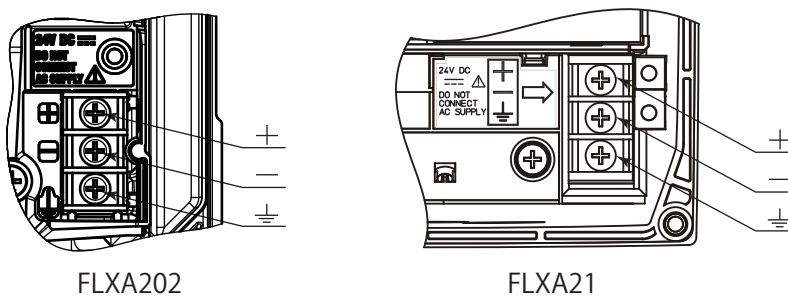
The way of connecting the grounding is different from FLXA202, FLXA21.

- FLXA202  
The ground cable is connected to the outer terminal marked  $\perp$
- FLXA21  
The ground cable is connected to the inner terminal marked  $\perp$



### 2.2.3 Connection of the power supply

The power supply is connected to the terminals marked with + and – which corresponds with the polarity of the DC power supply. The shield of cable is connected to the terminal marked  $\perp$ , then replace ground wiring cover.



#### CAUTION

The FLXA202/FLXA21 is used with a DC power supply. Do not use an alternating current or 100 volt mains power supply.

### 2.2.4 Installing the cable glands

#### WARNING

For Type n model (-DB, -DE),

- When the accompanying cable glands are used, external clamping is required additionally.
- When the optional conduit adaptors(/CB5, /CD5, /CF5) are used with accompanying cable glands, clamping; e.g) sealing fitting is required.
- If external clamping is not able to be prepared, Ex d, Ex e, or Ex n cable gland which provides sufficient clamping shall be used instead of the accompanying cable gland.
- Unused cable gland shall be sealed with the accompanying metal plug.

The supplied cable glands are for cables with an outside diameter of 6 to 12 mm (0.24 to 0.47 inches). Unused cable entry holes must be sealed with cable glands including the supplied close up plugs.

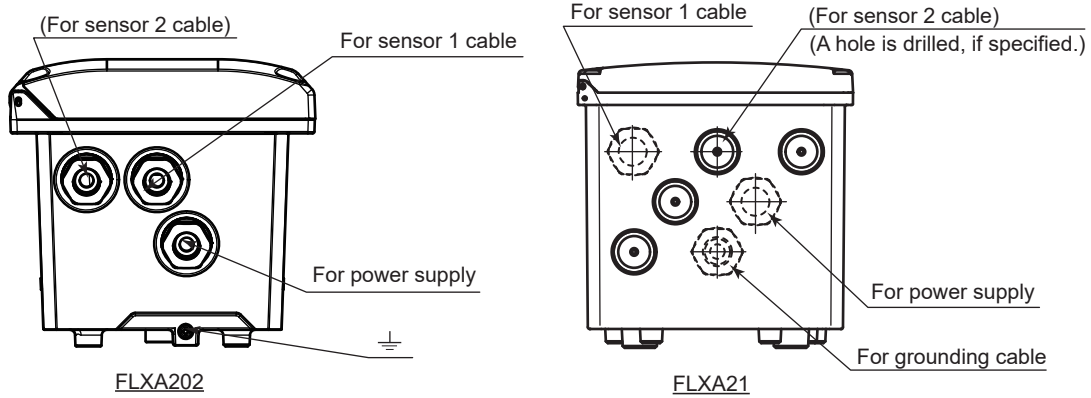


Figure 2.5 Cable gland diagram

**CAUTION**

Be careful not to be injured by the sharp hole edges on the housing.

Install the supplied cable gland as shown in Figure 2.6. When using an adapter for conduit work, see Figure 2.7.

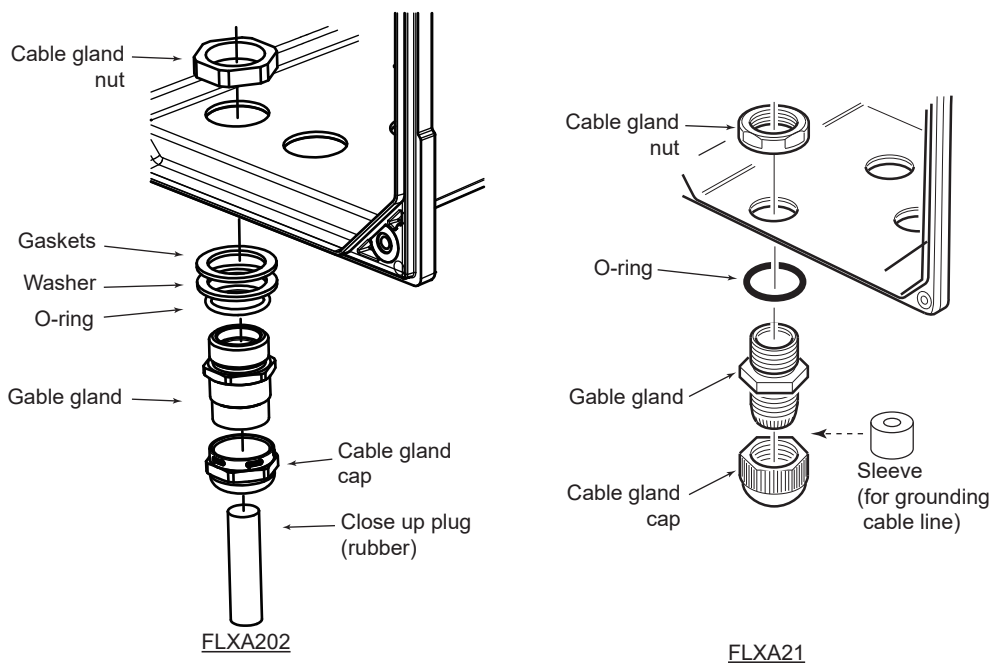


Figure 2.6 Cable glands

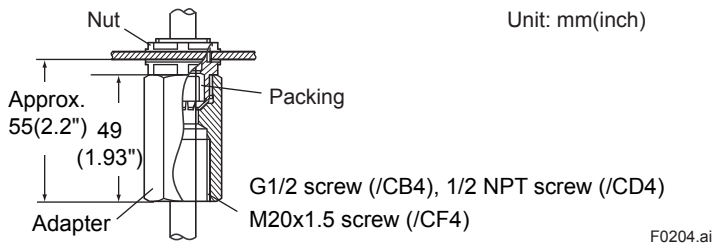
The unused cable glands should be sealed with the supplied close up plug.

**CAUTION**

When installing cable glands, hold cable glands and tighten cable gland nuts to a torque of 6 N•m. If cable glands, not gland nuts, are tightened, O-rings may be come out from the proper positions.

● **Adapter for conduit work**

When protecting the cable with a conduit, use an adapter (option codes: /CB4, /CD4, or /CF4). Set the adapter as shown in figure 2.7, instead of using the cable gland as shown in figure 2.6.



**Figure 2.7 Adapter for conduit work (option)**

**CAUTION**

When using a cable conduit, use a flexible conduit to avoid stress on the conduit adapter. The stress on the conduit adapter may damage the housing.

**2.3 Wiring the sensor**

The FLXA202/FLXA21 can be used with a wide range of commercially available sensor types, both from Yokogawa and other manufacturers.

Terminal screw size is M4, and torque of screw up is 1.2N•m

Pin terminal, ring terminal and spade terminal can be used.

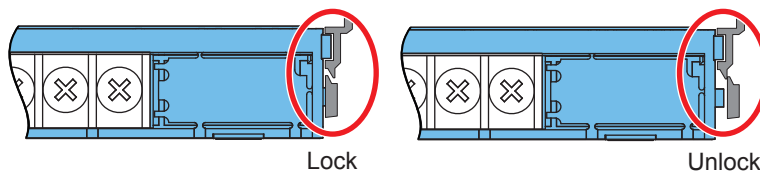
Pin terminal: pin diameter: max. 1.9mm

Ring and spade terminal: width: max. 7.8mm

For details on the sensors, refer to the respective instruction manuals of the sensors.

