

**azbil**

# **Field Mount type P/I Converter**

**Model: KUX60G (Waterproof)**

**Model: KUX70G (Explosion-proof)**

## **User's Manual**



Azbil Corporation

CM2-KUX100-2001  
2nd edition

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Thank you for purchasing the Azbil Corporation's Model KUX60G/70G field mount P/I converter.

The model KUX60G/70G offers high performance and is provided with highly reliable P/I converters with a microprocessor incorporated in each one.



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# Safety

## About this manual

Correct installation and periodic maintenance are essential for the safe use of this instrument. Carefully read the safety precautions described in this instruction manual and have a thorough understanding of it before starting installation or maintenance.

Upon receiving the product, check to see if it has the correct specifications or if it has sustained any damage during delivery. This instrument is shipped after being tested according to a strict quality control program. If you find any omissions in aspects of quality or specifications, inform us of the unit's model number and product number written on its identification plate.

The identification plate is attached to the Product.

### **WARNING**

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A warning alerts the user of a potentially hazardous situation that may result in death or serious injury in the event of improper handling.

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### **CAUTION**

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A caution warns the user of a potentially hazardous situation that may result in light to moderate injuries or only in property damage in the event of improper handling or operation.

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For correct and safe use of the instrument, be sure to observe the cautions described in the following pages. Azbil Corporation will not be responsible for any damage that is a result of handling of the product without heeding these cautions.

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## Safety precautions

### Cautions on installation

#### WARNING

- 
- Do not use the instrument beyond the rated pressure, connection specifications or the rated temperature specified for the instrument. This may result in a serious accident due to damage to the unit.
  - Wiring in an explosion-proof area should be performed according to the procedures specified in the explosion-proof guideline.
- 

#### CAUTION

- 
- After installation, do not use this instrument as a step or foothold. This may damage the instrument or may result in physical injury
  - Perform installation correctly. Insufficient installation or no installation may result in output errors or violate applicable regulations.
- 

### Cautions on wiring

#### WARNING

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Do not perform wiring with wet hands or with the power turned on. This may result in electrical shock. Work with dry hands or wear gloves with the power to the unit turned off power.

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#### CAUTION

- 
- Carefully check the specifications and perform wiring correctly. Incorrect wiring may damage the instrument or cause the unit to malfunction.
  - Use a power supply that conforms to the specifications. Using a wrong power supply may damage the instrument.
- 

### Cautions on maintenance

#### WARNING

- 
- When removing this instrument from the process for maintenance, be especially careful of residual pressure or any residual fluid remaining in the process line or in the instrument.
  - When carrying out venting or draining, check the direction of the venting or draining and take precautions to prevent it from coming into contact with the human body. Failure to do so may result in burns or physical injury.
  - If the instrument is used in an explosion-proof area, do not leave the Product uncovered to avoid sparks or ignition.
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**CAUTION**

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This instrument is shipped under strict product control by Azbil Corporation. Do not modify the instrument under any circumstances as this could result in permanent damage to the instrument.

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**Cautions on use of communication devices****CAUTION**

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Using a transceiver, cellular phone, pager, etc. near this instrument may prevent the instrument from functioning correctly depending on the transmission frequency being used. Observe the following precautions.

