

READ IN THE BEGINNING

MRS-104A-S 4ch-Strain Transmitter

Thank you for purchasing KYOWA's product MRS-104A-S (4ch-Strain Transmitter).
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.

Generally, company names and trade names described in this manual are trademarks or registered trademarks of the companies.

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The contents of the manual are subjected to change without prior notice.

We assume no responsibility whatever for any damage resulting from the use of this product.

The instruction manual in other available languages can be found at
<https://www.kyowa-ei.com/eng/support/download/manual/acquisition/index.html>

●STANDARD ACCESSORIES

The following accessories are packed with the MRS-104A-S.
When unpacking, check the contents to ensure that all accessories are enclosed.

• STANDARD ACCESSORIES

Fastening bracket	2
Full-bridge Adapter (ADP-401)*	2
Power Adapter (ADP-40P)*	1
JCIS10-70 Miniature Screw(M2x4)*	3
Battery holder (AAA cell×2) for checking operation	1
ID label	1
Product Warranty	1
*Attached to the transmitter body	

• OPTIONAL ACCESSORIES

Quarter-bridge 2-wire Adapter (120 ohm) (ADP-402-120)*
Quarter-bridge 3-wire Adapter (120 ohm) (ADP-403-120)*
* One adapter is available for 2 channels measurements. (2 adapters are required to measure 4 channels.)

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

The MRS-104A-S 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.

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

	Indicates "PROTECTIVE GROUND TERMINAL". Be sure to connect the GND terminal to the ground.
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• 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.
 - Connecting the power polarity in reverse may cause accidents or malfunctions. Be sure not to do this.
- **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.
- **Location of this product**
 - Never use the product in medical facilities. Also use the product away from the implantable pacemaker unit. Doing so may interfere with medical devices, posing a life-threatening risk.
 - Never use the product at airports or in aircrafts. Doing so may cause airport equipment to malfunction, posing a life-threatening risk.
- **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.



WARNING

- **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.
- **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 this product, place it on a flat surface.
 - If installing this product on a rotating body, install a safety cover to secure safety from blown parts.
 - If installing this product with screws, install the transmitter with the specified screws and torque.



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.
- **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.
- **Wireless communication**
This product operates on the 2.4 GHz band, which wireless LAN, Bluetooth®, and microwave ovens also use. Devices on the wireless LAN or on other radio waves may generate electromagnetic interference that causes wireless communication errors in this product. Before using this product, check to confirm that there are no such devices nearby. In addition, note that the wireless LAN and Bluetooth® functions of the computer on which the Setting Software for this product is installed may generate electromagnetic interference. When controlling this product via the computer, turn off the computer's wireless LAN and Bluetooth® functions.
- **Location of this product**
 - Do not use the product where use of wireless devices, such as mobile phones, is prohibited.
 - Use the product at the altitude up to 2,000 m.
 - When installing the transmitter on a rotating body, install a safety cover to secure safety from blown parts.
- **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.

- **Names described on the panel surface**
Names described on the panel surface are expressed in double quotation mark " ".
- **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.

●SURFACE APPEARANCE

In the manufacturing process, some products have a little uneven surface, rough coating and color.
It does not affect the quality, performance, or strength of the product.

●OUTLINE OF PRODUCT

■OUTLINE

Wireless measurements (telemeters) have long been desired to measure data at a place where wiring of strain gage is difficult. The product is a telemeter to meet the strict system requirements and conditions (Vibration and shock resistance, small size for narrow space, high stability over the wide operating temperature range, low current consumption to get long time battery usage, and high-speed sampling).