**CAUTION**

Confirm that all locking-tabs (including for BLANK slots) of FLXA21 are in “Lock” position before you close the front panel. If the locking-tabs are in “Unlock” position, the front panel may be interfered with locking-tabs.



### CAUTION

Do not tighten up four front panel screws one by one.

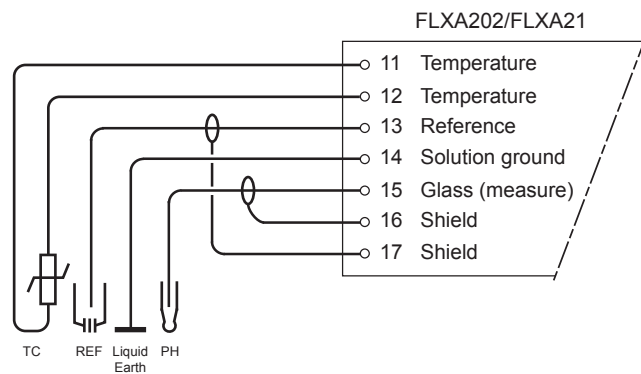
Each front panel screw should be tightened up in two times of screwing. And, firstly the screw at the upper left should be screwed a bit, the next is at the lower right, third is at the upper right, and fourth is at the lower left. The second round is the same sequence again to tighten up four screws.

Do not use an electric screwdriver with high revolutions. If an electric screwdriver is used for these front panel screws, the revolutions of the electric screwdriver should be less than 400 rpm.

Four screws should be tightened to the following torque; 0.8 to 0.9 N•m

## 2.3.1 pH Measurement

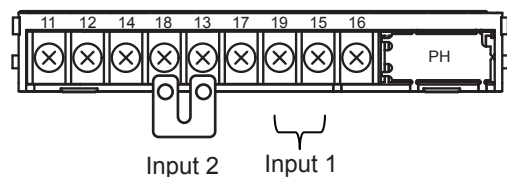
Conventional pH sensors are connected to the module as follows:



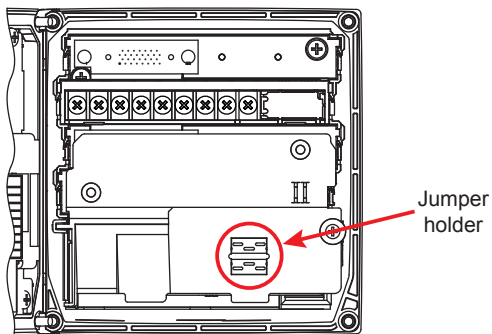
In addition to the wiring of the sensor, insure that a jumper for low-impedance sensor inputs is installed. The jumpers can be found on the plastic sensor module cover and can be stored in the lower level module wiring cover.

- pH Glass Electrode is a high impedance sensor input
- Standard reference electrodes and an ORP/REDOX electrode are low impedance sensor inputs
- Special electrodes using 2 glass sensor (example: Pfaudler, SC24V) do not need jumpers.

Terminals 15-19 are identified as input 1 (High Impedance) and terminals 13-18 are defined as input 2 (Low Impedance). For conventional pH sensors, the jumper is placed as illustrated:



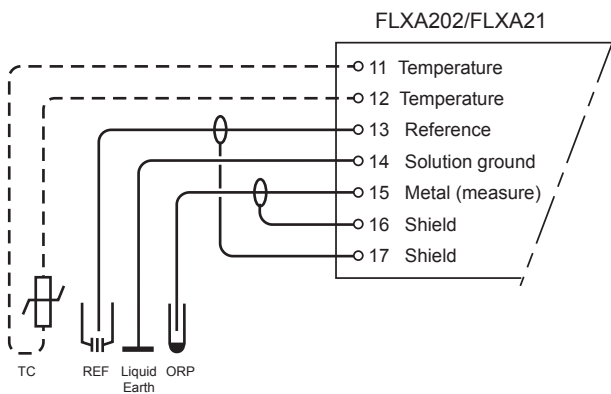
Glass sensor on Input 1.  
Reference sensor on Input 2.



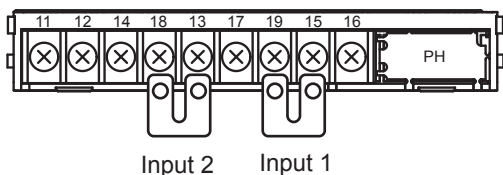
### 2.3.2 ORP Measurement

The ORP measurement uses the same sensor input module as the pH measurement. It is not uncommon to measure ORP as process variable and a pH Glass electrode as reference. This is the case with rH measurement and with pH compensated ORP measurement.

Conventional ORP sensors are connected to the module as follows:

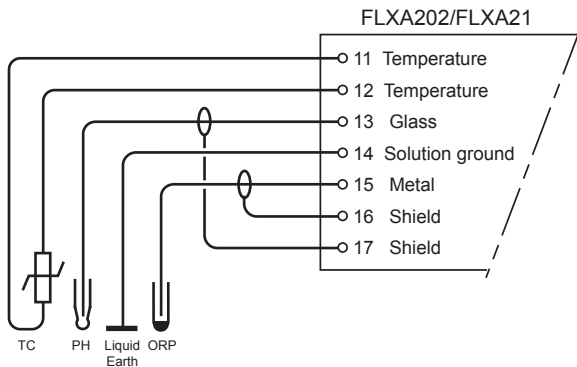


For conventional ORP sensors, the jumpers are placed as illustrated:



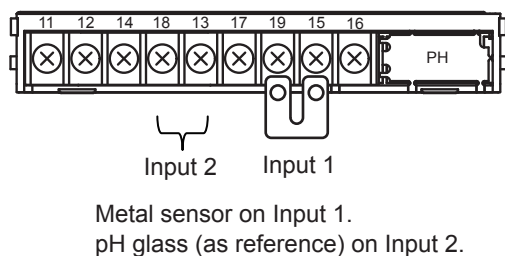
Metal sensor on Input 1.  
Normal reference on Input 2.

pH Compensated ORP sensors are connected to the module as follows:





For pH Compensated ORP sensors, the jumper is placed as illustrated:



**NOTE**

The special grommet is intended to be used to seal the multiple cables from the Yokogawa flow fittings such as FF20.

The designated cables are WU20 sensor cables, which are approximately 5 mm (0.2") in diameter, and K1500FV liquid earth cables, which are approximately 2.5 mm (0.1") in diameter.

For sensor systems using a single cable, like the FU20/FU24 and the PR10, PD20, PF20 and PS20, the standard gland will accommodate the cable adequately. Single cables between approximately 6 mm and 12 mm (0.24" and 0.47") can be sealed properly with these glands and the standard tulle.

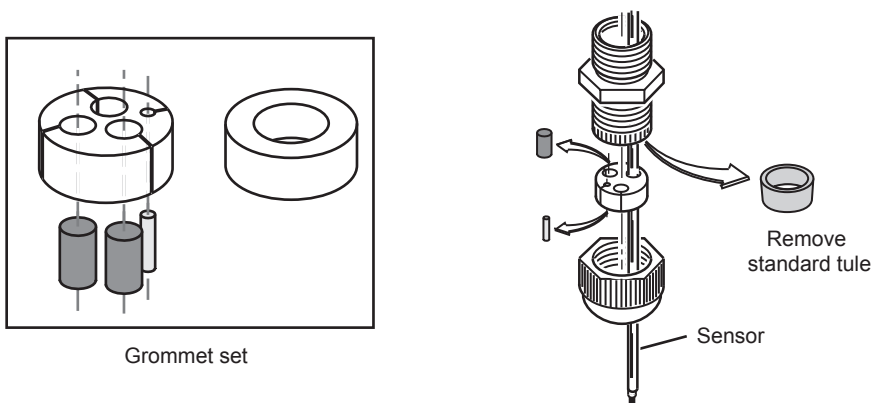
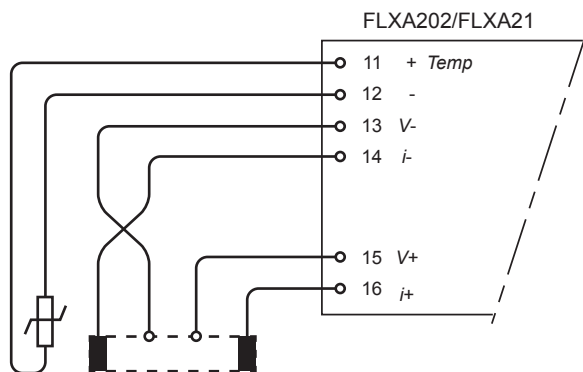