- Check beforehand the distance at which the communication device will not affect the correct operation of this instrument. Always use the communication device at a greater distance than this.
  - Use the communication device after putting the cover on the Product.
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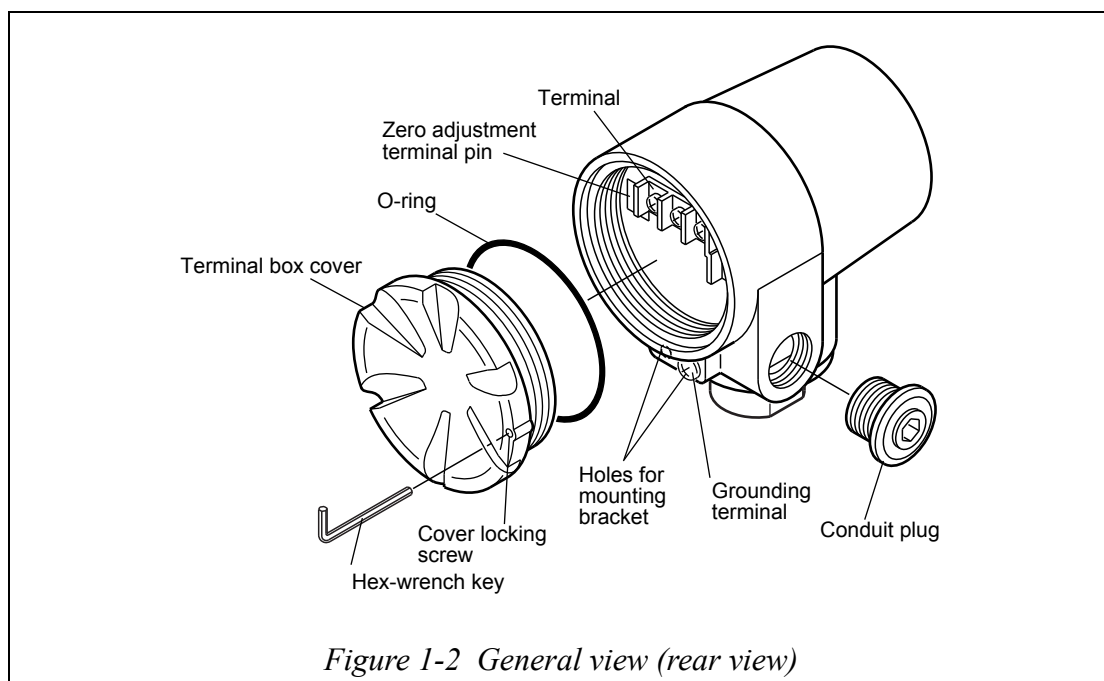
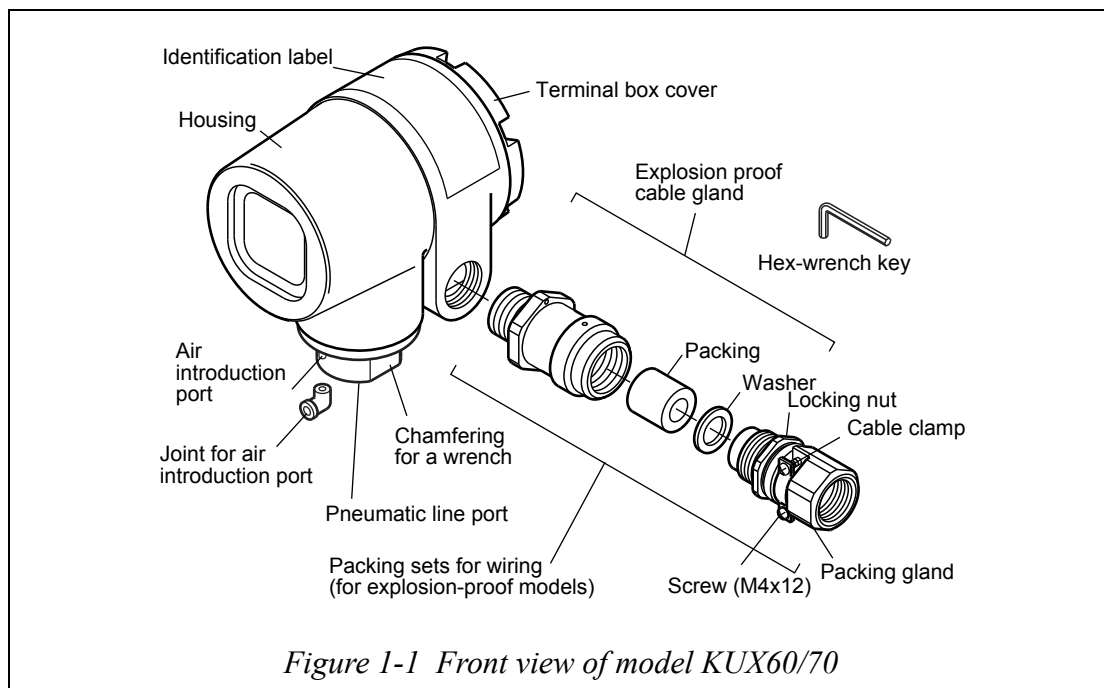
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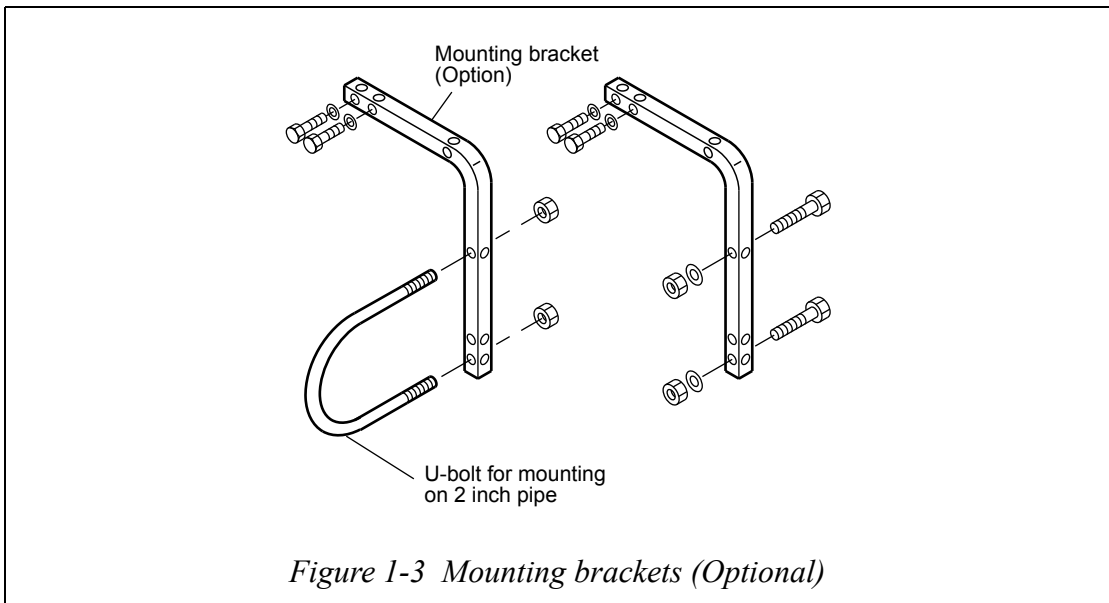
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# Chapter 1 : Description of parts

