



DAUDIN MELSEC-Q Modbus TCP Connection User Manual

[Home](#) » [DAUDIN](#) » DAUDIN MELSEC-Q Modbus TCP Connection User Manual 

Contents

- [1 DAUDIN MELSEC-Q Modbus TCP Connection](#)
- [2 Remote I/O Module System Configuration List](#)
- [3 Gateway Parameter Settings](#)
- [4 MELSEC-Q series Connection Setup](#)
- [5 Simple Program Demonstration using MELSEC-Q series and](#)
- [6 Documents / Resources](#)
- [7 Related Posts](#)



DAUDIN MELSEC-Q Modbus TCP Connection



Product Information

The 2302EN V2.0.0 and MELSEC-Q Modbus TCP Connection Operating Manual provides instructions on how to connect and configure a remote I/O module system using various components including a Modbus TCP-to-Modbus RTU/ASCII gateway, a Master Modbus RTU main controller, Digital Input and Output modules, and Power Supply modules. The gateway is used externally to connect with MELSEC-Q series' communication port (Modbus TCP) and the main controller is in charge of the management and dynamic configuration of I/O parameters and so on. The power module is standard for remote I/Os and users can choose the model or brand of power module they prefer.

Product Usage Instructions

Remote I/O Module System Configuration List

The Remote I/O Module System Configuration List provides a list of the various modules that can be used to configure the system including the Gateway, Main Controller, Digital Input and Output modules, and Power Supply modules. Each module has a Part No., Specification, and Description.

Gateway Parameter Settings

The Gateway Parameter Settings section details how to connect a gateway to MELSEC-Q series. For detailed information regarding these settings, please refer to the Series Product Manual.

i-Designer Program Setup

1. Make sure that the module is powered and connected to the gateway module using an Ethernet cable.
2. Launch the i-Designer software.
3. Select M Series Module Configuration.
4. Click on the Setting Module icon.
5. Enter the Setting Module page for M-series.
6. Select the mode type based on the connected module.
7. Click on Connect.
8. Configure the Gateway Module IP Settings. Note: The IP address must be in the same domain as the MELSEC-Q controller.
9. Configure the Gateway Module Operational Modes. Note: Set Group 1 as Slave and set the gateway to use the first set of RS485 port to connect to the main controller (GFMS-RM01N).

MELSEC-Q series Connection Setup

The MELSEC-Q series Connection Setup chapter explains how to use the GX Works2 program to use the QJ71MT91 module to connect MELSEC-Q series to a gateway module and add a remote I/O module. For detailed information, please refer to the MELSEC-Q Series Manual.

MELSEC-Q series Hardware Connections

1. The QJ71MT91 module's Ethernet port is at its bottom center and can be connected to the gateway.

MELSEC-Q series IP Address and Connection Setup

1. Launch GX Works 2 and right-click on the Intelligent Function Module menu under Project on the left side.
2. Click on New Module to create a QJ71MB91 module.

Remote I/O Module System Configuration List

Part No.	Specification	Description
GFGW-RM01N	Modbus TCP-to-Modbus RTU/ASCII, 4 Ports	Gateway
GFMS-RM01S	Master Modbus RTU, 1 Port	Main Controller
GFDI-RM01N	Digital Input 16 Channel	Digital Input
GFDO-RM01N	Digital Output 16 Channel / 0.5A	Digital Output
GFPS-0202	Power 24V / 48W	Power Supply
GFPS-0303	Power 5V / 20W	Power Supply

