MITSUBISHI ELECTRIC

Programmable Controller

MELSEC iQ-R series

MELSEC iQ-R MES Interface Module Option Driver User's Manual

-SW1SFD-RMESOPRC-B
-SW1SFD-RMESOPSM-B
-SW1SFD-RMESOPOM-B

Powered by TAKEBISHI

This product was jointly developed by Mitsubishi and Takebishi Corporation.

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 MELSEC iQ-R Module Configuration Manual.

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

- When data change or mode change is performed from a personal computer to a running module, create an interlock circuit outside the programmable controller system, motion system, GOT, and robot to ensure that the whole system always operates safely.
- When the online operations are performed from a personal computer to a CPU module, the corrective actions against a communication error due to such as a cable connection fault should be predetermined as a system.

[Design Precautions]

⚠ CAUTION

- When connecting to a device of another manufacturer, read its manual carefully and follow the instructions.

[Startup and Maintenance Precautions]

⚠CAUTION

- The online operations performed from a personal computer to a running CPU module (program change while a CPU module is in RUN state, operating status change such as RUN-STOP switching, and remote control operation) have to be executed after the manual has been carefully read and the safety has been ensured.
- When changing a program while a CPU module is in RUN, it may cause a program corruption in some operating conditions. Fully understand the precautions before use.
- The positioning test functions such as OPR, JOG, inching, or testing positioning data for positioning module must be executed with the CPU module set to STOP after the manual has been carefully read and the safety has been ensured.
  Specially when executing the function on the network system, ensure the safety thoroughly since the machinery whose operation cannot be checked by an operator may be activated. The operation failure may cause the injury or machine damage.

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 WARNING 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.

INTRODUCTION

Thank you for purchasing a MELSEC iQ-R MES interface module option driver.
This manual describes the specifications, procedures before operation, and troubleshooting of this product.
Before using this product, please read this manual and the relevant manuals carefully, and develop familiarity with the functions and performance of this product to handle correctly.
Please make sure that the end users read this manual.

CONTENTS

RELEVANT MANUALS

Manual name [manual number]	Description	Available form
MELSEC iQ-R MES Interface Module Option Driver User's Manual [SH-082186ENG] (this manual)	Specifications, procedure before operation, and troubleshooting of an MES interface module option driver	Print book e-Manual PDF
MELSEC iQ-R MES Interface Module User's Manual (Startup) [SH-081422ENG]	Specifications, procedure before operation, wiring, and operation examples of an MES interface module	Print book e-Manual PDF
MELSEC iQ-R MES Interface Module User's Manual (Application) [SH-081423ENG]	Functions, MES Interface Function Configuration Tool, DB Connection Service, parameter setting, troubleshooting, input/output, and buffer memory of an MES interface module	Print book e-Manual PDF
MELSEC iQ-R Module Configuration Manual [SH-081262ENG]	The combination of the MELSEC iQ-R series modules, common information on the installation/wiring in the system, and specifications of the power supply module, base unit, SD memory card, and battery	e-Manual PDF

This manual does not include detailed information on the following:

- General specifications
- Applicable CPU modules and the number of mountable modules
- Applicable remote head modules and the number of mountable modules
- Installation

For details, refer to the following:

MELSEC iQ-R Module Configuration Manual

Point

e-Manual refers to the Mitsubishi Electric FA electronic book manuals that can be browsed using a dedicated tool.

e-Manual has the following features:

- Required information can be cross-searched in multiple manuals.
- Other manuals can be accessed from the links in the manual.
- Hardware specifications of each part can be found from the product figures.
- Pages that users often browse can be bookmarked.
- Sample programs can be copied to an engineering tool.

TERMS

Unless otherwise specified, this manual uses the following terms.

Term	Description
Configuration personal computer	A personal computer to set various settings required for operating an MES interface module. This computer can be shared with a server.
MES	An abbreviation for Manufacturing Execution Systems. A system for controlling and monitoring the plant status in real time to optimize production activities. The system enables to speed up responses to changes of a production plan and situation that lead to efficient production processes and optimization of production activities.
MES Interface Function Configuration Tool	An abbreviation for MELSEC iQ-R series MES Interface Function Configuration Tool.
MES interface module	An abbreviation for an RD81MES96N MES interface module.
MX MESInterface-R	A product name for SW1DND-RMESIF-E.
Omron Connection	An abbreviation for MELSEC iQ-R series MES Interface Module Option Driver Omron Connection.
Option driver	A generic term for MELSEC iQ-R series MES interface module option drivers.
Rockwell Connection	An abbreviation for MELSEC iQ-R series MES Interface Module Option Driver Rockwell Connection.
Siemens Connection	An abbreviation for MELSEC iQ-R series MES Interface Module Option Driver Siemens Connection.

1 OPTION DRIVER

An option driver is software to add a function for connecting to a device that is not supported as standard to an MES interface module.
The following types of option drivers are available. By installing each option driver, an MES interface module can be connected to each corresponding option driver-supported device.

Type	Description
Rockwell Connection	To connect to Rockwell PLCs.
Siemens Connection	To connect to Siemens PLCs.
Omron Connection	To connect to Omron PLCs.

Precautions

When an option driver is installed, the following processing times of an MES interface module is slower than when it is not installed.

- Time from when an MES interface module is started to when the information linkage function starts running
- Time from when the settings of an MES interface module are updated to when the information linkage function starts running

1.1 Software Configuration

An option driver consists of the following pieces of software:

- Option driver body
- Tool add-in

By installing an option driver body on an MES interface module, the MES interface module can be connected to an option driver-supported device.
In addition, by adding a tool add-in to MES Interface Function Configuration Tool, an option driver-supported device (product) can be set in an access target device setting and its device can be set in a device tag setting in MES Interface Function Configuration Tool.

Precautions

- An option driver body can be installed on an RD81MES96N only.
- A tool add-in can be added only when using MES Interface Function Configuration Tool stored in MX MESInterface-R the software version of which is '1.10L' or later.

MEMO

2 COMMON SPECIFICATIONS

This chapter explains the common specifications of an option driver.

For the access specifications of each option driver, refer to the corresponding one of the following:

☞ Page 29 Rockwell Connection, Page 33 Siemens Connection, Page 39 Omron Connection

Item		Specification
Access target device	Maximum number of settings (per option driver)	64 devices
Device tag component	Maximum number of settings (per access target device)	1024 components
	Maximum size (per access target device)	81920 bytes
	Data type	• Bit • Word [unsigned]/Bit string [16-bit] • Double word [unsigned]/Bit string [32-bit] • Word [signed] • Double word [signed] • 16bit BCD • 32bit BCD • Single-precision real number • Double-precision real number • Character string [Unicode] • Character string [ASCII/SJIS]
	Array type of an array tag	Continuous array
	Maximum size of an array tag (per access target device)	81920 bytes
Job	Access type	General access
	Access interval	• 1 to 9 × 100 ms • 1 to 3600 s

MEMO

3 PROCEDURE BEFORE OPERATION

This chapter shows the procedure before operation of an option driver.
To use an option driver, license certification using a license file is required.

