

User's Manual

Model X069 Input/Output Through Card

JUXTA

Thank you for purchasing the JUXTA Signal Conditioner.
Please read through this manual before use for correct handling.

YOKOGAWA 
Yokogawa Electric Corporation

IM X069-01EN
2nd Edition Apr. 2021 (YK)

CAUTIONARY NOTES FOR SAFE USE OF THE PRODUCT

This User's Manual should be carefully read before installing and operating the product. Please keep this User's Manual for future reference.

For more information of the safety precautions, please refer to the "Precautions on the Use of the JUXTA Series (IM 77J01A00-91Z1)".

The related manuals and general specifications are shown in the table below.

Doc. Name	Doc. Number
Precautions on the Use of the JUXTA Series (User's Manual)	IM 77J01A00-91Z1
Model X069 Input/Output Through Card (User's Manual)	IM X069-01EN (This manual)
Model X069 Input/Output Through Card (General Specifications)	GS X069-01EN

User's manuals in the above table are essential parts of the product; keep it in a safe place for future reference.

This manual is intended for the following personnel;

- Engineers responsible for installation, wiring, and maintenance of the equipment.
- Personnel responsible for normal daily operation of the equipment.

The following symbol is used on the product and in this manual to ensure safe usage.



WARNING

Calls attention to actions or conditions that could cause serious or fatal injury to the user, and indicates precautions that should be taken to prevent such occurrences.



CAUTION

Calls attention to actions or conditions that could cause injury to the user or damage to the instrument or property and indicates precautions that should be taken to prevent such occurrences.

QR Code

The product has a QR Code pasted for efficient plant maintenance work and asset information management. It enables confirming the specifications of purchased products and user's manuals.

For more details, please refer to the following URL.

<https://www.yokogawa.com/qr-code>

* QR Code is a registered trademark of DENSO WAVE INCORPORATED.

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CHECKING PRODUCT SPECIFICATIONS AND PACKAGE

(1) Checking the Model and Product Specifications

Check that the model and specifications indicated on the nameplate attached to the main unit are as ordered.

(2) Packaged Items

Check that the package contains the following items:

- X069: 1 unit
- Standard Accessories:
 - Tag number label: 1 sheet
 - User's manual (IM X069-01EN, this manual): 1 copy
 - User's manual (IM 77J01A00-91Z1): 1 copy

GENERAL

The X069 is a card whose inputs are combined with the outputs directly.

- A resistor can be built in to convert the current signal to a voltage signal.

MODEL AND SUFFIX CODES

Model	Suffix codes	Description
X069	/x	Input/Output Through Card
Option	/SN	No socket (with socket if not specified)
	/C0	Coating *1
	/R10	With input resistance 10 Ohm *2
	/R50	With input resistance 50 Ohm *2
	/R100	With input resistance 100 Ohm *2
	/R250	With input resistance 250 Ohm *2
	/R500	With input resistance 500 Ohm *2
	/R1000	With input resistance 1000 Ohm *2

*1: When the option code /C0 is specified, the CE marking is not applied.

*2: Only one option code /Rxx can be specified.

Note: 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.

1. MOUNTING METHOD

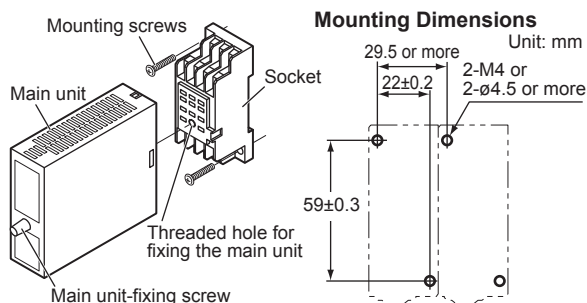


CAUTION

- Plug/disconnect the main unit into/from the socket vertically to the socket face. Otherwise the terminals may bend and it may cause bad contact.
- The converter shall not tilt 5 degrees or more in either direction when installed.
- When the converter is not connected to the socket, it is necessary to protect the socket against ingress of dust to the connector part.
- Keep this product in a conductive bag when plugged out, during transport or storage.

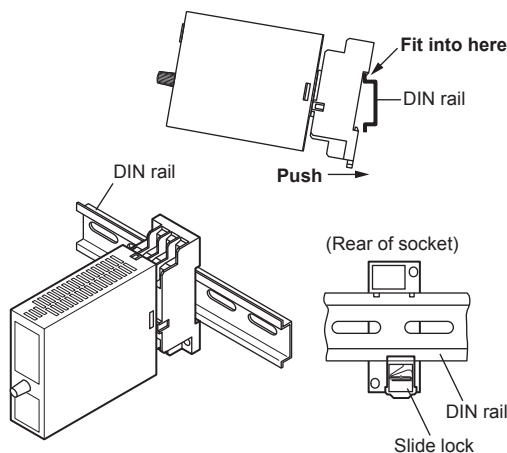
1.1 Wall Mounting

Loosen the main unit-fixing screw of the product and pull out the main unit from the socket. Fix the socket on the wall with screws. Next, insert the main unit into the socket and fasten the main unit with the main unit-fixing screw.