Product Description

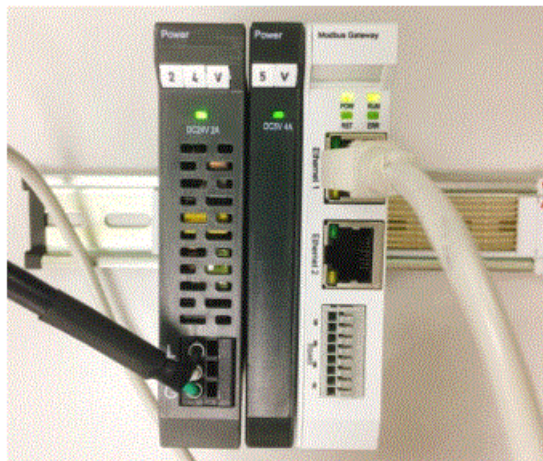
- I. The gateway is used externally to connect with MELSEC-Q series' communication port (Modbus TCP)
- II. The main controller is in charge of the management and dynamic configuration of I/O parameters and so on.
- III. The power module is standard for remote I/Os and users can choose the model or brand of power module they prefer.

Gateway Parameter Settings

This section details how to connect a gateway to MELSEC-Q series. For detailed information **iD-GRIDTM**, please refer to the **iD-GRIDTM** Series Product Manual

Designer Program Setup

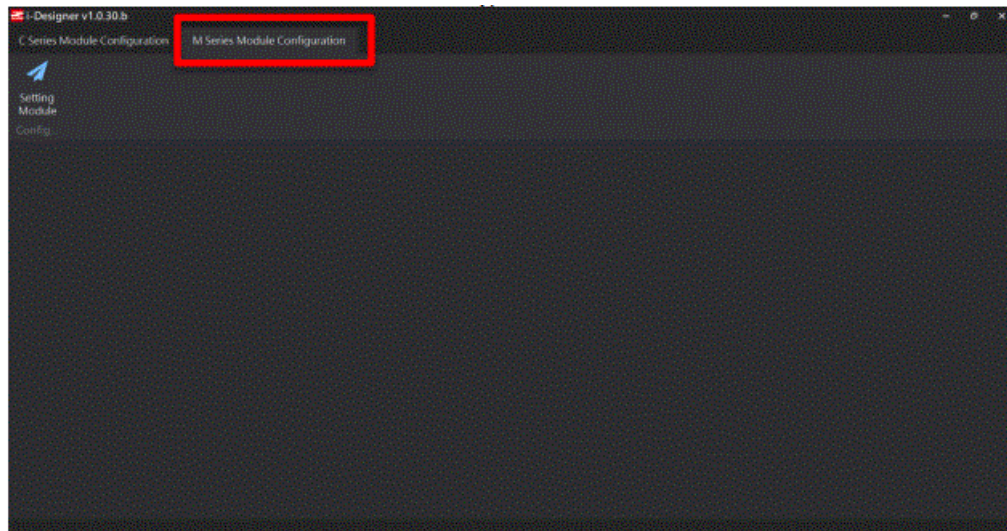
1. Make sure that the module is powered and connected to the gateway module using an Ethernet cable



