Iotzone's TCP modbus to RTU modbus user manual

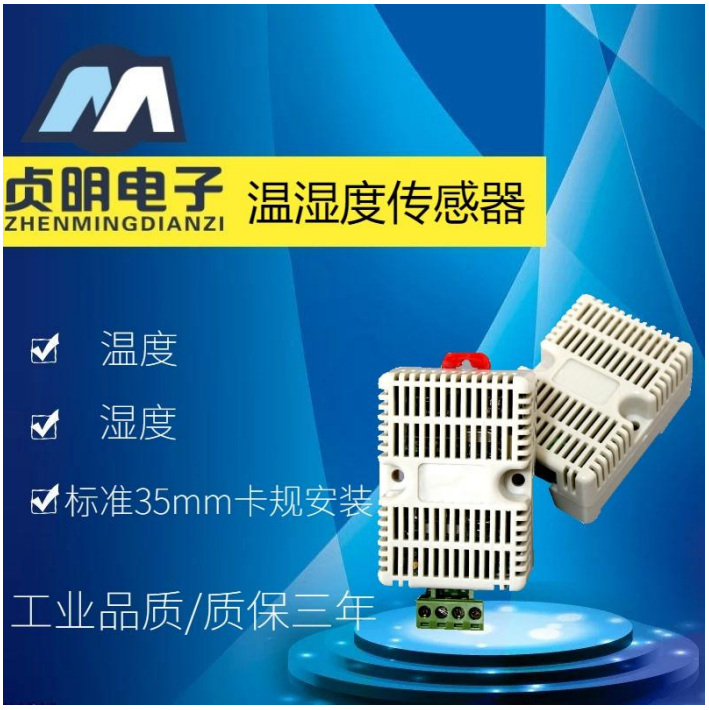
1. Overview

If you want to connect some sensors or controls that support MODBUS RTU, you can use this function to save the cost of a DTU and reduce the cost of wiring and software.

TCP modbus default port is 502, This document uses "MODBUS poll" tool to test and introduce. If connect to PLC or other configuration software, you can refer to the following settings。

2. Example for sensor read

Iotzone's sensor for example which support modbus rtu,default address is 1, register 0 is humidity data,register 1 is temperature data.



Steps:

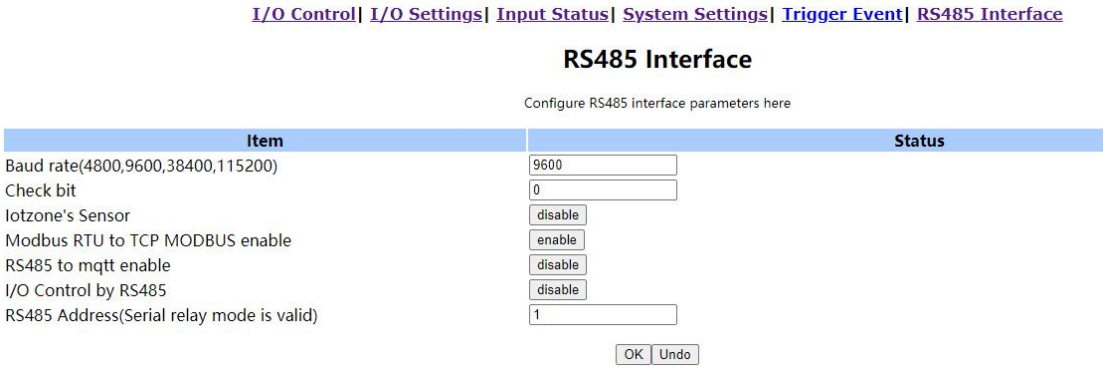
(1) Connect A and B of sensor to A and B of device.