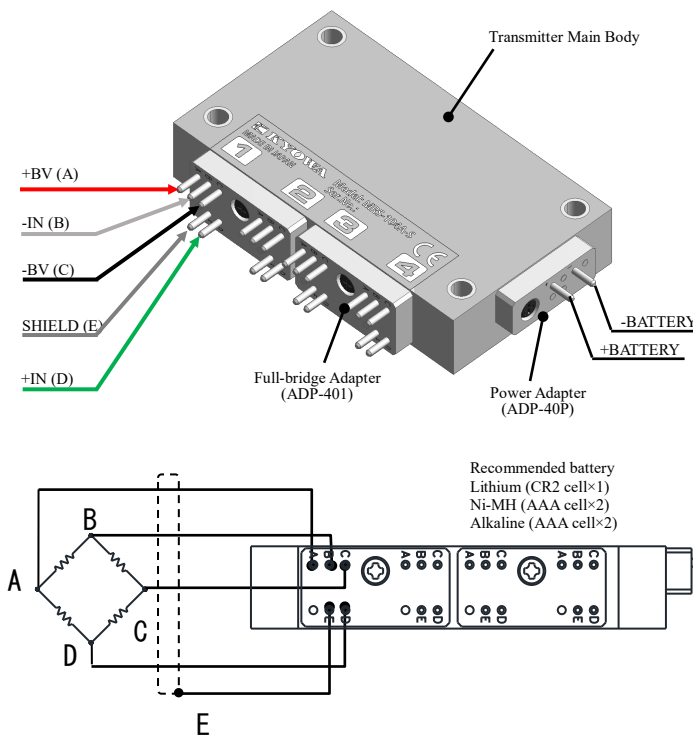
■FEATURES (4-ch strain transmitter: MRS-104A-S)

- Telemeter that supports a maximum of 4-ch analog I/O
- Resin-molded (non-metallic case) mechanism
Range by the built-in antenna: Max. 50 m (Line of sight distance)
- Thin (10 mm) enough for narrow space
- 5-step measuring ranges (1000, 2500, 5000, 10,000, 25,000 ×10⁻⁶ strain)
- High stability
Within 2.5×10⁻⁶ strain when the ambient temperature change is 50°C.
- Bridge-disconnection checking
- Minimum power supply: 2.2 VDC by two AAA size batteries (eneloop®)
- Continuous operation time: Approx. 13 hours (23°C, bridge resistance 120 ohm)
with the two AAA size batteries (alkaline)
- Centrifugal acceleration limit^{*)}: 100 G

*1 : When installing the transmitter on a rotating body, install a safety cover to secure safety from blown parts.
: The specification of centrifugal acceleration is assumed for height (H) direction of the transmitter.

●CONNECTION

Wire as shown below.



NOTE

The Full-bridge Adapter and Power Adapter can be removed for replacement. To reconnect it, solder the pins on the Adapter Board.
Avoid exposing the Adapter Board to excessive solder and heat from the soldering iron.

NOTE

Keep the sensor wire short. Long wiring may introduce noise into sensor signals and negatively affect signal transmission and reception.
Keep the battery wire short. Long wiring may negatively affect signal transmission and reception.
The included battery holder, which houses two AAA-cell batteries, is not designed to withstand vibration, impact, or centrifugal force. Use the batteries in the holder only for checking operation.

MEMO

The Full-bridge adapter is attached to the transmitter body of MRS-104A-S.
If using the quarter-bridge strain gage, replace the Full-bridge adapter to the optional Quarter-bridge 2-wire Adapter (ADP-402-120) or Quarter-bridge 3-wire Adapter (ADP-403-120).

●Preparation

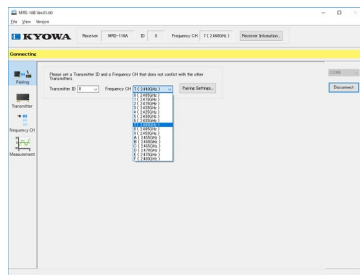
For proper use of the transmitter, frequency CH of transmitter and receiver should be same, and transmitter ID and transmitter information (number of measurement channel, range, bridge resistance, transmitter type, etc.) should be registered in receiver.
For matching transmitter ID and frequency CH, [Pairing settings] should be done in the Setting Software (MRS-10B) and transmitter information should be registered in receiver.
Registered information is saved in nonvolatile memory, so saved information can be kept even after power is off.

NOTE

For accurate [Pairing settings], distance of transmitter and receiver should be within 50cm.
[Pairing settings] must be performed by each pair of transmitter and receiver, when several pairs of them are used.
For detail, please refer to MRS-10B INSTRUCTION MANUAL.

■Pairing settings

By selecting the [Pairing] tab from the tool bar and using the pull-down menu, the transmitter ID and Frequency CH can be set. The transmitter type can be registered at the same time.



