DAUDIN Beijer HMI Modbus RTU Connection User Manual

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DAUDIN Beijer HMI Modbus RTU Connection

Product Information

The 2302EN V2.0.0 Beijer HMI Modbus RTU Connection Operating Manual provides instructions on how to connect Beijer HMI with iO-GRID using the iX Developer program. The system includes a main controller, digital input and output modules, a power supply, and an interface module to convert Beijer RS-485's communication port
(Modbus RTU) to an 8-pin RJ45 female connector/RS-485 interface.

Remote I/O Module System Configuration List

Part No.	Specification
GFMS-RM01S	Master Modbus RTU, 1 Port
GFDI-RM01N	Digital Input 16 Channel
GFDO-RM01N	Digital Output 16 Channel / 0.5A
GFPS-0202	Power 24V / 48W
GFPS-0303	Power 5V / 20W
0170-0101	8 pin RJ45 female connector/RS-485 Interface

Product Description

- The interface module converts Beijer RS-485's communication port (Modbus RTU) to an 8-pin RJ45 female connector/RS-485 interface.
- The main controller manages and dynamically configures I/O parameters.
- The power module and interface module are standard for remote I/Os, and users can choose the model or brand they prefer.

Product Usage Instructions

Beijer HMI Hardware Connection

1. Locate the connection port on the right at the bottom of the Beijer HMI machine.
2. Connect the COM (RS485 A/B) at the bottom of the machine to the interface module (1/2) to convert it into an RJ45 connector, which will be connected to the main controller.

Beijer HMI Connection Setup

1. Launch iX Developer and select MODICON and Modbus Master to add a new controller.
2. Click on the Controller tab to enter the controller setup page. Select the controller and then click on Settings.
3. Under Connection Method Setup:
    - From the Communication mode drop-down menu, select Serial.
    - Set up the default station number.
    - From the Modbus protocol drop-down menu, select RTU.
    - From the 32-bit World mapping drop-down menu, select

Little-endian.

- From the Force function code 0x10 drop-down menu, select Enable.
- From the String swap drop-down menu, select Disable.

4. Under Serial Settings:
    - Set the Port to COM2 or COM3.
    - From the Baud drop-down menu, select 115200.
    - From the Parity drop-down menu, select None.
    - From the Data Bits drop-down menu, select 8.
    - From the Stop Bits drop-down menu, select 1.
    - For using 485 pin with COM2 and COM3, please refer to 2.1 Beijer HMI Hardware Connection.
5. Click on Tab to enter the tab setting page. Next, click on New and set up the tab register's location.
    - iO-GRIDM's first GFDI-RM01N has the initial address at 44096.
    - iO-GRIDM's first GFDO-RM01N has the initial address at 48192.

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

Product Description

1. The interface module is used externally to convert Beijer RS-485's communication port (Modbus RTU) to a RJ45 connector
2. The main controller is in charge of the management and dynamic configuration of I/O parameters and so on.
3. The power module and interface module are standard for remote I/Os and users can choose the model or brand they prefer.

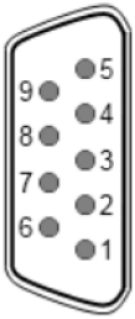
Beijer HMI Connection Setup

This chapter explains how to use the iX Developer program to connect Beijer HMI with iO-GRID. For detailed information, please refer to iX Developer User Manual