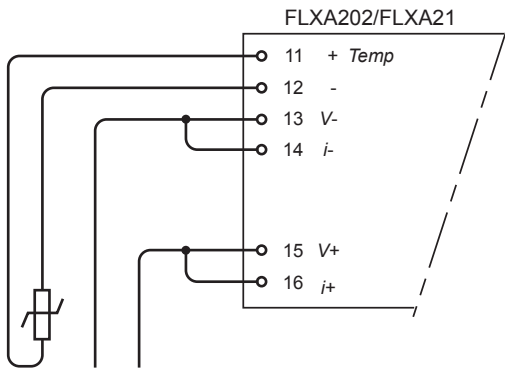
Figure 2.8 Grommet set use

### 2.3.3 SC Measurement

Contacting Conductivity, SC, sensors are connected to the module as follows:

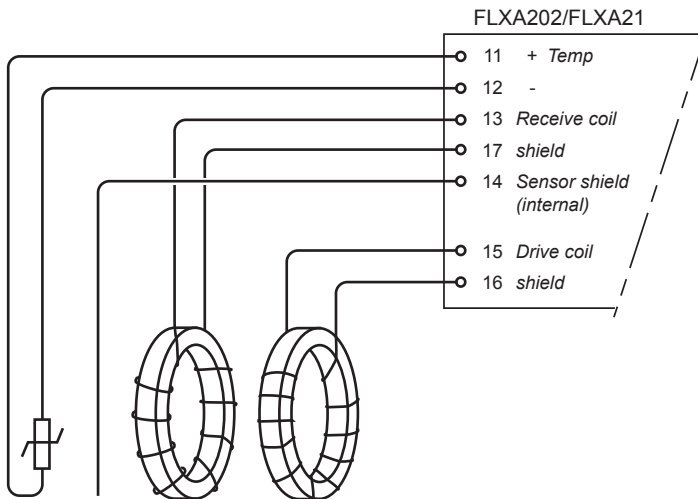


The above diagram shows wiring for 4-electrode conductivity sensors, such as SC42-SP34 large bore series. For 2-electrode conductivity sensors, such as SC42-SP36 small bore series, jumpers must be installed between terminals 13-14 and between terminals 15-16, as shown in the diagram below.



### 2.3.4 ISC Measurement

ISC40 sensors are connected to the module as follows:



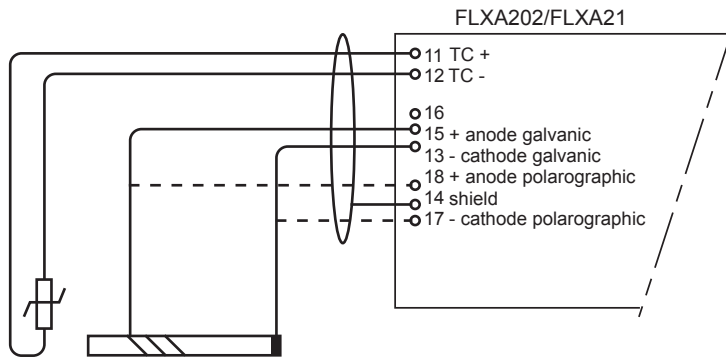
The sensors are supplied with integral cables and each individual wire is marked with the corresponding terminal numbers.

### 2.3.5 DO Measurement

The input module for DO measurement is suitable for different types of DO sensors:

- i. Galvanic sensors like model DO30G
- ii. Polarographic sensors like HAMILTON'S Oxyferm and Oxygold

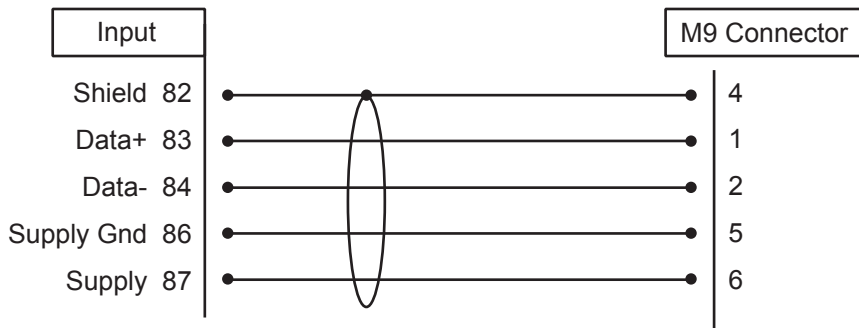
The connection is as follows:



The DO30G sensor comes with integral cable and the wires are labeled with the corresponding terminal numbers.

### 2.3.6 SENCOM pH/ORP Measurement

FU20F sensors are connected to the module as follows:



## 2.3.7 Wiring of YOKOGAWA sensors

Sensor	Measurement	FLXA202/FLXA21 Terminals									Short *2 FLXA202 /FLXA21 Terminals	Remark
		11	12	13	14	15	16	17	18/13	19/15		
		Sensor cable marking (or color)							Jumper *1			
DO30G	DO	11	12	13	14	15	16					Fixed Cable
FU20 /PH20/FU24	pH, pH & ORP, rH	11	12	13	14	15	16		Yes	No		Fixed Cable
FU20 /PH20/FU24	ORP	11	12	13		14			Yes	Yes	13/14	Fixed Cable
FU20 /PH20/FU24	pH Comp. ORP	11	12	15		14		16	No	Yes	13/14	Fixed Cable
FU20-VP /FU24-VP	pH, pH & ORP, rH	E	F	B	D	A			Yes	No		VP6-SC
FU20-VP/ FU24-VP	ORP	E	F	B		D			Yes	Yes	13/14	VP6-SC
FU20-VP/ FU24-VP	pH Comp. ORP	E	F	A		D			No	Yes	13/14	VP6-SC
ISC40	ISC	11	12	13	14	15	16					Fixed Cable
PR20/PR10	pH	11	12	13	14	15	16		Yes	No		Fixed Cable
SC21	pH			Blue	Liquid Earth	Red		(White)	No	No		WU20 Triax
SC24V	pH	E	F	C	H	A	B	D				VP8-DC
SC25V	pH	E	F	B	D	A			Yes	No		VP6-SC
SC29-PTG	pH Comp. ORP			Red	Liquid Earth	Blue		(White)				WU20 Triax
SC29-PTP	ORP			Blue	Liquid Earth	Red		(White)	Yes	Yes		WU20 Triax
SC42	SC	11	12	13	14	15	16					WU40 cable
SC4A	SC	11	12	13	14	15	16					Fixed Cable
SM21/SR20 /SM60	pH	Green: Red	Green: Blue	Yellow: Red	Black	Red: Red	Red: Blue	Yellow: Blue	Yes	No		WU20 Color Coded Coax
SM29 /SR20	ORP			Yellow: Red	Black	Red: Red	Red: Blue	Yellow: Blue	Yes	Yes		WU20 Color Coded Coax
SX42	SC	Brown	Brown	Yellow: Green		Red					13/14 and 15/16	Sensor Wiring

\*1: The jumper cables to short are attached to the product.

\*2: Jumper cables to short are supplied by users.