NOTE

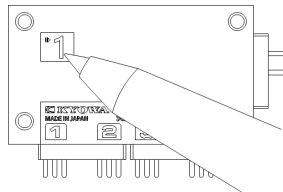
In the case of using multiple pairing, transmitter ID and Frequency CH should not overlap with other pairing.

NOTE

Transmitter ID and Frequency CH is important information for signal communication.
So, Transmitter ID and Frequency CH should be managed strictly.

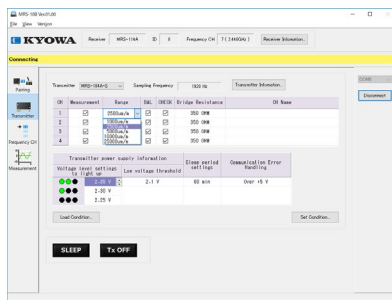
MEMO

Label is applied onto transmitter body to write ID.
Write ID on label with pen. Spare label is packed with transmitter.



■Number of measurement channels, measurement range, bridge resistance setting

By selecting the [Transmitter] tab from the tool bar, the number of measurement channels, measurement range and bridge resistance can be set.



●Measurement command

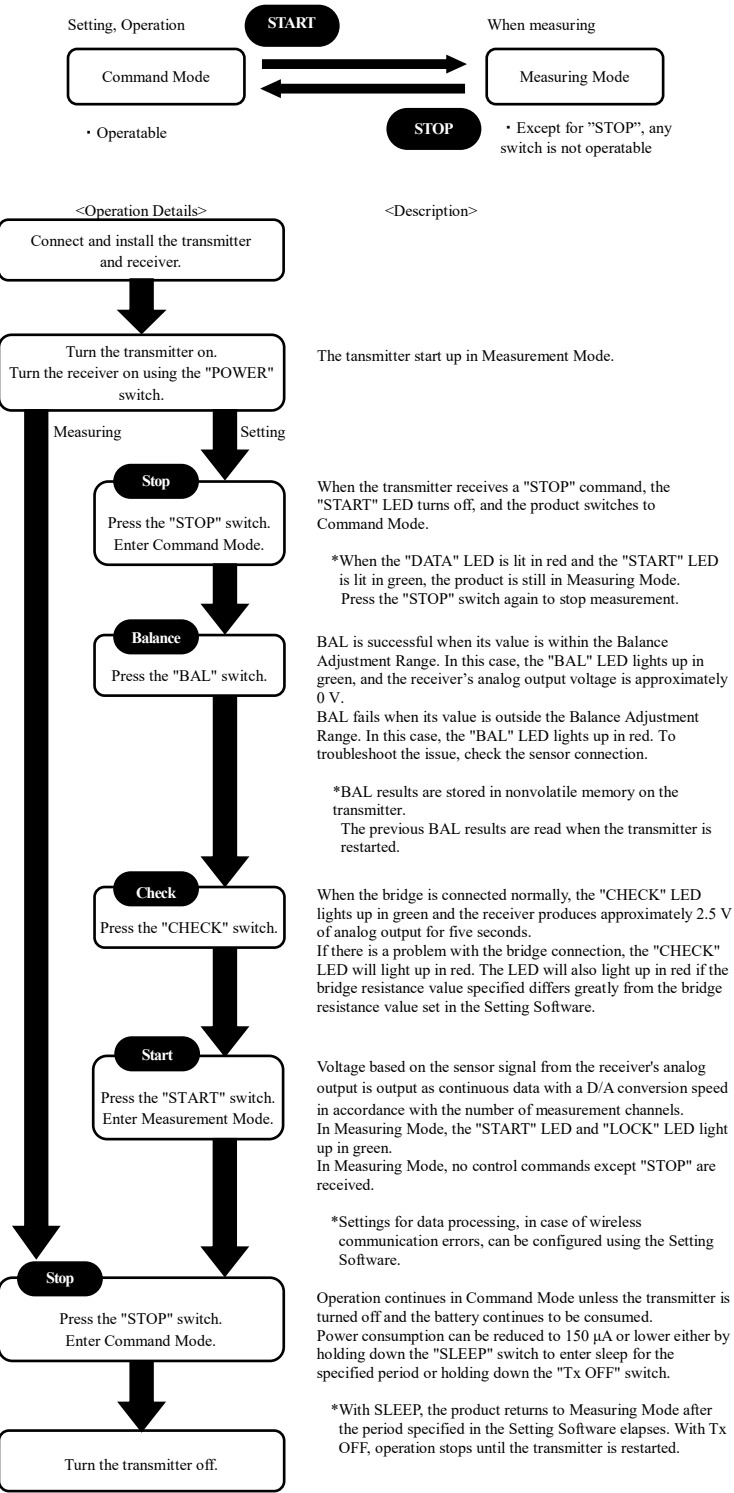
After preparation, computer with the Setting Software should disconnect from receiver. After wiring transmitter and setting receiving antenna, operation stated below enables transmitter's measurement data to be outputted from receiver as analog output. Analog output from receiver can be recorded with data logger prepared by users.

