

BCN-P5999-1040-B(1906)MEE

R60MH12

Before Using the Product

Before using the product, please read this manual. Make sure that the end users read this manual and then keep the manual in a safe place for future reference. If the product is used in a manner not specified by the manufacturer, the protection provided by the product may be impaired.

1. Relevant manuals

Manuels correspondants

Before using the product, please read the Safety Guidelines included with the base unit used, especially the following sections.

- SAFETY PRECAUTIONS
- CONDITIONS OF USE FOR THE PRODUCT
- EMC AND LOW VOLTAGE DIRECTIVES
- WARRANTY

Avant d'utiliser ce produit, prière de lire les "Safety Guidelines" (directive de sécurité) fournies avec l'unité de base, en particulier dans les sections suivantes.

- PRÉCAUTIONS DE SÉCURITÉ
- CONDITIONS D'UTILISATION DE PRODUIT
- DIRECTIVES CEM ET BASSE TENSION
- GARANTIE

For the product information, refer to the following.

Description	Manual name [manual number]
Common information on MELSEC IQ-R series programmable controllers ¹	MELSEC IQ-R Module Configuration Manual [SH-081262ENG]
Detailed information on the product	MELSEC IQ-R Laser Displacement Sensor Control Module User's Manual (Startup) [SH-082017ENG]
	MELSEC IQ-R Laser Displacement Sensor Control Module User's Manual (Application) [SH-082019ENG]

¹ The information includes the system configuration, specifications, installation, wiring, maintenance, and inspection. Please develop familiarity with the functions and performance of the product to handle the product correctly.

2. Packing list

Check that the following items are included in the package of the product.

Item	Quantity
Module	1
Before Using the Product (this manual)	1

3. Laser displacement sensor MH11 SettingTool Version 2

For the laser displacement sensor MH11 SettingTool Version 2, please consult your local Mitsubishi representative.

4. Mounting modules

Montage des modules

When installing the programmable controller in a control panel, fully consider its operability, maintainability, and environmental resistance.

Securely mount all the MELSEC IQ-R series modules used on the base unit.

For details on the mounting method, refer to the MELSEC IQ-R Module Configuration Manual.

Pour installer l'automate programmable dans un tableau de commande, prendre en compte tous les aspects d'opérabilité, de maintenabilité et de résistance à l'environnement.

Monter fermement sur l'unité de base tous les modules de la série MELSEC IQ-R à utiliser.

Pour le détail de la méthode de montage, voir le MELSEC IQ-R Module Configuration Manual (Manuel de configuration du module MELSEC IQ-R).

5. Specifications

5.1 General specifications

The following table shows the general specifications of the product.

Item	Specifications
Operating ambient temperature	0 to 55°C (When an extended temperature range base unit is not used) 0 to 60°C (When an extended temperature range base unit is used)
Température ambiante de fonctionnement	0 à 55°C (quand une unité de base à gamme de température élargie n'est pas utilisée) 0 à 60°C (quand une unité de base à gamme de température élargie est utilisée)
Operating ambient humidity	5 to 95%RH, non-condensing
Operating altitude	0 to 2000m
Installation location ¹	Inside a control panel (Indoor use)
Pollution degree ²	2 or less

¹ The product is an open-type device. Install it in a control panel with protection structure of UL50, Type 1, and IP20 or more.

² 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.

5.2 Performance specifications

The following table shows the performance specifications of the product.

Item	Specifications
Internal current consumption (5VDC)	0.14A (max.)
External power supply	24VDC -15 to +20% (including ripple of 0.5V (p-p)) Maximum current consumption: 0.5A

¹ For a power supply to supply 24VDC, use a power supply (SELV power supply) that does not exceed 30VAC (effective value), 42.4V (peak value), or 60VDC. Also, use a power supply which is applied to "limited-energy circuit" specified in IEC61010-1.

6. Wiring

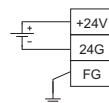
Câblage

6.1 Wiring diagram

Schémas de câblage

Viewed from the front of the module¹

Vue de l'avant du module¹



¹ For a power supply to supply 24VDC, use a power supply (SELV power supply) that does not exceed 30VAC (effective value), 42.4V (peak value), or 60VDC. Also, use a power supply which is applied to "limited-energy circuit" specified in IEC61010-1.

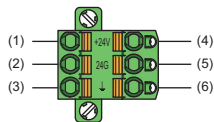
¹ Pour une alimentation à 24 V CC, utilisez une source d'alimentation (alimentation SELV) qui ne dépasse pas 30 V CA (valeur effective), 42,4 V (valeur de crête), ou 60 V CC. En outre, utilisez une source d'alimentation qui est appliquée au « circuit limité en énergie » spécifié dans IEC61010-1.

6.2 Signal names of the terminal block

Noms des signaux de la plaque à bornes

The following figure and table show signal names of the terminal block.

La figure et le tableau ci-dessous présentent les noms des signaux de la plaque à bornes.



