MITSUBISHI ELECTRIC

Safety Guidelines

MELIPC

MI2012-W
MI2012-W-CL

Thank you for purchasing the Industrial PC MELIPC series.
Prior to use, please read this and relevant manuals thoroughly to fully understand the product.

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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.
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**

- Configure safety circuits external to the product to ensure that the entire system operates safely even when a fault occurs in the external power supply or the product. Failure to do so may result in an accident due to an incorrect output or malfunction. Emergency stop circuits, protection circuits, and protective interlock circuits for conflicting operations (such as forward/reverse rotations or upper/lower limit positioning) must be configured external to the product.
- Configure a circuit so that the programmable controller is turned on first and then the external power supply. If the external power supply is turned on first, an accident may occur due to an incorrect output or malfunction.
- Before performing operations for the product from the peripheral connected, read the relevant manuals carefully and ensure the safety.

⚠**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. Failure to do so may result in malfunction due to noise.
- When selecting fuses and breakers for external circuits, consider the specification values of fusing/ detection characteristics and inrush current.
- When using an uninterruptible power supply (UPS), do not use the one that outputs square waves.

[Installation Precautions]

⚠CAUTION

- Use the product in an environment that meets “General Specifications” in this manual. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product.
- When using the product in an environment of frequent vibrations, fix the power supply module with a screw.
- Do not directly touch any conductive parts and electronic components of the product. Doing so can cause malfunction or failure of the product.

[Wiring Precautions]

⚠WARNING

- Shut off the external power supply (all phases) used in the system before installation and wiring. Failure to do so may result in electric shock or cause the product to fail or malfunction.

⚠CAUTION

- Ground the FG terminal of the product with a ground resistance of 100 ohms or less. Failure to do so may result in electric shock or malfunction.
- Securely connect the connector of an external device to the product. Poor contact may cause malfunction.
- 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.
- Place the cables in a duct or clamp them. (Cable ties made of nylon can be used as well.) If not, dangling cable may swing or inadvertently be pulled, resulting in damage to the product or cables or malfunction due to poor contact.
- Check the interface type and correctly connect the cable. Incorrect wiring (connecting the cable to an incorrect interface) may cause failure of the product and external device.
- Prevent foreign matter such as dust or wire chips from entering the product. Such foreign matter can cause a fire, failure, or malfunction.
- When disconnecting the cable from the product, 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 product or cable.
- Wiring and replacement of a AC adapter must be performed by qualified maintenance personnel with knowledge of protection against electric shock.

[Startup and Maintenance Precautions]

⚠WARNING

- Do not touch any terminal while power is on. Doing so will cause electric shock or malfunction.
- Correctly connect the battery connector. Do not charge, disassemble, heat, short-circuit, solder, or throw the battery into the fire. Also, do not expose it to liquid or strong shock. Doing so will cause the battery to produce heat, explode, ignite, or leak, resulting in injury and fire.
- Shut off the external power supply (all phases) used in the system before cleaning the product or retightening the terminal screws, connector screws, or module fixing screws. Failure to do so may result in electric shock.

⚠CAUTION

- Do not disassemble or modify the product. Doing so may cause failure, malfunction, injury, or a fire.
- Use any radio communication device such as a cellular phone or PHS (Personal Handy-phone System) more than 25cm away in all directions from the product. Failure to do so may cause malfunction.
- Do not drop or apply shock to the battery to be installed in the product.
- Before handling the product, 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 product to fail or malfunction.

[Power-on Precautions]

⚠CAUTION

- Wait for ten seconds or more after power supply shutdown of the product. Then, supply input power again.

[Disposal Precautions]

⚠CAUTION

- When disposing of this product, treat it as industrial waste.
- When disposing of batteries, separate them from other wastes according to the local regulations. For details on battery regulations in EU member states, refer to “Handling of Batteries and Devices with Built-In Batteries in EU Member States” in this manual.

[Transportation Precautions]

⚠CAUTION

- When transporting lithium batteries, follow the transportation regulations. For details on the regulated models, refer to “Precautions for Battery Transportation” in this manual.