In this measurement, there are two different modes, 'Measuring Mode' and 'Command Mode'.

In 'Command Mode', measurement range can be set, and by using "BAL", "CHECK", "START" switch, every commands of receiver are operable.

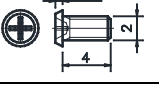
In Measuring Mode, receiver outputs measurement data from transmitter with analog output. Except for "STOP" switch, any commands cannot be operated.

Command Mode and Measuring Mode can be switched by "START" and "STOP" switch.



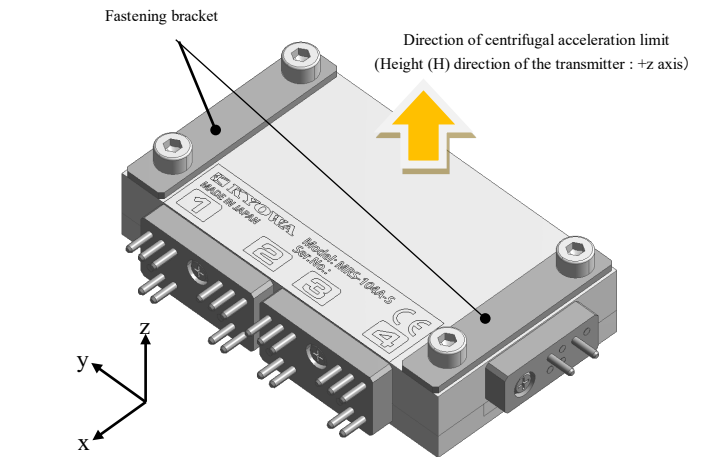
●Transmitter installation

The transmitter body is attached to Full-bridge Adapter, Power Adapter and fixing surface by the screws in the following table.

Mounting screws to the transmitter main body			
Mounting object		Full-bridge Adapter Power Adapter	fixing surface
Screw	Type	JCIS10-70 Miniature Screw (M2)	Hexagon socket head cap Screw (M2.5)
	Material	SWCH	SCM435
	Finish	Black Trivalent Chromate	Black Trivalent Chromate
	Size	 (mm)	 (mm)
Max.Torque to the Transmitter Main Body		0.1N・m	0.45N・m
Mounting precautions		Exceeding the maximum torque or mounting the transmitter to a warped or uneven fixing surface may cause damage or cracking on the transmitter or prevent normal operation. Fix the MRS-104A-S on flat metal surface, etc. by the recommended screw in using it on rotating shafts, moving obstacles, etc.	

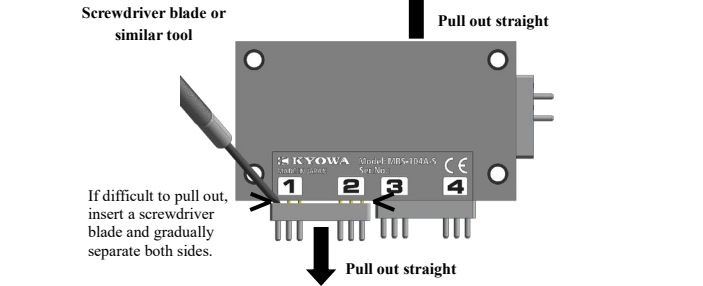
In order to operate the transmitter (MRS-104A-S) for a long period of time, fix the transmitter with bolts via the Fastening bracket shown in the figure below

When installing the transmitter on a rotating body, install a safety cover to secure safety from blown parts. The specification of centrifugal acceleration is assumed for height (H) direction of the transmitter.