Operating procedure

1. Acquire a license file.
☞ Page 14 Acquiring a License File

2. Enable the option driver setting.
For the method of enabling, refer to the following:
📖MELSEC iQ-R MES Interface Module Option Driver Installation Instructions

3. Install an option driver body on an MES interface module.
☞ Page 16 Option driver body

4. Register the acquired license file in the MES interface module.
☞ Page 23 Registering a License File

Point

When using an option driver before acquiring a license file, enable the temporary authentication of the option driver.
☞ Page 27 Enabling Temporary Authentication

5. Add a tool add-in to MES Interface Function Configuration Tool.
☞ Page 18 Tool add-in

6. Set parameters of the option driver.
Rockwell Connection: ☞ Page 30 Parameter Settings
Siemens Connection: ☞ Page 35 Parameter Settings
Omron Connection: ☞ Page 41 Parameter Settings

7. Write the settings to the MES interface module.
For the method for writing settings to an MES interface module, refer to the following:
📖MELSEC iQ-R MES Interface Module User's Manual (Application)

Point

For checking the availability of an option driver, refer to the following:
☞ Page 53 Checking the Availability of an Option Driver

3.1 Acquiring a License File

This section shows the procedure for acquiring a license file.
Note that it takes approximately a week to acquire a license file. When using an option driver before acquiring a license file, temporary authentication of the option driver is required.
☞ Page 27 Enabling Temporary Authentication

Operating procedure

1. Check the entitlement ID shown in the Entitlement ID Notification.
2. Check the product information of an MES interface module on which an option driver body is to be installed.

Point

The product information is displayed on an MES interface module.
For details, refer to the following:
📖MELSEC iQ-R MES Interface Module User's Manual (Startup)

3. Access to the web form for issuing licenses, then enter the following information and apply for the license.

- Entitlement ID
- Product information
- User information (company name, customer name, phone number, address, e-mail address, and others)

For the web form for issuing licenses, refer to the following:
📖MELSEC iQ-R MES Interface Module Option Driver License Application Instructions

4. Save the license file delivered to the entered e-mail address into a folder on the industrial PC in which MES Interface Function Configuration Tool is installed.

Precautions

- Be sure to enter the correct e-mail address carefully to receive a license file without fail.
- Do not change the extension (.v2c) of a license file.

4 INSTALLATION AND UNINSTALLATION

This chapter shows the methods for installing and uninstalling an option driver.

Considerations for installation and uninstallation

■Option driver body

- Up to three option driver bodies can be installed on an MES interface module.
- An option driver body cannot be installed by overwriting an existing one.
  To upgrade the version, uninstall an installed option driver body then restart an MES interface module, and install a new version of the option driver body.
- When an option driver body is uninstalled, an MES interface module must be restarted.
  An option driver body to be uninstalled can be used until the power of a programmable controller is turned OFF. However, the settings of an MES interface module cannot be updated.
  In addition, an option driver body to be uninstalled cannot be reinstalled before restarting an MES interface module.

■Tool add-in

- Up to three tool add-ins can be added to MES Interface Function Configuration Tool.
- When a tool add-in is added or deleted, MES Interface Function Configuration Tool must be restarted.
  A tool add-in to be added cannot be used before restarting MES Interface Function Configuration Tool.
  A tool add-in to be deleted cannot be used.
- If a setting of a tool add-in is used in MES Interface Function Configuration Tool, the tool add-in cannot be deleted.
- A tool add-in cannot be added by overwriting an existing one.
  To upgrade the version, delete an added tool add-in then add a new version of the tool add-in.

4.1 Installation Procedures

Option driver body

The following shows the procedures for installing an option driver body on an MES interface module.

For checking the version of an installed option driver body, refer to the following:

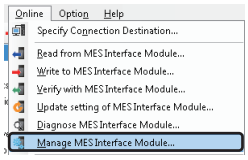
☞ Page 22 Option driver body

Using MES Interface Function Configuration Tool

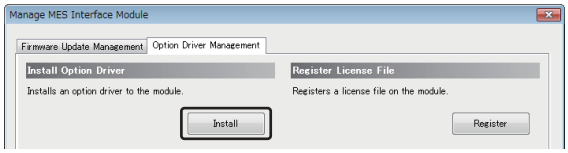
The following shows the installation procedure using MES Interface Function Configuration Tool.

Operating procedure

1. Select [Online] ⇨ [Manage MES Interface Module] in MES Interface Function Configuration Tool.



2. Click the [Install] button in the [Option Driver Management] tab.



3. Select the following folder in each product DVD-ROM, and click the [OK] button.

Model name	Folder
SW1SFD-RMESOPRC-B	Option Driver RC
SW1SFD-RMESOPSM-B	Option Driver SM
SW1SFD-RMESOPOM-B	Option Driver OM

Using an SD memory card

The following shows the installation procedure using an SD memory card.

Operating procedure

1. Turn the power of a programmable controller OFF.
2. Copy the following folder in each product DVD-ROM to the OPD folder in an SD memory card used for an MES interface module.

If the OPD folder does not exist in the SD memory card, create a new one.

Model name	Folder
SW1SFD-RMESOPRC-B	Option Driver RC\001
SW1SFD-RMESOPSM-B	Option Driver SM\002
SW1SFD-RMESOPOM-B	Option Driver OM\003

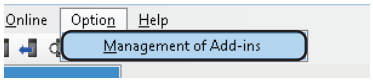
3. Insert the SD memory card into the MES interface module.
4. Turn the power of the programmable controller ON.

Tool add-in

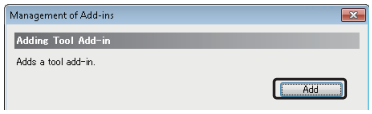
The following shows the procedure for adding a tool add-in to MES Interface Function Configuration Tool.
For checking the version of an added tool add-in, refer to the following:
☞ Page 22 Tool add-in

Operating procedure

1. Select [Option] ⇨ [Management of Add-ins] in MES Interface Function Configuration Tool.



2. Click the [Add] button.



3. Select the following folder in each product DVD-ROM, and click the [OK] button.

Model name	Folder
SW1SFD-RMESOPRC-B	Option Driver RC
SW1SFD-RMESOPSM-B	Option Driver SM
SW1SFD-RMESOPOM-B	Option Driver OM

4. Restart MES Interface Function Configuration Tool.

Point

Adding a tool add-in is applied to a configuration personal computer on which MES Interface Function Configuration Tool is running. Therefore, when starting multiple pieces of MES Interface Function Configuration Tool on the configuration personal computer after performing this procedure, the tool add-in is added to all of them.

4.2 Uninstallation Procedures

Option driver body

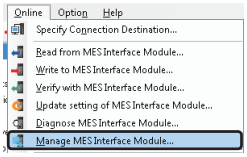
The following shows the procedures for uninstalling an option driver body from an MES interface module.

Using MES Interface Function Configuration Tool

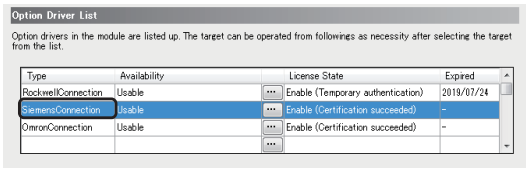
The following shows the uninstallation procedure using MES Interface Function Configuration Tool.

Operating procedure

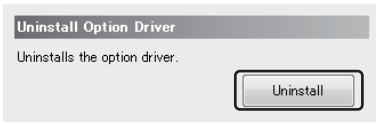
1. Select [Online] ⇨ [Manage MES Interface Module] in MES Interface Function Configuration Tool.



2. Select a target option driver body in "Option Driver List" in the [Option Driver Management] tab.



3. Click the [Uninstall] button.



4. Turn the power of the programmable controller OFF and ON.

Using an SD memory card

The following shows the uninstallation procedure using an SD memory card.