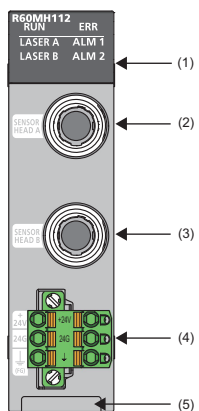
No.	Signal name	Function
(1)	+24V	24VDC (input) for power supply
(2)	24G	Ground for power supply
(3)	↓ (FG)	Functional earth
(4)	+24V	24VDC (output) for power supply
(5)	24G	Ground for power supply
(6)	↓ (FG)	Functional earth (Use prohibited)

N°	Nom de signal	Fonction
(1)	+24V	24 VCC (entrée) d'alimentation

N°	Nom de signal	Fonction
(2)	24G	Masse d'alimentation
(3)	↓ (FG)	Terre fonctionnelle
(4)	+24V	24 VCC (sortie) d'alimentation
(5)	24G	Masse d'alimentation
(6)	↓ (FG)	Terre fonctionnelle (Utilisation interdite)

6.3 Part names

The following figure and table show part names of the product.



No.	Name	Description
(1)	RUN LED	Indicates the operating status of the module. On: Normal operation Off: Module power supply interrupted
	ERR LED	Indicates the error status of the module. On: Minor error Flashing: Moderate error ¹ Off: Normal operation
	LASER A LED	On: Sensor head A laser emission Off: Sensor head A laser stop
	LASER B LED	On: Sensor head B laser emission Off: Sensor head B laser stop
	ALM1 LED	On: Alarm in OUT1 ¹ Flashing: The sensor head is being replaced. ² Off: Normal operation
	ALM2 LED	On: Alarm in OUT2 ¹ Flashing: The sensor head is being replaced. ² Off: Normal operation
(2)	Sensor head A connector	The sensor head connected to this connector is recognized as sensor head A, to activate the control module.
(3)	Sensor head B connector	The sensor head connected to this connector is recognized as sensor head B, to activate the control module.
(4)	External power supply terminal block	A terminal block for connecting an external power supply cable to the control module
(5)	Production information marking	Shows the production information (16 digits) of the module.

¹ For details, refer to the following.
[] MELSEC IQ-R Laser Displacement Sensor Control Module User's Manual (Application)

² For details, refer to the following.
[] MELSEC IQ-R Laser Displacement Sensor Control Module User's Manual (Startup)

6.4 Wiring products

Produits pour câblage

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. Pour le câblage, utiliser les fils prescrits.

Utiliser les bornes-barnes sans soudure répertoriées par UL et, pour le montage, utiliser l'outil recommandé par le fabricant de ces bornes.

Product	Solderless terminal/bar solderless terminal tool		Wire			
	Model	Diameter	Type	Material	Temperature rating	
Solderless terminal ¹	AI 0.25-10YE	24 to 14 AWG	Stranded	Copper	90°C or more	
	AI 0.34-10TQ					
	AI 0.5-10WH					
	AI 0.75-10GY					
	AI 1-10RD					
	AI 1.5-10BK					
Bar solderless terminal tool ¹	CRIMPFOX6	—	—	—	—	
	TE 0.5-10	24 to 14 AWG	Stranded	Copper	90°C or more	
TE 0.75-10						
TE 1.0-10						
TE 1.5-10						
TE 2.5-10						
Bar solderless terminal tool ²	NH 79A	—	—	—	—	

¹ Use products manufactured by PHOENIX CONTACT GmbH & Co. KG.

² Use products manufactured by NICHIFU Co., Ltd.

Produit	Outil pour borne/borne-barre sans soudure		Fil			
	Modèle	Diamètre	Type	Matériau	Gamme de température	
Borne sans soudure ¹	AI 0.25-10YE	24 à 14 AWG	Torsadé	Cuivre	90°C ou plus	
	AI 0.34-10TQ					
	AI 0.5-10WH					
	AI 0.75-10GY					
	AI 1-10RD					
	AI 1.5-10BK					
Outil pour borne-barre sans soudure ¹	CRIMPFOX6	—	—	—	—	
	TE 0.5-10	24 à 14 AWG	Torsadé	Cuivre	90°C ou plus	
TE 0.75-10						
TE 1.0-10						
TE 1.5-10						
TE 2.5-10						
Outil pour borne-barre sans soudure ²	NH 79A	—	—	—	—	

¹ Utiliser les produits fabriqués par PHOENIX CONTACT GmbH & Co. KG.

² Utiliser les produits fabriqués par NICHIFU Co., Ltd.