Sensor	Measurement	Board Terminals					Remark
		82	83	84	86	87	
FU20F	pH, pH & ORP, rH	82	83	84	86	87	WU11 Cable

## 2.3.8 Wiring of HAMILTON sensors

Sensor	Measurement	FLXA202/FLXA21 Terminals										Short *2 FLXA202 /FLXA21 Terminals	Remark	
		11	12	13	14	15	16	17	18	18/13	19/15			
Sensor cable marking (or color)										Jumper *1				
CHEMTRODE	pH			Blue		Red		(White)			Yes	No	13/14	WU20D Cable
CHEMTRODE- ORP	ORP										Yes	Yes	13/14	
CHEMTRODE- VP	pH	E	F	B		A					Yes	No	13/14	VP6-SC
CLARITRODE	pH			Blue		Red		(White)			Yes	No	13/14	WU20D Cable
CLARITRODE- VP	pH	E	F	B		A					Yes	No		VP6-SC
CONDCUELL	SC	White/ Grey	Blue	Green	Pink	Brown	Yellow							Fixed Cable
CONDCUELL- VP	SC	Blue	Yellow	Black	Black Shield	Grey	Grey Shield							Hamilton VP Cable
EASYFERM	pH			Blue		Red		(White)			Yes	No	13/14	WU20D Cable
EASYFERM- VP	pH	E	F	B		A					Yes	No	13/14	VP6-SC
INCHTRODE	pH	E	F	B	D	A					Yes	No		VP6-SC
MECOTRODE	pH			Blue		Red		(White)			Yes	No	13/14	WU20D Cable
MECOTRODE- VP	pH	E	F	B		A					Yes	No		VP8-DC
OXYFERM- VP/OXYGOLD	DO	White	Green		Green/ Yellow			Black	Red					Hamilton VP Cable
OXYSENS	DO	Yellow	Blue		Black			Clear	Brown					Fixed Cable
pHEASY	pH	E	F	B	D	A	B				Yes	No		
POLILYTE	pH			Blue		Red		(White)			Yes	No		WU20D Cable
POLILYTE-VP	pH	White	Green	Red	Blue	Black/ Clear					Yes	No		Hamilton VP Cable
POLILYTE PLUS-VP	pH	White	Green	Red	Blue	Black/ Clear					Yes	No		Hamilton VP Cable

\*1: The jumper cables to short are attached to the product.

\*2: Jumper cables to short are supplied by users.

### Color coding of Variopin cables

PIN		A	B	C	D	E	F	G	H
Hamilton	VP6-SC	Black/ Clear	Red	Grey	Blue	White	Green		
Hamilton	VP8-DC	Black/ Clear	Black Shield	Red/ Clear	Red Shield	White	Green	Yellow	Brown
WU20-V-S	VP6-SC	Clear	Brown	Black	Yellow	Red	Blue		
WU20-V-D	VP8-DC	Brown Core	Brown Shield	White Cored	White Shield	Red	Blue	Yellow	

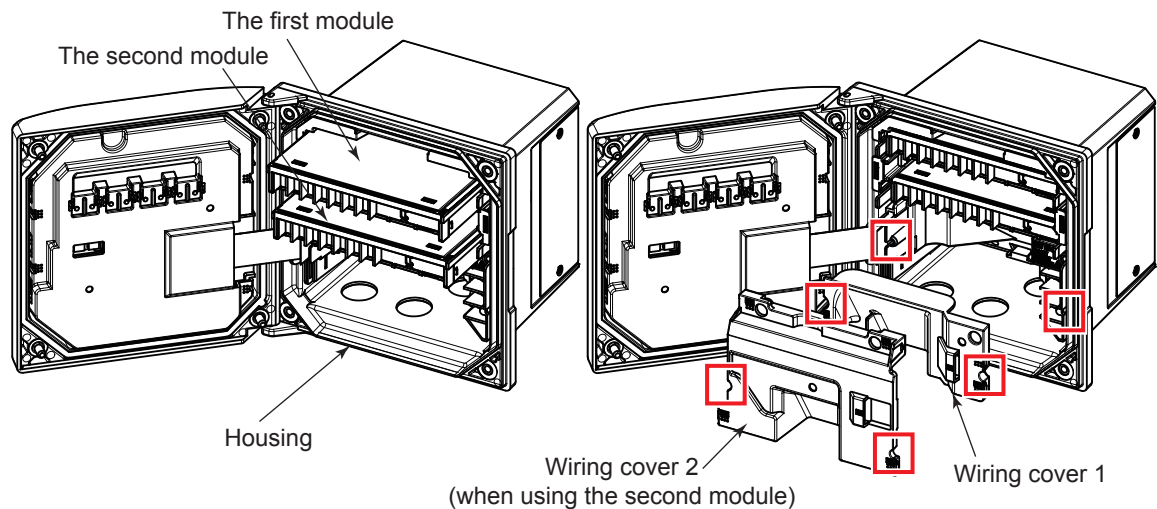
### 2.3.9 Wiring covers

- **FLXA202**

#### NOTE

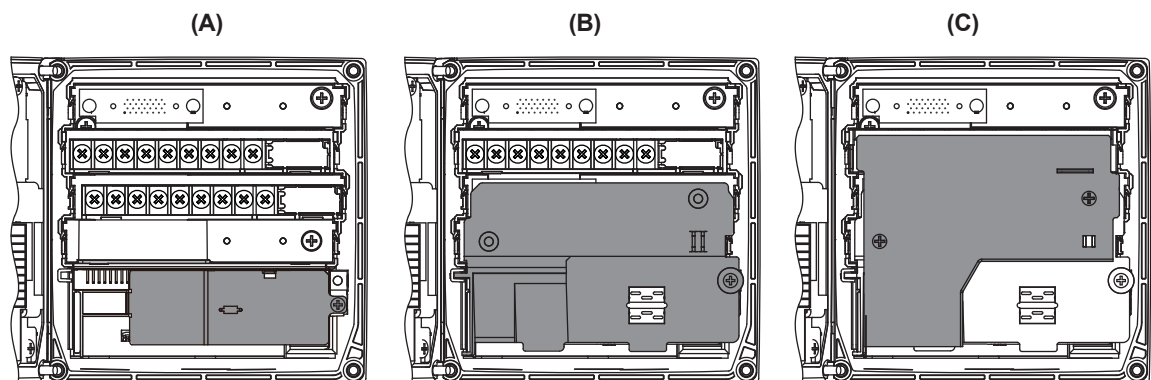
Wiring covers are required intrinsic safety and Type n (Type is -C\*, -DB, -DE). In the case of other types, the cover is not attached to the FLXA202.

When two sensor modules are used, the upper-level module is for input 1 and the lower-level module is for input 2. For ease of installation, first wire input 2 sensor on the lower-level module, and attach the wiring cover 1; then wire input 1 sensor on the upper-level module and replace the module wiring cover 2.



- **FLXA21**

When two sensor modules are used, the upper-level module is for input 1 and the lower-level module is for input 2. For ease of installation, first wire input 2 sensor on the lower-level module (A), and attach the wiring cover; then wire input 1 sensor on the upper-level module (B) and replace the module wiring cover (C).



When all wiring is completed and all wiring covers have been installed, the front panel can be closed and the power can be switched on.

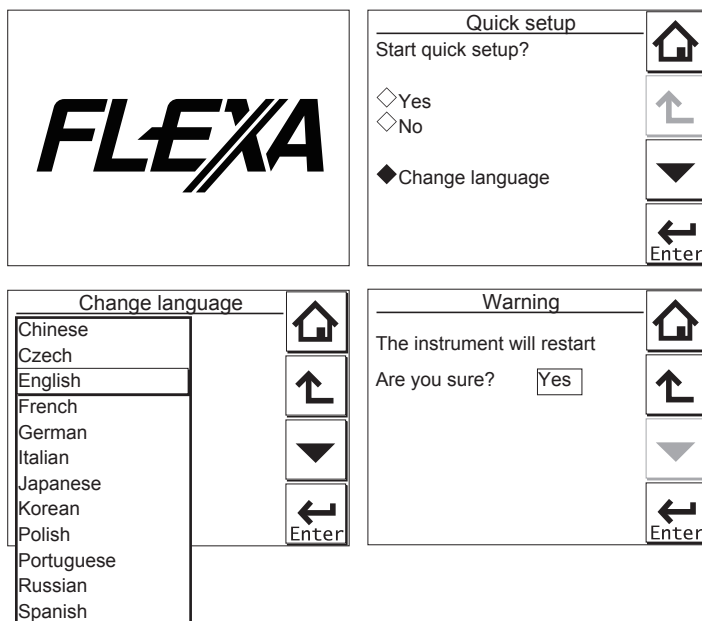
# 3. Operation

When all wiring is completed, turn on the power to the instrument. Make sure that the LCD screen turns on, and then wait for the Quick Setup menu to be displayed. Follow the on-screen instructions for set-up and calibration. If the instrument is not configured correctly an error indicator may be displayed, or the measurement values displayed may be incorrect. Consult the User's Manual supplied on CD with the analyzer, and check the initial settings and change them to suit your purpose.