(2) Plug in cable,make sure the device and PC are in the local

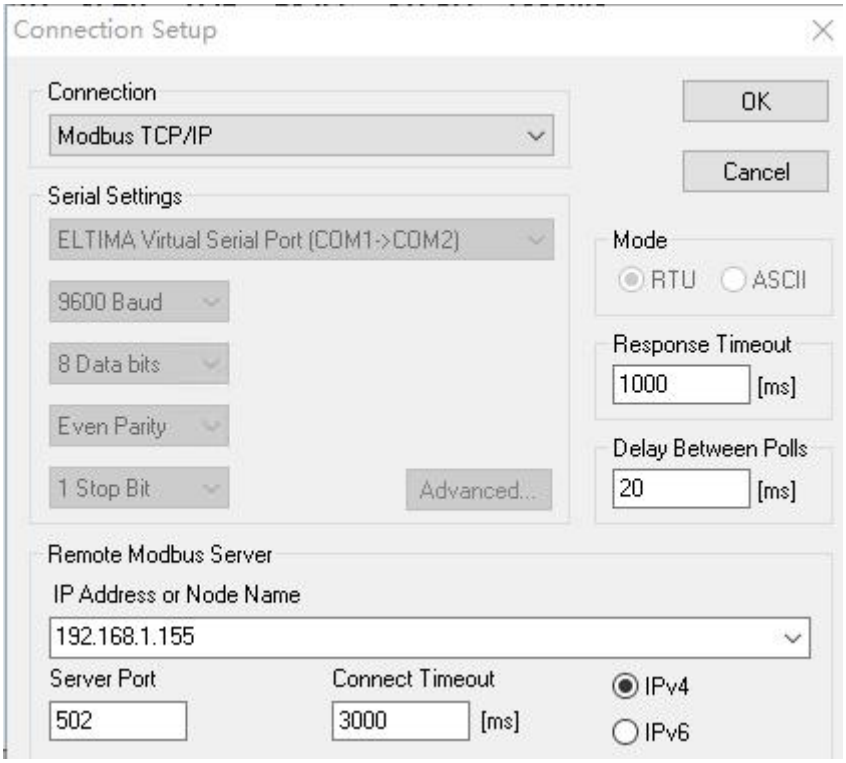
network.

(3) Power on the device and sensor, either support 9-24VDC.

(4) Enable the RTU to TCP modbus in 192.168.1.166/rs485.cgi

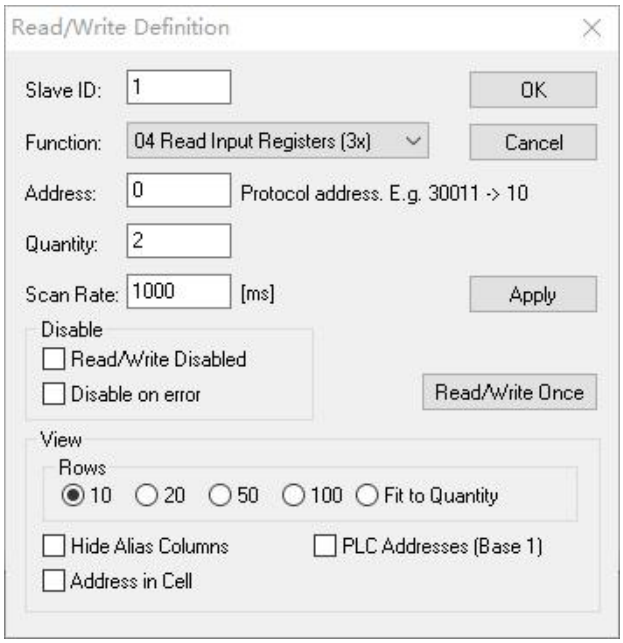


(5) Select “Modbus TCP/IP” in MODBUS poll Connection,IP is 192.168.1.155(the device IP),Server Port is 502 as figure.