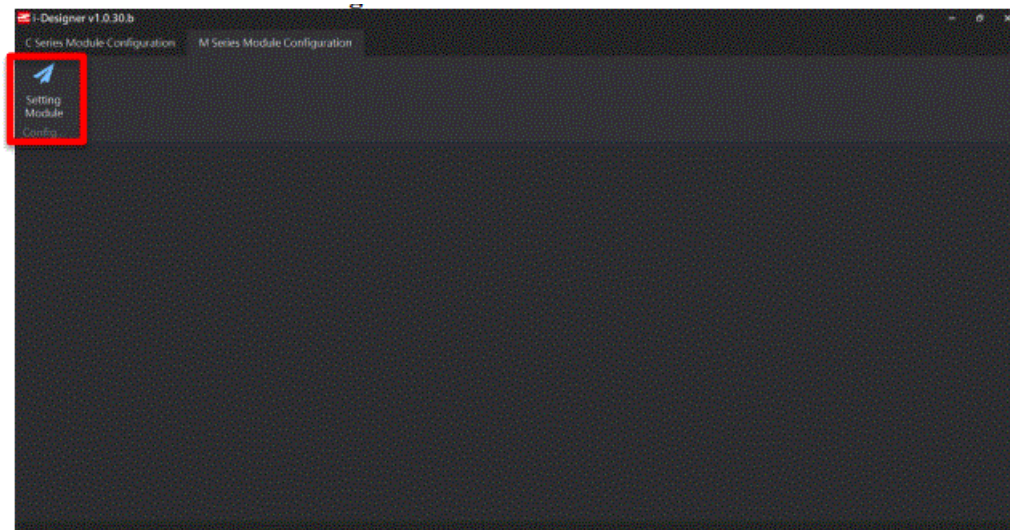
2. Click to launch the software



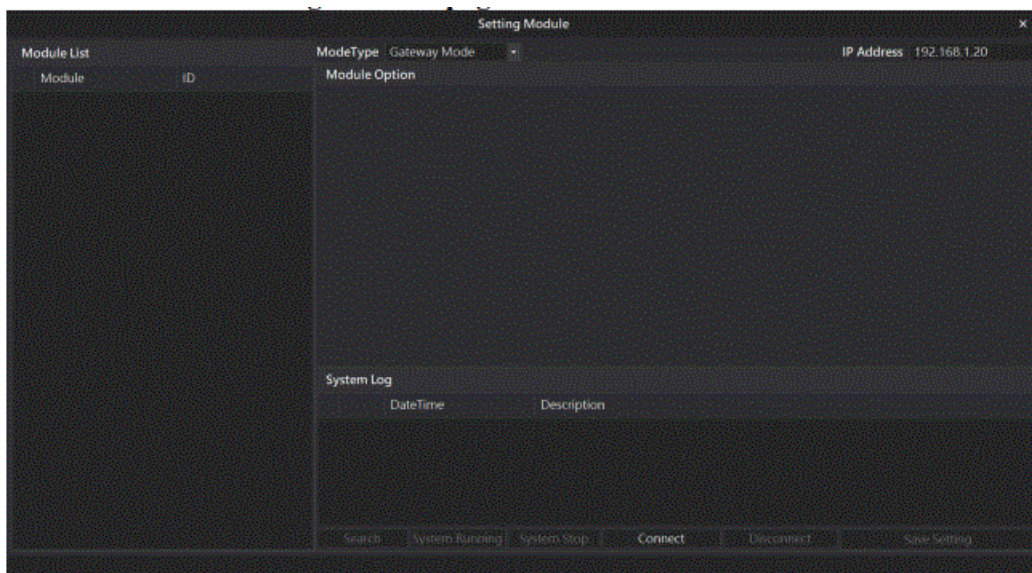
3. Select “M Series Module Configuration”