Basic operation of the software is similar the EXAxt 450 series. For more detailed information please refer to the User's Manual of the FLXA202/FLXA21.


## 3.1 Change language

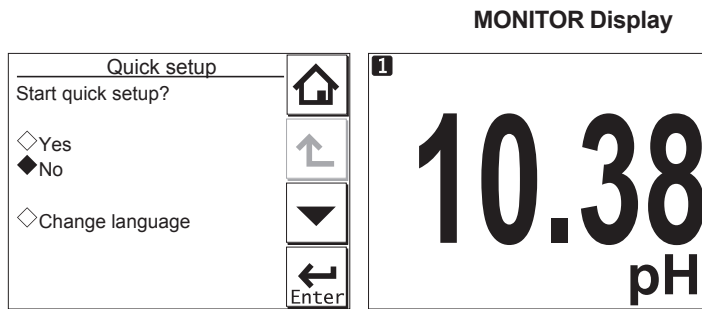
The default language setting for the FLEXA is English. To select a different language other than English, follow the steps below.



## 3.2 Quick setup


The Quick setup menu is used to program the basic items necessary to make the transmitter operational, such as the date/time and sensor settings. The detailed settings are described in the Commissioning in the User's Manual (for example, chapter 4 for pH/ORP). Each time the FLXA202/FLXA21 is started up, this menu is displayed. If it is not necessary to change the setup,

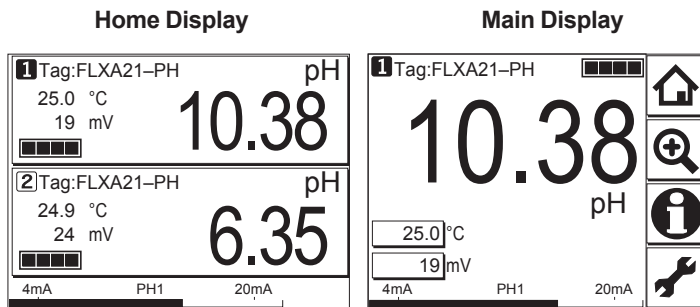
you may bypass the Quick setup by selecting No or . When no operation is performed for 10 minutes, the screen changes to the monitor display or the main display (or home display) automatically.



### 3.3 Basic operation (when two sensors are connected)

When 2 sensor modules are installed, the Home display shows both sensor information at one time, while the Main display will show the individual sensor information. If only one sensor

module is installed, the  is grayed out and disabled on the Main display. On the Home display, pressing the 1st sensor (top) information or the 2nd sensor (bottom) information causes the Main display of the selected sensor to appear.





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## 4. Commissioning

### NOTES for Quick Setup:

a. pH measurement module

Under “measurement” a selection is made for pH, ORP or pH&ORP. The selected measurement must be in accordance with the sensor wiring. When rH measurement is requested pH&ORP must be chosen on this level. The rH must then be selected in the commissioning menu.

b. SC measurement module

Under “measurement” a selection is made between Conductivity, Resistivity, Concentration or Concentration plus Conductivity. On this level only Conductivity or Resistivity can be selected. Settings for Concentration measurement must be done in the commissioning menu.

c. DO measurement module

Under “sensor type” a selection is made for Galvanic or Polarographic. The selected sensor type must be in accordance with the sensor wiring. Otherwise the analyzer or sensor can be damaged.

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# 5. Maintenance

## ■ Periodic maintenance

The FLXA202/FLXA21 requires very little periodic maintenance, except to make sure the front window is kept clean in order to permit a clear view of the display and allow proper operation of the touchscreen. If the window becomes soiled, clean it using a soft damp cloth or soft tissue.

To deal with more stubborn stains, a neutral detergent may be used.

When you must open the front cover and/or glands, make sure that the seals are clean and correctly fitted when the unit is re-assembled in order to maintain the housing's weatherproof integrity against water and water vapor.

The pH measurement uses high impedance sensors and may otherwise be prone to problems caused by exposure of the circuitry to condensation.

### **CAUTION**

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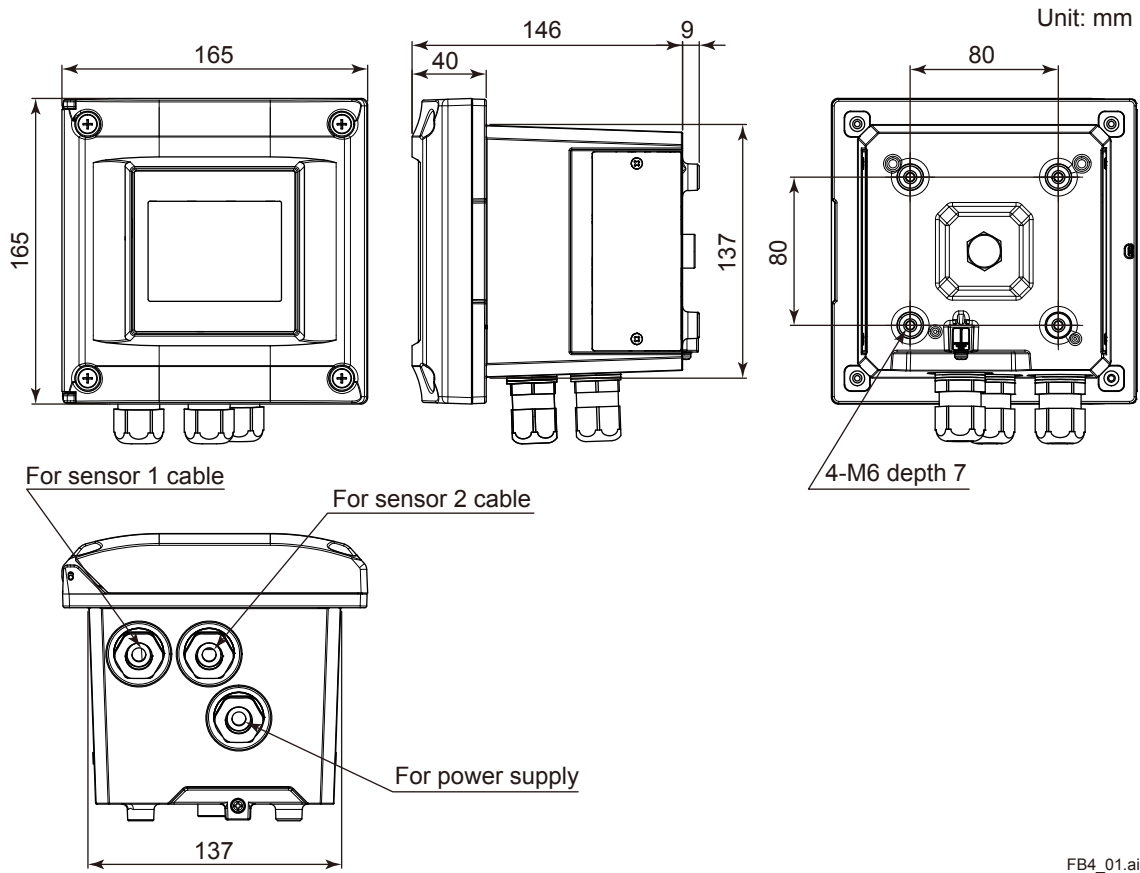
Never use harsh chemicals or solvents. In the event that the window does become heavily stained or scratched, refer to the parts list for replacement part numbers.