## 1-1 : Description of parts

Figure 1-1 and Figure 1-2 show expanded front and rear views of the KUX60/70 P/I converter.





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## Chapter 2 : Installation

### 2-1 : Precautions

 **CAUTION**

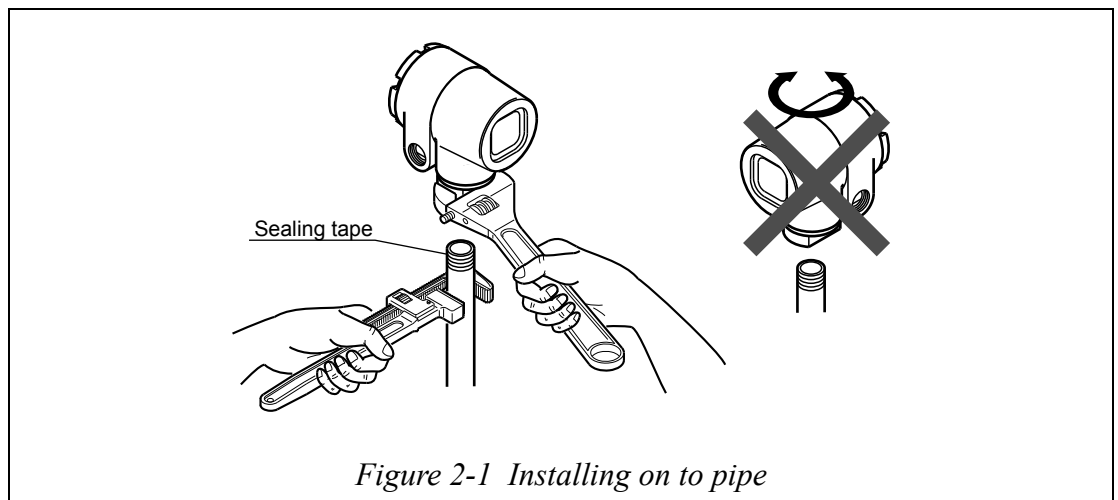
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Once the model KUX60/70 converter is installed, do not use it as foot-hold or any other improper purpose. Doing so may damage the equipment and could result in personal injury.