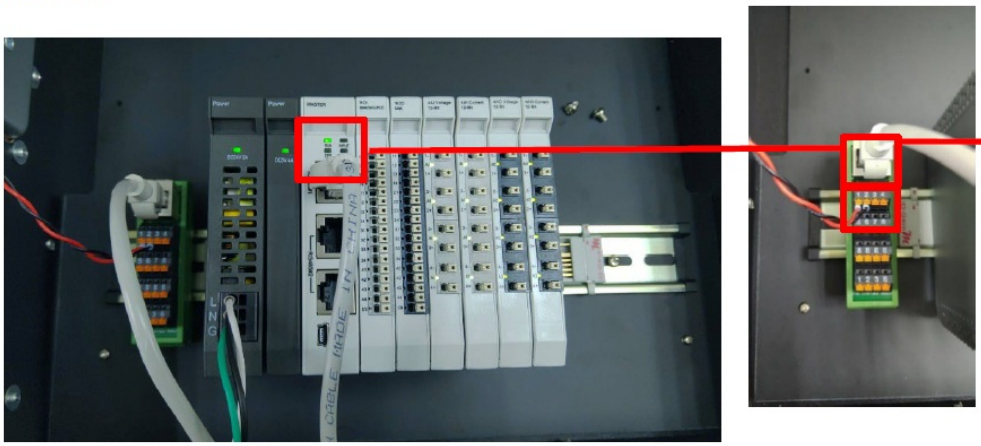
Beijer HMI Hardware Connection

1. The connection port is on the right at the bottom of the machine. Take X2 control for example. It uses RS485

COM2 or COM3

Female DB-9	Pin	COM1 signal	COM2 signal	COM3 signal
	1	-	RS422 TX+/RS485 TX+/RX+	-
	2	RS232 RX	-	-
	3	RS232 TX	-	-
	4	-	RS422 RX+	RS485 TX+/RX+
	5	GND	GND	GND
	6	-	RS422 TX- / RS485 TX-/RX-	-
	7	RS232 RTS	-	-
	8	RS232 CTS	-	-
	9	-	RS422 RX-	RS485 TX-/RX-

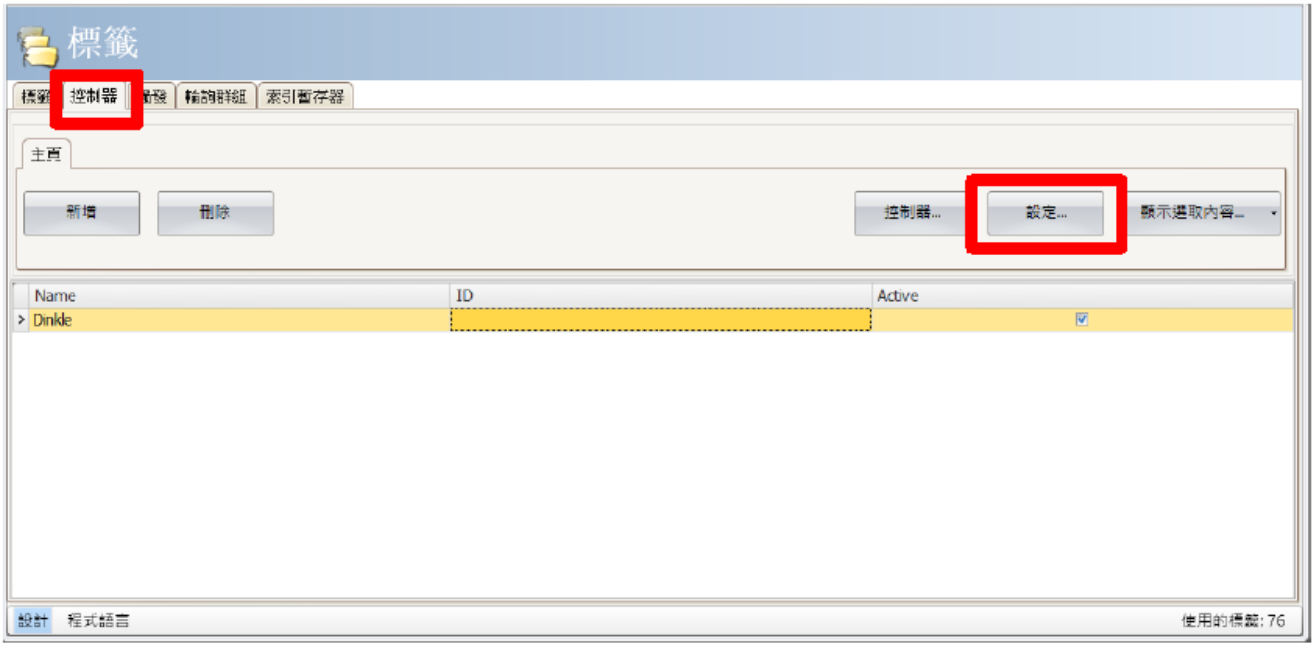
II. Connect the COM (RS485 A/B) at the bottom of the machine to the interface module (1/2) to convert it into a RJ45 connector, which will be connected to the main controller



