DAUDIN CO., LTD.

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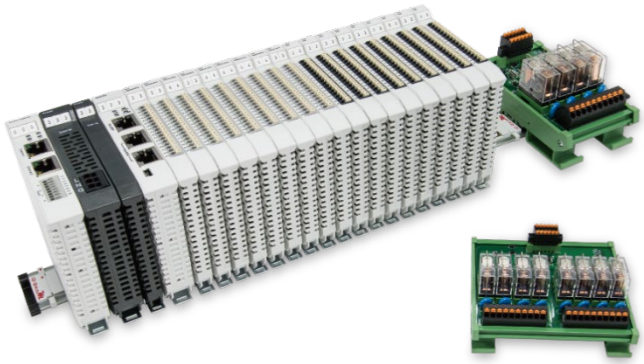


iO-GRID M

and FATEK PLC

Modbus RTU Connection

Operating Manual

Table of Contents

1. Remote I/O Module System Configuration List

Part No.	Specification	Description
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
0170-0101	8 pin RJ45 female connector/RS-485 Interface	Interface Module

1.1 Product Description

I. The interface module is used externally to convert FATEK PLC RS485's communication port (Modbus RTU) to a RJ45 connector

II. The main controller is in charge of the management and dynamic configuration of I/O parameters and so on.

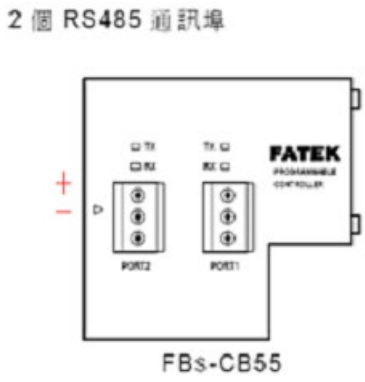
III. The power module and interface module are standard for remote I/Os and users can choose the model or brand they prefer.

2. FATEK PLC Connection Setup

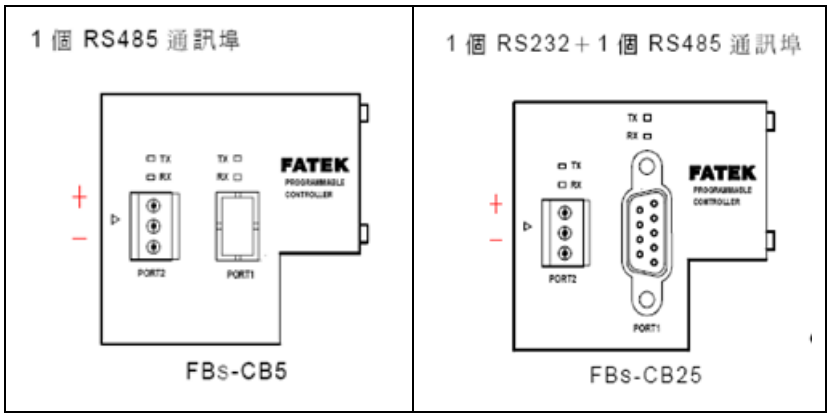
This chapter explains how to use the WinProladder program to connect FATEK PLC with iO-GRID M
For detailed information, please refer to the *Winproladder Manual*