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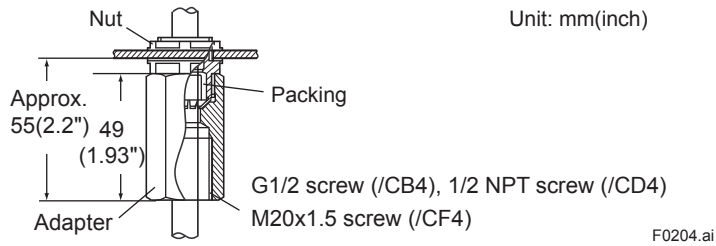


# ◆ Appendix

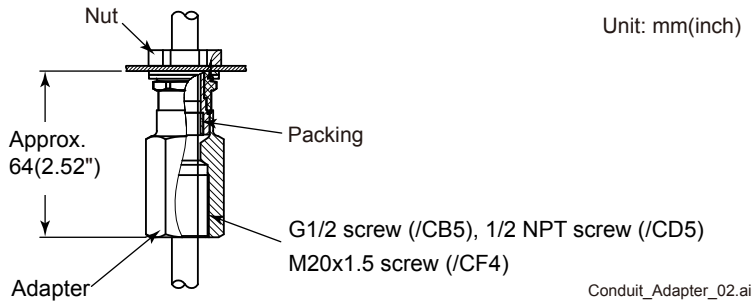
## ■ FLXA202 Dimensions and Mounting



### Conduit Adapter (Option code: /CB4, /CD4, /CF4)

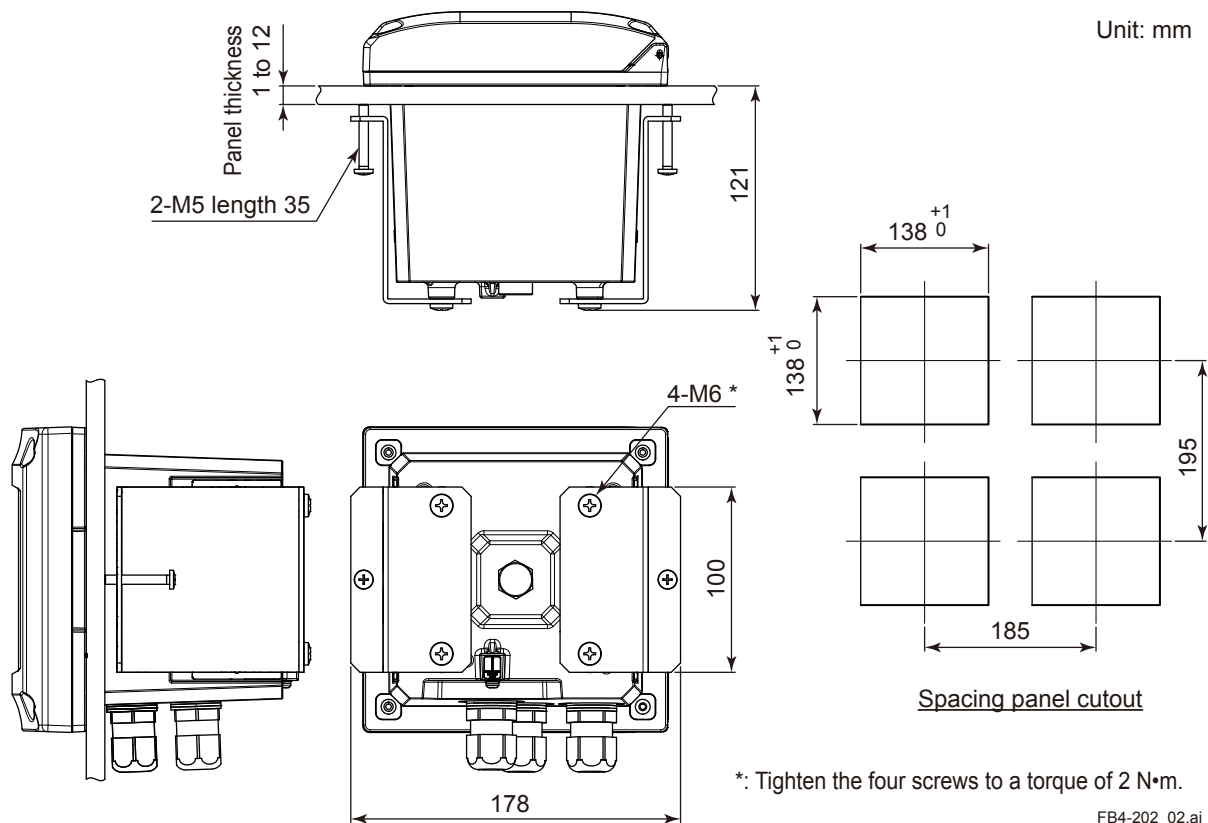


### Conduit Adapter (Option code: /CB5, /CD5, /CF5)

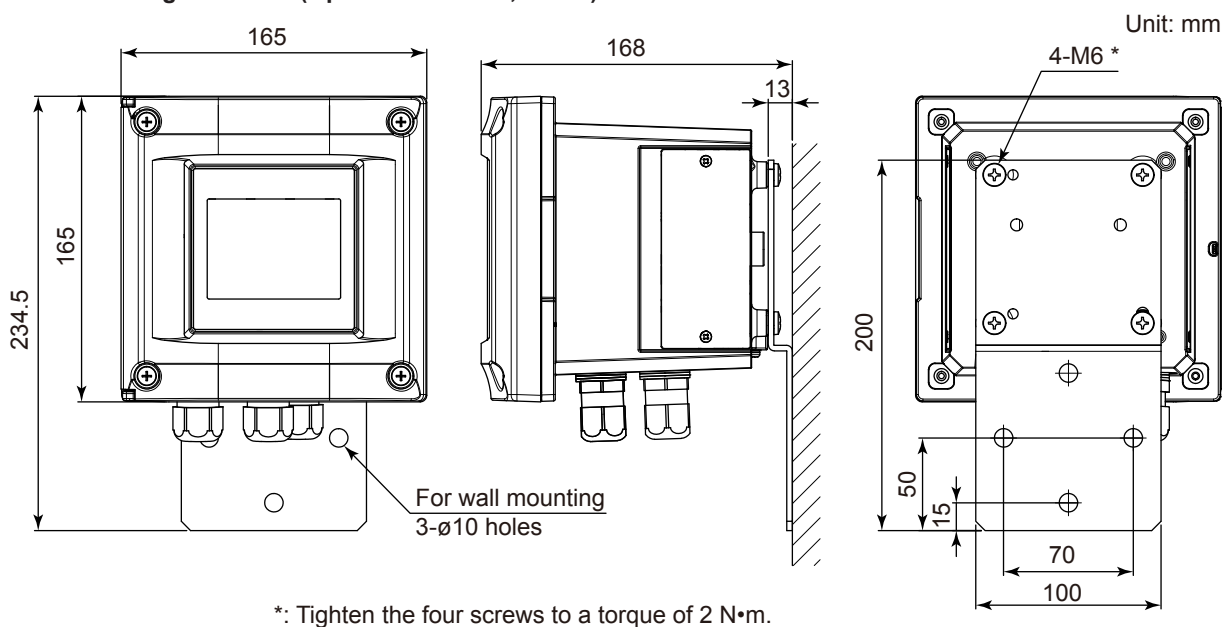


(Note) The universal mounting kit (/UM) contains the pipe and wall mounting hardware (/U) and the panel mounting hardware (/PM).