Operating procedure

1. Turn the power of a programmable controller OFF.
2. Delete any of the following folders in an SD memory card used for an MES interface module.

Option driver	Folder
Rockwell Connection	OPD\001
Siemens Connection	OPD\002
Omron Connection	OPD\003

3. Insert the SD memory card into the MES interface module.
4. Turn the power of the programmable controller ON.

Formatting an SD memory card

By formatting an SD memory card, all the files and folders including option driver bodies stored in the SD memory card are deleted.

For the method for formatting an SD memory card, refer to the following:

MELSEC iQ-R MES Interface Module User's Manual (Application)

Precautions

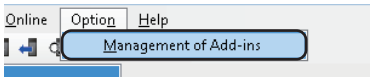
After formatting an SD memory card is completed, turn the power of a programmable controller OFF and ON.

Tool add-in

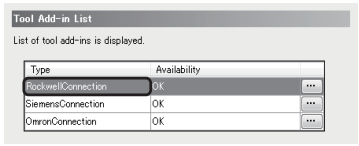
The following shows the procedure for deleting a tool add-in from MES Interface Function Configuration Tool.

Operating procedure

1. Select [Option] ⇨ [Management of Add-ins] in MES Interface Function Configuration Tool.



2. Select a target tool add-in in "Tool Add-in List".



3. Click the [Delete] button.

4. Restart MES Interface Function Configuration Tool.

Point

Deleting a tool add-in is applied to a configuration personal computer on which MES Interface Function Configuration Tool is running. Therefore, when starting multiple pieces of MES Interface Function Configuration Tool on the configuration personal computer after performing this procedure, the tool add-in is deleted from all of them.

4.3 Checking the Version

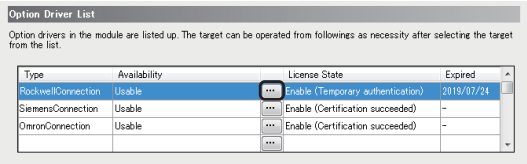
This section shows the procedures for checking the version of an option driver.

Option driver body

The following shows the procedure for checking the version of an option driver body.

Operating procedure

1. Select [Online] ⇨ [Manage MES Interface Module].
2. Select the [Option Driver Management] tab.
3. Click the [...] button in "Option Driver List".

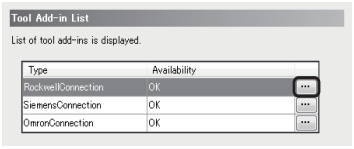


Tool add-in

The following shows the procedure for checking the version of a tool add-in.

Operating procedure

1. Select [Option] ⇨ [Management of Add-ins].
2. Click the [...] button in "Tool Add-in List".



5 LICENSE MANAGEMENT

This chapter shows the methods for managing licenses.
For checking the certification status of a license, refer to the following:
☞ Page 28 Checking the Certification Status of a License

5.1 Registering a License File

This section shows the methods for registering a license file.

Considerations

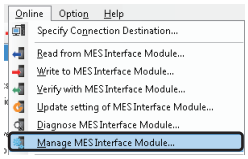
- Make sure that the product information entered when acquiring a license file matches that of a target MES interface module.
- A license file is retained in an SD memory card inserted into an MES interface module. Note that a license file is deleted if formatting an SD memory card.
- If registration of the license file of an option driver fails during temporary authentication, the certification of the license file also fails and the option driver may not be available. In this case, the state in which the option driver is temporarily authenticated can be restored by deleting the license file.

Using MES Interface Function Configuration Tool

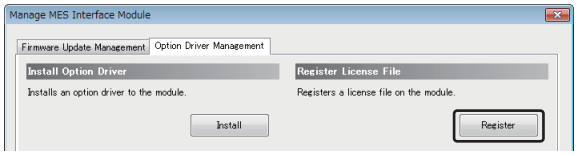
The following shows the registration procedure using MES Interface Function Configuration Tool.

Operating procedure

1. Select [Online] ⇨ [Manage MES Interface Module] in MES Interface Function Configuration Tool.



2. Click the [Register] button in the [Option Driver Management] tab.



3. Select a license file saved in the following section, and click the [Open] button.
☞ Page 14 Acquiring a License File

Using an SD memory card

The following shows the registration procedure using an SD memory card.

Operating procedure

1. Turn the power of a programmable controller OFF.

2. Change the name of a license file saved in the following section to 'lic.v2c'.

☞Page 14 Acquiring a License File

3. Copy the license file to any of the following folders in an SD memory card used for an MES interface module.

If no folders exist in the SD memory card, create a new one.

Option driver	Folder
Rockwell Connection	LIC\001
Siemens Connection	LIC\002
Omron Connection	LIC\003

4. Insert the SD memory card into the MES interface module.

5. Turn the power of the programmable controller ON.

5.2 Deleting a License File

This section shows the methods for deleting a license file.

Certification of a license fails in the following cases. If it fails, delete an invalid license file and register a valid one.

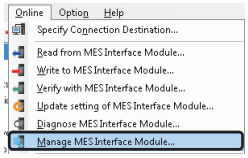
- An incorrect license file is registered.
- A failure occurs in an MES interface module that has succeeded in certification of a license, and the SD memory card is used for another MES interface module.

Using MES Interface Function Configuration Tool

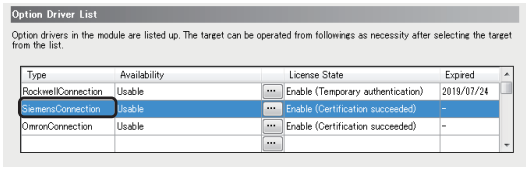
The following shows the deletion procedure using MES Interface Function Configuration Tool.

Operating procedure

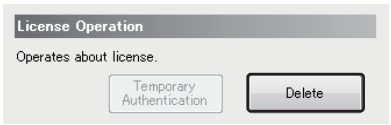
1. Select [Online] ⇨ [Manage MES Interface Module] in MES Interface Function Configuration Tool.



2. Select a target option driver body in "Option Driver List" in the [Option Driver Management] tab.



3. Click the [Delete] button.



Precautions

If a target option driver body is not displayed, perform this procedure after installing an option driver body or delete a license file by using an SD memory card.

Using an SD memory card

The following shows the deletion procedure using an SD memory card.

Operating procedure

1. Turn the power of a programmable controller OFF.
2. Delete any of the following folders in an SD memory card used for an MES interface module.

Option driver	Folder
Rockwell Connection	LIC\001
Siemens Connection	LIC\002
Omron Connection	LIC\003

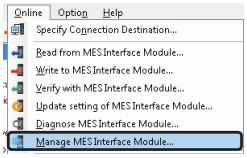
3. Insert the SD memory card into the MES interface module.
4. Turn the power of the programmable controller ON.

5.3 Enabling Temporary Authentication

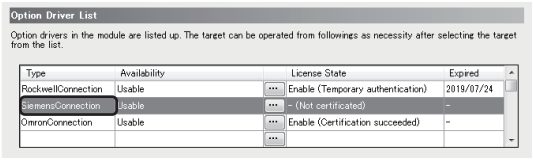
This section shows the method for enabling the temporary authentication of an option driver.
By enabling the temporary authentication, an option driver can be used before acquiring a license file.