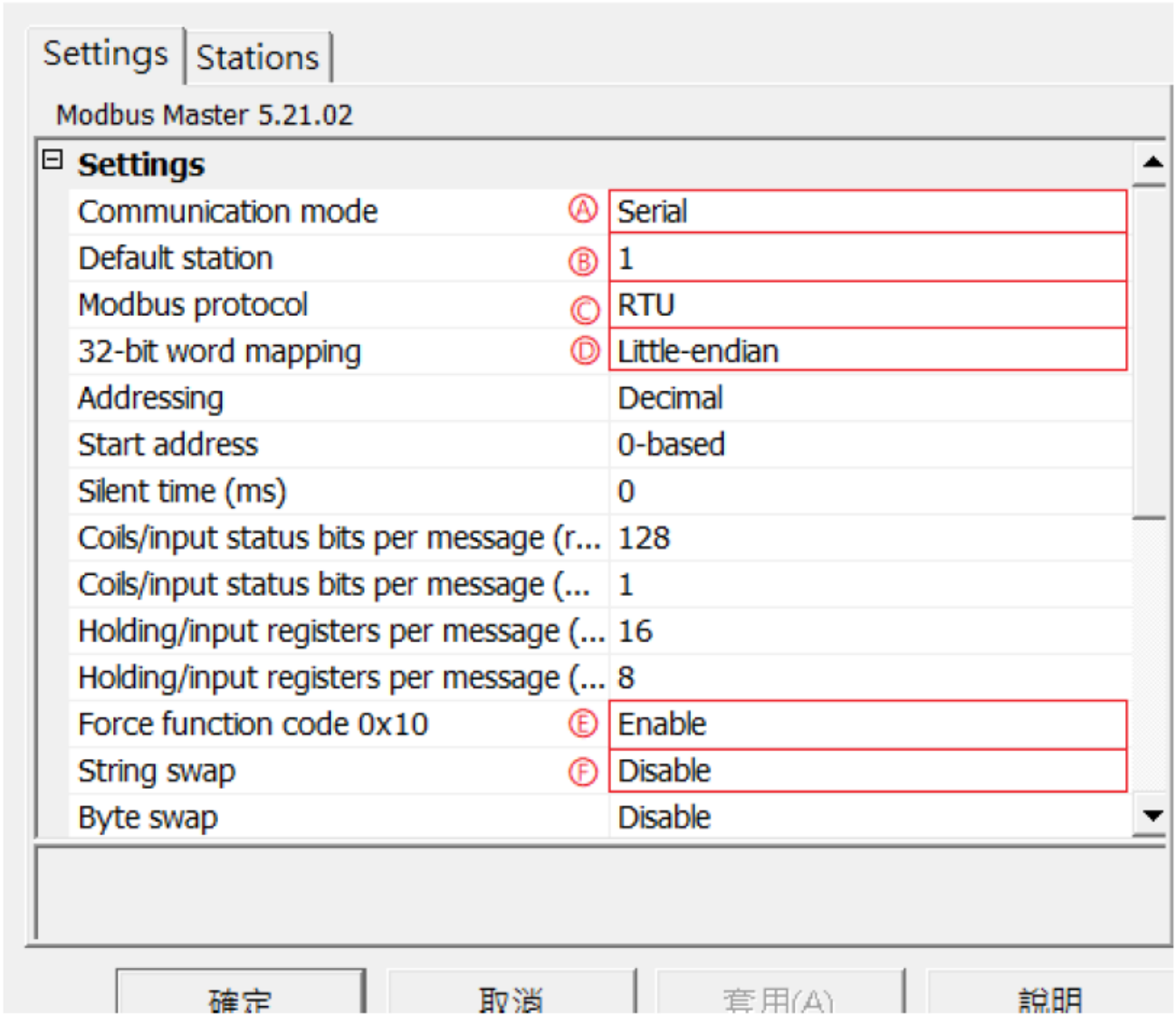
Beijer HMI Connection Setup

1. Launch iX Developer and select **“MODICON”** and **“Modbus Master”** to add a new controller

2. Click on the “Controller” tab to enter the controller setup page. Select the controller and then click on “Settings”

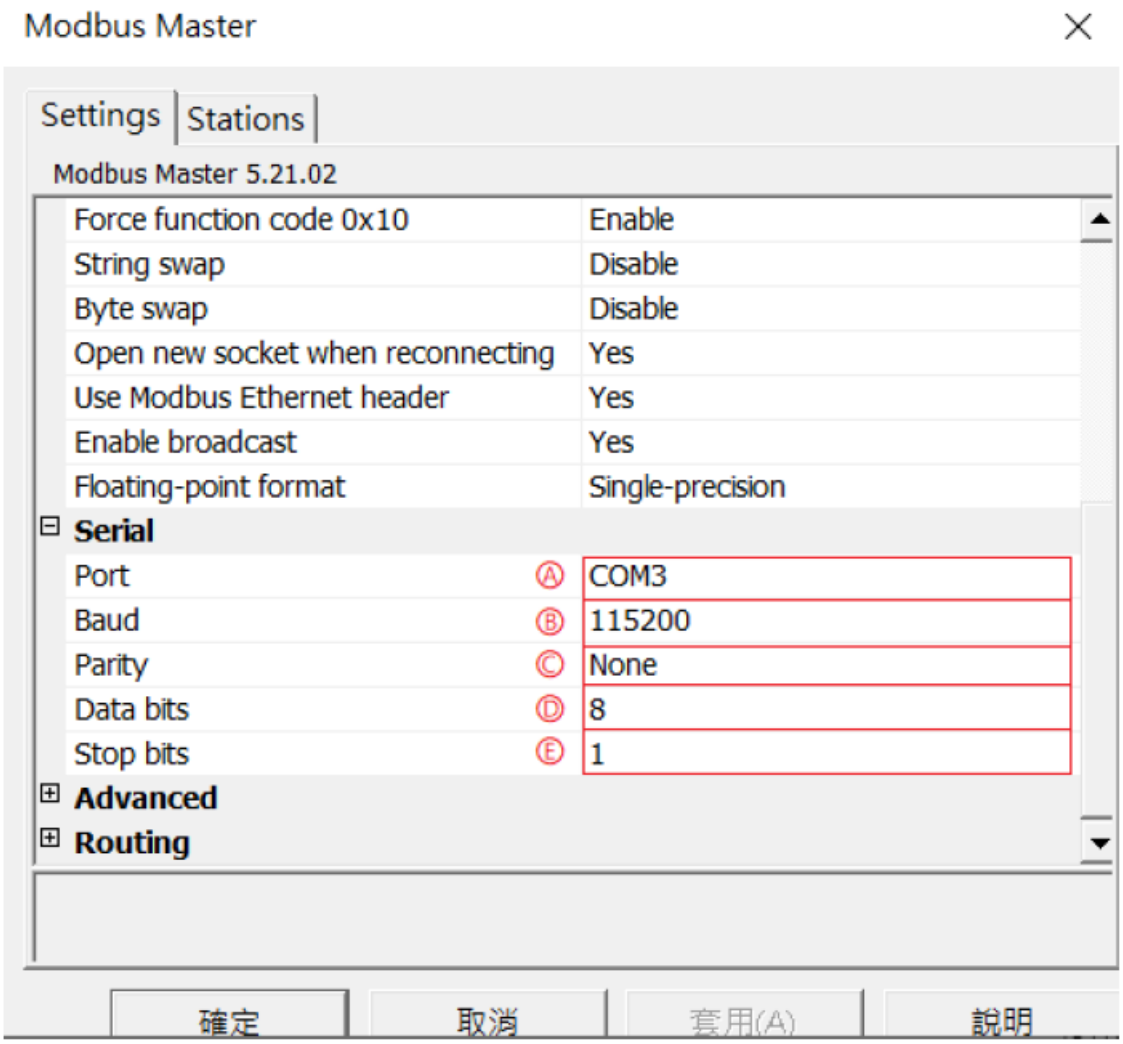


3. Connection method setup



- From the **"Communication mode"** drop-down menu, select **"Serial"**
- Setup the default station number
- From the **"Modbus protocol"** drop-down menu, select **"RTU"**
- From the **"32-bit World mapping"** drop-down menu, select **"Little-endian"**
- From the **"Force function code 0x10"** drop-down menu, select **"Enable"**
- From the **"String swap"** drop-down menu, select **"Disable"**

