

INSTRUCTION MANUAL

MRS-J14A
MRS 4ch junction kit

Thank you for purchasing KYOWA's product MRS-J14A (MRS 4ch junction kit).
Read this manual carefully in order to make full use of the high performance capabilities of the product.
Do not use the product in methods other than described in this Manual.

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STANDARD ACCESSORIES

The following accessories are packed with the MRS-J14A.
When unpacking, check the contents to ensure that all accessories are enclosed.

L-Bracket	1
Power harness	1
Round head screw (M2.6 × 5) (Model : F-2605EB)	2
Binding head screw (M2 × 12) (Model : CSPBD-SUS-M2-12)	4

SAFETY PRECAUTIONS (Do not forget to read the safety precautions prior to use.)

The MRS-J14A is designed to be used according to "SPECIFICATIONS". Do not use the product in an environment exceeding the specifications. Or, it may cause troubles.

PRIOR TO USE

For safe use of the product, do not forget to read the "SAFETY PRECAUTIONS" prior to use.
KYOWA assumes no liability for any damage resulting from the user's failure to comply with the safety precautions.

SAFETY SYMBOLS

For safety operation of the product, the following symbol marks are used in the manual.

 WARNING	Improper operation of the system may result in death or severe injury of the operator.
 CAUTION	Improper operation of the system may result in injury of the operator and physical damage of the system.

WARNING

- Power supply.**
To prevent fire hazards, before turning on the product, make sure the power supply voltage specified for the product matches the local line voltage.
- Environments containing inflammable substances.**
To prevent the risk of fire and/or explosion, do not use the product in environments containing inflammable gas, vapor, or dust.
- In the event of problems.**
If abnormalities such as smoke, abnormal odor, or abnormal noise occur, immediately turn off the power, disconnect the power cable from the main unit, and stop using it. Also, do not install the instrument on or near flammable materials to prevent a fire when an abnormality occurs.
- Connecting and disconnecting adapter**
Before connecting/disconnecting adapter, turn off the power to the instrument and connected devices and ground the GND terminal. Failure to do so may cause an electric shock, performance degradation, or malfunctions.
- Connecting and disconnecting cables**
Before connecting/disconnecting cables, turn off the power to the instrument and connected devices. Failure to do so may cause an electric shock, performance degradation, or malfunctions.
- Concomitant use of conservation measures**
If there is a possibility that a secondary disaster may occur in the system due to a failure of the instrument, be sure to use another technical conservation measure.
- Do not disassemble or modify the product.**
Failure to observe this precaution can result in electric shock or malfunctions. Attempting to disassemble or modify the product will invalidate the warranty.

WARNING

- Handling of batteries**
 - If use primary batteries, do not recharge the primary batteries.
 - If use secondary batteries, If use secondary batteries, charge the battery with the charger specified for the battery to be used.
 - Connect positive (+) and negative (-) terminals of the batteries correctly. It may cause Liquid leakage, fever, ignite or explosion.
 - Do not heat the batteries or throw the batteries into fire. It may cause Liquid leakage, fever, ignite or explosion.
 - Do not short-circuit positive (+) and negative (-) terminals of the batteries. It may cause fever or ignite due to a rush current.
 - If connecting batteries in parallel, use diodes or other means to prevent the batteries from being inadvertently charged.
 - Using the batteries at temperatures outside of the manufacturer's specified range, may lower the performance and/or the life and cause liquid leakage, fever, or explosion.
- Installation**
 - If installing the product, place it on a flat surface. It not, it may cause in damage to the product.

