BCN-P5999-0285-A(1405)MEE

NZ2AW1GFAL

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.

1. Precautions regarding warranty and specifications

The NZ2AW1GFAL is jointly developed and manufactured by Mitsubishi and Anywire Corporation.
Note that there are some precautions regarding warranty and specifications of this product.

◆ Warranty

Item	NZ2AW1GFAL	Other programmable controller products (e.g. MELSEC-Q series)
Repair term after discontinuation of production	1 year	7 years

◆ Compliance with the EMC Directive

Item	NZ2AW1GFAL	Other programmable controller products (e.g. MELSEC-Q series)
EMC standard	EN61131-2	EN61131-2

◆ Application of the UL/cUL standards

Item	NZ2AW1GFAL	Other programmable controller products (e.g. MELSEC-Q series)
Applicable UL standard/cUL standard	UL508 CSA22.2	UL508 CSA22.2

2. Related manuals

Before using this product, please read the manual included with the CPU module or base unit.
Confirm the following descriptions:

- SAFETY PRECAUTIONS
- CONDITIONS OF USE FOR THE PRODUCT

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 Field Network–AnyWireASLINK Bridge Module User's Manual SH-081380ENG (13JZ97)

2. Manuels correspondants

Avant d'utiliser ce produit, prière de lire les Consignes de sécurité fournies avec l'unité de base, en particulier dans les sections suivantes.
Respecter les points suivants

- *PRÉCAUTIONS DE SÉCURITÉ*
- *CONDITIONS D'UTILISATION DE PRODUIT*

3. Safety precautions

The following precautions are unique to this product and are not described in the manual included with the CPU module or base unit. Please read them before using this product.

[Design Precautions]

⚠WARNING

- An AnyWireASLINK system has no control function for ensuring safety.
- When a communication failure occurs in the network, data in the master module are held.
  Check the communication status information and configure an interlock circuit in the sequence program to ensure that the entire system will operate safely.

[Design Precautions]

⚠CAUTION

- Configure safety circuits, such as an emergency stop circuit and interlock circuit, external to the AnyWireASLINK system.

[Installation Precautions]

⚠CAUTION

- Securely fix the module with a DIN rail.

[Wiring Precautions]

⚠CAUTION

- Incorrect wiring may damage modules and external devices.
  Adjust a cable length and a module position to prevent disconnection of a connector-type terminal block or a cable.
- Do not solder stranded wires of a cable when connecting them to the terminal block. Doing so may cause poor contact.
- The power supply voltage of remote slave modules may be insufficient due to a voltage drop in the power supply line. Connect an external power supply so that the voltage of remote slave modules is ensured.
- Do not apply the 24VDC power before wiring the entire AnyWireASLINK system.
- Use 24VDC external power supplies for devices in the AnyWireASLINK system.

3. Précautions de sécurité

Les précautions ci-après sont spécifiques à ce produits et ne figurent pas dans le manuel fourni avec le module CPU ou l'unité de base.
Lire ces précautions avant d'utiliser le produit.

[Précautions lors de la conception]

⚠AVERTISSEMENT

- *Le système AnyWire ASLINK n'a pas de fonction de commande permettant de garantir la sécurité.*
- *En cas de mauvaise communication dans le réseau, les données sont gardées en mémoire par le module maître.*
  Vérifier les infos d'état de communication et constituer un circuit de verrouillage dans le programme séquentiel pour garantir la sécurité de fonctionnement de l'ensemble du système.

[Précautions lors de la conception]

⚠ATTENTION

- *Configurer des circuits de sécurité, comme un circuit d'arrêt d'urgence et un circuit de verrouillage, à l'extérieur du système AnyWireASLINK.*

[Précautions d'installation]

⚠ATTENTION

- *Fixer fermement le module sur un rail DIN.*

[Précautions de câblage]

⚠ATTENTION

- *Un câblage incorrect pourrait endommager les modules et les dispositifs externes. Régler la longueur des câbles et la position du module pour ne pas risquer une déconnexion sur les connecteurs et les borniers.*
- *Les raccordements sur les plaques à bornes ne doivent pas se faire en soudant les fils torsadés des câbles. Ceci peut être une cause de mauvais contact.*
- *La tension d'alimentation des modules esclaves distants peut devenir insuffisante s'il y a chute de tension dans la ligne d'alimentation. Prévoir une alimentation externe pour garantir l'alimentation des modules esclaves distants.*
- *Ne pas brancher l'alimentation 24 V cc avant que le câblage du système AnyWireASLINL ne soit entièrement terminé.*
- *Utiliser une alimentation externe 24V cc pour tous les dispositifs du système AnyWireASLINL.*

4. Packing list

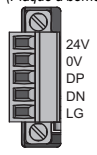
Check that the following items are included in the package.