SAFETY PRECAUTIONS

(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 considerer la securite comme de la plus haute importance en manipulant le produit correctement.
Dans ce manuel, les precautions de securite sont classees en deux niveaux, a 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

- *Configurer des circuits de sécurité extérieurs à le produit pour garantir la sécurité du système dans son ensemble à la survenance d'une anomalie dans l'alimentation externe comme dans le produit. Faute de quoi, une instruction de sortie incorrecte ou un dysfonctionnement pourrait être à l'origine d'un accident.*
  Configurer des circuits de sécurité externes, comme un circuit d'arrêt d'urgence, un circuit de protection et les circuits de verrouillage de sécurité pour l'opération d'inversion de marche avant/arrière et de positionnement en limite haute/basse.
- *Configurer le circuit de façon à allumer d'abord le produit avant l'alimentation externe. Si on commence par brancher l'alimentation externe, ceci peut être une cause d'accident en cas de sortie incorrecte ou autre dysfonctionnement.*
- *Veuillez lire attentivement le manuel de l'appareil connecté et vérifier entièrement la sécurité lors de la connexion du périphérique à le produit et de son fonctionnement.*

⚠ATTENTION

- *Ne pas entremêler 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 100 mm.*
  Faute de quoi, il y a risque de dysfonctionnement par un bruit.
- *Lorsque vous sélectionnez des fusibles et des disjoncteurs pour des circuits externes, tenez compte des valeurs de spécification des caractéristiques de fusion / détection et du courant d'appel.*
- *Lorsque vous utilisez un onduleur, n'utilisez pas celui qui émet des ondes carrées.*

[Précautions d'installation]

⚠ATTENTION

- *Utiliser le produit dans un environnement en conformité avec les "GENERAL SPECIFICATIONS (Spécifications générales)" de ce manuel. Faute de quoi, il a risque d'électrocution, de départ de feu, de dysfonctionnement, d'endommagement ou de détérioration du produit.*
- *Si le produit est installé dans un environnement exposé aux vibrations, le produit doit être immobilisé par une vis de blocage.*
- *Éviter tout contact direct avec les parties conductrices et les composants électroniques du produit ou des connecteurs. Cela pourrait être à l'origine d'un dysfonctionnement ou d'une panne du produit.*

[Précautions de câblage]

⚠AVERTISSEMENT

- *Couper l'alimentation externe du système (sur toutes les phases) avant l'installation et le câblage. Faute de quoi, il y a risque d'électrocution et d'endommagement du produit.*

⚠ATTENTION

- *Mettre à la terre la borne FG du produit avec une résistance de terre inférieure à 100 ohms. Faute de quoi, il y a risque d'électrocution et de dysfonctionnement.*
- *Raccorder fermement le connecteur sur le produit. Tout mauvais contact peut être source de dysfonctionnements.*
- *Ne pas entremêler 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 100 mm. Faute de quoi, il y a risque de dysfonctionnement par un bruit.*
- *Les câbles doivent être placés dans un conduit de câbles ou doivent être attachés. Faute de quoi, le ballottement ou le déplacement des câbles pourrait endommager le module ou les câbles et être à l'origine de dysfonctionnements par mauvais contact. Ne pas serrer les câbles de rallonge en retirant la gaine de câble.*
- *Vérifier le type d'interface et raccorder les câbles correctement. Un câblage incorrect (avec raccordement d'un câble à une interface incorrect) peut entraîner une panne du produit ou du dispositif externe.*
- *Veiller à ne pas laisser la poussière, les copeaux métalliques ou d'autres corps étrangers pénétrer dans le produit De telles corps étrangers peuvent être à l'origine d'un départ de feu, d'une panne ou d'un dysfonctionnement.*
- *Pour débrancher le câble du produit, ne tirer directement sur le câble proprement dit. Pour les câbles avec connecteur, saisir le câble par le connecteur. Tirer sur un câble raccordé au produit peut endommager le câble ou le produit et être à l'origine de dysfonctionnements.*
- *Le câblage et le remplacement d'un produit d'alimentation doivent être effectués par un personnel de maintenance qualifié et formé à la protection contre les risques d'électrocution.*

[Précautions de mise sous tension]

⚠ATTENTION

- *Attendez dix secondes ou plus après l'arrêt de l'alimentation électrique du produit. Ensuite, alimentez à nouveau le courant d'entrée.*

[Précautions de transport]

⚠ATTENTION

- *Pour le transport des piles au lithium, respecter la réglementation afférente à ce transport. Pour le détail des modèles soumis à une réglementation, voir le "Precautions for Battery Transportation" de ce manual.*