●Detachment of Full-bridge Adapter or Power Adapter

When removing the Full-bridge Adapter or Power Adapter from the transmitter, after removing the small screw (M2), pull out the Full-bridge Adapter or Power Adapter straight. Be careful when handling the transmitter pins, as they can bend easily. If the Full-bridge Adapter or Power Adapter is difficult to pull out, insert a flat tool, such as a screwdriver blade, between the transmitter and Adapter Board and gradually separate both sides, one after the other.



NOTE

If the pins become bent, use tweezers or similar tool to straighten them before use. Be careful, because inserting the Full-bridge Adapter or Power Adapter when the pins are bent may damage the transmitter pins.

●SPECIFICATIONS

■Hardware Specifications	
Measuring Targets	Strain gages (Full bridge system), Strain gage transducers
Number of Channels	4
Compatible Bridge Resistance	120 to 1000 ohm
Gage Factor	2.00 fixed
Bridge Excitation	1 VDC
Measuring Range	1000, 2500, 5000, 10000, 25000×10 ⁻⁶ Strain
Range Accuracy	Within ±0.15%FS
Balance Adjustment Range	Within ±10000×10 ⁻⁶ Strain
AD Resolution	16 bits
Sampling Frequencies	1 measurement channel at 4.8kHz 2 measurement channels at 3.2kHz 3 measurement channels at 2.4kHz 4 measurement channels at 1.92kHz
Stability Temperature	Zero point : Within ±0.05×10 ⁻⁶ Strain /°C Sensitivity : Within ±0.01%/°C
Operating Temperature, Humidity	-25 to 75°C, 20 to 85 % (Non condensing).
Vibration Resistance	294.2 m/s ² (30 G), 10 to 500 Hz
Shock Resistance	980.7 m/s ² (100 G), 11ms
Centrifugal Acceleration limit ^{*1}	980.7 m/s ² (100 G)
Power Supply	2.2 to 4.4 VDC
Current Consumption	Within 62mA or less (Test conditions:Power Supply 3.0V,Bridge resistance 120 ohm) Approx 12 hours (Lithium (CR2 manufactured by Panasonic)) Approx.10 hours (Ni-MH eneloop® (BK-4MCC,AAA cell×2)) Approx.13 hours (Alkaline EVOLTA (LR03EJ,AAA cell×2)) *Under the conditions of tests: 23°C, Bridge resistance 120 ohm
Hours of Continuous Use	55mm (W) × 10mm (H) × 32.5 mm (D) (Excluding protrusions) Approx. 32 g
Dimensions	Directive 2014/53/EU (RED)
Weight	Directive 2011/65/EU,(EU)2015/863 (10 restricted substances)
Compliance	(RoHS)

^{*1} : When installing the transmitter on a rotating body, install a safety cover to secure safety from blown parts. : The specification of centrifugal acceleration is assumed for height (H) direction of the transmitter.

■RF Specifications	
Transceiver Frequency Channel	1CH (Choose 1 channel from 16 channels using Setting software.)
Antenna	External antenna
Radio Communication Frequency	2.4GHz Band
Radio System	Digital Modulation System
Radio Certification	Japan, USA, China, India, Tailand, Taiwan and EU
Radio Communications Distance	Maximum line of sight distance: 50m (Using External Antenna (W1030) of Standard Accessory.)
Radio Environment of Usage	Environment where the wireless LAN and the Bluetooth®, etc. are not intermingled on the 2.4GHz

Frequency Channel	CH 0	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7
Central Frequency (GHz)	2.405	2.410	2.415	2.420	2.425	2.430	2.435	2.440