2.1 FATEK PLC Hardware Connection

I. The connection port is on the top of the machine. Take FBs-10MAR2-AC for example. It uses Port2(RS485 pin)



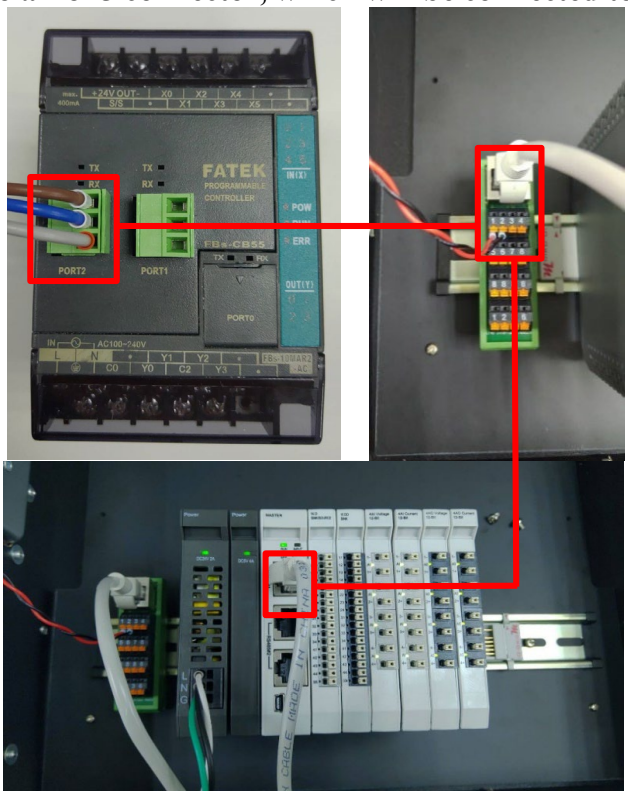
Connections for other communication modules



※All FATEK's RS485 communication modules have the following pins on the terminal blocks (from top to bottom):

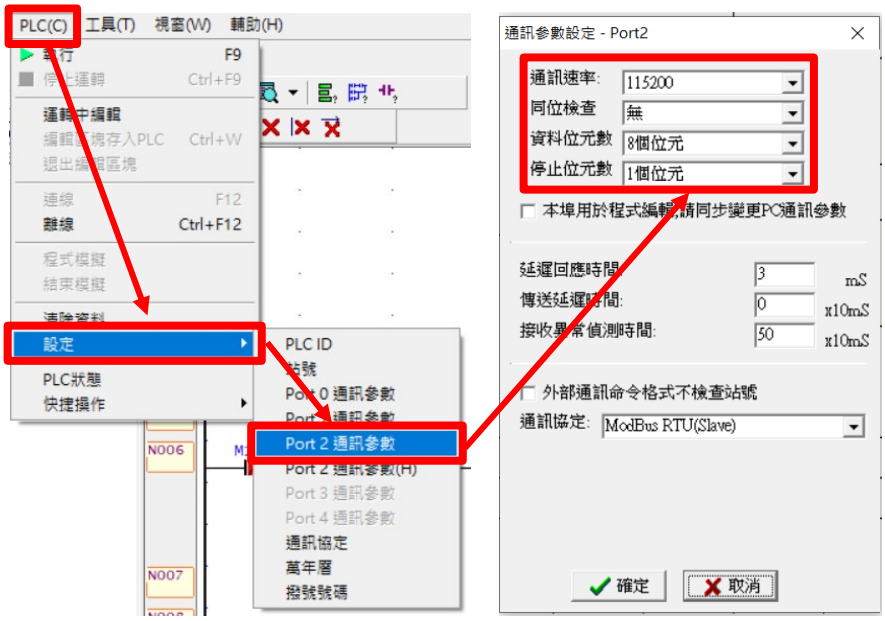
First pin: “+”
Second pin: “-”
Third pin: “Ground”

II. Connect Port2 (RS485 A/B) on the top of the machine to the interface module (1/2) to convert it into a RJ45 connector, which will be connected to the main controller