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

5. Signal layout

(Répartition des signaux)

◆ AnyWireASLINK side terminal block
(Plaque à bornes côté AnyWireASLINK)



Abbreviation *Abréviation*	Description *Description*
24V 0V	A power supply of the NZ2AW1GFAL *Alimentation de NZ2AW1GFAL*
DP DN	AnyWireASLINK transmission signal terminal DP: Transmission line (+), DN: Transmission line (-) The DP/DN terminals are connected to those on the slave module and terminating unit *Borne de signal de transmission AnyWireASLINK* *DP: Ligne de transmission (+),* *DN: Ligne de transmission (-)* *Les bornes DP/DN sont raccordés aux bornes correspondantes du module esclave et de l'unité terminale.*
LG	The LG terminal is connected to the neutral point of the noise filter inserted between the 24V and the 0V terminals. Ground the LG terminal with the functional ground terminal (FG terminal) on the programmable controller at a single point. *La borne LG est raccordée au neutre du filtre antiparasite inséré entre les bornes 24V et 0V.* *Mettre à la masse en un seul point la borne LG avec la borne de terre fonctionnelle (borne FG) sur l'automate programmable.*

6. Wiring products

(Produits pour câblage)

◆ CC-Link IE Field Network
(Réseau de terrain CC-Link IE)

The following table shows applicable cables to connect to the CC-Link IE Field Network port. Use the cables that meet the standards of IEEE 802.3 1000BASE-T.
Le tableau ci-dessous indique quels câbles peuvent être utilisés pour le raccordement au port du réseau de terrain CC-Link IE. Utiliser des câbles conformes aux normes IEEE 802.3 1000BASE-T.

Name	Connector	Cable	Category
1000BASE-T	RJ45	Straight cable (Double shielded/STP)	5e or higher

Nom	*Connecteur*	*Câble*	*Catégorie*
1000BASE-T	*RJ45*	*Câble simple* *(Double blindé/STP)*	*5e ou plu*

◆ AnyWireASLINK side terminal block
(Plaque à bornes côté AnyWireASLINK)
When wiring, use applicable wires and an appropriate tightening torque.
Pour le câblage, utiliser les fils et couples de serrage prescrits.

Model name *Nom du modèle*	Tightening torque *Couple de serrage*
MC 1,5/5-STF-3,81*1	0.2 to 0.3N•m *0,2 à 0,3 N•m*

*1 Use wires manufactured by Phoenix Contact Co., Ltd. (Contact: http://www.phoenixcontact.com/)
1 Utiliser des fils de fabrication Phoenix Contact Co., Ltd. (Contact: http://www.phoenixcontact.com/)

Item *Rubrique*	Name *Nom*	Wire diameter *Diamètre de fil*	Type	Material *Matériau*	Temperature rating *Gamme de température*
Transmission cable *Câble de transmission* (DP, DN)	UL-listed general-purpose 2-wire cable *Câble 2-fils à usage universel, conforme aux prescriptions UL* (VCTF, VCT)	1.25mm^2 0.75mm^2	Stranded *Torsadé*	Copper *Cuivre*	70℃ or more *70 °C ou plus*
	UL-listed general-purpose wire *Fil à usage universel, conforme aux prescriptions UL*	1.25mm^2 0.75mm^2			
	Dedicated flat cable *Câble plat dédié*	1.25mm^2 0.75mm^2			90℃
Power cable *Câble d'alimentation* (24V, 0V)	UL-listed general-purpose 2-wire cable *Câble 2-fils à usage universel, conforme aux prescriptions UL* (VCTF, VCT)	0.75mm^2 to 2.0mm^2 0.75mm^2 à 2.0mm^2	Stranded *Torsadé*		70℃ or more *70 °C ou plus*
	UL-listed general-purpose wire *Fil à usage universel, conforme aux prescriptions UL*	0.75mm^2 to 2.0mm^2 *0.75mm^2 à 2.0mm^2*	Stranded/ solid *Torsadé/ Monobrin*		
	Dedicated flat cable *Câble plat dédié*	1.25mm^2 0.75mm^2	Stranded *Torsadé*		90℃

7. Operating ambient temperature

(Température ambiante de fonctionnement)

Use the product within the range from 0℃ to 55℃.
Ce produit doit être utilisé entre 0 et 55°C.

8. EMC and Low Voltage Directives

Compliance with the EMC Directive, which is one of the EU directives, has been mandatory for the products sold within EU member states since 1996 as well as compliance with the Low Voltage Directive since 1997.
To prove the compliance, manufactures must issue an EC Declaration of Conformity and the products must bear a CE marking.