**Panel mounting hardware (Option code: □/PM, □/UM)**

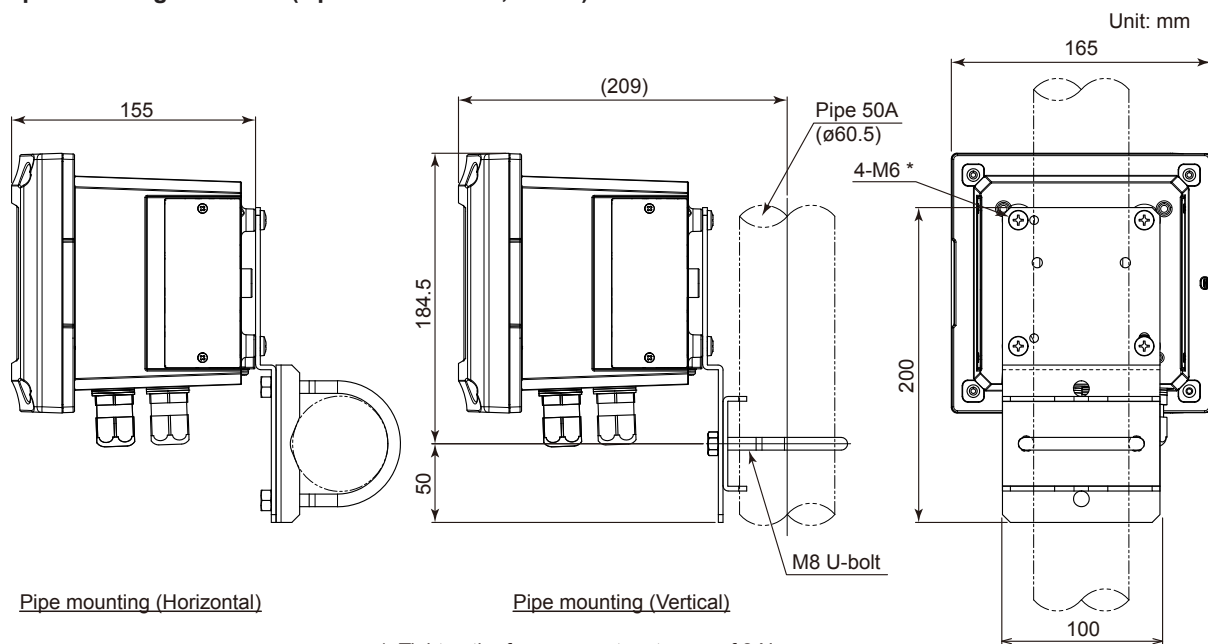


**Wall mounting hardware (Option code: □/U, □/UM)**



Note: The wall on which the analyzer is mounted should be strong enough to bear the weight of more than 8 kg.

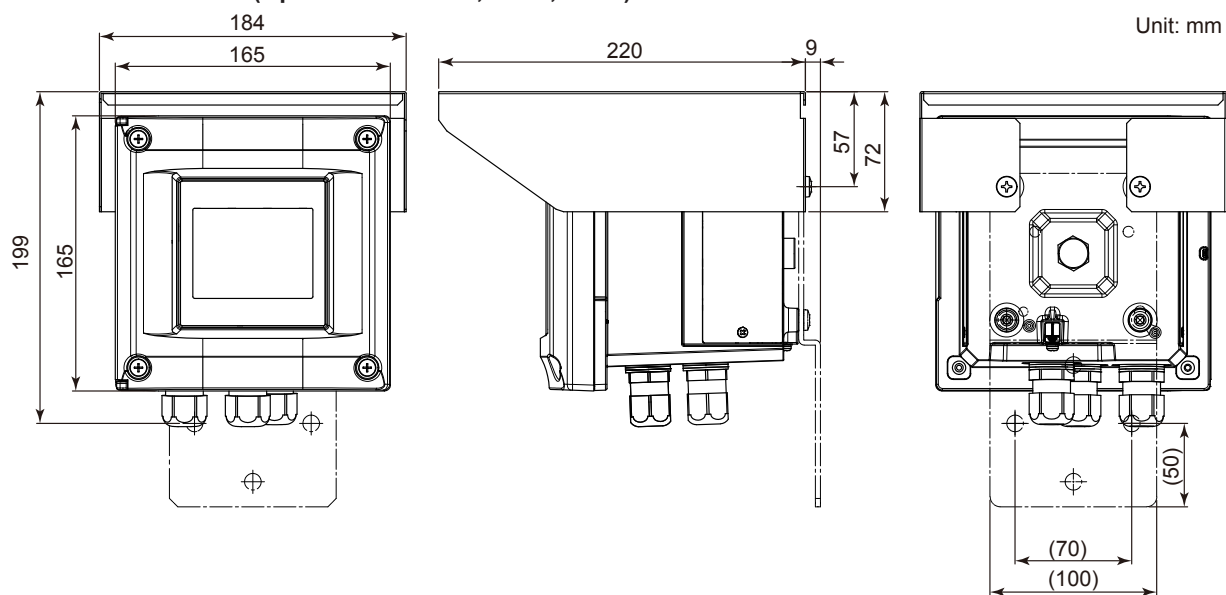
Pipe mounting hardware (Option code: □/U, □/UM)



\*: Tighten the four screws to a torque of 2 N•m.

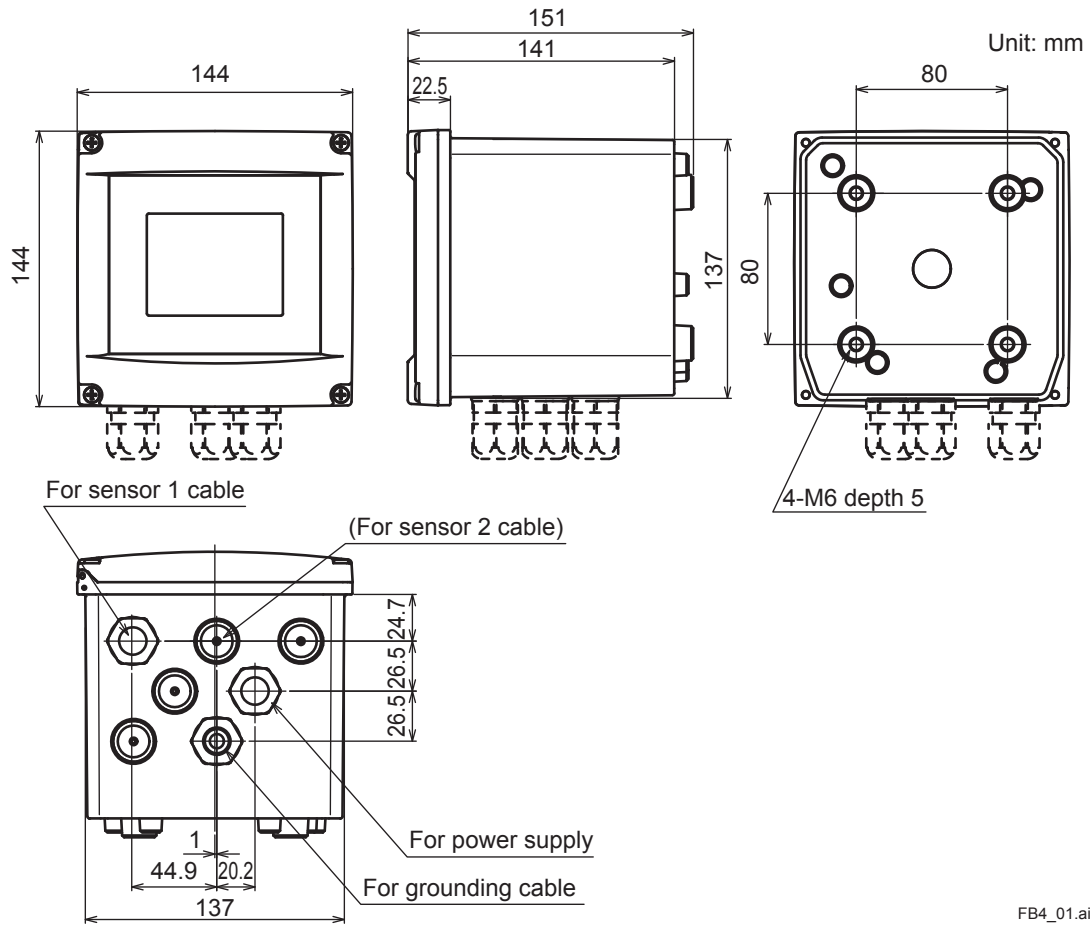
FB4-202\_04.ai

Stainless steel hood (Option code: □/H6, □/H7, □/H8)