CAUTION

- Use the product in a temperature range of the specified range.**
Using the product at temperatures outside of the specified range, may lower product performance or result in malfunctions.
Also, using batteries at temperatures outside of the manufacturer's specified range, may lower the performance and/or the life and cause liquid leakage, fever, or explosion.
- Use the product in a relative humidity range of 20% to 85 %.**
Using the product in environments in which the relative humidity falls outside the specified range, may degrade product performance or result in malfunctions.
- Take care of condensation after an abrupt change in the environment.**
Abrupt changes in ambient temperature, such as during transportation, may cause condensation, which can degrade performance or cause malfunctions. Make sure that there is no condensation before using the instrument.
- Avoid exposing the product to liquid.**
The product is not waterproof or drip-proof. Make sure no liquids come into contact the product; otherwise, electrical leakage or malfunctions may result.
- Take care when operating the product in locations where the product may be subject to severe impact or vibration.**
Continuous vibration or severe impact may result in performance degradation or malfunctions. Also, when using in an environment with impact or vibration, please fix the chassis and connection cable.
- Avoid using the product in the presence of strong electromagnetic fields.**
Use the product only in environments in which magnetic fields will not disrupt computer operations. Performance degradation, erratic operation, or malfunctions may occur if the product is used near radio equipment, microwave ovens, electric furnaces, or other equipment generating strong electromagnetic fields.
- Pay attention to static electricity.**
It may cause damage due to static electricity. Before touching the equipment, touch a metal object to discharge static electricity.
- Avoid using the product under poor power supply conditions.**
Failure to observe this precaution may result in performance degradation, erratic operations, or malfunctions. Be sure to use a power supply that does not emit noise or produce risk of instantaneous power outages.
- Avoid installing sensors near a welding machine or performing measurements near a welding machine.**
Failure to observe this precaution may result in output abnormalities, erratic operations, or malfunctions.
- When using or storing in an environment exposed to dust or corrosive gas, protect the opening with a connector cap.**
It may cause performance degradation or malfunctions. If dust gets inside, performance decreases. Make sure that dust does not enter during use as well as during storage.
- If the product is used or stored in a place near the sea, take appropriate measures to protect the product from exposure to outside air.**
Failure to observe this precaution may result in performance degradation or malfunctions.

CAUTION

- Take care when operating this product in high or low pressure environments.**
Failure to observe this precaution may result in malfunction, performance degradation, or failure.
This product is designed to be used under pressure of the standard atmosphere.
- After power is turned OFF, wait at least 5 seconds before turning ON power once again.**
If power is turned on again within 5 seconds or if the power is repeatedly turned ON and OFF, the product may cause performance deterioration or failure due to the inrush current generated by the product being turned on.
- Allow the product to warm up before use.**
After the power ON, always preheat the product for approximately 1 hour.
- Do not pull on or apply excessive tension to the cables.**
Lay the cables with a certain safety margin of length to avoid subjecting the connections to excessive force. Applying excessive tension to a cable may result in abnormal output, conductor damage, or connector damage.
- Clean the product as needed.**
When the product becomes dirty, clean with a soft, dry cloth.

NOTATIONS USED IN THE MANUAL

The following notations are used in the manual for convenience.

Informational notes

Certain notations are used as necessary to attract your attention to information that requires special care when handling the product, and to information provided for reference purposes.

Examples of Notations

NOTE

Essential precautions required when handling the product.

MEMO

Reference items required when handling the product.

INFORMATION SERVICE

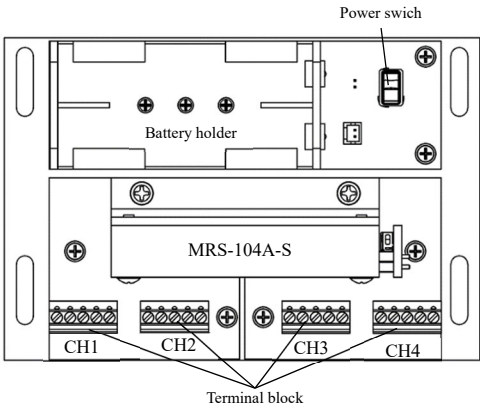
On our website, you can check the catalogs, Instruction manuals, CAD data and update information etc.
The detailed handling method is described in the instruction manual, so please use it after reading the latest instruction manual carefully.