Operating procedure

1. Select [Online] ⇨ [Manage MES Interface Module] in MES Interface Function Configuration Tool.



2. Select a target option driver body in "Option Driver List" in the [Option Driver Management] tab.



3. Click the [Temporary Authentication] button.

Precautions

- If there is a time difference between CPU No.1 on the own station and a configuration personal computer, temporary authentication cannot be enabled. In this case, match the time between them and enable the temporary authentication again.
- The effective period of temporary authentication is 14 days regardless of the time when it is enabled.
  (Example) If it is enabled on November 1, 2019, it will be expired at 00:00 on November 15, 2019.
- The expiration date of temporary authentication is calculated in local time.
- Temporary authentication can be enabled only once for an MES interface module per option driver. Make sure that a target MES interface module is correct by checking the product information in advance. (The product information must match that of an MES interface module for which a license file is to be acquired.)

5.4 Checking the Certification Status of a License

This section shows the two methods for checking the certification status of a license.

Checking with the LED status

The certification status can be checked with 'LICENSE LED' of an MES interface module.

LED status	Description
ON	Certification succeeded (succeeded in certification of all the licenses of option drivers used for settings of a running MES interface module)
Flashing	Temporarily authenticated (some option drivers used for settings of a running MES interface module are temporarily authenticated)
OFF	No licenses*1

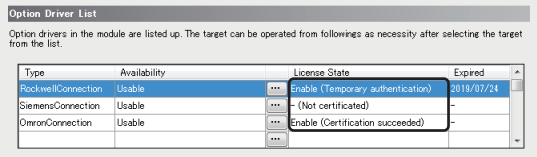
*1 A state in which both of the following conditions are satisfied.
No option drivers used for settings of a running MES interface module are temporarily authenticated.
Temporary authentication has expired or a license of an option driver that failed in certification exists.

Checking in MES Interface Function Configuration Tool

The certification status can be checked in the "Manage MES Interface Module" screen of MES Interface Function Configuration Tool.

Window

1. Select [Online] ⇨ [Manage MES Interface Module].
2. Select the [Option Driver Management] tab.
3. Check the certification status of a license in "Option Driver List".



Point

The expiration date of temporary authentication can be checked in "Expired Date" in the following cases:

- An option driver is temporarily authenticated.
- Temporary authentication has expired.

6 Rockwell Connection

This chapter explains Rockwell Connection.

6.1 Access Specifications

This section shows the access specifications of Rockwell Connection.

Accessible devices (products)

Series	Model name	Ethernet communication module
ControlLogix	1756	1756-ENBT, 1756-EN2T(/C, /T)
CompactLogix	1769-L32E, 1769-L35E	—*1
	1768	1768-ENBT
FlexLogix	1794	1788-ENBT
DriveLogix	5720, 5730	1788-ENBT

*1 Use a built-in Ethernet port of a CPU.

Accessible route

Access is available from a built-in Ethernet port (CH1, CH2) of an MES interface module via Ethernet.

Accessible devices

Devices that are set in a Rockwell PLC can be accessed.

Access units

Access in device units is available. Note that data synchronization is not guaranteed.

6.2 Parameter Settings

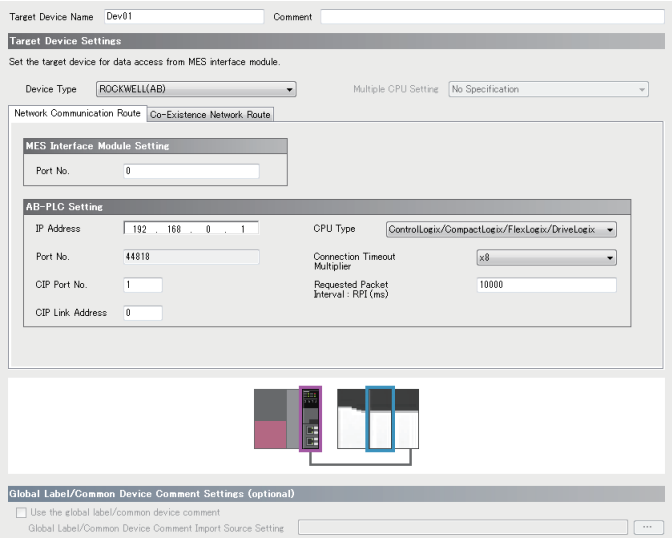
This section shows the parameter settings for Rockwell Connection in MES Interface Function Configuration Tool.
For details on MES Interface Function Configuration Tool, refer to the following:
MELSEC iQ-R MES Interface Module User's Manual (Application)

Access target device setting

The following shows the setting of an access target device accessed from an MES interface module.

Window

1. Click "Target Device Settings" in the edit item tree.
2. Click the [Edit] button in "Target Device Setting List".



Displayed items

Item		Description
Device Type		Select "ROCKWELL(AB)".
MES Interface Module Setting	Port No.	Set the port number of an MES interface module (0, or 1024 to 65535). If setting '0', a free port is automatically set.
AB-PLC Setting	IP Address	Set the IP address of an AB-PLC.
	Port No.	The port number*1 of an AB-PLC is displayed.
	CIP Port No.	Set the CIP port number of an AB-PLC (1 to 15).
	CIP Link Address	Set the CIP link address of an AB-PLC (0 to 255).
	CPU Type	The CPU type of a connection target AB-PLC is displayed.
	Connection Timeout Multiplier	Select a multiplier. A timeout time is calculated by multiplying an interval set for "Requested Packet Interval : RPI (ms)" by a multiplier selected for this item.
	Requested Packet Interval : RPI (ms)	Set an interval to connect to an Ethernet/IP-supported device (0 to 2147483647 milliseconds).

*1 Refers to the TCP/IP port number (44818) for Ethernet/IP.

Precautions

The following items cannot be set.

- Multiple CPU Setting
- Co-Existence Network Route setting
- Global Label/Common Device Comment Settings (optional)

Device tag setting

The following shows the setting of a device tag accessed from an MES interface module.
A screen for setting device tags is not provided in Rockwell Connection.
Enter devices set in a Rockwell PLC directly in the "Device Tag Setting" screen.
Set the following data types for "Data Type" according to the device definition of Rockwell PLCs. This allows access to devices of the corresponding data types.

Data type*1	MES interface module data type
BOOL	Bit
INT	Word [signed]
UINT	Word [unsigned]/Bit string [16-bit] 16bit BCD
DINT	Double word [signed]
UDINT	Double word [unsigned]/Bit string [32-bit] 32bit BCD
REAL	Single-precision real number
STRING	Character string [ASCII/SJIS]

*1 The size and sign must match those of a corresponding data type.

Precautions

- Array tags for which "Block Array" is selected for "Array Type" cannot be used.
- Arrays other than one-dimensional arrays (multidimensional arrays and structured arrays) of the simple type cannot be used.
- Arrays for the BOOL type or the STRING type cannot be used.
- An error may not occur even if an unsupported data type is used, however, the operation is not guaranteed.

6.3 Checking Methods for Error Descriptions

This section shows the checking methods for error descriptions of Rockwell Connection.

Checking method	Details
System monitor of an engineering tool	Error codes*1 can be checked by the system monitor of an engineering tool. For details, refer to the following: MELSEC iQ-R MES Interface Module User's Manual (Application)
MES Interface Function Configuration Tool	Error codes*1 can be checked by using the diagnostic function. For details, refer to the following: MELSEC iQ-R MES Interface Module User's Manual (Application)
Dot matrix LED	Error codes*1 can be checked with the dot matrix LED on the front of an MES interface module.

*1 Error code
If the same error occurs repeatedly, the error is output only for the first time. (Detailed information is also output only for the first occurrence of the error.)
When the same error occurs several times in different causes, take action to correct the error in the order of occurrence based on the error code and detailed information that are output at the first occurrence of the error.
If clearing the error (or resetting and turning the power OFF and ON) after taking the corrective action, error information is output when the same error occurs again.