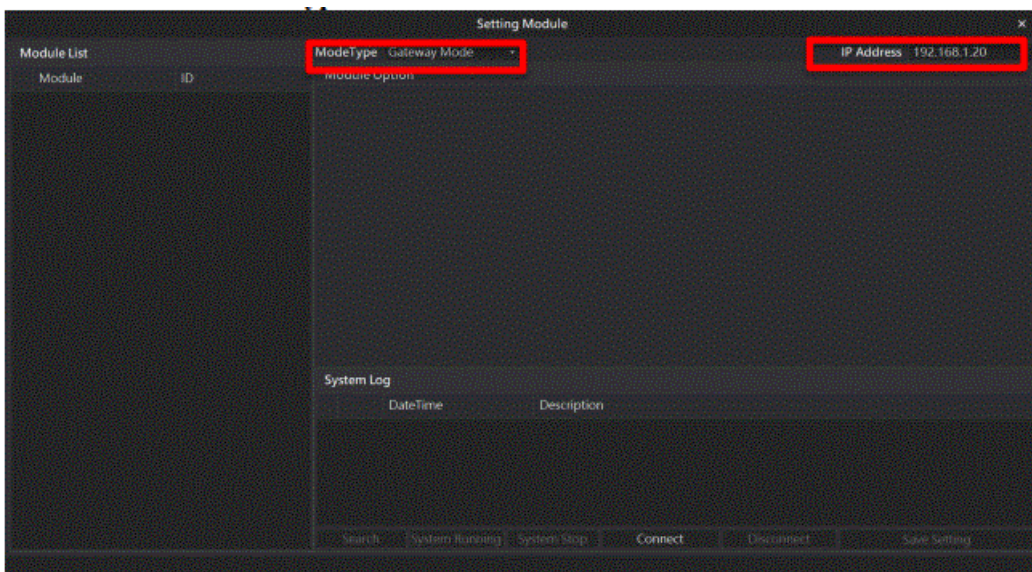
4. Click on the “Setting Module” icon



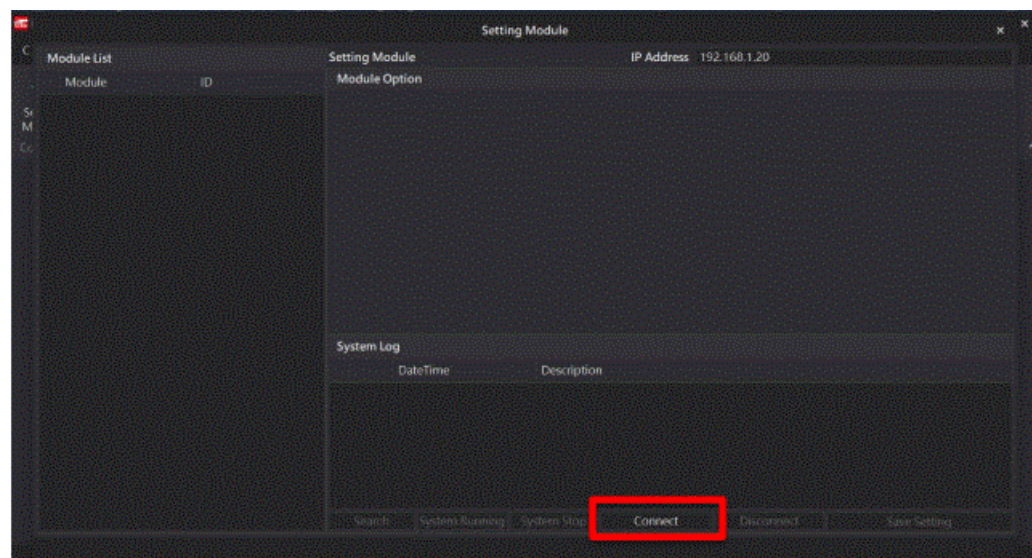
5. Enter the “Setting Module” page for M-series



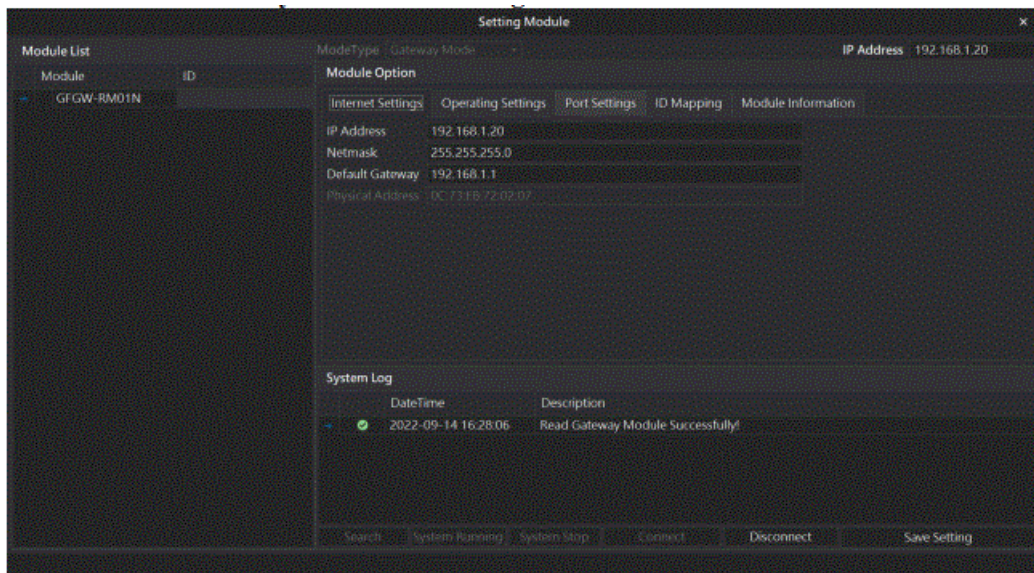
6. Select the mode type based on the connected module