https://www.kyowa-ei.com/jpn/product/category/acquisition/s_mrs-100_series/index.html

OUTLINE OF PRODUCT

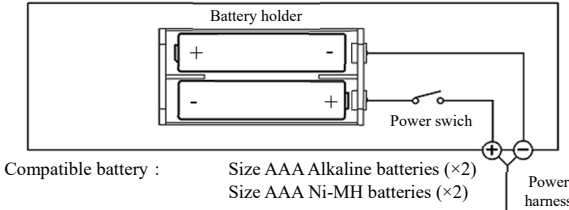
OUTLINE

This unit can be used to easily make measurements and be iterated with battery without the need for soldering just by connecting a 4ch-Strain Transmitter (MRS-104A-S).

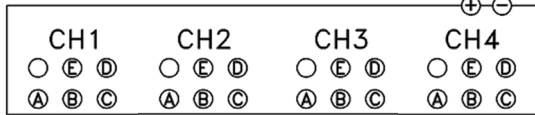


CONNECTION

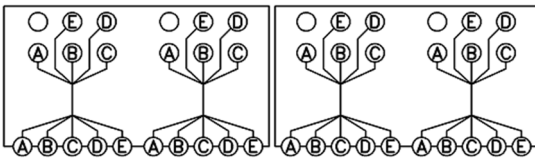
Wire as shown below.



Compatible battery : Size AAA Alkaline batteries (×2)
Size AAA Ni-MH batteries (×2)



MRS-104A-S



Terminal block

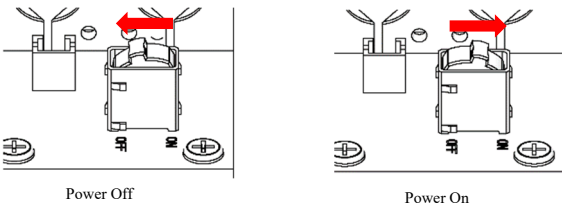
(*Applicable lead wire 0.14 to 0.5 mm²)

NOTE

- The product is compatible with four-gage bridges.
- Keep the sensor wire short. Long wiring may introduce noise into sensor signals and negatively affect signal transmission and reception.
Should use a twisted-pair cable from gage terminals to the main unit for noise reduction.

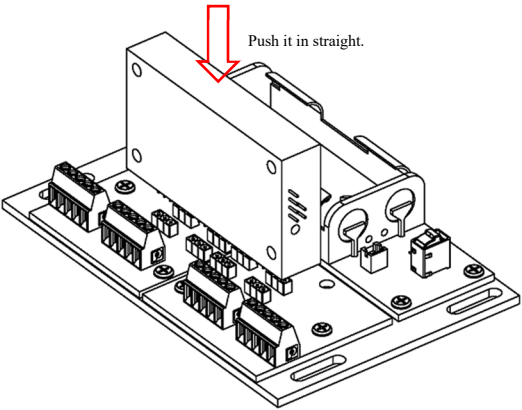
NOTE

Take care regarding the battery direction when inserting it.
The electrode direction is indicated on the battery holder.
Leaving the power on will result in battery consumption.
When not using the unit, turn off the power.



