

Before Using the Product

PRECAUTIONS REGARDING WARRANTY AND SPECIFICATIONS

The managed switch was jointly developed and manufactured by Mitsubishi Electric and Moxa. Thus, warranty information is different from that of other MELSEC products. For inquiries and service, our response may take some time, depending on the contents or the time we have received the inquiries.

• Warranty

Item	Managed switch	Other programmable controller products (e.g. MELSEC IQ-R series)
Gratis warranty term	36 months after delivery or 60 months after produced, whichever is less.	36 months after delivery or 42 months after produced
Repair term after discontinuation of production	5 years	7 years
Service not covered by the warranty	Replacement with a new product (charged)	Repair (charged)
• Standards which the products are compliant with		
Item	Managed switch	Other programmable controller products (e.g. MELSEC IQ-R series)
EMC standard	EN61000-6-2 EN61000-6-4 EN55032 EN55035	EN61131-2
Vibration resistance	IEC 60068-2-6	IEC 61131-2
Shock resistance	IEC 60068-2-27	IEC 61131-2

SAFETY PRECAUTIONS

(Read these precautions before using this product.) Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.

The precautions given in this manual are concerned with this product only. For the safety precautions of the programmable controller system, refer to the user's manual for the CPU module used.

In this manual, the safety precautions are classified into two levels: "⚠ WARNING" and "⚠ CAUTION".

⚠ **WARNING** Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.

⚠ **CAUTION** Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

⚠ **Avertissement** Attire l'attention sur le fait qu'une négligence peut créer une situation de danger avec risque de mort ou de blessures graves.

⚠ **Attention** Attire l'attention sur le fait qu'une négligence peut créer une situation de danger avec risque de blessures légères ou de gravité moyennes ou risque de dégâts matériels.

Under some circumstances, failure to observe the precautions given under "⚠ CAUTION" may lead to serious consequences.

Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Design Precautions]

⚠ **CAUTION**

• The values of link speed at the transfer rate described in the CC-Link IE TSN Industrial Managed Switch User's Manual (such as 100Mbps) are the theoretical maximum values of the wired LAN standards. They are not the actual data transfer speed.

• Frame loss may occur depending on the connected external devices or installation environment.

[Security Precautions]

⚠ **WARNING**

• To maintain the security (confidentiality, integrity, and availability) of the programmable controller and the system against unauthorized access, denial-of-service (DoS) attacks, computer viruses, and other cyberattacks from external devices via the network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.

[Installation Precautions]

⚠ **WARNING**

- Shut off the external power supply (all phases) used in the system before installing or removing the module. Failure to do so may result in electric shock or cause the module to fail or malfunction.
- The module may become very hot during the setting and operation. Lock the control panel so that only qualified maintenance personnel can access the module. When installing/removing the module, take a measure to prevent a burn and be sure that the module is not very hot.

[Installation Precautions]

⚠ **CAUTION**

- Use the module in an environment that meets the general specifications in the CC-Link IE TSN Industrial Managed Switch User's Manual. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- Do not directly touch any conductive parts and electronic components of the module or connectors. Doing so can cause malfunction or failure of the module.
- Securely fix the module with a DIN rail or module mounting bracket.
- Micro SD memory cards cannot be used. Do not insert it to the module. Doing so may cause malfunction.
- Install the product according to the methods described in the CC-Link IE TSN Industrial Managed Switch User's Manual. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- Tighten the screws within the specified torque range. Undertightening can cause drop of the component or wire, short circuit, or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- Use provided connectors and connection cables. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- Ground the power supply that is used to supply the power to the module. Failure to do so may result in electric shock or malfunction.
- Use a module mounting bracket that is allowed for the module fixing. If a bracket other than that is used, proper fixing of the module is not guaranteed.

[Wiring Precautions]

⚠ **WARNING**

- Shut off the external power supply (all phases) used in the system before wiring. Failure to do so may result in electric shock or cause the module to fail or malfunction.
- To supply the power to the module, use the UL-listed power supply that has reinforced insulation from the hazardous potential part (60V or higher) and meets the requirements of the following: the SELV (Separated Extra Low Voltage), the LPS (Limited Power Source). Be sure that the power supply used meets the specifications required. Failure to do so may result in electric shock or cause the module to fail or malfunction.
- When an overcurrent caused by a failure of an external device or a module flows for a long time, it may cause smoke and fire. To prevent this, configure an external safety circuit, such as a fuse.