7. Click on "Connect" Note: The IP address must be in the same domain as the MELSEC-Q controller

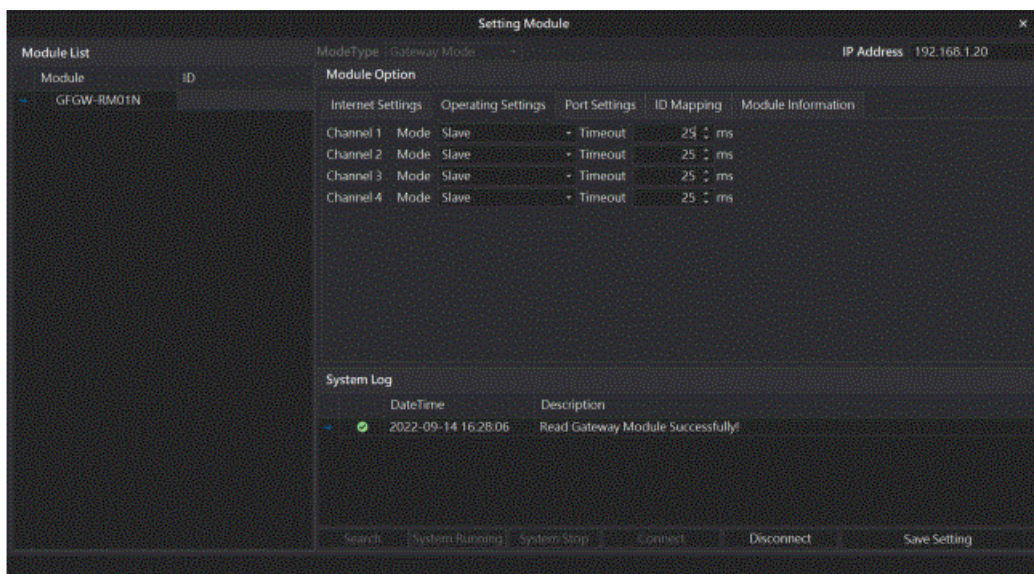


8. Gateway Module IP Settings



Note: The IP address must be in the same domain as the MELSEC-Q controller

9. Gateway Module Operational Modes



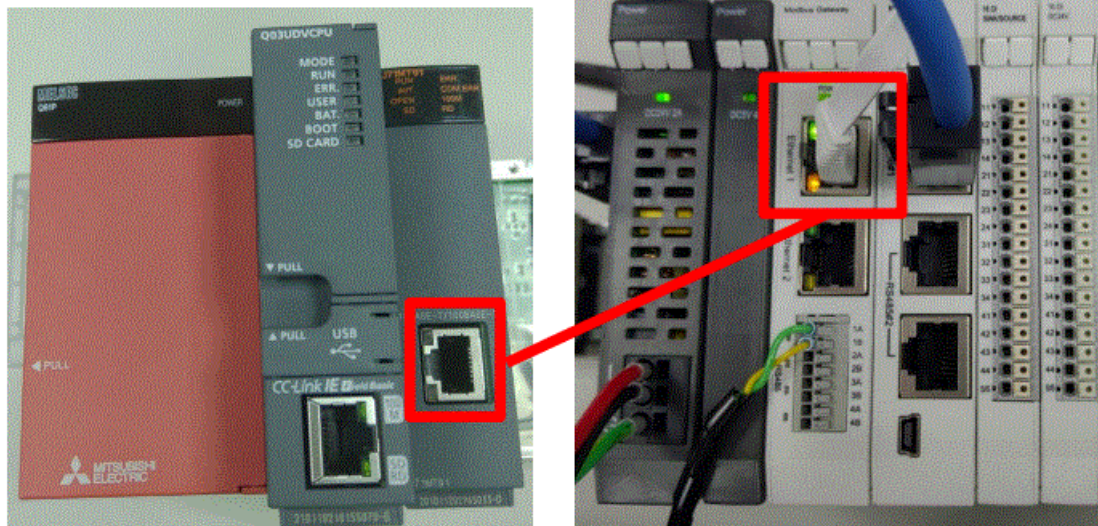
Note: Set Group 1 as Slave and set the gateway to use the first set of RS485 port to connect to the main controller (GFMS-RM01N)