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- When installing the converter, position and secure the gasket in order to avoid any leakage from where the converter is connected to the pneumatic signal line. If gasket protrudes out, output errors may results.
- Do not use the converter under any other operating conditions than those specified in the product specifications. Using this product under incorrect operating conditions may result in damage to the product or leakage that could lead to a major accident.
- Wiring work in a hazardous area should be performed carefully by following the procedures specified in explosion-protection guidelines.

### 2-2 : Installation to pipe



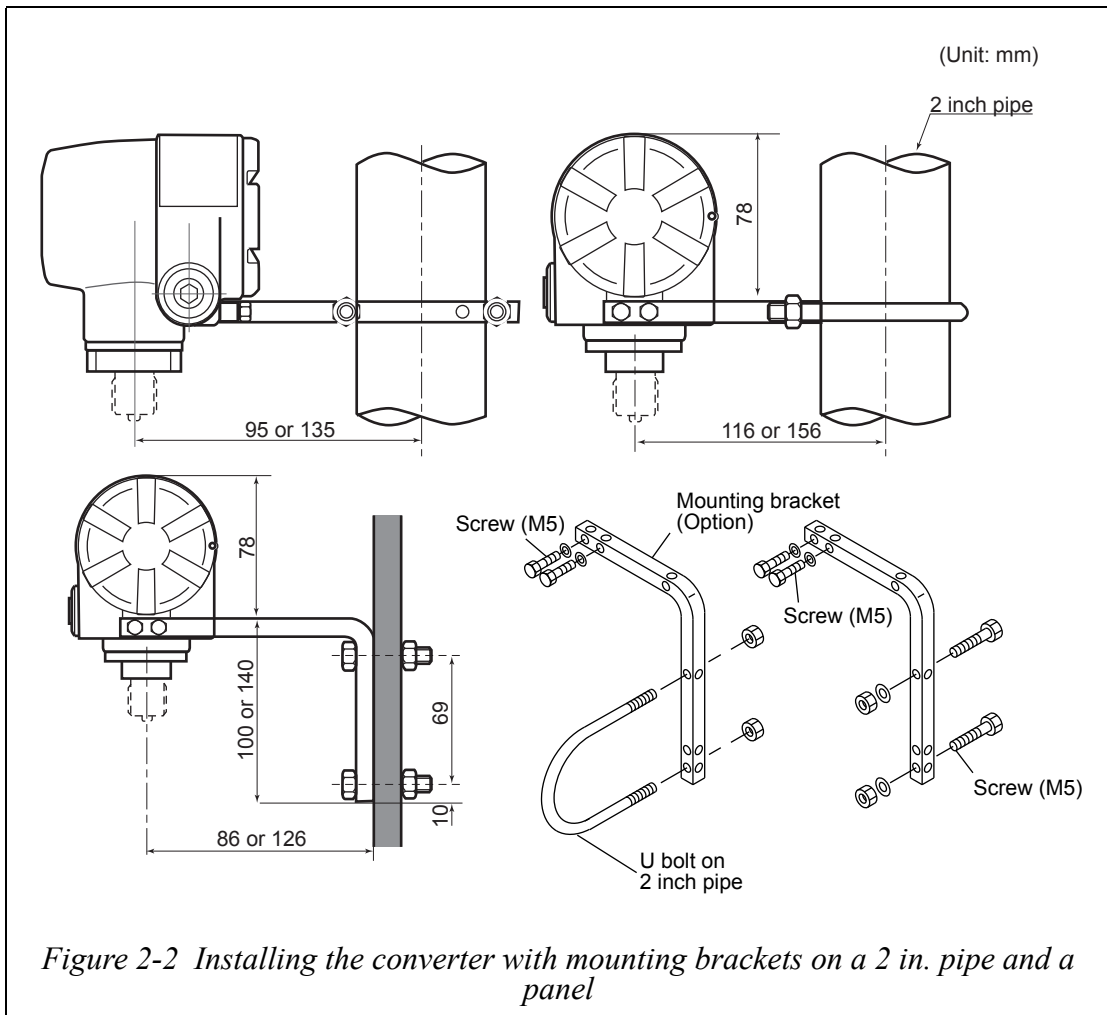
- Securely wrap sealing tape around the joint of the connecting pipe to prevent leakage. Using a wrench, securely tighten the pneumatic line port of the converter to the connecting pipe. When doing so, use a wrench to hold the chamfering part. Do not tighten by holding the housing of the product as this may damage the converter. Avoid holding the housing when tightening without a wrench (See Figure 2-1).
- Install the converter in a location where there will be no excessive impact or vibration.

