



## Before Using the Product

Please read this document before use. Keep the document in a safe place for future reference. Make sure that the end users read the document.

## 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. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

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.

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.

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]

#### ⚠️ WARNING

- In the case of a communication failure in the network, data of the master station are held. Check Data link status (each station) (SW00B0 to SW00B7) and configure an interlock circuit in the program to ensure that the entire system will operate safely.
- When a module on CC-Link IE TSN is disconnected due to a communication failure, outputs to the stations connected to CC-Link IE Field Network are held or turned off according to the I/O maintenance settings. Configure an interlock circuit in the program to ensure that the entire system will always operate safely even in such a case. If not, an accident may occur due to an incorrect output or malfunction.
- When a module on CC-Link IE Field Network is disconnected due to a communication failure, outputs to the master station on CC-Link IE TSN are held or turned off according to the I/O maintenance settings. Configure an interlock circuit in the program to ensure that the entire system will always operate safely even in such a case. If not, an accident may occur due to an incorrect output or malfunction.
- Outputs may remain on or off due to a failure of the module. Configure an external circuit for monitoring output signals that could cause a serious accident.
- Do not use any "use prohibited" signals as a remote input or output signal. These signals are reserved for system use. Do not write any data to the "use prohibited" area in the remote register. If these operations are performed, an accident may occur due to an incorrect output or malfunction.

### [Design Precautions]

#### ⚠️ CAUTION

- Do not install the control lines or communication cables together with the main circuit lines or power cables. Doing so may result in malfunction due to electromagnetic interference. Keep a distance of 100mm or more between those cables.

### [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 mounting or removing a module. Failure to do so may result in electric shock or cause the module to fail or malfunction.

### [Disposal Precautions]

#### ⚠️ CAUTION

- When disposing of this product, treat it as industrial waste.

## [Précautions de mise au rebut]

### ⚠️ ATTENTION

- Lors de sa mise au rebut, ce produit doit être traité comme un déchet industriel.

## CONDITIONS OF USE FOR THE PRODUCT

(1) MELSEC programmable controller ("the PRODUCT") shall be used in conditions; i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.

mitsubishi electric SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY THE PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNINGS CONTAINED IN MITSUBISHI ELECTRIC USER'S INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR THE PRODUCT. ("Prohibited Application")

Prohibited Applications include, but not limited to, the use of the PRODUCT in; • Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.

• Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.

• Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above restrictions, Mitsubishi Electric may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi Electric and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTS are required. For details, please contact the Mitsubishi Electric representative in your region.

(3) Mitsubishi Electric shall have no responsibility or liability for any problems involving programmable controller trouble and system trouble caused by DoS attacks, unauthorized access, computer viruses, and other cyberattacks.

## [Installation Precautions]

### ⚠️ CAUTION

- Use the module in an environment that meets the general specifications in the user's manual for the module. 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. Doing so can cause malfunction or failure of the module.
- Securely connect the cable connectors. Poor contact may cause malfunction.
- After the first use of the product, do not connect/remove the connector more than 50 times (IEC 61131-2/JIS B 3502 compliant). Exceeding the limit may cause malfunction.

### [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.

### [Wiring Precautions]

#### ⚠️ CAUTION

- Individually ground the FG terminal of the programmable controller with a ground resistance of 100Ω or less. Failure to do so may result in electric shock or malfunction.
- Check the rated voltage and terminal layout before wiring to 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.
- Prevent foreign matter such as dust or wire chips from entering the module. Such foreign matter can cause a fire, failure, or malfunction.
- Place the cables in a duct or clamp them. If not, dangling cables may swing or inadvertently be pulled, resulting in malfunction or damage to modules or cables. In addition, the weight of the cables may put stress on modules in an environment of strong vibrations or shocks.
- Do not connect 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.
- When an overcurrent caused by an error of an external device or a failure of the programmable controller flows for a long time, it may cause smoke and fire. To prevent this, configure an external safety circuit, such as a fuse.
- Mitsubishi programmable controllers 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 "INSTALLATION AND WIRING" in the user's manual for the module.

### [Startup and Maintenance Precautions]

#### ⚠️ WARNING

- Do not touch any terminal while power is on. Doing so will cause electric shock or malfunction.
- Shut off the external power supply (all phases) used in the system before cleaning the module, retightening the terminal block screws and connector screws, or using IP address/number setting switches. Failure to do so may cause the module to fail or malfunction.