MELSEC-Q series Connection Setup

This chapter explains how to use the GX Works2 program to use the QJ71MT91 module to connect MELSEC-Q series to a gateway module and add a remote I/O module. For detailed information, please refer to the “MELSEC-Q Series Manual

MELSEC-Q series Hardware Connections

1. The QJ71MT91 module's Ethernet port is at its bottom center and can be connected to the gateway



MELSEC-Q series IP Address and Connection Setup

1. Launch GX Works 2 and right click on the “Intelligent Function Module” menu under “Project” on the left side. Then click on “New Module” to create a “QJ71MT91” module

New Module

Module Selection

Module Type: MODBUS Interface Module

Module Name: QJ71MT91

Mount Position

Base No.: - Mounted Slot No.: 1 Acknowledge I/O Assignment

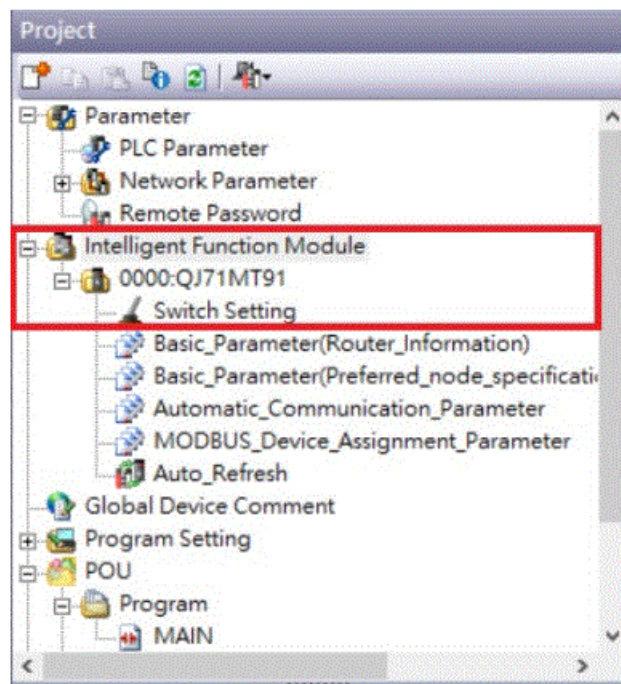
☒ Specify start XY address 0020 (H) 1 Slot Occupy [32 points]

Title setting

Title:

OK Cancel

2. Launch GX Works 2 and select the “Intelligent Function Module” menu under “Project” on the left side. Then click on “Switch Setting” in the “QJ71MT91” menu



