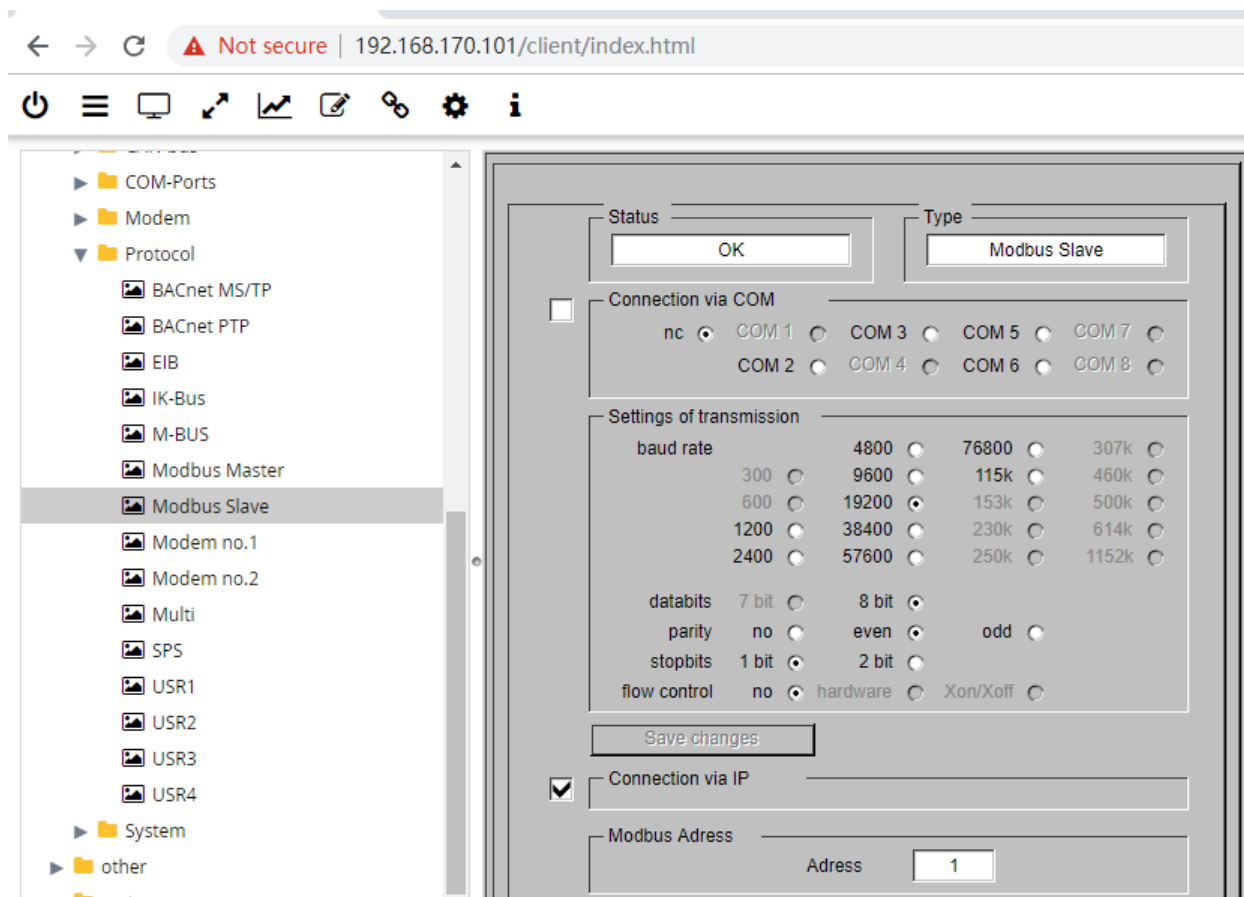


TT190803 – FUP - Modbus Slave Setup

1. The OPEN controller can be both Modbus master (i.e. integrate 3rd Modbus devices) and also Modbus slave (i.e. 3rd party System integrate us). Modbus slave is an additional option in our controller. It supports both RS-485 and TCP/IP, and can be used together with Modbus master at the same time
2. The setup is very easy, first start browser and connect to the controller. Select “Service Controller”, “Protocol” and “Modbus Slave”. Enable the “Connection via IP” and you can leave the “Address” as default “1”.