4. **Serial Settings**



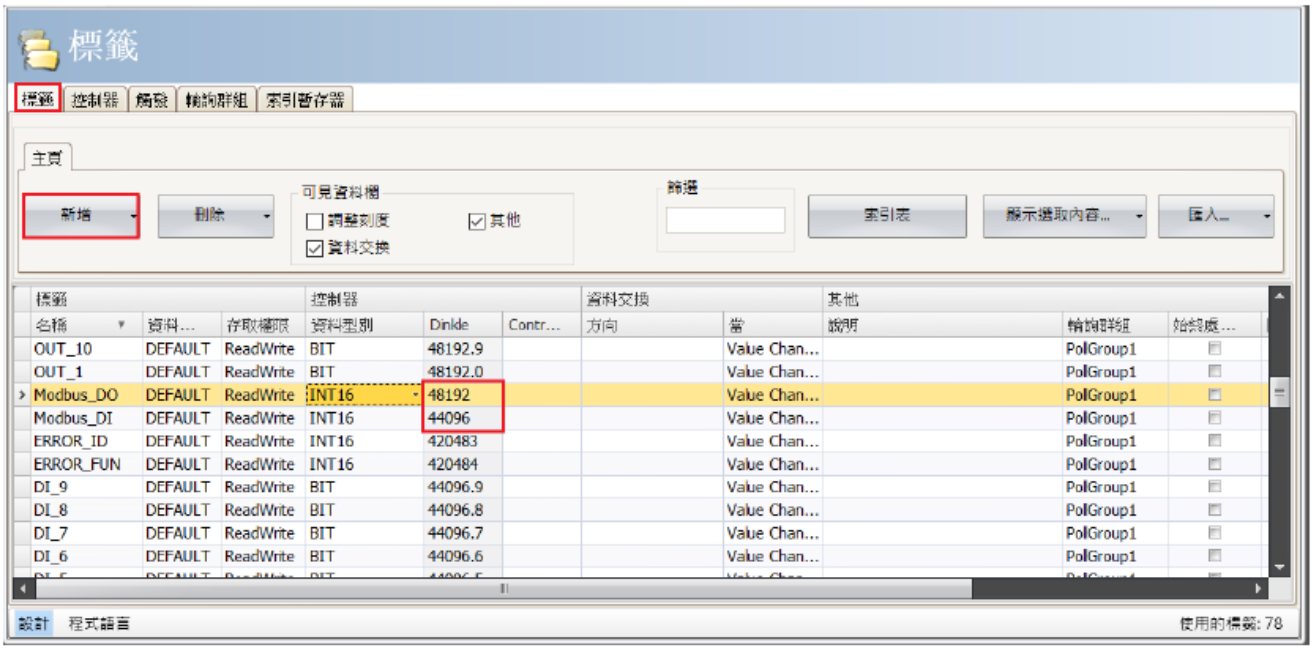
- Set Port to COM2 or COM3
- From the “Baud” drop-down menu, select “115200”
- From the “Parity” drop-down menu, select “None”
- From the “Data bits” drop-down menu, select “8”
- From the “Stop bits” drop-down menu, select “1

Notes:

The demonstration in the Connection Operating Manual uses COM3

For using 485 pin with COM2 and COM3, please refer to2.1 Beijer HMI Hardware Connection

5. **Click on “Tab” to enter the tab setting page. Next, click on “New” and set up the tab register’s location**



❖ iO-GRIDM ’s first GFDI-RM01N has the initial address at 44096
❖ iO-GRIDM ’s first GFDO-RM01N has the initial address at 48192

Documents / Resources

	DAUDIN Beijer HMI Modbus RTU Connection [pdf] User Manual Beijer HMI Modbus RTU Connection, Beijer HMI, Modbus RTU Connection