

BCN-P5999-1102-B(1910)MEE
NZ2GN2S1-32DTE

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. 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.

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 the module is disconnected due to a communication failure in the network or the CPU module is in the STOP state, outputs are held or turned off according to the output HOLD/CLEAR setting. Configure an interlock circuit in the program to ensure that the entire system will operate safely even in such a case. Failure to do so may result in an accident 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.
- To maintain the safety of the programmable controller system against unauthorized access from external devices via the network, take appropriate measures. To maintain the safety against unauthorized access via the Internet, take measures such as installing a firewall.

[Design Precautions]

⚠ CAUTION

- 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.
- During control of an inductive load such as a lamp, heater, or solenoid valve, a large current (approximately ten times greater than normal) may flow when the output is turned from off to on. Therefore, use a module that has a sufficient current rating.

[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.

[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.

[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.
- 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.
- 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 and shocks.
- 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. For the cable connected to the terminal block, loosen the terminal screw. 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 or retightening the terminal block screws and connector screws. 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 programmable controller. 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 mount/remove the terminal block to/from the module 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.

Dans ce manuel, les précautions de sécurité sont classées en deux niveaux, à savoir : "⚠ AVERTISSEMENT" et "⚡ ATTENTION".

⚠ 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.

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 le module se trouve déconnecté suite à un problème de communication dans le réseau ou quand le module CPU entre à l'état STOP, les sorties peuvent être maintenues ou désactivées, ce qui dépend du paramétrage HOLD/CLEAR de sortie. Constituer un circuit de verrouillage dans le programme pour garantir la sécurité de fonctionnement de l'ensemble du système même dans ce cas.Le non-respect de cette précaution peut être à l'origine d'un accident en cas de sortie erronée ou de dysfonctionnement.
- Selon la nature de la panne du module, les sorties peuvent rester activées 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.
- Prendre les mesures appropriées pour maintenir la sécurité sur le système de l'automate programmable en cas d'accès non autorisé d'un dispositif externe via le réseau. Pour maintenir la sécurité en cas d'accès via Internet, prendre des mesures adéquates du genre coupe-feu.

[Précautions lors de la conception]

⚠ ATTENTION

- Ne pas entremlér les lignes de commandes ou câbles de communication avec les lignes des circuits principaux ou les câbles d'alimentation. Les installer en maintenant entre eux une distance minimum de 100mm. Faute de quoi, il y a risque de dysfonctionnement par un bruit.
- À la commande d'une charge inductive comme une lampe, un réchauffeur ou une électrovanne, un fort courant (jusqu'à 10 fois l'intensité normale) traverse la sortie quand celle-ci passe de OFF à ON. Il faut donc que le module utilisé ait une capacité de courant suffisante.

[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]

⚠ ATTENTION

- Utiliser le module dans un environnement en conformité avec les spécifications générales que présente son Manuel de l'utilisateur. Faute de quoi, il a risque d'électrocution, de danger 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 ou de pannes du module.
- Raccorder fermement les connecteurs des câbles. Tout mauvais contact peut être source de dysfonctionnements.

[Précautions de câblage]

⚠ AVERTISSEMENT

- Avant le câblage, couper l'alimentation externe du système (sur toutes les phases). Faute de quoi, il y a risque d'électrocution et le module risque de tomber en panne ou de mal fonctionner.

CONDITIONS OF USE FOR THE PRODUCT

- Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
 - where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
 - 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.
- The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI 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 WARNING CONTAINED IN MITSUBISHI'S USER, 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 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 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 representative in your region.

1. Relevant manuals

Details of the product are also described in the manual shown below (sold separately). Please read the manual and understand the functions and performance of the product to use it correctly.

- CC-Link IE TSN Remote I/O Module User's Manual (CC-Link IE TSN Communication Mode) SH-082135ENG (13J1XC)
- CC-Link IE TSN Remote I/O Module User's Manual (CC-Link IE Field Network Communication Mode) SH-082240ENG (13J2XF)

2. Packing list

Check that the following items are included in the package.

Item	Quantity
Module	1
"Before Using the Product" (this document)	1

3. Operating ambient temperature

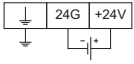
Use the module in the ambient temperatures of 0 to 55°C.