7 Siemens Connection

This chapter explains Siemens Connection.

7.1 Access Specifications

This section shows the access specifications of Siemens Connection.

Accessible devices (products)

Series	Type	Model name	Ethernet communication module
SIMATIC S7	S7-300	CPU 312/314/315-2 (PN/DP), CPU317-2 (PN/DP)	CP343-1
	S7-400	CPU 412-1/2, CPU 417-4, CPU414-2/3 (PN/DP), CPU416-2/3 (PN/DP), CPU412-3H, CPU414 /417-4H	CP443-1
	S7-1200	CPU 1211/1212, CPU 1214C, CPU 1215C , CPU 1217C	—*1
	S7-1500	CPU 1511-1 PN, CPU 1513-1 PN, CPU 1515-2 PN, CPU 1516(F)-3 PN/DP, CPU 1518(F)-4 PN/DP	—*1

*1 Use a built-in Ethernet port of a CPU.

Accessible route

Access is available from a built-in Ethernet port (CH1, CH2) of an MES interface module via Ethernet.

Accessible devices

Device (register)	Name	Address range	MES interface module data type
M	Memory (Flag Memory)	0 to 65535*4	Bit Word [signed] Word [unsigned]/Bit string [16-bit] 16bit BCD Double word [signed] Double word [unsigned]/Bit string [32-bit] 32bit BCD Single-precision real number Double-precision real number Character string [ASCII/SJIS] Character string [Unicode]
I	Input		
Q	Output		
PI*1	Peripheral Input		
PQ	Peripheral Output		
DB*2	Data Block		
C*3	Counter		Word [unsigned]/Bit string [16-bit] 16bit BCD
T*3	Timer		

*1 Read-only
*2 Set it by combining a data block number and an address.
*3 Treated as BCD type data in Siemens PLCs. Set BCD type data when using it in MES Interface Function Configuration Tool.
*4 The address range differs depending on the setting contents of parameters of a CPU or PLC. For details, refer to the manual of a Siemens PLC.

Access units

Access in device units is available. Note that data synchronization is not guaranteed.

7.2 Parameter Settings

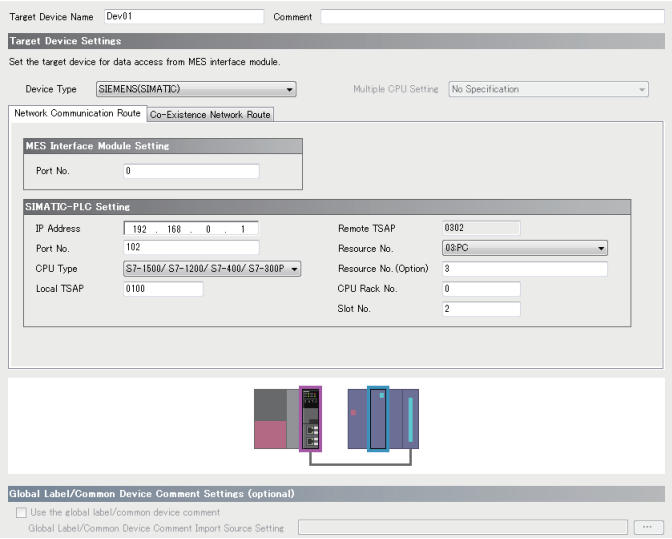
This section shows the parameter settings for Siemens Connection in MES Interface Function Configuration Tool.
For details on MES Interface Function Configuration Tool, refer to the following:
MELSEC iQ-R MES Interface Module User's Manual (Application)

Access target device setting

The following shows the setting of an access target device accessed from an MES interface module.

Window

1. Click "Target Device Settings" in the edit item tree.
2. Click the [Edit] button in "Target Device Setting List".



Displayed items

Item		Description
Device Type		Select "SIEMENS(SIMATIC)".
MES Interface Module Setting	Port No.	Set the port number of an MES interface module (0, or 1024 to 65535). If setting '0', a free port is automatically set.
SIMATIC-PLC Setting	IP Address	Set the IP address of a SIMATIC-PLC.
	Port No.	Set the port number of a SIMATIC-PLC (0 to 65535).
	CPU Type	The CPU type of a connection target SIMATIC-PLC is displayed.
	Local TSAP	Set TSAP (Transport Service Access Point) for an MES interface module. Set '0100'.
	Remote TSAP	TSAP (Transport Service Access Point)*1 of a SIMATIC-PLC is displayed.
	Resource No.	Select a resource number to connect to a SIMATIC-PLC.*2,*3
	Resource No. (Option)	When selecting "Custom" for "Resource No.", set a resource number.
	CPU Rack No.	Set the CPU rack number for a SIMATIC-PLC (0 to 7).
	Slot No.	Set the slot number for a SIMATIC-PLC (0 to 31).

*1 Set based on a resource number, CPU rack number, and slot number.
(Example) When selecting "03:PC" for "Resource No.", setting "0" for "CPU Rack No.", and setting "3" for "Slot No.", "0303" is set.

*2 Normally, select "03:PC". However, if the connection resources for '03:PC' on the SIMATIC-PLC side are occupied, select an item other than "03:PC".

*3 By selecting "Custom" when a resource number other than '01' to '03' can be used as a connection resource, a SIMATIC-PLC can be connected by using any resource number.

Precautions

The following items cannot be set.

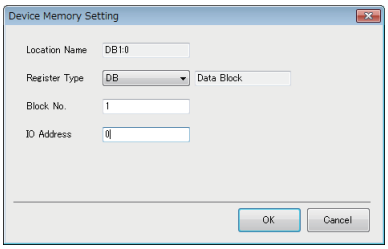
- Multiple CPU Setting
- Co-Existence Network Route setting
- Global Label/Common Device Comment Settings (optional)

Device tag setting

The following shows the setting of a device tag accessed from an MES interface module.

Window

1. Click "Device Tag Settings" in the edit item tree.
2. Click the [Edit] button in the "Device Tag Setting List" screen.
3. Click the [...] button of "Device Memory (Start)" in the "Device Tag Setting" screen.



Displayed items

Item	Description
Location Name	The location name[*1] of a device is displayed.
Register Type	Select a register type. For the register types, refer to the following: ☞ Page 34 Accessible devices
Block No.	When selecting "DB" for "Register Type", set a block number (1 to 65535).
IO Address	Set an I/O address (0 to 65535).

*1 Automatically generated based on other setting items.

Precautions

Array tags for which "Block Array" is selected for "Array Type" cannot be used.

7.3 Checking Methods for Error Descriptions

The checking methods for error descriptions of Siemens Connection are same as those shown in the following:

☞ Page 32 Checking Methods for Error Descriptions

8 Omron Connection

This chapter explains Omron Connection.

8.1 Access Specifications

This section shows the access specifications of Omron Connection.

Accessible devices (products)

Type	Model name	Ethernet communication module*1
SYSMAC-CJ	CJ1G, CJ1H, CJ1M, CJ2H, CJ2M	CJ1W-ETN21, CJ1W-ETN11, CJ1W-EIP21
SYSMAC-CS	CS1G, CS1H, CS1D	CS1D-ETN21D, CS1W-ETN21, CS1W-ETN11, CS1W-ETN01, CS1W-EIP21
SYSMAC-CP	CP1E, CP1L(-EM/EL), CP1H	CP1W-CIF41, CJ1W-ETN21, CJ1W-ETN11
SYSMAC-CV	CVM1(D), CV500, CV1000, CV2000	CV500-ETN01

*1 For a SYSMAC-CJ or SYSMAC-CP, a built-in Ethernet port of a CPU can also be used.