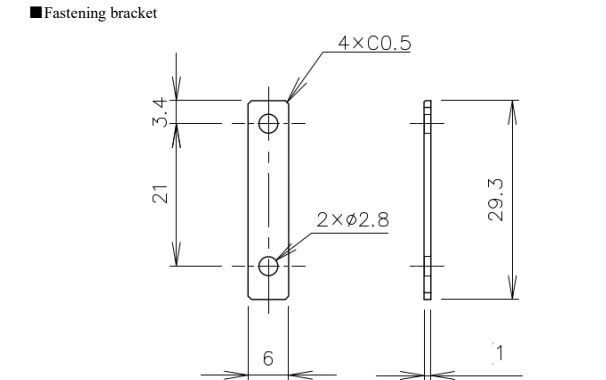
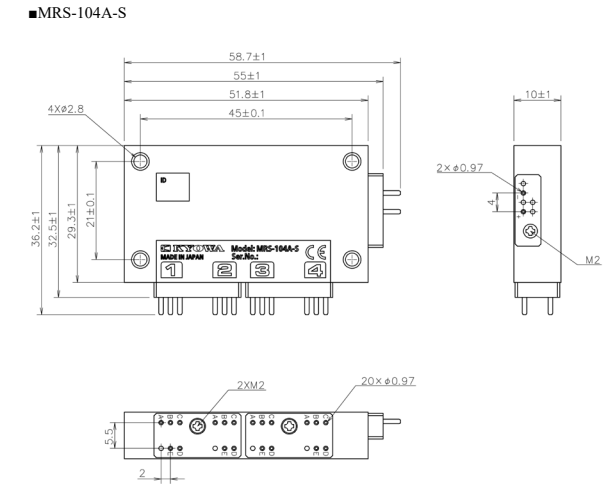
Frequency Channel	CH 8	CH 9	CH A	CH B	CH C	CH D	CH E	CH F
Central Frequency (GHz)	2.445	2.450	2.455	2.460	2.465	2.470	2.475	2.480

■Specifications in Combination with MRS-114A (4ch-Receiver)

Analog Output Voltage	within ±5 V/ (Full Scale Range)		
Measurement Accuracy	Within ±0.2%FS		
Frequency Response Range and Delay Time			
Number of measurement channels	Sampling frequency	Frequency response range	Delay time
1	4.8kHz	DC - 370Hz(Dev. +0.5, -1dB) -3 ±1 dB(at 480Hz)	11.1±0.3ms (at DC - 480Hz)
2	3.2kHz	DC - 320Hz(Dev. +0.5, -1dB) -3 ±1 dB(at 466Hz)	10.8±0.3ms (at DC - 320Hz)
3	2.4kHz	DC - 240Hz(Dev. +0.5, -1dB) -3 ±1 dB(at 424Hz)	9.8±0.3ms (at DC - 240Hz)
4	1.92kHz	DC - 192Hz(Dev. +0.5, -1dB) -3 ±1 dB(at 376Hz)	9.7±0.3ms (at DC - 192Hz)