3. Basically, we've finished the setup. All “Input” and “Display” in the controller can now be accessed via Modbus by 3rd party system. What you need to do now is to find out the Modbus address and point type for each “Input” and “Display”

The screenshot shows the OPENview web interface at 192.168.170.101/client/index.html. The left sidebar shows a tree view with '01: DCS.Open' expanded, containing items like AHU, Analog, Controller, Digital, Events, Graphic, Modbus (selected), Password, Slide, and Slideshow. The main panel displays a list of Modbus points with their addresses, types, and values:

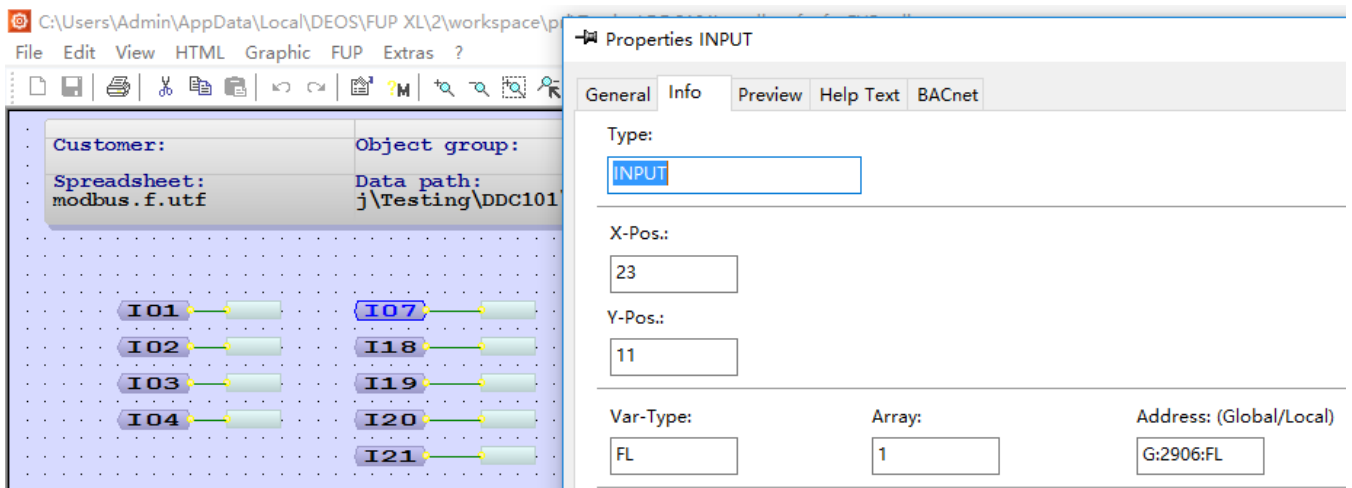
Address	Type	Value
DI (0)	kWh	22.4
DO (0)	Voltage	224.74
AI 0	Current	0.121
AO 0	Power	9.4
	Frequency	49.95

Overlaid on the right is a 'Modbus Poll - [Mbpoll1]' application window. It shows a table of Modbus points with their addresses, aliases, and values:

Address	Alias	Value
0		-30651
1		0
2		0
3		0
4		0
5		0
6		224.5
7		--
8		0
9		0

The Modbus Poll window also shows a status bar at the bottom: 'For Help, press F1.' and '[192.168.170.101]: 502'.

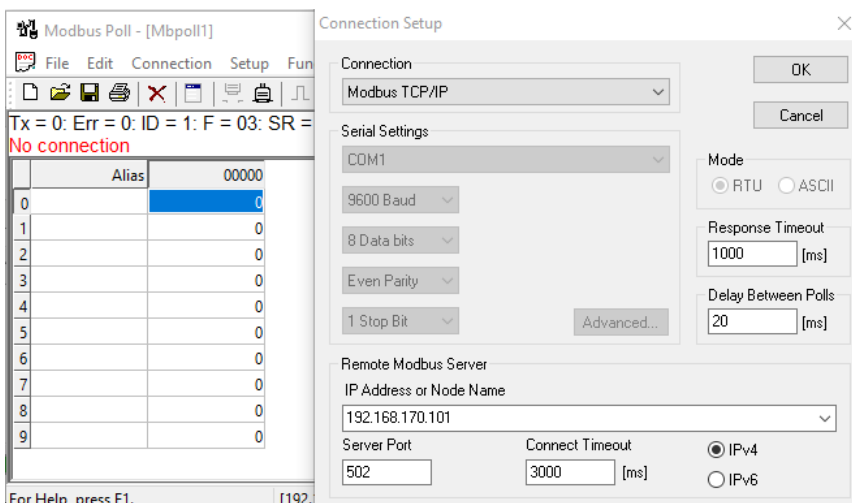
- To find it, open the “modbus.f” FUP page. Double click on the “Input” and go to “Info” tab