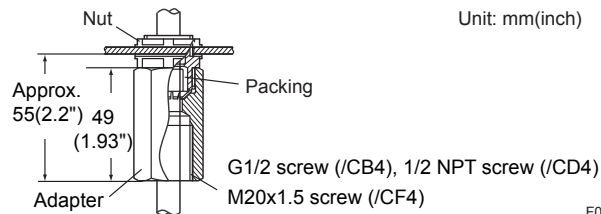
FB4-202\_05.ai

■ FLXA21 Dimensions and Mounting



FB4\_01.ai

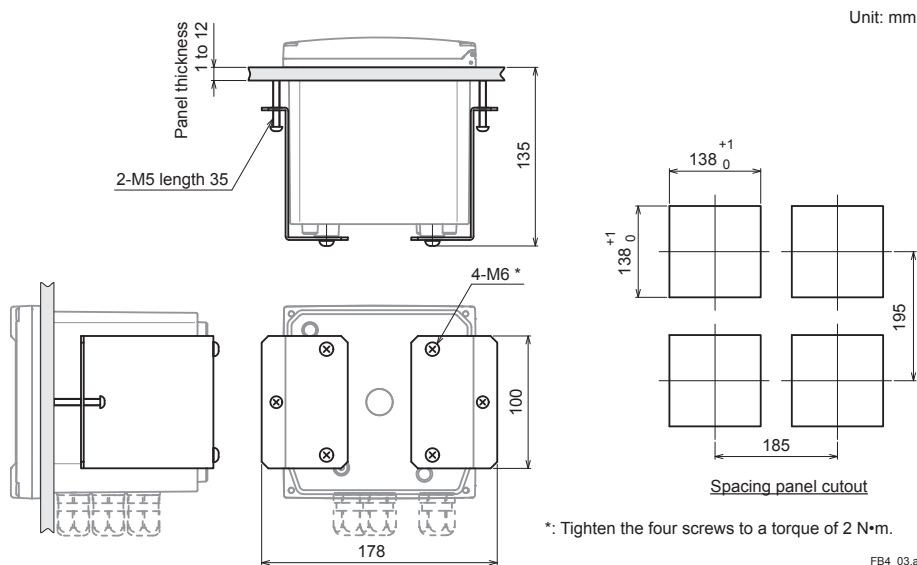
Conduit Adapter (Option code: □/CB4, □/CD4, □/CF4)



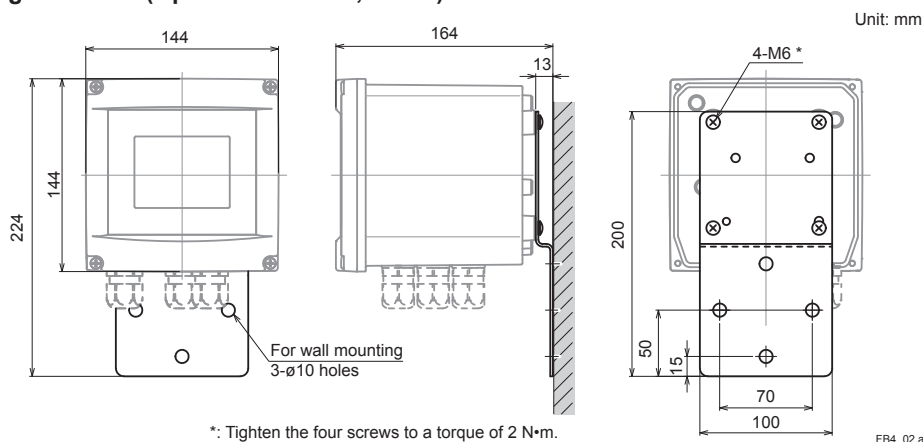
F0204.ai

(Note) The universal mounting kit (/UM) contains the pipe and wall mounting hardware (/U) and the panel mounting hardware (/PM).

**Panel mounting hardware (Option code: □/PM, □/UM)**

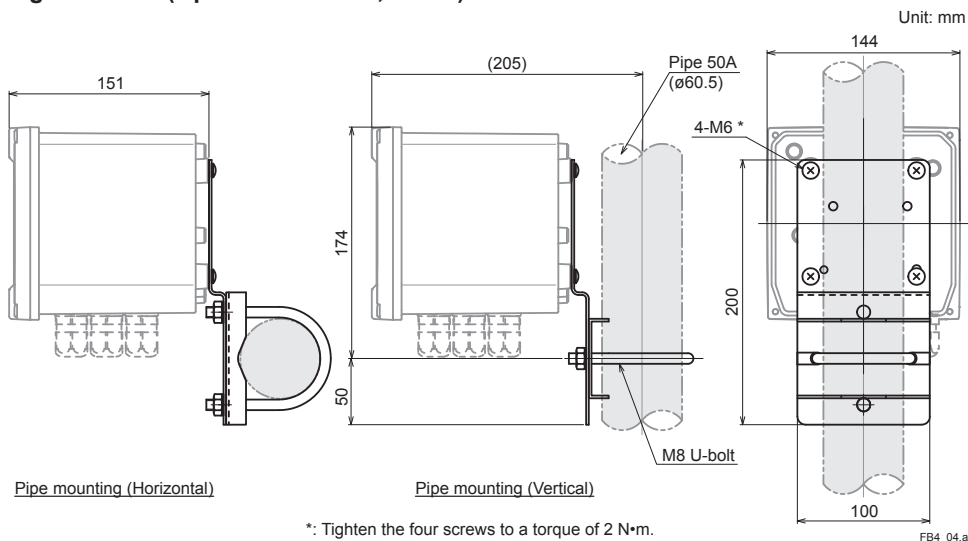


**Wall mounting hardware (Option code: □/U, □/UM)**



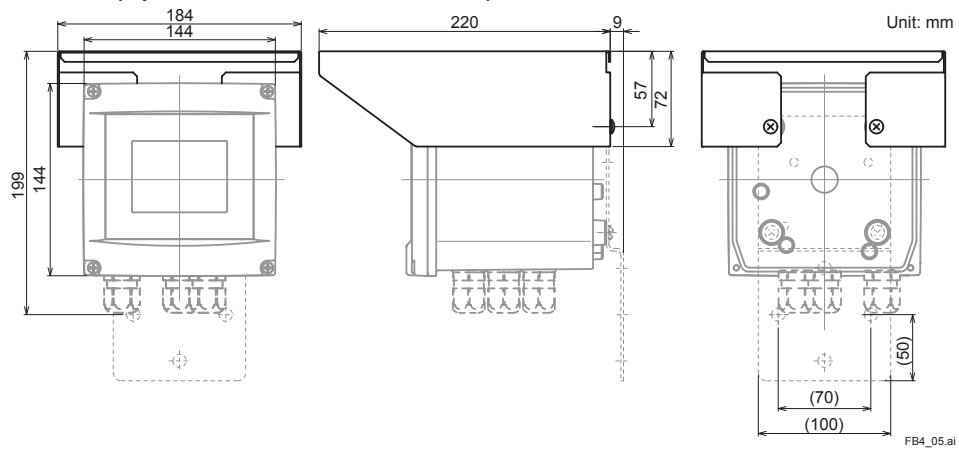
Note: The wall on which the analyzer is mounted should be strong enough to bear the weight of more than 8 kg.

**Pipe mounting hardware (Option code: □/U, □/UM)**





## Stainless steel hood (Option code: □/H6, □/H7, □/H8)



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# Revision Record

- Manual Title : Model FLXA202 / FLXA21 2-Wire Analyzer Start-up Manual
- Manual No. : IM 12A01A02-12E

**Mar. 2018/9th Edition**

Change the location of the nameplate, addition of Type n, deletion of stainless steel housing, etc.

**Oct. 2015/8th Edition**

Addition of FLXA202

**Apr. 2015/7th Edition**

Change of “type of ground” of the stainless steel housing (pages 14 and 15)  
Note for wall mounting (pages 14 and 15)

**Oct. 2014/6th Edition**

Correction of discriptions and words

**Oct. 2013/5th Edition**

Addition of MONITOR display  
Correction of discriptions and words

**Sep. 2013/4rd Edition**

Pages are significantly reduced

**Feb. 2012/3rd Edition**

Addition of descriptions and drawings for intrinsically safe type  
Change of descriptions of messages on displays  
Change of figures of housing due to change of position of external grounding for stainless steel housing  
Change of figures of wiring covers  
Change of description of message language due to addition of message languages  
And, other corrections

**Aug. 2010/2nd Edition**

Followings are mainly revised;

Addition of grounding terminal position on stainless housing with specific mountings  
Addition of plate position on stainless housing with specific coatings  
Addition of explanation of sleeve for grounding wire for plastic housing  
Correction of torques  
Addition of Note, Warning etc.  
Addition of detail descriptions for wire terminals  
Addition of drawings of housing with hood  
Addition of example displays for calculated data and redundant system  
Addition of explanation of passwords  
Correction of errors on the User setting tables

**May 2010/1st Edition**

Newly published