Accessible route

Access is available from a built-in Ethernet port (CH1, CH2) of an MES interface module via Ethernet.

Accessible devices

Device (register)	Name	Address range		MES interface module data type
		CJ/JS/CP	CV	
TC*1	Timer Contact	0 to 4095	0 to 1023	Bit
CC*1	Counter Contact			
CIO	Channel I/O	0 to 6143	0 to 2555	Bit Word [signed] Word [unsigned]/Bit string [16-bit] 16bit BCD Double word [signed] Double word [unsigned]/Bit string [32-bit] 32bit BCD Single-precision real number Double-precision real number Character string [ASCII/SJIS] Character string [Unicode]
WR	Internal Auxiliary Relay	0 to 511	—	
HR	Hold Relay	0 to 511	—	
AR	Special Auxiliary Relay	0 to 959	0 to 511	
LR*2	Link Relay	—	—	
TN	Timer Current Value	0 to 4095	0 to 1023	
CN	Counter Current Value			
DM	Data Memory	0 to 32767	0 to 24575	
EM*3	Expanded Data Memory	0 to 32767	0 to 32767	

*1 Read-only
*2 Cannot be written to AR0 to AR447.
*3 Set it by combining a bank number and a device number.

Access units

Access in device units is available. Note that data synchronization is not guaranteed.

8.2 Parameter Settings

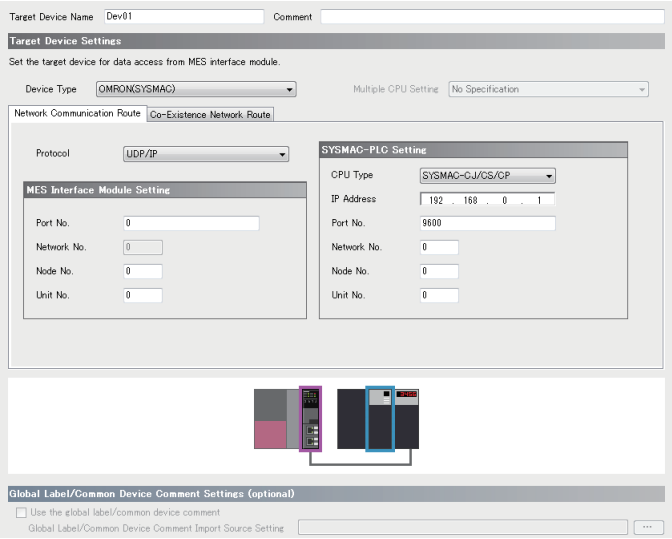
This section shows the parameter settings for Omron Connection in MES Interface Function Configuration Tool.
For details on MES Interface Function Configuration Tool, refer to the following:
MELSEC iQ-R MES Interface Module User's Manual (Application)

Access target device setting

The following shows the setting of an access target device accessed from an MES interface module.

Window

1. Click "Target Device Settings" in the edit item tree.
2. Click the [Edit] button in "Target Device Setting List".



Displayed items

Item		Description
Device Type		Select "OMRON(SYSMAC)".
Protocol		Select "TCP/IP" or "UDP/IP".
MES Interface Module Setting	Port No.	Set the port number of an MES interface module (0, or 1024 to 65535). If setting '0', a free port is automatically set.
	Network No.	A value set for "Network No." in "SYSMAC-PLC Setting" is automatically set.
	Node No.*1	When selecting "UDP/IP" for "Protocol", set the node number of an MES interface module (0 to 255). Set it based on the following: • Fourth octet of the IP address of an MES interface module • Routing table set for a SYSMAC-PLC
	Unit No.	Set the module number of an MES interface module (0 to 255). Normally, set '0'.
SYSMAC-PLC Setting	CPU Type	Select the CPU type of a connection target SYSMAC-PLC.
	IP Address	Set the IP address of a SYSMAC-PLC.
	Port No.	Set the port number of a SYSMAC-PLC (0 to 65535).
	Network No.	Set a network address set for an Ethernet communication module of a SYSMAC-PLC (0 to 255).
	Node No.	Set the node number of a SYSMAC-PLC (0 to 255). Set it based on the following: • Fourth octet of the IP address of a SYSMAC-PLC • Routing table set for a SYSMAC-PLC
	Unit No.	Set the module number of an access target (0 to 255).

*1 A value set for this item is not used when "TCP/IP" is selected for "Protocol".

Precautions

The following items cannot be set.

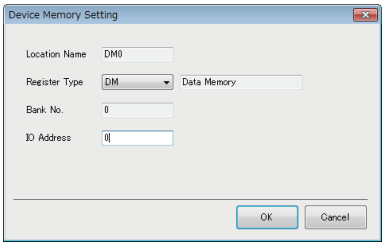
- Multiple CPU Setting
- Co-Existence Network Route setting
- Global Label/Common Device Comment Settings (optional)

Device tag setting

The following shows the setting of a device tag accessed from an MES interface module.

Window

1. Click "Device Tag Settings" in the edit item tree.
2. Click the [Edit] button in the "Device Tag Setting List" screen.
3. Click the [...] button of "Device Memory (Start)" in the "Device Tag Setting" screen.



Displayed items

Item	Description
Location Name	The location name[*1] of a device is displayed.
Register Type	Select a register type. For the register types, refer to the following: ☞ Page 40 Accessible devices
Bank No.	When selecting "EM" for "Register Type", set a bank number (0 to 31).
IO Address	Set an I/O address (0 to 32767).

*1 Automatically generated based on other setting items.

Precautions

Array tags for which "Block Array" is selected for "Array Type" cannot be used.

8.3 Checking Methods for Error Descriptions

The checking methods for error descriptions of Omron Connection are same as those shown in the following:

☞ Page 32 Checking Methods for Error Descriptions

APPENDIX

Appendix 1 Error Code List

This section shows the error code list for an option driver.

For error codes other than those shown in this section, refer to the following:

MELSEC iQ-R MES Interface Module User's Manual (Application)

Error code*1	Error name	Error description	Corrective action
1B00H	Option driver error	Error occurred on the option driver.	Please refer to the user's manual of the option driver.
1B01H	Option driver error	Error occurred on the option driver.	Please refer to the user's manual of the option driver.
1B02H	Option driver settings error	The settings of option drivers may be corrupted.	• Retry the writing of the settings with MES Interface Function Configuration Tool. • Retry the test in the case of executing communication test. • Please install the latest version of the option driver if the same error occurs again.
1B03H	Option driver not installed error	The option driver which is used in the target devices is not installed.	Install the option driver to be used for the target device.
1B04H	Option driver license not registered error	The license of the option driver is not certificated.	• Register the license file of the option driver to be used. • Start the temporary authentication of the option driver to be used.
1B05H	Option driver unsupported version error	The option driver installed in the module does not support some functions.	Please install the latest version of the option driver to MES interface module.
1B06H	Option driver communication connection error	A communication error has occurred between the module and a target device supported by the option driver.	Check whether the device set in the "Target Device Settings" can be connected.
3B10H	Option driver error	Failed to execute initial processing of the option drivers.	• Install the option driver again after uninstalling. • Please install the latest version of the option driver if the same error occurs again.
3B11H	Option driver error	Failed to execute initial processing of the option drivers.	• Install the option driver again after uninstalling. • Please install the latest version of the option driver if the same error occurs again.