- When mounting the converter directly onto the pneumatic signal pipe, full consideration must be given to its weight and vibration.

### 2-3 : Piping

Mounting brackets are supplied with the converter as an option. With the mounting bracket, the converter can be installed on a 2 inch pipe or a panel.

Figure 2-2 illustrates examples of installing the converter with mounting brackets. Figure 2-3 gives the dimensions of the mounting bracket.



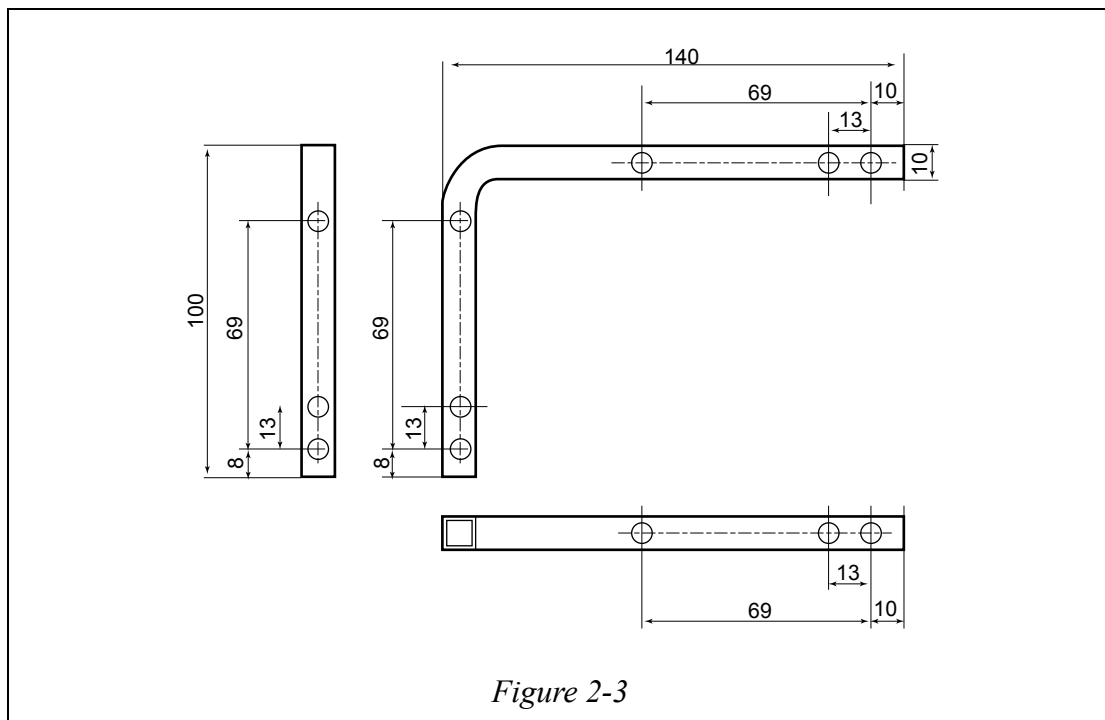


Figure 2-3





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## Chapter 3 : Wiring

### 3-1 : Precautions

 **CAUTION**

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- Performing wiring with wet hands or with its power turned on may result in electrical shock to personnel. Always perform wiring work with dry hands, always wear gloves and turn the power to the converter off before performing wiring work.
  - Turning on the power in an explosion-protected area while the housing is open can induce explosion.
- 
- Perform the wiring work correctly while carefully following the specifications. Incorrect wiring will cause damage to or result in malfunction of the product.
  - Use the power supply properly based on the specifications. Incorrect power supply will damage the product.
  - This instrument is designed based on a two-wire system. The power supply line also functions as a signal line. The wires are routed through the conduit hole on the side face of the converter and are connected to the terminals. The conduit end is potted with sealing agent or capped with a sealing plug so the water cannot permeate into the housing. The connecting wires to the terminals must be drawn in below the position of where the connection port is located.
  - The converter has two grounding terminals: one at the terminal and the other on the outside face. Either terminal may be used. The grounding terminal must be connected to a ground having a resistance of 100Ω or less.