### [Startup and Maintenance Precautions]

#### ⚠️ CAUTION

- Do not disassemble or modify the module. Doing so may cause failure, malfunction, injury, or a fire.
- Do not drop or apply strong shock to the module. Doing so may damage the module.
- Use any radio communication device such as a cellular phone or PHS (Personal Handy-phone System) more than 25cm away from wiring as well as away in all directions from the module. Failure to do so may cause malfunction.
- Shut off the external power supply (all phases) used in the system before mounting or removing a module. Failure to do so may cause the module to fail or malfunction.
- After the first use of the product, do not connect/remove the connector more than 50 times (IEC 61131-2/JIS B 3502 compliant). Exceeding the limit may cause malfunction.
- Before handling the module or the cable to be connected to the module, touch a conducting object such as a grounded metal to discharge the static electricity from the human body. Failure to do so may cause the module to fail or malfunction.
- Startup and maintenance of a control panel must be performed by qualified maintenance personnel with knowledge of protection against electric shock. Lock the control panel so that only qualified maintenance personnel can operate it.

### [Disposal Precautions]

#### ⚠️ CAUTION

- When disposing of this product, treat it as industrial waste.

## PRÉCAUTIONS DE SÉCURITÉ

(Lire ces précautions avant toute utilisation du produit.)

Avant d'utiliser ce produit, lire attentivement ce manuel ainsi que les manuels auxquels il renvoie, et toujours considérer la sécurité comme de la plus haute importance en manipulant le produit correctement. Si l'équipement est utilisé d'une autre manière que celle indiquée par le fabricant, la protection fournie par l'équipement risque d'être altérée. Les précautions à observer figurant dans ce manuel ne concernent que ce produit. Pour les précautions de sécurité concernant le système d'automate programmable, prière de se reporter au Manuel de l'utilisateur du module CPU utilisé. Dans ce manuel, les précautions de sécurité sont classées en deux niveaux, à savoir : "⚠️ AVERTISSEMENT" et "⚠️ ATTENTION".

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

**⚠️ ATTENTION** Atteire 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.

Dans certaines circonstances, le non-respect d'une précaution de sécurité introduite sous le titre "⚠️ ATTENTION" peut avoir des conséquences graves.

Les précautions de ces deux niveaux doivent être observées dans leur intégralité car elles ont trait à la sécurité des personnes et aussi du système.

Veiller à ce que les utilisateurs finaux lisent ce manuel qui doit être conservé soigneusement à portée de main pour s'y référer autant que de besoin.

### [Précautions lors de la conception]

#### ⚠️ AVERTISSEMENT

- En cas de problème de communication dans le réseau, les données de la station maître sont gardées en mémoire. Vérifier l'état de la liaison de données (sur chaque station) (SW00B0 à SW00B7) et constituer dans le programme séquentiel un circuit de verrouillage permettant de garantir la sécurité de fonctionnement de l'ensemble du système.

Quand un module sur CC-Link IE TSN se trouve déconnecté suite à un problème de communication, les sorties vers les stations connectées au réseau de terrain TSN sont maintenues ou désactivées selon les paramètres de maintenance d'E/S. Pour cette éventualité, constituer dans le programme un circuit de verrouillage permettant de garantir la sécurité de fonctionnement de l'ensemble du système. Faute de quoi, un sortie erronée ou un dysfonctionnement pourrait être à l'origine d'un accident.

Quand un module sur le réseau de terrain CC-Link IE se trouve déconnecté suite à un problème de communication, les sorties vers la station maître sur CC-Link IE TSN sont maintenues ou désactivées selon les paramètres de maintenance d'E/S. Pour cette éventualité, constituer dans le programme un circuit de verrouillage permettant de garantir la sécurité de fonctionnement de l'ensemble du système. Faute de quoi, une sortie erronée ou un dysfonctionnement pourrait être à l'origine d'un accident.

Selon la nature de la panne du module, les sorties peuvent rester actives ou désactivées. Configurer un circuit de surveillance externe pour le suivi des signaux de sortie susceptibles de provoquer un accident grave.

Comme signal d'entrée ou de sortie distante, il ne faut utiliser aucun des signaux dont l'usage est interdit ("use prohibited"). L'usage de ces signaux est réservé au système. N'inscrire aucune données dans les zones du registre distant marquées "use prohibited". Si ces opérations sont effectuées, une sortie erronée ou un dysfonctionnement pourrait être à l'origine d'un accident.

Ne pas entremer les lignes de commandes ou câbles de communication avec les lignes des circuits principaux ou les câbles d'alimentation. Cela pourrait entraîner un dysfonctionnement du à des interférences électromagnétiques. Garder une distance d'au moins 100 mm entre eux.

### [Précautions de sécurité]

#### ⚠️ ATTENTION

- Ne pas entremer les lignes de commandes ou câbles de communication avec les lignes des circuits principaux ou les câbles d'alimentation. Cela pourrait entraîner un dysfonctionnement du à des interférences électromagnétiques.

Garder une distance d'au moins 100 mm entre eux.

### [Précautions d'installation]

#### ⚠️ AVERTISSEMENT

- Couper l'alimentation externe du système (sur toutes les phases) avant de mettre en place ou de retirer un module. Faute de quoi, il y a risque d'électrocution et le module risque de tomber en panne ou de mal fonctionner.

