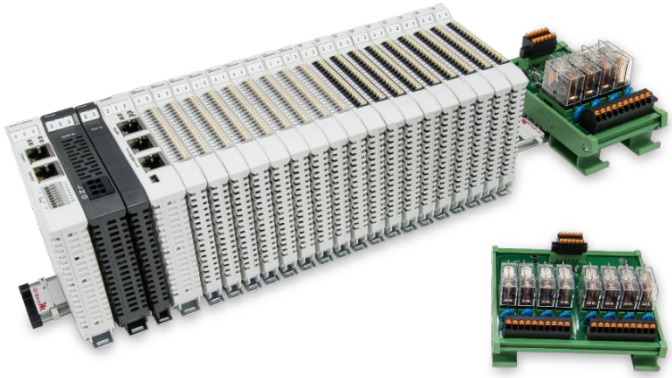
DAUDIN CO., LTD.

2302EN
V2.0.0



iO-GRID M

and Micro800

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 micro800'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.

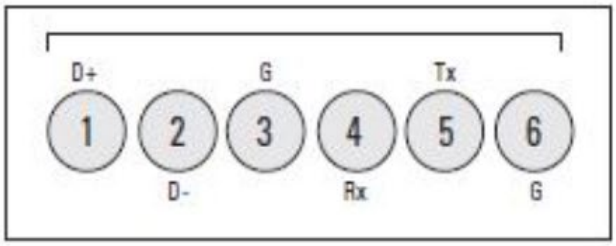
III. The power module and interface module are standard for remote I/Os and users can choose the model or brand they prefer.

2. Micro800 Connection Setup

This section details how to use the Connection Components Workbench program to connect Micro800 and iO-GRID M