### 3-2 : Power supply

Power supply to the converter should be between 11.5V DC and 30V DC.



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# Chapter 4 : Maintenance

## 4-1 : Maintenance



### CAUTION

- 
- If the converter is disconnected from the pipe for maintenance purposes, securely shut off the pneumatic line to the product. Personal injury could result from the blowout of air.
  - Do not open the housing cover while it is operating in hazardous area. Opening the cover may induce an explosion.
- 

Check the following on periodic basis:

- Has the housing, cover or grounding cable been damaged?
- Are the grounding cable, cover or housing locking screw loose?
- Are the terminal screws loose?
- Is there any deterioration in the O-rings?
- Is there any leakage from the connection pipes?



# Chapter 5 : Spare parts

## 5-1 : Spare parts

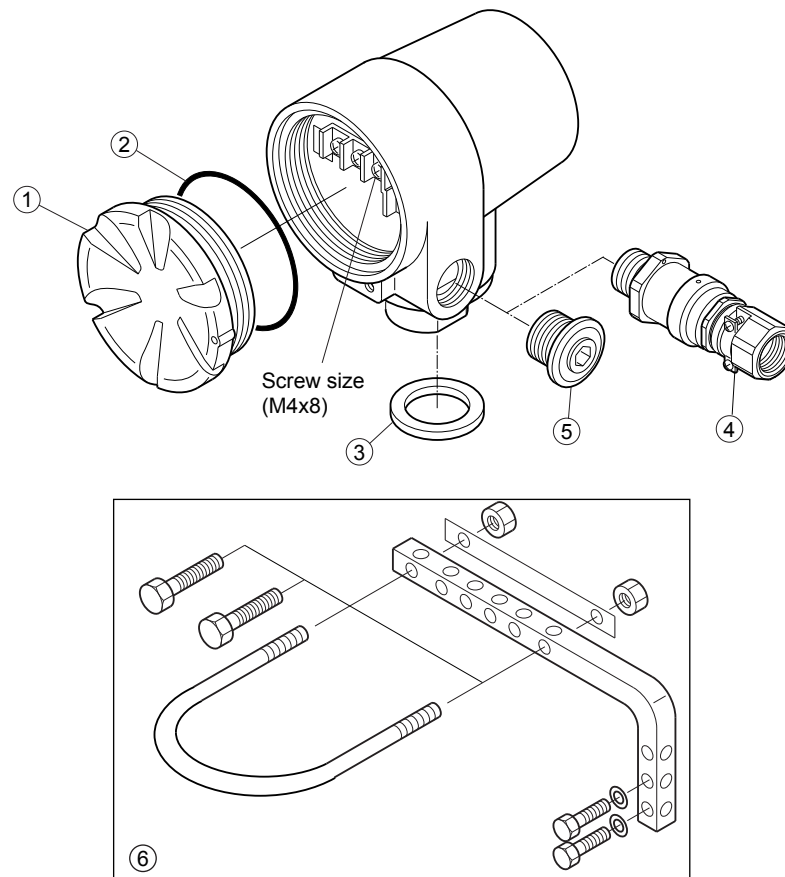


Figure 5-1

Table 5-1: Spare parts

No.	Part description	Part No.	Qty. to use per unit	Unit qty. for resale
1	Case cover (with an O-ring)	80370406-001	1	1EA
2	O-ring	80020935-842	1	1-F
4	Gland packing set	80373094-001	1	1EA
5	Plug (with an O-ring)	80387115-002	1	1EA
6	Mounting bracket	80370404-001	1	1EA

~Note "1-F" is equal to "10EA"



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