### [Précautions d'installation]

#### ⚠️ AVERTISSEMENT

- Couper l'alimentation externe du système (sur toutes les phases) avant de mettre en place ou de retirer un module. Faute de quoi, il y a risque d'électrocution et le module risque de tomber en panne ou de mal fonctionner.

### [Précautions de mise en service et de maintenance]

#### ⚠️ AVERTISSEMENT

- Ne toucher à aucun des bornes quand le système est sous tension. Faute de quoi, il y a risque d'électrocutions et de dysfonctionnements.

Couper l'alimentation externe (sur toutes les phases) utilisée dans le système avant le nettoyage du module ou le resserrage des vis des bornes et des vis des connecteurs, ou l'utilisation des contacts de réglage de l'adresse IP/nom de stations. Le non-respect de cette précaution peut être à l'origine de pannes ou de dysfonctionnements du module.

### [Précautions de mise en service et de maintenance]

#### ⚠️ ATTENTION

- Ne pas démonter ni modifier le module. Cela pourrait entraîner des pannes ou de dysfonctionnements et être à l'origine de blessures ou de départs de feu.
- Ne pas faire tomber le module et ne pas le soumettre à des chocs. Cela risquerait d'endommager le module.
- Tout type d'appareil de communication radio, comme un téléphone portable ou PHS (Personal handy-phone system), doit être tenu éloigné de plus de 25 cm du câblage ainsi que du module dans tous les sens. Ne pas le faire peut causer un défaut de fonctionnement. Le non-respect de cette précaution expose à des dysfonctionnements.

Couper l'alimentation externe du système (sur toutes les phases) avant de mettre en place ou de retirer un module. Le non-respect de cette précaution peut être à l'origine de pannes ou de dysfonctionnements du module.

Avant de manipuler le module, où le câble à raccorder au module, se débarrasser de la charge électrostatique qu'accumule le corps humain en touchant un objet conducteur comme une barre de mise à la terre. Le non-respect de cette précaution peut être à l'origine de pannes ou de dysfonctionnements du module.

La mise en service et la maintenance des tableaux de commande doivent être effectuées par un personnel de maintenance qualifié et formé à la protection contre les chocs électriques. Les tableaux de commande doivent être fermés à clé pour n'être accessibles qu'à un personnel de maintenance qualifié.

## ATTENTION

- Utiliser le module dans un environnement en conformité avec les spécifications générales que présente son Manuel de l'utilisateur. Faute de quoi, il y a risque d'électrocution, de départ de feu, de dysfonctionnement, d'endommagement ou de détérioration du produit.
- éviter tout contact direct avec les parties conductrices et les composants électroniques du module. Une manipulation incorrecte peut être à l'origine de dysfonctionnements.
- Raccorder fermement les connecteurs des câbles. Tout mauvais contact peut être source de dysfonctionnements.
- Après la première mise en service du produit, le nombre maximum admissible d'opérations de connexion/retrait du connecteur est de 50 (selon CEI 61131-2/JIS B 3502). Le dépassement de cette limite peut causer un défaut de fonctionnement.

### [Précautions de câblage]

#### ⚠️ AVERTISSEMENT

- Av

## 6. Setting switches

### 6.1 CC-Link IE TSN IP address setting switch setting

Set the fourth octet (decimal) of IP address on the CC-Link IE TSN side using the CC-Link IE TSN IP address setting switches x1 and x16 (hexadecimal).

- The setting range of IP address is 1 to 254. When 0 is set, the previously set IP address is used for operation. When 255 is set, an error occurs.

### 6.2 CC-Link IE Field Network station number setting switch setting

Set the station number on the CC-Link IE Field Network side using the CC-Link IE Field Network station number setting switches x1 and x16 (hexadecimal).

- When using the bridge module for the master station on CC-Link IE Field Network, set the station number to 0.
- When using the bridge module for a local station on CC-Link IE Field Network, set the station number within 1 to 120.
- If a value other than the above is set, an error occurs.

### 6.3 Combinations of the setting switches

Combinations of x1 and x16 are as follows.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
x16	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
B	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

## 7. EMC and Low Voltage Directives

For EMC and Low Voltage Directives, refer to the manual described in 1. Relevant manuals.

## 8. Information and services

For further information and services, please consult your local Mitsubishi representative.

## WARRANTY

Please confirm the following product warranty details before using this product.

### 1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion.

Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

### [Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

### [Gratis Warranty Range]

(1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.

(2) Even within the gratis warranty term, repairs shall be charged for in the following cases.

1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.

2. Failure caused by unapproved modifications, etc., to the product by the user.

3. When the Mitsubishi product is assembled into a user's device. Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.

4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.

5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.

6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.

7. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

### 2. Onerous repair term after discontinuation of production

(1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.

(2) Product supply (including repair parts) is not available after production is discontinued.

### 3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center.

Note that the repair conditions at each FA Center may differ.

### 4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

(1) Damages caused by any cause found not to be the responsibility of Mitsubishi.

(2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.

(3) Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.

(4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

### 5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.