[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 arisque d'électrocutions et de dysfonctionnements.*
- *Raccorder correctement le connecteur des piles. Les piles ne doivent pas être rechargées, démontées, court-circuitées ou soudées. Elles ne doivent pas non plus être jetées au feu. De plus, ne pas les exposer à des liquides ou à des chocs violents. Cela pourrait entraîner une surchauffe ou un éclatement de la pile qui pourrait s'enflammer et être à l'origine de blessures ou d'un départ de feu.*
- *Couper l'alimentation externe utilisée pour le système (sur toutes les phases) avant de procéder au nettoyage du module ou au resserrage des vis de bornes des vis de connecteur ou des vis de fixation du module. Faute de quoi, il y a risque d'électrocution et le produit risque de tomber en panne ou de mal fonctionner.*

⚠ATTENTION

- *Ne pas démonter ni modifier le produit. Cela pourrait entraîner des pannes ou dysfonctionnements et être à l'origine de blessures ou de départs de feu.*
- *Tout type d'appareil de communication radio, y compris les téléphones portables et les appareils PHS (Personal handy-phone system), doit être tenus éloignés de plus de 25 cm de le produit, dans tous les sens. Le non-respect de cette précaution expose à des dysfonctionnements.*
- *Ne pas faire tomber ou soumettre à de forts chocs les piles à installer dans les modules.*
- *Avant de manipuler un produit, se débarrasser de la charge électrostatique qu'accumule le corps humain en touchant un objet conducteur approprié. Le non-respect de cette précaution peut être à l'origine de pannes ou de dysfonctionnements du produit.*

[Précautions de mise sous tension]

⚠ATTENTION

- *Attendez dix secondes ou plus après l'arrêt de l'alimentation électrique du produit. Ensuite, alimentez à nouveau le courant d'entrée.*

[Précautions de mise au rebut]

⚠ATTENTION

- *Lors de sa mise au rebut, ce produit doit être traité comme un déchet industriel.*
- *Les piles ou batteries doivent être mises au rebut séparément des autres déchets et conformément à la réglementation locale. Pour le détail des règlements sur les piles et batteries dans les pays membres de l'Union Européenne, voir le "Handling of Batteries and Devices with Built-In Batteries in EU Member States" de ce manual.*

[Précautions de transport]

⚠ATTENTION

- *Pour le transport des piles au lithium, respecter la réglementation afférente à ce transport. Pour le détail des modèles soumis à une réglementation, voir le "Precautions for Battery Transportation" de ce manual.*

CONDITIONS OF USE FOR THE PRODUCT

(1). Mitsubishi Electric Industrial PC ("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 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.

(3). Mitsubishi Electric shall have no responsibility or liability for any problems involving MELIPC trouble and system trouble by denial-of-service (DoS) attacks, unauthorized access, computer viruses, and other cyberattacks.

1. OVERVIEW

This manual describes safety precautions for using the MELIPC series Industrial PCs.

For more details, refer to relevant manual listed below.

・Relevant manual

Manual name	Manual No.
MI2012-W User's Manual	SH-081994

1.1. Checking the included items

The following items are included in the package of this product.

Check that all the items are included before using the product.

Item		Quantity
AC adapter		1
AC power cable *1 (Only MI2012-W)		1
3-pin plug-in block for power wiring		1
DVI - VGA connector		1
Wall mount kit		2
M3*5L screws for fastening wall mount kit		12
Screws for fastening mPCIe modules		4
Declaration for China restriction of hazardous substances		1
Edgecross Basic Software License Certificate		1
SLMP Data collector License Certificate		1
CC-Link IE TSN Communication Software License Certificate		1
SLMP Data Collector	Software License Agreement	1
CC-Link IE TSN Communication Software		
This manual		1

*1 : The included AC power cable should be only used in Japan and Taiwan at 100VAC. If you are using this product in outside of Japan and Taiwan, please confirm the AC power cable and AC adapter requirements for each location in which you plan to use; voltage, frequency, plug configurations, and the safety standards vary.
When using the MI2012-W-CL, prepare a power cable that meets the safety standards of the power source and area used.

2. GeneralSpecifications *(Spécifications générales)*

Item	Specifications
Operating ambient temperature *Température ambiante de fonctionnement*	0 to 55 °C [*1] *0 à 55 °C*
Storage ambient temperature	-40 to 75 °C
Operating ambient humidity	10 to 90%RH, non-condensing
Storage ambient humidity	
Vibration resistance	IEC60068-2-64 5～500Hz，1oct/min, an hour each X, Y, and Z directions
	4Grms （1.5Grms in case of using HDD）
Shock resistance	IEC60068-2-27 50G，half-sine wave，11msec
Operating atmosphere	No corrosive gases, flammable gases, less conductive dust
Overvoltage category[*2]	II or less
Pollution degree[*3]	2 or less

*1：Safety certificate: 0 to 45 °C. / *Certificat de sécurité: 0 à 45* ℃.