*1 For more detailed causes and corrective actions, refer to the following:

☞ Page 46 List of error codes displayed in detailed information 3

A

List of error codes displayed in detailed information 3

The following table shows the list of error codes displayed in detailed information 3 and their respective causes and corrective actions.

Error code	Error cause	Corrective action
0001H	A specified option driver is not loaded.	• Reinstall the option driver, then restart the MES interface module. • Turn the power OFF and ON or reset the CPU module. • If the problem is still not resolved, contact the publisher of the option driver.
0002H	A module specified when loading an option driver does not exist.	
0003H	A specified version.txt does not exist.	
0004H	Required information (type information) is not included in the context file.	
0005H	Required information in the context file is insufficient.	
0006H	A module of an installed option driver is incorrect. (A file is corrupted or overwritten etc.)	
0007H	The format of the context file is incorrect.	
0008H	API of an option driver is called even though the option driver has not been initialized.	
0009H	A registered license file is invalid.	• Delete the registered license file, then register a new one. • Start the temporary authentication of the option driver to be used.
000AH	A checksum and a value (CODE2) do not match in the context file.	• Retry the writing of the settings with MES Interface Function Configuration Tool. • Delete a tool add-in and add it again, then set an option driver again. • If the problem is still not resolved, contact the publisher of the option driver.
000BH	A checksum for an option driver does not match a value (CODE1) in the context file.	• Reinstall the option driver, then restart the MES interface module. • Turn the power OFF and ON or reset the CPU module. • If the problem is still not resolved, contact the publisher of the option driver.
000CH	The OPD version of the context file is newer than that in the add-in adapter.	• Install the latest option driver, then restart the MES interface module. • If the problem is still not resolved, contact the publisher of the option driver.
000DH	The major version of the context file is newer than that in the add-in adapter.	
000EH	Opening a port of an access target device fails.	• Check whether the access target device setting is correct. • Check the status of the access target device. • Check whether the route to the access target device is correct. • Check whether there is any problem in the route to the access target device.
000FH	The communication setting of an access target device is not proper.	
0010H	A response equivalent to NAK is received from an access target device.	
0011H	The length of received data is short.	• Install the latest option driver, then restart the MES interface module. • If the problem is still not resolved, contact the publisher of the option driver.
0012H	Parameters set in an MES interface module are incorrect.	• Check whether writing to a read-only device is performed. • Retry the writing of the settings with MES Interface Function Configuration Tool. • Delete a tool add-in and add it again, then set an option driver again.
0013H	An unexpected error has occurred.	• Install the latest option driver, then restart the MES interface module. • If the problem is still not resolved, contact the publisher of the option driver.

Appendix 2 Buffer Memory

This section shows the buffer memories in which information on an option driver is stored.

- Un\1038 to 1085

For the buffer memories other than the above, refer to the following:

MELSEC iQ-R MES Interface Module User's Manual (Application)

Buffer memory list

The following table shows the buffer memories in which information on an option driver is stored.

R: Only reading is possible. W: Only writing is possible. R/W: Both reading and writing are possible.

Address Dec (Hex)	Description	Name and description			Initial value	R/W
1038 (40EH)	Option driver information	Option driver 1 detailed information	Version information	Option driver ID • 0: Not installed • 1: Rockwell Connection • 2: Siemens Connection • 3: Omron Connection	0	R
1039 (40FH)				Software version	0	R
1040 (410H)			Option driver management information	Option driver operating status • 0: Not installed • 1: Usable • 2: Usable (unable to update settings)	0	R
1041 (411H)			License management information	License certification status • 0x00: Not certificated • 0x01: Temporarily authenticated (usable) • 0x02: Expired • 0x10: Certification failed • 0x11: Certification succeeded (usable)	0	R
1042 to 1044 (412H to 414H)				Status of temporary authentication • 0: Temporary authentication is not enabled yet • Value other than '0': Expiration date of temporary authentication (YYMMDD) (Example) December 30, 2018: 181230	0	R
1045 to 1053 (415H to 41DH)			System area		—	—
1054 to 1085 (41EH to 43DH)		Option driver 2 to 3 detailed information	Same as option driver 1 detailed information		0	R

A

Buffer memory details

The following shows the details of the buffer memories in which information on an option driver is stored.

Option driver 1 detailed information (Un\G1038 to 1053)

Detailed information on option driver 1 is displayed.

■Version information (Un\G1038 to 1039)

• Option driver ID (Un\G1038)

An option driver ID is stored.

0: Not installed

1: Rockwell Connection

2: Siemens Connection

3: Omron Connection

• Software version (Un\G1039)

A software version is stored.

■Option driver management information (Un\G1040)

The operating status is stored.

0: Not installed

1: Usable

2: Usable (unable to update settings)

■License management information (Un\G1041 to 1044)

• License certification status (Un\G1041)

The license certification status is stored.

0x00: Not certificated

0x01: Temporarily authenticated (usable)

0x02: Expired

0x10: Certification failed

0x11: Certification succeeded (usable)

• Status of temporary authentication (Un\G1042 to 1044)

The status of temporary authentication is stored.

0: Temporary authentication is not enabled yet

Value other than '0': Expiration date of temporary authentication (YYMMDD)

The expiration date of temporary authentication is stored as shown in the following table.

Address	Description
Un\G1042	YY (year)
Un\G1043	MM (month)
Un\G1044	DD (day)

Option driver 2 detailed information (Un\G1054 to 1069)

Same as 'Option driver 1 detailed information' (Un\G1038 to 1053)

Option driver 3 detailed information (Un\G1070 to 1085)

Same as 'Option driver 1 detailed information' (Un\G1038 to 1053)

Appendix 3 Saving a Project to a CSV File

This section shows the specifications when saving a project in which an option driver is set to a CSV file.
For the contents other than those of items shown in this section and the input/output specifications of a CSV file, refer to the following:
MELSEC iQ-R MES Interface Module User's Manual (Application)

ADDIN folder

An ADDIN folder is output to a user-specified folder.

Folder name	Stored file	Content
ADDIN000*1	xxx*2_acssry.csv	Communication setting
	xxx*2_dataaddress.csv*3	Data address setting
	dataaddress_mapping.csv*3	Mapping information

*1 An integer indicating an option driver ID. It differs depending on an option driver.
Rockwell Connection: 001
Siemens Connection: 002
Omron Connection: 003
*2 Indicates the number of an access target device setting (three digits) in which an option driver-supported device is set.
*3 Not used when opening a CSV file.