●ASSEMBLING PROCEDURE

(1) Install the MRS-104A-S

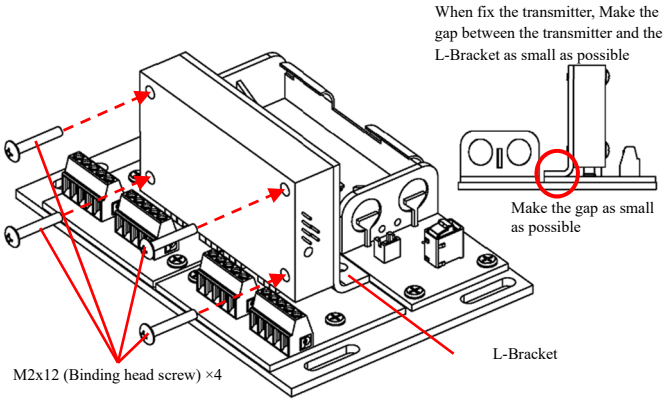


MEMO

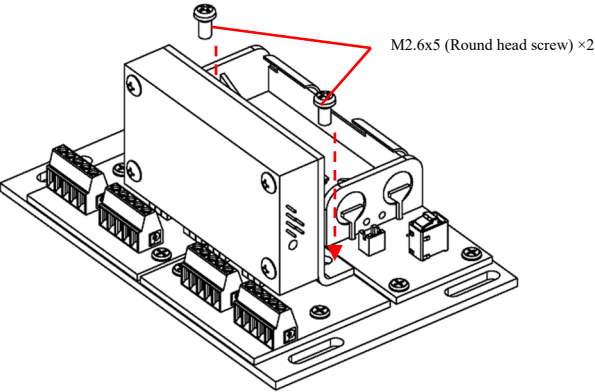
If the pins of the transmitter cannot be install well, loosen the screws and adjust the position of the board before installing the transmitter.
Be careful, because inserting forcibly the transmitter may damage the transmitter pins.

Loosen the four screws

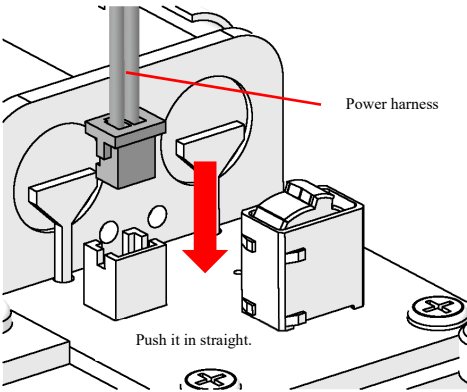
(2)Use the screws to fix the transmitter in the L-Bracket.



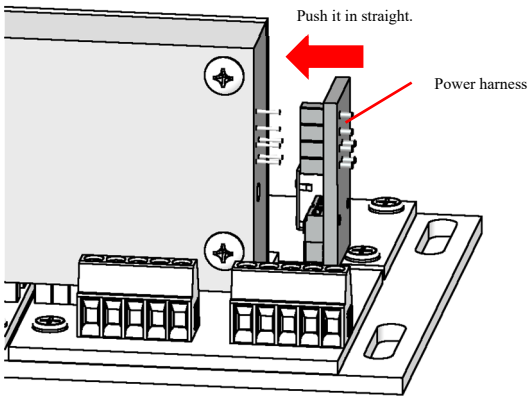
(3)Use the screws to fix the L-Bracket in the MRS-J14A



(4)Connect to the Power harness to the MRS-J14A.



(5)Connect to the Power harness to the transmmter.



●SPECIFICATIONS

Model	MRS-J14A
Name	MRS 4ch junction kit
Compatible transmitter	MRS-104A-S
Input channels	4
Input terminals	Screw-fixed terminal block *Compatible lead wire 0.14 to 0.5 mm ²
Measuring target	Strain gages (Full bridge system*), Strain gage transducers * Other bridge systems need bridge box.
Operation temperature, humidity	-10 to 60 °C, 20 to 85 % (Non condensing)
Compatible battery	Size AAA Alkaline batteries (×2) Size AAA Ni-MH batteries (×2)
Dimensions	62.2 (W) × 92 (H) × 35.1 (D) mm (Excluding protrusions)
Weight	Approx. 60 g (Excluding battery and transmitter)

This product does not contain the 10 restricted substances beyond the maximum concentration limit under RoHS Directive (2011/65/EU, (EU)2015/863).
* Excluding exemptions allowed under RoHS Directive (2011/65/EU, (EU)2015/863).

●OUTSIDE DRAWING