7. Information and services

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

Country/Region	Sales office/Tel
USA	MITSUBISHI ELECTRIC AUTOMATION, INC. 500 Corporate Woods Parkway, Vernon Hills, IL 60061, U.S.A. Tel : +1-847-478-2100
Mexico	MITSUBISHI ELECTRIC AUTOMATION, INC. Mexico Branch Mariano Escobedo #69, Col. Zona Industrial, Tlalnepantla Edo. Mexico, C.P.54030 Tel : +52-55-3067-7500
Brazil	MITSUBISHI ELECTRIC DO BRASIL COMÉRCIO E SERVIÇOS LTDA. Avenida Adelfino Cardana, 293, 21 andar, Bethaville, Barueri/SP, Brazil Tel : +55-11-4689-3000
Germany	MITSUBISHI ELECTRIC EUROPE B.V. German Branch Mitsubishi-Electro-Platz 1, 40882 Ratingen, Germany Tel : +49-2102-486-0
UK	MITSUBISHI ELECTRIC EUROPE B.V. UK Branch Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, U.K. Tel : +44-1703-28-8790
Ireland	MITSUBISHI ELECTRIC EUROPE B.V. Irish Branch Westgate Business Park, Ballymount, Dublin 24, Ireland Tel : +353-1-4198800
Italy	MITSUBISHI ELECTRIC EUROPE B.V. Italian Branch Centro Direzionale Colleoni-Palazzo Sirio Viale Colleoni 7, 20864 Agrate Brianza(Milano) Italy Tel : +39-039-60531
Spain	MITSUBISHI ELECTRIC EUROPE B.V. Spanish Branch Carretera de Rubí, 76-80-Apdo. 420, 08190 Sant Cugat del Vallés (Barcelona), Spain Tel : +34-935-65-3131
France	MITSUBISHI ELECTRIC EUROPE B.V. French Branch 25, Boulevard des Bouvets, 92741 Nanterre Cedex, France Tel : +33-1-55-68-55-68
Czech Republic	MITSUBISHI ELECTRIC EUROPE B.V. Czech Branch Avenir Business Park, Radická 75/113e, 158 00 Praha5, Czech Republic Tel : +420-251-551-470
Poland	MITSUBISHI ELECTRIC EUROPE B.V. Polish Branch ul. Krakowska 50, 32-083 Balice, Poland Tel : +48-12-347-65-00
Sweden	MITSUBISHI ELECTRIC EUROPE B.V. (Scandinavia) Fjällvägen 8, SE-22736 Lund, Sweden Tel : +46-9-625-10-00
Russia	MITSUBISHI ELECTRIC (RUSSIA) LLC St. Petersburg Branch Piskarevsky pr. 2, bld 2, lit "Sch", BC "Benus", office 720, 195027 St. Petersburg, Russia Tel : +7-812-633-3497
Turkey	MITSUBISHI ELECTRIC TURKEY A.Ş Umranıye Branch Serifali Mahallesi Nispetiye Sokak No:5, TR-34775 Umranıye/Istanbul, Turkey Tel : +90-216-526-3990
UAE	MITSUBISHI ELECTRIC EUROPE B.V. Dubai Branch Dubai Silicon Oasis, P.O.BOX 341241, Dubai, U.A.E. Tel : +971-4-3724716
South Africa	ADROIT TECHNOLOGIES 20 Waterford Office Park, 189 Witkoppen Road, Fourways, South Africa Tel : +27-11-658-8100
China	MITSUBISHI ELECTRIC AUTOMATION (CHINA) LTD. No.1386 Hongqiao Road, Mitsubishi Electric Automation Center, Shanghai, China Tel : +86-21-2322-3030
Taiwan	SETSUJO ENTERPRISE CO., LTD. 6F, No.105, Wugong 3rd Road, Wugu District, New Taipei City 24889, Taiwan Tel : +886-2-2299-2499
Korea	MITSUBISHI ELECTRIC AUTOMATION KOREA CO., LTD. 7F-9F, Gangseo Hangang X-tower A, 401, Yangcheon-ro, Gangseo-Gu, Seoul 07528, Korea Tel : +82-2-3860-9530
Singapore	MITSUBISHI ELECTRIC ASIA PTE. LTD. 307, Alexandra Road, Mitsubishi Electric Building, Singapore 159943 Tel : +65-6473-2308
Thailand	MITSUBISHI ELECTRIC FACTORY AUTOMATION (THAILAND) CO., LTD. 12th Floor, SV City Building, Office Tower 1, No. 89/19 and 20 Rama 3 Road, Kwang Bangpompang, Khet Yannawa, Bangkok 10120, Thailand Tel : +66-2682-6522
Vietnam	MITSUBISHI ELECTRIC VIETNAM COMPANY LIMITED Hanoi Branch 8th Floor, Detch Tower, 8 Ton That Thuyet Street, My Dinh 2 Ward, Nam Tu Liem District, Hanoi, Vietnam Tel : +84-4-3937-8075
Indonesia	PT. MITSUBISHI ELECTRIC INDONESIA Gedung Jaya 11th Floor, J.L. MH. Thamrin No.12, Jakarta Pusat 10340, Indonesia Tel : +62-21-3192-6461
India	MITSUBISHI ELECTRIC INDIA PVT. LTD. Pune Branch Emerald House, EL-2, J Block, M.I.D.C., Bhosari, Pune-411026, Maharashtra, India Tel : +91-20-2710-2000
Australia	MITSUBISHI ELECTRIC AUSTRALIA PTY. LTD. 348 Victoria Road, P.O. Box 11, Rydalmere, N.S.W 2116, Australia Tel : +61-2-9894-7777

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
 NAGOYA WORKS : 1-14, YADA-MINAMI 5-CHOME, HIGASHI-KU, NAGOYA, JAPAN

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