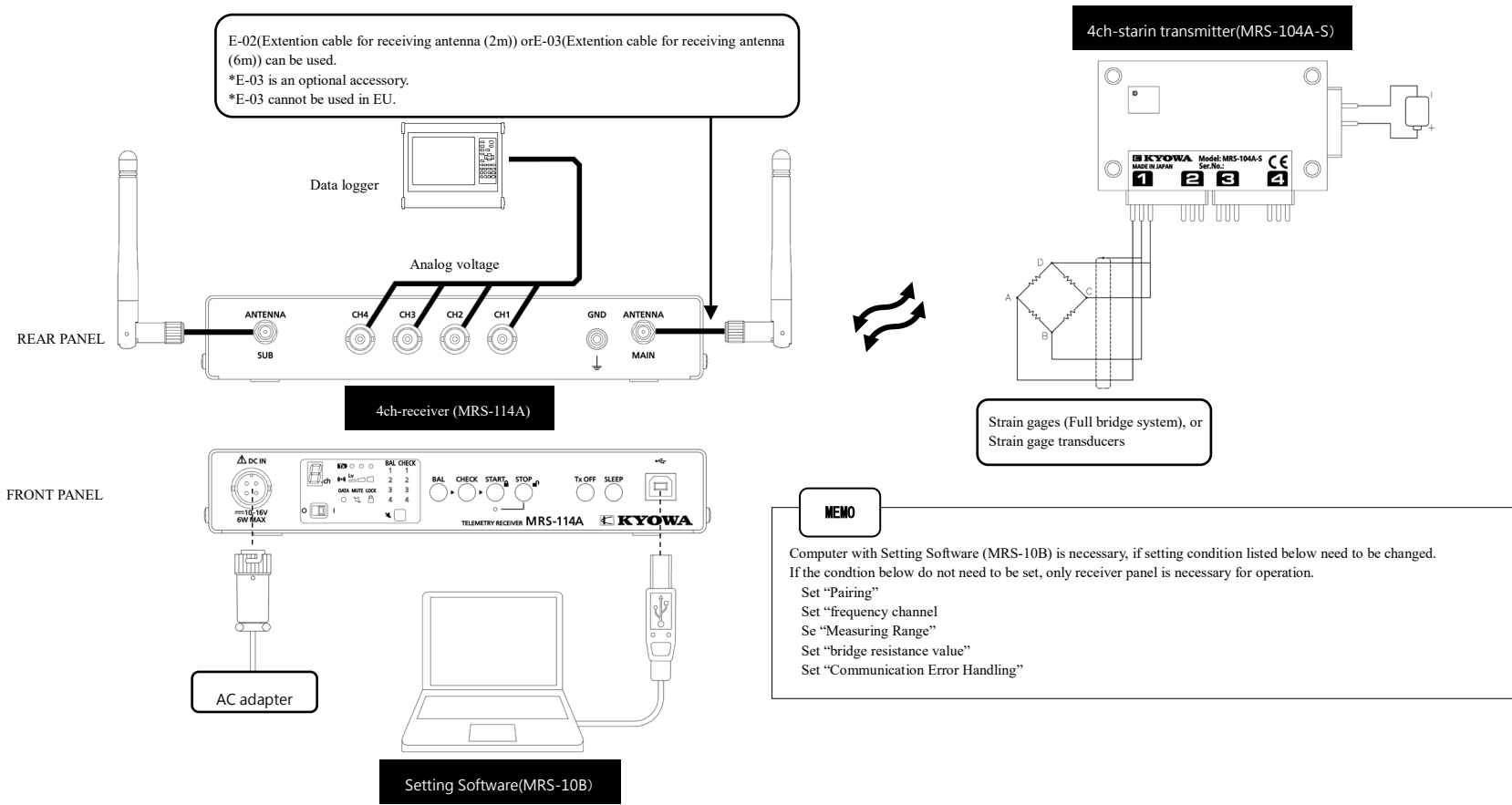
* MRS-104A-S cannot be used in combination with MRS-111A (1ch Receiver).

●OUTSIDE DRAWING



Note

1. Light chamfering for corners lacking other instructions: C0.2 or less
2. Material: SUS 304



NOTE

IMPORTANT REGULATORY INFORMATION

The product is for use only in the following countries and regions.Use in other countries or regions is prohibited.

JAPAN

Type certification

The product has been certified as a low-power data communications system in the 2.4 GHz band (Technical Regulations Conformity Certification System: Ordinance of MPT No. 37, 1981, Article 2, paragraph 1, item (19)) according to the Radio Law of Japan.

Accordingly, no radio equipment license is required to use this product.

When mounting the product in your system, please clearly indicate the following certification information of the product on the case or on the customer's instruction manual, package or container etc.

Futhermore, the following actions may be punishable under law:

- Disassembling or modifying the product.
- Removing the certification label on the product. Please notify following certified ID on your product.

Name of radio equipment: MR-2400M Number of type certification: 007-AE0235

USA

COMPLIANCE WITH ELECTRIC DIRECTIVES & REGULATIONS

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

[CAUTION]

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Contains Transmitter Module

FCC ID: 2AJE9, MR-2400MA

This device should be used EXCLUSIVELY as the digital devices for industrial, commercial or medical test equipment. "Test equipment" includes devices used for maintenance, research, evaluation, simulation and other analytical or scientific applications in areas such as industrial plants, public utilities, hospitals, universities, laboratories, automotive service centers and electronic repair shops.