2.1 Micro800 Hardware Connection

I. The connector is on the top side of the Micro800 and uses RS485 connections

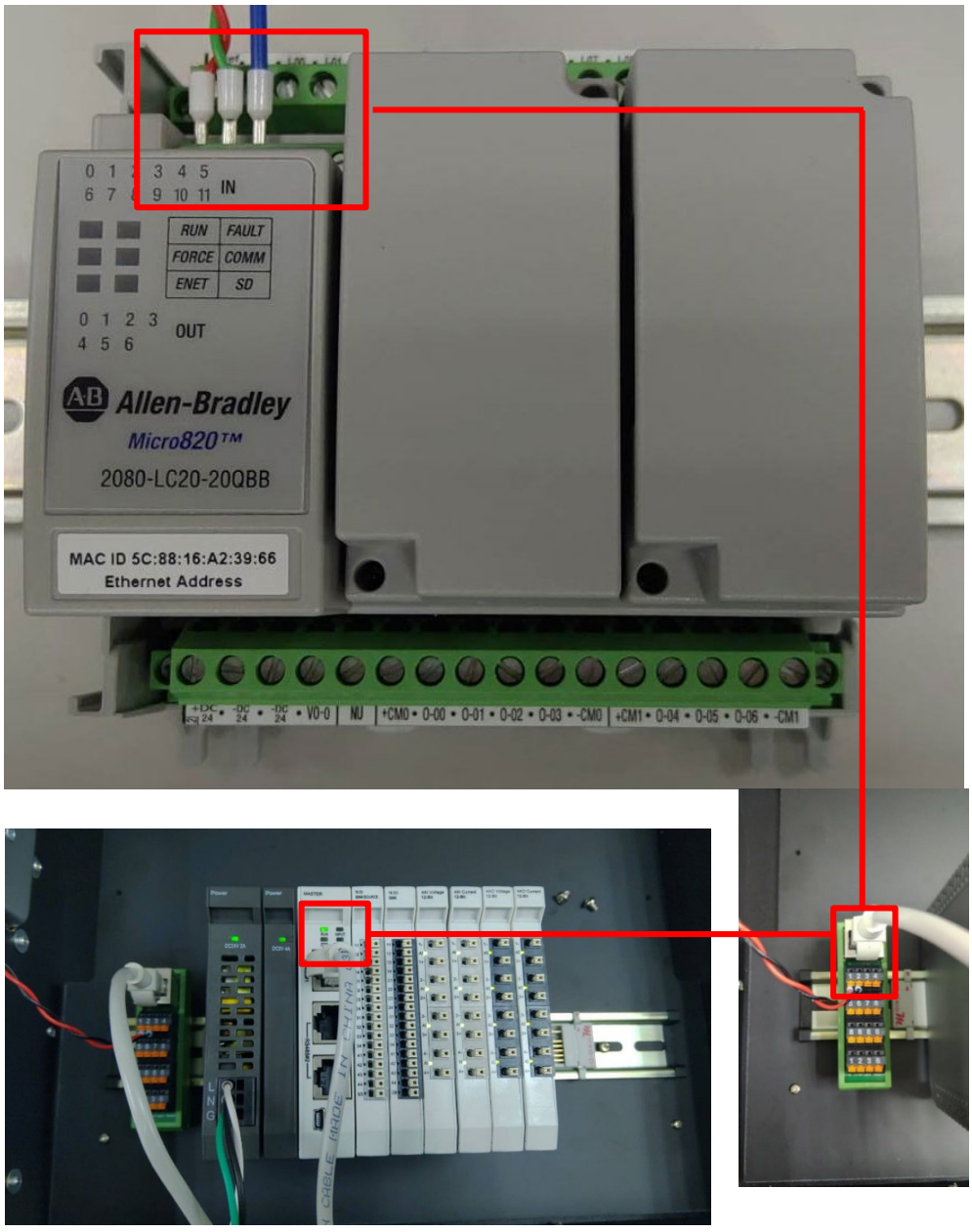


46213

(View into terminal block)

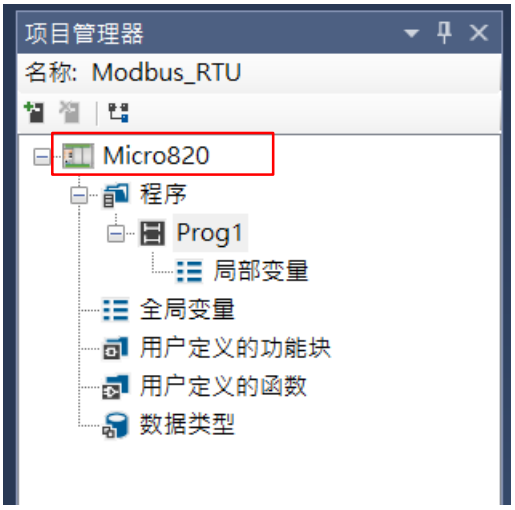
Pin 1	RS485	Data +
Pin 2	RS485	Data -
Pin 3	RS485	Ground(1)
Pin 4	RS232	Receive
Pin 5	RS232	Transmit
Pin 6	RS232	Ground(1)

II. Connect the COM (RS485 A/B) on top of the Micro800 to the interface module (1/2) to convert it to a RJ45 connector before connecting it to the main controller



2.2 Micro800 Connection Setup

I. Launch the Connected Components Workbench software and click on the "Micro820" menu in the Item Manager on the left side



II. Click on "Serial Port" under the "Controller" menu

III. Set up the communication format in “Protocol Format”

For “Driver”, select “MODBUS_RTU COM”
For “Baud Rate”, select “38400”
For “Parity”, select “None”
For “Modbus Role”, select “Master”
For “Medium”, select “RS485”
For “Stop Bit, select “1”

※The communication format setting must be consistent with iO-GRID M

※If the texts in the driver are gray, please switch to “Remote LCD”, and uncheck “Assign Serial Port for Remote LCD”

IV. Master Program Settings

In the master M820, MSG_MODBUS commands are used to read the register on the iO-GRID M (slave). As illustrated below, different data types for the commands are created using the local variables of the program

名称	别名	数据类型	维度	项目值	初始值
MSG_MODBUS_1		MSG_MODBUS		...	...
Target_Add		MODBUSTARPARA		...	...
Target_Add.Addr		UDINT			8193
Target_Add.Node		USINT			1
Local_cfg		MODBUSLOCPARA		...	...
Local_cfg.Channel		UINT			2
Local_cfg.TriggerType		USINT			1
Local_cfg.Cmd		USINT			16
Local_cfg.ElementCnt		UINT			10
Local_Add		MODBUSLOCADDR		...	...

Addr: The address of the iO-GRID M register to be read or written

Node: Slave station number

Channel:

2: For the embedded serial ports
5: Slot 1
6: Slot 2
7: Slot 3
8: Slot 4
9: Slot 5

Trigger Type:

0: When MSG is triggered once (When “IN” goes from “False” to “True”)
1: When “IN” is “True”, the MSG is triggered continuously

Cmd:

03: Read and keep the register (s)
16: Write in multiple registers

ElementCnt: The amount of data to read or write

Notes:

※iO-GRID M’s first GFDI-RM01N has the register address at 4097
※iO-GRID M’s first GFDO-RM01N has the register address at 8193

V. Programming Example:

Create command block “MSG_MODBUS” and enter the variables just created into the block