3. Set "IP Address" to the same domain as the gateway domain at 192.168.1.XXX.

Switch Setting 0000:QJ71MT91

IP Address Setting
192 . 168 . 1 . 10

Operation Mode Setting
Online

Communication Condition Setting/Redundant Setting

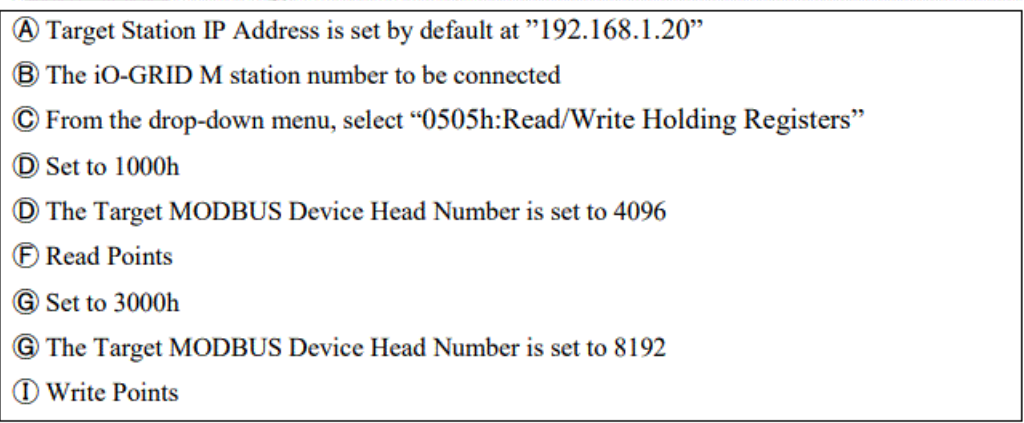
	Item	Setting Value
Communication Condition Setting	Basic parameter starting method	User Setting Parameter
	MODBUS device assignment parameter starting method	User Setting Parameter
	Online change enable/disable setting	Online Change Disabled
	Send frame specification	Data are sent in the Ethernet(V2.0)-compliant frame
Redundant Setting	Enable/Disable Redundant Setting	Disable
	IP mode type	Fixed IP Mode
	System switching at disconnection	Disable
	System switching at communication error	Disable
	System switching at communication error	Disable
	Disconnection detection time	4

Redundant setting is available for Product Information 161020000000000-D or later.
The range of 'disconnection detection time' is 0 to 60 (unit : x500ms)

* This dialog setting is linked to the Switch Setting of the PLC parameter.
Default value will be shown in the dialog if the Switch Setting of the PLC parameter contains an out-of-range value.

OK Cancel

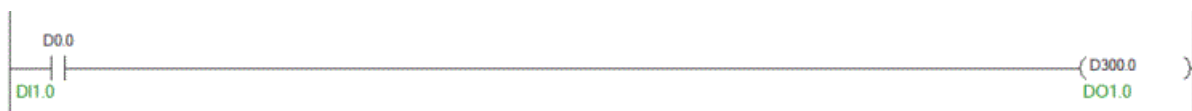
4. Click on "Automatic_Communication_Parameter" to set up reading and writing methods




※ **iQ-GR13M**'s first GFDO-RM01N has the register address at 1000(HEX) converted to 4096
 ※ **iQ-GR13M**'s first GFDO-RM01N has the register address at 2000(HEX) converted to 8192

The screenshot displays the GX Developer software interface. On the left, the 'Project' tree shows the 'Parameter' section expanded, with 'Auto Refresh' highlighted. The main window shows the 'Display Filter' window, which lists the 'Transfer to PLC' and 'Transfer to Intelligent Function Module' parameters. The 'Auto Communication Function Buffer Input' area is highlighted in blue. The 'Input Device 0000:QJ71MT91' dialog box is open, showing the 'Auto Communication Function Buffer Input Area' configuration. The dialog box includes fields for 'Device Specification' (DO), 'Offset Value' (0), and 'Transfer Word Counts' (10). The 'OK' button is highlighted.

Therefore, when you want to control the program, you can just use the internal register to control the writing and reading.



 <p>DAUDIN CO., LTD.</p> <p>IC-Bridge™ and MELSEC-Q Modbus TCP Connection Operating Manual</p>	<p>DAUDIN MELSEC-Q Modbus TCP Connection [pdf] User Manual</p> <p>MELSEC-Q Modbus TCP Connection, MELSEC-Q, Modbus TCP Connection, Modbus</p>
---	---