- Sales representative in EU member states

The authorized representative in EU member states will be:
Company name: Mitsubishi Electric Europe BV
Address: Gothaer Strasse 8, 40880 Ratingen, Germany

◆ Measures to comply with the EMC Directive

The EMC Directive sets two requirements for compliance: emission (conducted and radiated electromagnetic energy emitted by a product) and immunity (the ability of a product to not be influenced by externally generated electromagnetic energy).
This section summarizes the precautions for machinery constructed with this product to comply with the EMC Directive.
These precautions are based on the requirements of the EMC Directive and the harmonized standards. However, they do not guarantee that the entire machinery constructed according to the descriptions complies with the EMC Directive.
The manufacturer of the machinery must determine the testing method for compliance and declare conformity to the EMC Directive.

- Installation in a control panel

This open-type device is intended to be placed in an industrial control panel or similar type of enclosure.*1
This ensures safety as well as effective shielding of programmable controller-emitted electromagnetic noise.

*1 Modules on the remote station in each network must be also installed inside the control panel. However, the waterproof type remote station can be installed outside the control panel.

- Control panel
  - Use a conductive control panel.
  - Mask off the area used for grounding when securing the top or bottom plate to the control panel using bolts.
  - To ensure electrical contact between the inner plate and the control panel, mask off the bolt installation areas of an inner plate so that conductivity can be ensured in the largest possible area.
  - Ground the control panel with a thick ground cable so that low impedance can be ensured even at high frequencies.
  - Keep the diameter of the holes on the control panel to 10cm or less. If the diameter is larger than 10cm, electromagnetic wave may be emitted. In addition, because electromagnetic wave leaks through a clearance between the control panel and its door, reduce the clearance as much as possible. Use of EMI gaskets (sealing the clearance) can suppress undesired radiated emissions. The tests by Mitsubishi were conducted using a control panel having the damping characteristics of 37dB (maximum) and 30dB (average) (measured at 3m distance, 30 to 300MHz).
- Wiring of power cables and ground cables

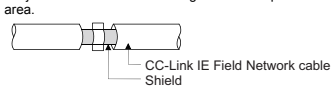
  Near the power supply part, provide a ground point to the control panel. Ground the LG terminal with the thickest and shortest possible ground cable (30cm or shorter).

- Cables

Use shielded cables for the cables which are connected to the module and run out from the control panel.
If a shielded cable is not used or not grounded correctly, the noise immunity will not meet the specified value.

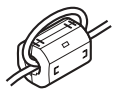
- Cables for the CC-Link IE Field Network

  Shielded cables should be used for the CC-Link IE Field Network. Strip a part of the jacket as shown below and ground the exposed shield in the largest possible area.



- External power supply
  - Use a CE-marked product for an external power supply and always ground the FG terminal. (External power supply used for the tests conducted by Mitsubishi: TDK-Lambda DLP-120-24-1, IDEC PS5R-SF24, PS5R-F24)
  - Use a power cable of 30m or less when connecting it to the external power supply.
- Others
- Ferrite core

  A ferrite core has the effect of reducing radiated noise in the 30MHz to 100MHz band. It is recommended to install ferrite cores if shield cables coming out of the control panel do not provide sufficient shielding effects.
  Note that the ferrite cores must be installed at the position closest to the cable hole inside the control panel. If installed at an improper position, the ferrite core will not produce any effect.
  For the external power supply and CC-Link IE Field Network cables, install a ferrite core 4cm away from the module. For the AnyWireASLINK cable, install a ferrite core at a point as close to the AnyWireASLINK side terminal block of this product as possible.
  Twist the cable around the ferrite core by one as shown below.
  (Ferrite core used for the tests conducted by Mitsubishi: NEC TOKIN ESD-SR-250, TDK ZCAT3035-1330)



- Installation environment

Use the module under the installation environment of Zone B*2.

*2 Zone defines categories according to industrial environment, specified in the EMC and Low Voltage Directives, EN61131-2.
Zone C: Factory mains (isolated from public mains by dedicated transformer)
Zone B: Dedicated power distribution, secondary surge protection (rated voltage: 300V or less)
Zone A: Local power distribution, protected from dedicated power distribution by AC/DC converter and insulation transformer (rated voltage: 120V or less)

◆ Requirements for Low Voltage Directive compliance

The Low Voltage Directive does not apply to this product as it operates on 24VDC power supply. For making the programmable controller system used comply with the Low Voltage Directive, refer to the section about EMC and Low Voltage Directives in the user's manual for the CPU module used.

9. Information and services

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

10. Contact of the co-branded product

Anywire Anywire Corporation http://www.anywire.jp