2.2 FATEK PLC Connection Setup

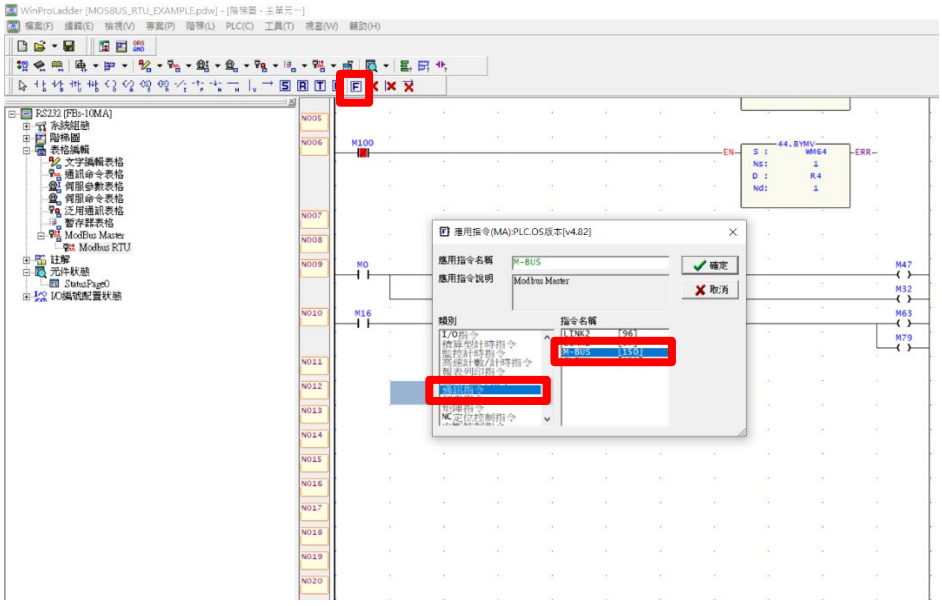
I. Launch WinProladder and set up the communication ports



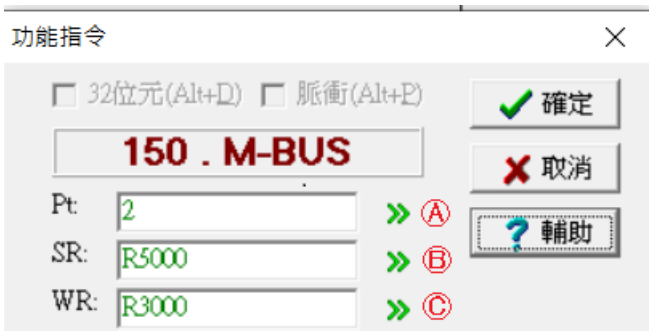
※This demonstration utilizes communication module CB55 RS485 with Port2 in its address

※The communication parameter setting must be consistent with iO-GRID M to enable communication

II. Editing the program- Click on “Set up program block diagram”, then from the drop-down menu, select “Communication Commands” and then select “M-BUS”



III. Function Commands



Ⓐ Pt: The address of the port for selecting a Modbus communication module

Ⓑ SR: Starting register for the communication program

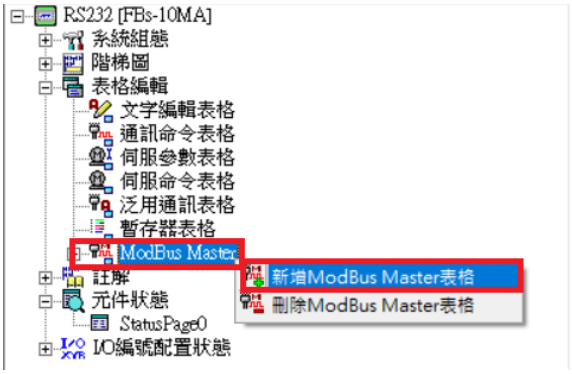
Ⓒ WR: The starting register running the commands will take up totally 8 registers

In this example, we select ”2”, ”R5000” and ”R3000”

IV. Internal Related Relays

Internal Related Relays	
Communication Port	Port Ready Indicating Relay
Port1	M1960
Port2	M1962
Port3	M1936
Port4	M1938

V. Establish a Communication Form



※The form's starting address must be the same with that of the register from the SR command

VI. Setting the Communication Commands

Ⓐ iO-GRID M station number

Ⓑ From the drop-down menu, select “Read” or “Write” to PLC

Ⓒ With double word data, select “2” for data length

Ⓓ Read iO-GRID M’s value to PLC R1’s address

※iO-GRID M’s register address

Note:

※iO-GRID M’s first GFDI-RM01N has the register address at 1000(HEX) converted to 4096(DEC)+1, and the starting address at 404097

※iO-GRID M’s first GFDO-RM01N has the register address at 2000(HEX) converted to 8192(DEC)+1, and the starting address at 408193