[Wiring Precautions]

⚠ **CAUTION**

- Initially ground the FG terminal of the programmable controller with a ground resistance of 100 ohms or less. Failure to do so may result in electric shock or malfunction.
- Before wiring to the module, check the rated voltage and terminal layout of the module, and connect the cables correctly. Connecting a power supply with a different voltage rating or incorrect wiring may cause a fire or failure.
- Tighten the terminal block screws within the specified torque range. Undertightening can cause short circuit, fire, or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, fire, or malfunction.
- Place the cables in a duct or clamp them. If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the module or cables or module to door contact.
- Do not install the control lines or communication cables together with the main circuit lines or power cables. Keep a distance of 100mm or more between them. Failure to do so may result in malfunction due to noise.
- When disconnecting the cable from the module, do not pull the cable by the cable part. For the cable with connector, hold the connector part of the cable. Pulling the cable connected to the module may result in malfunction or damage to the module or cable.
- Prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction.
- Check the interface type and correctly connect the cable. Incorrect wiring (connecting the cable to an incorrect interface) may cause failure of the module and external device.
- The product must be installed in control panels. Wiring and replacement of a module must be performed by qualified maintenance personnel with knowledge of protection against electric shock. For wiring methods, refer to the CC-Link IE TSN Industrial Managed Switch User's Manual.
- For Ethernet cables to be used in the system, select the ones that meet the specifications in the user's manual for the module used. If not, normal data transmission is not guaranteed.
- Ground the power supply that is used to supply the power to the module. Failure to do so may result in electric shock or malfunction.

1. Relevant manuals

Details of the product are described in the manual shown below (sold separately). Please read that manual and develop familiarity with the functions and performance of the product to handle it correctly.

- CC-Link IE TSN Industrial Managed Ethernet Switch User's Manual SH-082449ENG(13JX5E)

2. Packing list

Check that the following items are included in the package.

Item	Quantity
Module	1
Before Using the Product (this document)	1
Console cable	1
Terminal block	2
Federal Communications Commission (FCC) Statement	1

3. Operating ambient temperature

Use the product in the ambient temperatures of -10 to 60°C.

4. Wiring

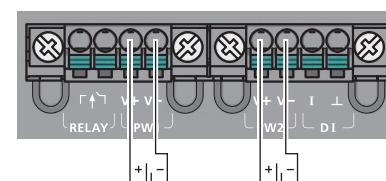
⚠ **Câblage**

4.1 Wiring diagram

⚠ **Schémas de câblage**

⚠ **Wiring of the power supply terminals**

⚠ **Câblage des bornes d'alimentation**



⚠ **Wiring of the relay output terminals**

⚠ **Câblage des bornes de sortie de relais**

Relays of the module are closed when the module operates normally. They become open at the following cases: the power is not supplied to the module; a user-specified event has occurred. For connection, use the relay output terminals (RELAY).

Les relais du module sont fermés lorsque le module fonctionne normalement. Ils deviennent ouverts dans les cas suivants : le module n'est pas alimenté en électricité, un événement spécifié par l'utilisateur s'est produit. Pour la connexion, utiliser les bornes de sortie de relais (RELAY).

Le tableau ci-dessous indique quelles bornes sans soudure peuvent être utilisées pour le raccordement au bornier. Pour le câblage, utiliser les fils prescrits. Utiliser les bornes-barres sans soudure répertoriées par UL et, pour le montage, utiliser l'outil recommandé par le fabricant de ces bornes.

⚠ **Bar solderless terminal Bornes-barre sans soudure**

⚠ **Wire Fil**

⚠ **Model Modèle**

⚠ **Diameter Diamètre**

⚠ **Type Type**

⚠ **Material Matériau**

⚠ **Temperature rating Gammme de température**

AI 0.5-10WH 18 to 24 AWG Stranded Copper 105°C or more

AI 0.75-10GY 18 to 24 AWG Torsadé Copper 105°C or plus

A 0.5-10

A 0.75-10

A 1.0-10

AI 0.5-10WH 18 to 24 AWG Stranded Copper 105°C or more

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