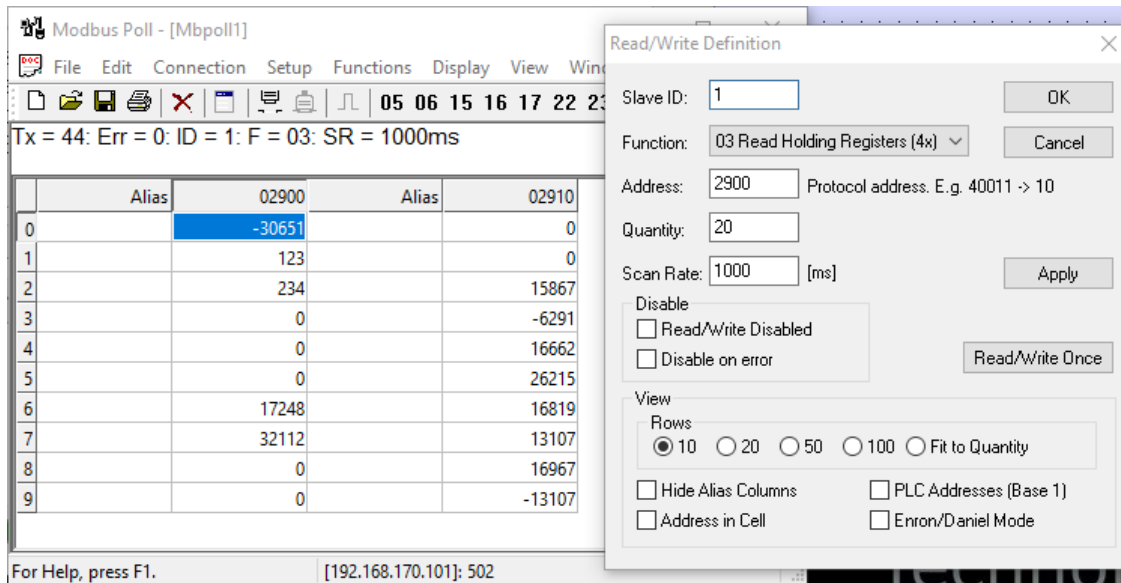
- In the “Address: (Global/Local)”, you can find the Modbus address and point type. In this example, the Modbus address is 2906, and the point type is “FL”, i.e. floating point, and so it is in the “Holding Register” table. Below is the list for your reference

Properties in the FUP editor:			MODBUS	
Type	Refresh	Adresse:(G/L)	Memory type	Variable type
BIT	Display (read)	G:xxxx:BIT	Discrete_Input	BIT
BIT	Input (read and write)	G:xxxx:BIT	Coil	BIT
BIT	Display (read and write)	G:xxxx:BIT	Coil	BIT
UI	Display (read)	G:xxxx:UI	Input_Register	UI
UI	Input (read and write)	G:xxxx:UI	HoldingRegister	UI
UI	Display (read and write)	G:xxxx:UI	HoldingRegister	UI
SI	Display (read)	G:xxxx:SI	Input_Register	SI
SI	Input (read and write)	G:xxxx:SI	HoldingRegister	SI
SI	Display (read and write)	G:xxxx:SI	HoldingRegister	SI
ULI	Display (read)	G:xxxx:ULI	Input_Register	ULI
ULI	Input (read and write)	G:xxxx:ULI	HoldingRegister	ULI
ULI	Display (read and write)	G:xxxx:ULI	HoldingRegister	ULI
SLI	Display (read)	G:xxxx:SLI	Input_Register	SLI
SLI	Input (read and write)	G:xxxx:SLI	HoldingRegister	SLI
SLI	Display (read and write)	G:xxxx:SLI	HoldingRegister	SLI
FL	Display (read)	G:xxxx:FL	Input_Register	FL
FL	Input (read and write)	G:xxxx:FL	HoldingRegister	FL
FL	Display (read and write)	G:xxxx:FL	HoldingRegister	FL