3. Température ambiante de fonctionnement

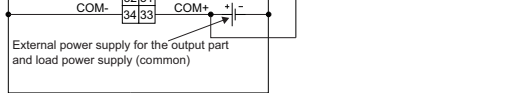
Utiliser le module avec une température ambiante entre 0 et 55°C.

4. Wiring

Câblage
Schémas de câblage
Terminal block for module power supply and FG
Bornier du module d'alimentation et FG


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Wiring to an I/O terminal block
Câblage sur un bornier E/S

Signal name	Terminal number	Signal name
X1	2	X0
X3	4	X2
X5	6	X4
X7	8	X6
X9	10	X8
XB	12	XA
XD	14	XC
XF	16	XE
Y11	18	Y10
Y13	20	Y12
Y15	22	Y14
Y17	24	Y16
Y19	26	Y18
Y1B	28	Y1A
Y1D	30	Y1C
Y1F	32	Y1E
COM-	34	COM+
External power supply for the output part and load power supply (common) 		

English	French
External power supply for output part	<i>Alimentation externe pour section sortie</i>
Load power supply	<i>Alimentation de charge</i>
Signal name	<i>Nom de signal</i>
Terminal number	<i>Borne N°</i>

4.2 Wiring products

Produits pour câblage
Ethernet cables

For Ethernet cables to be connected to P1 and P2 connectors, refer to the manuals described in 1. Relevant manuals.

Wiring to an I/O terminal block

Câblage à une plaque à bornes d'entrée/sortie

The table below shows applicable solderless terminals connected to the terminal block. When wiring, use applicable wires. Use UL listed solderless terminals and, for processing, use a tool recommended by their manufacturer.

Le tableau ci-dessous indique quelles bornes sans soudure on doit utiliser pour les raccordements sur la plaque à bornes. Pour le câblage, utiliser les fils prescrits. Utiliser les bornes sans soudure répertoriées par UL et, pour le montage, utiliser l'outil recommandé par le fabricant de ces bornes.

Solderless terminal	Wire			
Borne sans soudure	Fil			
Model	Diameter	Type	Matériau	Temperature rating
Modèle	Diamètre	Type	Matériau	Gamme de température
A10.34-10TQ	22 to 16 AWG	Stranded <i>Torsadé</i>	Copper <i>Cuivre</i>	75°C, or more 75°C ou plus
A10.5-10WH	22 à 16 AWG			
A10.75-10GY				
A0.5-10				
A0.75-10				
A1.0-10				
A1.5-10				

Terminal block for module power supply and FG

Bornier du module d'alimentation et FG

The table below shows applicable bar solderless terminals connected to the terminal block. When wiring, use applicable wires. Use UL listed bar solderless terminals and, for processing, use a tool recommended by their manufacturer.
Le tableau ci-dessous indique quelles bornes sans soudure peuvent être utilisées pour le raccordement sur la plaque à bornes. Utiliser les bornes-bares sans soudure répertoriées par UL et, pour le montage, utiliser l'outil recommandé par le fabricant de ces bornes.

Solderless terminal	Wire			
Borne sans soudure	Fil			
Model	Diameter	Type	Matériau	Temperature rating
Modèle	Diamètre	Type	Matériau	Gamme de température
TE0.5-8, TE0.5-10	22 to 16 AWG	Stranded <i>Torsadé</i>	Copper <i>Cuivre</i>	75°C or more 75°C ou plus
TE0.75-8, TE0.75-10	22 à 16 AWG			
A10.34-10TQ				
A10.5-10WH				
A10.75-10GY				
A0.5-10				
A0.75-10				
A1.0-10				
A1.5-10				

4.3 Setting switches

Setting the IP address/station number setting switches

When setting the fourth octet (decimal) of IP address (for CC-Link IE TSN communication mode) or a station number (for CC-Link IE Field Network communication mode), use x1 and x16 (hexadecimal) of the IP address/station number setting switches.

- 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.

- The setting range of station number is 1 to 120. When a value other than 1 to 120 is set, an error occurs.

Combinations of x1 and x16 are as follows.

	x1															
	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
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
x16	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

5. EMC and Low Voltage Directives

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