*2：This indicates the section of the power supply to which the equipment is assumed to be connected between the public electrical power distribution network and the machinery within premises. Category II applies to equipment for which electrical power is supplied from fixed facilities. The surge voltage withstand level for up to the rated voltage of 300V is 2500V.

*3：This index indicates the degree to which conductive material is generated in terms of the environment in which the equipment is used. Pollution degree 2 is when only non-conductive pollution occurs. A temporary conductivity caused by condensing must be expected occasionally.

3. EMC AND LOW VOLTAGE DIRECTIVES

In each country, regulations concerning electromagnetic compatibility (EMC) and electrical safety are enacted.
For the products sold in the European countries, compliance with the EU's EMC Directive has been a legal obligation as EMC regulation since 1996, as well as the EU's Low Voltage Directive as electrical safety regulation since 1997.
Manufacturers who recognize their products are compliant to the EMC and Low Voltage Directives are required to attach a "CE marking" on their products in European countries.
In some other countries and regions, manufacturers are required to make their products compliant with applicable laws or regulations and attach a certification mark on the products as well (such as UK Conformity Assessed (UKCA) marking in the UK, and Korea Certification (KC) marking in South Korea).
Each country works to make their regulatory requirements consistent across countries based on international standards. When the requirements are consistent, measures to comply with the EMC and electrical safety regulations become common across countries.
The UK and South Korea have enacted EMC regulations whose requirements are consistent with those of the EMC Directive.
The UK has also enacted electrical safety regulations whose requirements are consistent with those of the Low Voltage Directive. In this section, the requirements of the EMC and Low Voltage Directives are described as examples of those of the EMC and electrical safety regulations.

3.1. Measures to Comply with the EMC Directive

The EMC Directive sets requirements for emission (conducted and radiated electromagnetic interference emitted by a product) and immunity (the ability of a product not to be influenced by externally generated electromagnetic interference).
This product complies with the EMC Directive related standards as follows.
The manufacturer of the machinery must determine the testing method for compliance and declare conformity to the EMC Directive.

EMC Directive related standards

Item	Standards
Emission	EN 50011:2009+A1:2010 （Group1, Class A） EN 55022:2010+AC:2011 （Class A） EN 61000-6-4:2007+A1:2011
Immunity	EN 55024:2010+A1:2015 EN 61000-6-2:2005+AC:2005

3.2. Measures to Comply with the Low Voltage Directive

The Low Voltage Directive requires electrical equipment that is designed or adapted for use between 50 to 1000VAC or 75 to 1500VDC to satisfy the safety requirements.

This section describes the precautions for use of this product to comply with the Low Voltage Directive.

These precautions are based on the requirements of the Low Voltage Directive and the harmonized standards. However, they do not guarantee that the entire machinery constructed according to the descriptions complies with the Low Voltage Directive. The manufacturer of the machinery must determine the testing method for compliance and declare conformity to the Low Voltage Directive.

Standard applied to this product

EN60950-1 “Information technology equipment Safety General requirement”
(Applicable until November 2020 production)
EN62368-1 “Audio/Video, Information and Communication Technology Equipment - Safety Requirements”
(Applicable from December 2020 production)

Compliant range of this product

- AC adapter
  AC adapter have hazardous voltage (peak voltage higher than or equal to 42.4V) internally.
  Therefore, insulation between the primary and secondary circuits is reinforced for CE-marked power supply modules.
- Main unit
  It is not targeted for the Low Voltage Directive compliance because the circuits in the product operate at the 24VDC or less rated voltage.

Power supply

AC adapter is designed to meet the overvoltage category II.
Confirm that the power supply to this product meets the overvoltage category II.

Installation site

■ Protection against electric shock

In order to protect a person who does not have adequate knowledge of electrical installation from an electric shock, take the following measures.

- Restrict access to the instllation site so that only persons who are trained and has acquired enough knowledge of electrical installation can operate.
- Place on the protective structure with a protection degree of IP20 or higher; control panels for example.

■ Protection from dust and water

Insufficient dustproof and waterproof lower the dielectric withstand of the install site, possibly causing dielectric breakdown.

The insulation of Mitsubishi programmable controllers is designed to be used in an environment of pollution degree 2.