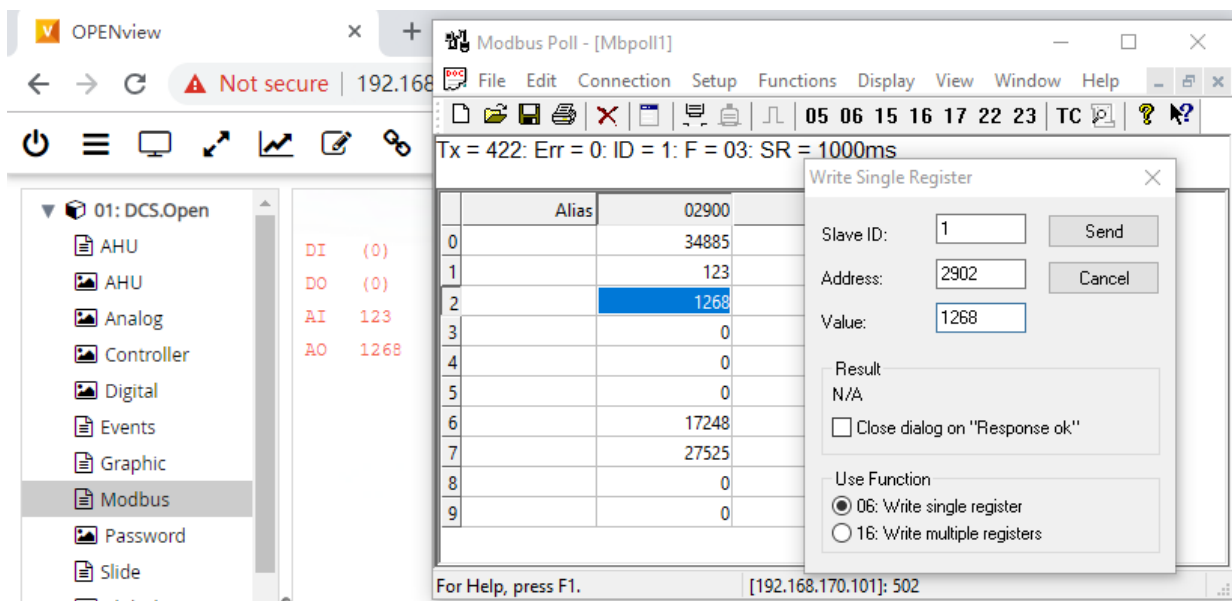
- You can use “Modbus Poll” (<https://www.modbustools.com/download.html>) to test the connection. Start it, click on “Connection”, “Connect”, and type the controller IP address



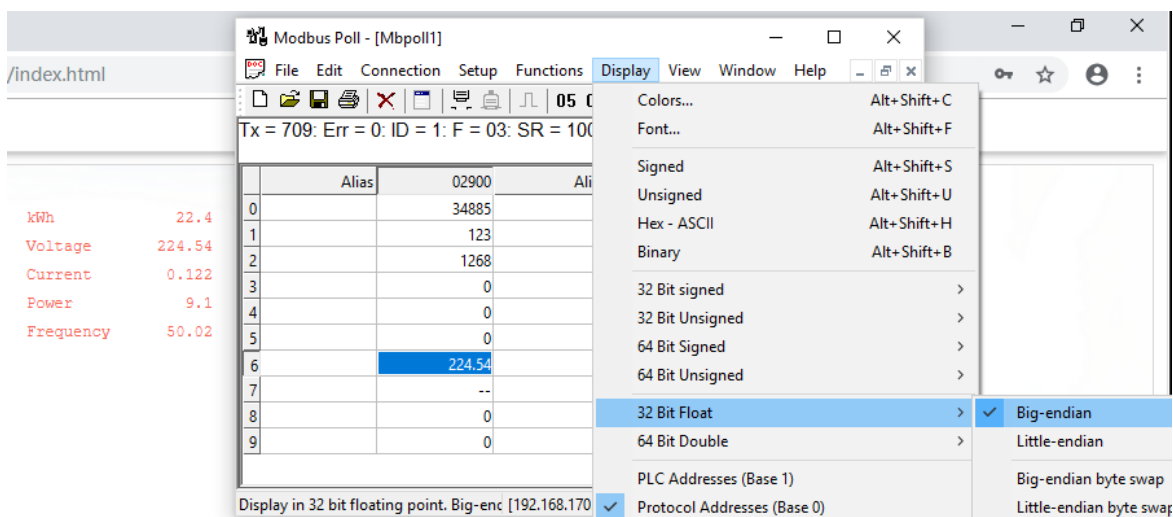
7. You should now see it communicating with the OPEN 600. To set the address, click “Setup”, “Read/Write Definition”. In my example, the Modbus address start from 2901, so I set the “Address” to 2900 and “Quantity” to 20



8. You should now see the point value of AI and AO correctly, because it's the default type “UI”. To change the AO value, double click on it, change the value and click “Send”



9. To change the type to “FL”, click on the point, select “Display”, “32 Bit Float”



10. After that you can view and/or command all the points in OPEN 600 via Modbus TCP/IP

OPENview

192.168.170.101/client/index.html

01: DCS.Open

- AHU
- AHU
- Analog
- Controller
- Digital
- Events
- Graphic
- Modbus
- Password
- Slide

DI (0)

kWh

22.4

DO (0)

Voltage

224.54

AI 123

Current

0.122

AO 1268

Power

9.1

Frequency

50.02

Modbus Poll - [Mbpoll1]

File Edit Connection Setup Functions Display View W

Tx = 1014: Err = 0: ID = 1: F = 03: SR = 1000ms

	Alias	02900	Alias	02910
0		34885		0
1		123		0
2		1268		0.122
3		0		--
4		0		9.1
5		0		--
6		224.54		22.4
7		--		--
8		0		50.02
9		0		--

For Help, press F1. [192.168.170.101]: 502