CHINA

REGULATORY INFORMATION in China

MRS-100系列产品符合《微功率短距离无线电发射设备目录和技术要求》的无线电发射设备。无需取得无线电频率使用许可、无线电台执照、无线电发射设备型号核准。使用时请注意以下几点内容。

- 符合「微功率短距离无线电发射设备目录和技术要求」的具体条款和使用场景，采用的天线类型和性能，控制、调整及开关等使用方法；
- 不得擅自改变使用场景或使用条件、扩大发射频率范围、加大发射功率（包括额外加装射频功率放大器），不得擅自更改发射天线；
- 不得对其他合法的无线电台（站）产生有害干扰，也不得提出免受有害干扰保护；
- 应当承受辐射射频能量的工业、科学及医疗（ISM）应用设备的干扰或其他合法的无线电台（站）干扰；
- 如对其他合法的无线电台（站）产生有害干扰时，应立即停止使用，并采取措拖消除干扰后方可继续使用；
- 在航空器内和依据法律法规、国家有关规定、标准划设的射电天文台、气象雷达站、卫星地球站（含测控、测距、接收、导航站）等军民用无线电台（站）、机场等的电磁环境保护区域内使用微功率设备，应当遵守电磁环境保护及相关行业主管部门的规定；
- 禁止在以机场跑道中心点为圆心、半径5000米的区域内使用各类模型遥控器；
- 微功率设备使用时温度和电压的环境条件。

INDIA

REGULATORY NOTRICE FOR Radio Frequency module

- Notice for users in India
The name of RF module: MR-2400MA

THAILAND

REGULATORY INFORMATION in Thailand

เครื่องโทรคมนาคมและอุปกรณ์นี้ มีความสอดคล้องตามข้อกำหนดของ กสทช.

TAIWAN

REGULATORY INFORMATION in Taiwan.

Contains the following NCC ID
MRS-111B and MRS-114A
內含發射器模組：CCAQ21LP0050T3
MRS-101A-SE CCAQ21LP0060T6
MRS-104A-S CCAQ21LP0070T9
MRS-101B-T CCAQ21LP0080T2

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。



Compliance Information for 2.4-GHz Wireless Products Relevant to the EU and Other Countries Following the EU Directive 2014/53/EU (Radio Equipment Directive).

English:	This equipment is in compliance with the essential requirements and other relevant provisions of Dmrective 2014/53/EU.
Česky [Czech]:	Toto zařízení je v souladu se základními požadavky a ostatními odpovídajícími ustanoveními Směrnice 2014/53/EU.
Deutsch [German]:	Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprecheneden Vorgaben der Richtlinie 2014/53/EU.
Dansk:	Dette udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Directiv 2014/53/EU.
Español[Spain]:	Este equipo cumple con los requisitos esenciales asi como con otras disposiciones de la Directive 2014/53/EU.
Français [France]:	Cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 2014/53/EU.
Ελληνική [Greek]:	Αυτό το εξοπλισμός είναι σε συμμόρφωση με τις ουσιαστικές απαιτήσεις και άλλες σχετικές διατάξεις της Οδηγίας 2014/53/ΕΕ
Italiano [Italian]:	Questo apparato é conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 2014/53/UE.
Magyar [Hungarian]:	Ez a készülék teljesíti az alapvető követelményeket és más 2014/53/EU irányelvben meghatározott vonatkozó rendelkezéseket.
Nederlands [Dutch]:	Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen van de Richtlijn 2014/53/EU.
Norsk [Norwegian]:	Dette utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-directiv 2014/53/EU.
Português:	Este equipamento satisfaz os requisitos essenciais e outras provisões da Directiva 2014/53/EU.
Română [Romanian]:	Acest echipament este in conformitate cu cerintele esentiale si cu alte prevederi relevante ale Directivei 2014/53/EU.
Slovensko [Slovenian]:	Ta naprava je skladna z bistvenimi zahtevami in ostalimi relevantnimi pogoji Direktive 2014/53/EU.
Slovensky [Slovak]:	Toto zariadenie je v zhode so základnými požiadavkami a inými príslušnými nariadeniami direktív: 2014/53/EU.
Suomi [Finnish]:	Tämä laite täyttää direktiivin 2014/53/EU olennaiset vaatimukset ja on siinä asetettujen muiden laitetta koskevien määräysten mukainen.
Svenska [Swedish]:	Denna utrustning är i överensstämmelse med de väsentliga kraven och andra relevanta bestämmelser i Direktiv 2014/53/EU.

This equipment is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

Website: https://www.kyowa-ei.com/eng/company/environment/eu_declaration.html

When mounting the product in customersr systems, it is required to proceed additional certification processes before placing on the market in EU member states to make customers products fully comply with relative EU standards.

Kyowa can provide a test report of conducted measurement portion for the radio module to customers. Customers can utilize the test report for the certification processes of own systems as it requires radio.