Details of files

■xxx_acssry.csv

• Rockwell Connection

Column title	Content	CSV format version
dataAddressCount	Number of data addresses	3
comID	Communication ID	3
protocol	Protocol	3
cpuType	CPU type	3
unitType	Module type	3
rmesIpAddr	IP address on the RMESN module side	3
rmesPortNo	Port number on the RMESN module side	3
plcIpAddr	IP address on the AB-PLC side	3
plcPortNo	Port number on the AB-PLC side	3
cipPortNo	CIP port number	3
cipLinkAddr	CIP link address	3
CTM	Connection Timeout Multiplier	3
RPI	Request Packet Interval	3
delay	Send delay	3
timeout	Timeout	3
retry	Number of retries	3

• Siemens Connection

Column title	Content	CSV format version
dataAddressCount	Number of data addresses	3
comID	Communication ID	3
protocol	Protocol	3
cpuType	CPU type	3
unitType	IP address on the RMESN module side	3
rmesIpAddr	Port number on the RMESN module side	3
rmesPortNo	Local TSAP	3
plcIpAddr	IP address on the SIMATIC-PLC side	3
plcPortNo	Port number on the SIMATIC-PLC side	3
remoteTSAP	Remote TSAP	3

Column title	Content	CSV format version
resourceNo	Resource number	3
resourceNoOther	Resource number (other)	3
cpuRackNo	CPU rack number	3
slotNo	Slot number	3
maxMessageLength	Maximum message length	3
readBlockSize	Number of read blocks	3
writeBlockSize	Number of written blocks	3
delay	Send delay	3
timeout	Timeout	3
retry	Number of retries	3

• Omron Connection

Column title	Content	CSV format version
dataAddressCount	Number of data addresses	3
comID	Communication ID	3
protocol	Protocol	3
cpuType	CPU type	3
rmesIpAddr	IP address on the RMESN module side	3
rmesPortNo	Port number on the RMESN module side	3
rmesNetworkNo	Network number on the RMESN module side	3
rmesNodeNo	Node number on the RMESN module side	3
rmesUnitNo	Module number on the RMESN module side	3
plcIpAddr	IP address on the SYSMAC-PLC side	3
plcPortNo	Port number on the SYSMAC-PLC side	3
plcNetworkNo	Network number on the SYSMAC-PLC side	3
plcNodeNo	Node number on the SYSMAC-PLC side	3
plcUnitNo	Module number on the SYSMAC-PLC side	3
readPointBit	Number of points read in a batch (bit)	3
readPointWord	Number of points read in a batch (word)	3
delay	Send delay	3
timeout	Timeout	3
retry	Number of retries	3

■xxx_dataaddress.csv

• Rockwell Connection

Column title	Content	CSV format version
acssryKey	Accessory key	3
parentRecordKey	Parent record key	3
devTagID	Device tag ID	3
devTagElmID	Device tag component ID	3
dataAddressID	Data address ID	3
tagAddr	Tag address	3
dataType	Data type	3
strSize	String size	3
arySize	Array size	3
aryType	Array type	3

• Siemens Connection

Column title	Content	CSV format version
acssryKey	Accessory key	3
parentRecordKey	Parent record key	3
devTagID	Device tag ID	3
devTagElmID	Device tag component ID	3
dataAddressID	Data address ID	3

Column title	Content	CSV format version
regType	Register type	3
blockNo	Block number	3
regAddress	I/O address	3
s5TimerType	S5 timer type	3
bitpos	Bit position	3
dataType	Data type	3
strSize	String size	3
arySize	Array size	3
aryType	Array type	3

• Omron Connection

Column title	Content	CSV format version
acssryKey	Accessory key	3
parentRecordKey	Parent record key	3
devTagID	Device tag ID	3
devTagElmID	Device tag component ID	3
dataAddressID	Data address ID	3
regType	Register type	3
bankNo	Bank number	3
regAddress	I/O address	3
bitpos	Bit position	3
dataType	Data type	3
strSize	String size	3
arySize	Array size	3
aryType	Array type	3

■dataaddress_mapping.csv

Column title	Content	CSV format version
recordKey	Record key	3
parentKey	Parent key	3
ID	ID	3
compType	Component type	3

Setting information file

Information on a set option driver is output to the following items in setting information files.

TARGET_DEVICE.CSV

Column title	Content	Setting value	Description of setting value
DEVICE TYPE	Device type	ADDIN000*1	Option driver-supported device

*1 An integer indicating an option driver ID. It differs depending on an option driver.
Rockwell Connection: 001
Siemens Connection: 002
Omron Connection: 003

export_info.txt

Item name	Content
TOOL ADDINS	Tool add-in

Ex.

File output example

```
[PROJECT NAME]
NewProject
[EXPORT DATE]
2019/11/01 17:34:24.669
[TOOL VERSION]
1.10L
[TOOL ADDINS]
001*1: Rockwell Connection
```

*1 An integer indicating an option driver ID. It differs depending on an option driver.
Rockwell Connection: 001
Siemens Connection: 002
Omron Connection: 003

Appendix 4 Checking the Availability of an Option Driver

This section shows the procedures for checking the availability of an option driver.

Option driver body

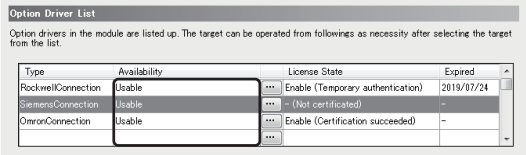
The following shows the procedure for checking the availability of an option driver body.

Operating procedure

1. Select [Online] ⇨ [Manage MES Interface Module].
2. Check the availability in "Option Driver List" in the [Option Driver Management] tab.

- Usable: An option driver body is usable.
- Usable (Unable to update settings): An option driver body is usable. (Settings of an MES interface module cannot be updated.)

For a case other than the above, nothing is displayed.



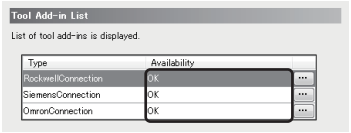
Tool add-in

The following shows the procedure for checking the availability of a tool add-in.

Operating procedure

1. Select [Option] ⇨ [Management of Add-ins].
2. Check the availability in "Tool Add-in List".

- OK: A tool add-in can be used.
- - (Waiting for restart): A tool add-in cannot be used. (State in which a tool add-in is added or deleted but MES Interface Function Configuration Tool is not restarted.)



A

Appendix 5 System Recovery When a Failure Occurs in a Module

License certification of an option driver can be performed only to an MES interface module the product information of which was entered when acquiring a license file. Therefore, if using an SD memory card in which the license file is saved for another MES interface module after a failure occurs, license certification will fail.
The following shows the procedures for recovering the system when a failure occurs in an MES interface module.

Using another module

1. Prepare an MES interface module for which the temporary authentication of an option driver is not enabled.
2. Insert an SD memory card used when a failure occurred into the MES interface module, and turn the power of a programmable controller ON.
3. Delete a license file saved in the SD memory card.

☞ Page 25 Deleting a License File

4. Enable the temporary authentication of the option driver.

☞ Page 27 Enabling Temporary Authentication

5. Check the product information of the MES interface module for which the option driver is to be used.

Point

The product information can be checked in the "Diagnostics" screen displayed by selecting [Online] ⇨ [Diagnose MES Interface Module] in MES Interface Function Configuration Tool.
For details, refer to the following:
MELSEC iQ-R MES Interface Module User's Manual (Application)

6. Contact the publisher of the license file to apply for a transfer of the license.
7. Register a new license file.

☞ Page 23 Registering a License File

Repairing and using a module in which a failure occurs

1. Contact your local Mitsubishi Electric sales office or representative to request repair of an MES interface module in which a failure occurs.
2. Perform any of the following operations depending on the state of the repaired MES interface module.

- The circuit board has been replaced: Perform step 2 and later shown in the following:

☞ Page 54 Using another module

- The circuit board has not been replaced (factory default state): Perform the procedure shown in the following:

☞ Page 13 PROCEDURE BEFORE OPERATION

- The circuit board has not been replaced (state other than the factory default state): Insert an SD memory card used when a failure occurred into an MES interface module, and turn the power of a programmable controller ON.

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MEMO

REVISIONS

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

Revision date	*Manual number	Description
October 2019	SH(NA)-082186ENG-A	First edition
June 2023	SH(NA)-082186ENG-B	■Added or modified parts Section 6.2, Section 7.1, Section 8.1

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