1.2 DIN Rail Mounting

Insert a DIN rail into the upper part of the DIN rail groove on the rear of the socket, and then slide the slide lock at the lower part of the socket upwards until the socket is fixed into position as shown below.



1.3 Mounting Using a Multi-mounting Base

When using a multi-mounting base, see the User's Manual for VJCE-01A (VJ Mounting Base for communication) (IM 77J01C51-11E).

1.4 Using a Duct

When using a wiring duct, install the duct at least 30 mm away from the top and bottom faces of the main unit.

2. INSTALLATION AND ENVIRONMENTAL CONDITIONS

- Avoid the following environments for installation locations: Areas with vibrations, corrosive gases, dust, water, oil, solvents, direct sunlight, radiation, a strong electric field, and/or a strong magnetic field, direct radiant heat, wind, temperature fluctuation.
- If there is any risk of a surge being induced into the power line and/or signal lines due to lightning or other factors, a dedicated lightning arrester should be used as protection for both the product and a field-installed device.
- Use indoors at an altitude of 2000 m or less
- Operating temperature/humidity range: -10 to 55°C (-10 to 45°C for side-by-side mounting*)/5 to 90%RH (no condensation)
 - * If the previous model (style S3.xx earlier) is installed together, the ambient temperature is 0 to 40°C.
- Continuous vibration: (at 5 to 9 Hz) Half amplitude of 3 mm or less (at 9 to 150 Hz) 9.8m/s² or less, 1 oct/min for 90 minutes each in the three axis directions
- Impact: 98 m/s² or less, 11 ms, 3 axes, 6 directions, 3 times each

3. EXTERNAL WIRING



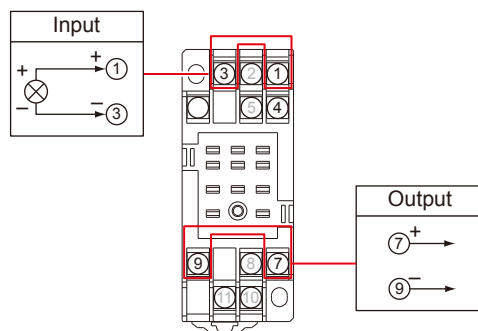
WARNING

- Wiring should be done after ensuring power break of cable.
- Do not operate the product in the presence of flammable or explosive gases or vapors. To do so is highly dangerous.
- Use of the product ignoring the specifications may cause overheating or damage.
 - Input signal value applied to the product should meet the required specifications.
 - The external wiring to the terminals and wiring to ground are as specifications.

Wiring should be connected to the terminals on the socket of the product. The terminals for external connections are of M3 screws. Use crimp-on terminal lugs for connections to the terminals.

- Recommended cables: A nominal cross-sectional area of 0.5 mm² or thicker for signal cables.

Wiring Diagram



CAUTION

- Unused terminals should not be connected.
- The input/output signal lines should be installed away from noise-generating sources.
- This product is sensitive to static electricity; exercise care in handling. Before you operate the product, touch a nearby metal part to discharge static electricity.
- If the ambient temperature is 50 °C or more, please use the cable that the rated temperature is 70 °C or more.

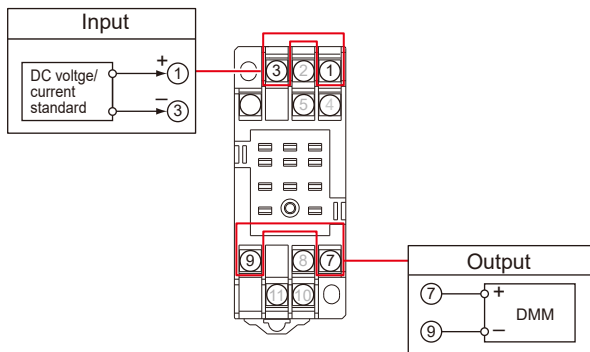
4. MAINTENANCE

4.1 Calibration Apparatus

- A DC voltage/current standard (YOKOGAWA GS200 or the equivalent)
- A digital multimeter (YOKOGAWA DM7560 or the equivalent)

4.2 Calibration Procedure

1. Connect the instruments as shown below.



2. Use the DC voltage/current standard and apply input signals equivalent to 0, 25, 50, 75, and 100% of the input span to the product.
3. Check to see the corresponding output voltages are 0, 25, 50, 75, and 100% respectively and within the specified accuracy rating.

5. ENVIRONMENT STANDARD

EU RoHS directive: EN IEC 63000

(However, when the option code /C0 is specified, the CE marking is not applied.)

6. TRANSPORT AND STORAGE CONDITIONS

- Temperature: -25 to 70°C
- Temperature change rate: 20°C per hour or less
- Humidity: 5 to 95%RH (no condensation)



CAUTION

Keep this product in a conductive bag when plugged out, during transport or storage.