Use them in an environment of pollution degree 2 or below.

Grounding

Securely ground by using the chassis grounding screw on the front panel.

External wiring

■ External devices

For external devices connected to a programmable controller, use the one of which insulation between the interface circuit section to the programmable controller and the hazardous voltage circuit section is reinforced (if the device internally has a hazardous voltage circuit section).

■ Reinforced insulation

Reinforced insulation means an insulation having the following withstand voltage.

Rated voltage of hazardous voltage	Surge withstand voltage (1.2/50μs)
150VAC or less	2500V
300VAC or less	4000V

(Overvoltage category II, source: IEC 60664-1)

4. Handling of Batteries and Devices with Built-In Batteries in EU Member States

This section describes the precautions for disposing of waste batteries in EU member states and exporting batteries and/or devices with built-in batteries to EU member states.

Disposal precautions

In EU member states, there is a separate collection system for waste batteries. Dispose of batteries properly at the local community waste collection/recycling center.

The following symbol mark is printed on the batteries and packaging of devices with built-in batteries. The symbol mark indicates that batteries need to be disposed of separately from other wastes.

The symbol is specified in Article 13 "Labelling and marking of batteries" and ANNEX VI of the EU Battery Regulations ((EU) 2023/1542).

Exportation precautions

The EU Battery Regulations ((EU) 2023/1542) requires the following when batteries and/or devices with built-in batteries are sold and exported to the EU member states.

- To print the symbol marks (1) and (2) on batteries (if not possible, on product manuals and packaging)
- To explain the symbol mark (1) in the product manual

The display and explanation of the symbol mark (1) are requirements continued from the new EU Battery Directive (2006/66/EC).

(1) (2)

■ Labeling

To comply with the European Battery Regulation ((EU)2023/1542), print the symbol marks (1) and (2) on the labels attached to the batteries or the manuals and packaging. (Applicable from August 18, 2024[*1].)

*1 : To market or export batteries and/or devices with built-in batteries before August 18, 2024, print the symbol mark (1) on the labels attached to the batteries or packaging to comply with the EU Battery Directive (2006/66/EC).

■ Explaining the symbol in the manuals

To export devices incorporating Mitsubishi programmable controller to EU member states after August 18, 2024, provide the latest manuals that include the explanation of the symbol mark (1). If the manuals of Mitsubishi programmable controller are not provided or the manuals do not include the explanation of the symbol mark (1), separately attach an explanatory note regarding the symbol mark (1) to each manual of the devices.

Note!

The requirements apply to batteries and/or devices with built-in batteries manufactured before the enforcement date of the EU Battery Directive (2006/66/EC) and EU Battery Regulation ((EU)2023/1542).

5. Precautions for Battery Transportation

When transporting lithium batteries, follow the transportation regulations.
For details on the regulations, refer to Mitsubishi Technical Bulletins as follows.

・Precautions for transport recommendations on lithium batteries (FA-A-0259)

Regulated models

The battery for this product is classified as shown below.

Model	Supply status	Lithium content	Weight	Classification for transportation
BR2032	Lithium metal battery	0.06 g per unit	2.5 g per unit	Non-dangerous goods

Transport guidelines

Products are packed in compliance with the transportation regulations prior to shipment. When repacking any of the unpacked products for transportation, make sure to observe the IATA Dangerous Goods Regulations, IMDG (International Maritime Dangerous Goods) Code, and other local transportation regulations.

For details, please consult the shipping carrier used.

5.1. Perchrolate Reguration in the State of California, USA

California law requires that warning text be displayed on packaging for products incorporating lithium primary batteries containing more than 6 ppb of perchlorate. However, the battery for this product does not contain perchlorate.
Therefor, the customer will not be required for any special measure.

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 (24) 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 five (5) 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.

REVISIONS

Revision date	*Manual number	Description
May, 2018	BCN-P5999-0991-A	Firtst edition
Oct, 2018	BCN-P5999-0991-B	■Added model MI2012-W-CL
July, 2019	BCN-P5999-0991-C	■Added or modified parts Section 1.1
Sep, 2021	BCN-P5999-0991-D	■Added or modified parts Section 1.1,3,3.2
Oct, 2024	BCN-P5999-0991-E	■Added or modified parts CONDITIONS OF USE FOR THE PRODUCT, Section 4
Nov, 2025	BCN-P5999-0991-F	■Added or modified parts Section 2,3.2,4

*The manual number is given on the bottom left of the front cover.

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