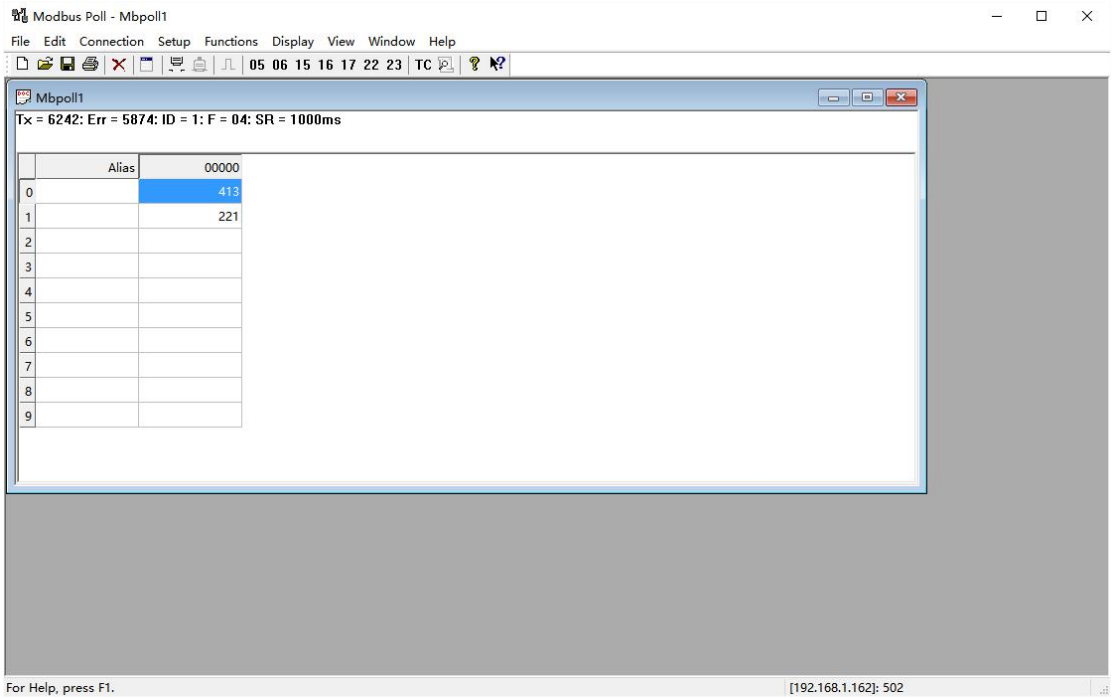


(6) Set the Read/Write Definition in “Setup”,Slave ID is 1(the sensor’s address)，Function select 04(Read Input Register),Address is 0，Qunatity

is 2, other is default, as figure.



The data can be read, as shown in the figure below. If the value of register 0 (humidity) is 413 and the value of register 1 (temperature) is 221, then the humidity value is 413 / 10 = 41.3%, and the temperature value is 221 / 10 = 22.1 ℃



3. Example for RS485 relays module

Iotzone's RS485 relay module supports Modbus RTU which address is 2.

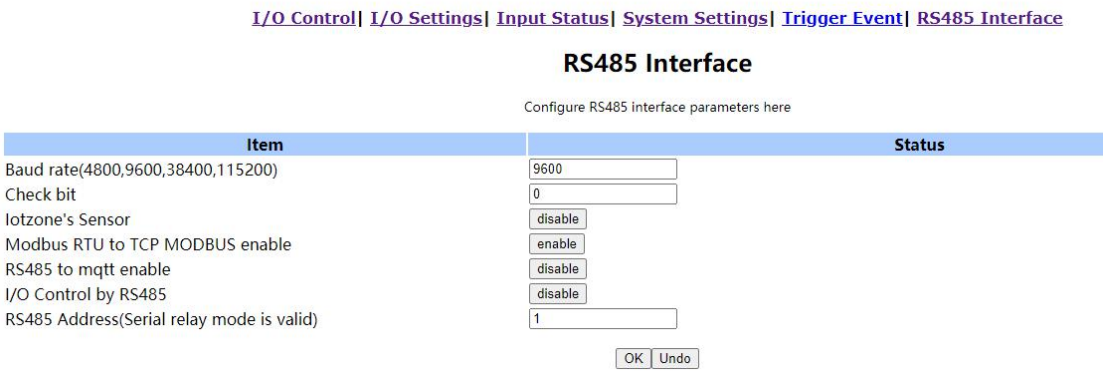
Steps:

(1) Connect A and B of RS485 relay module to A and B of device.

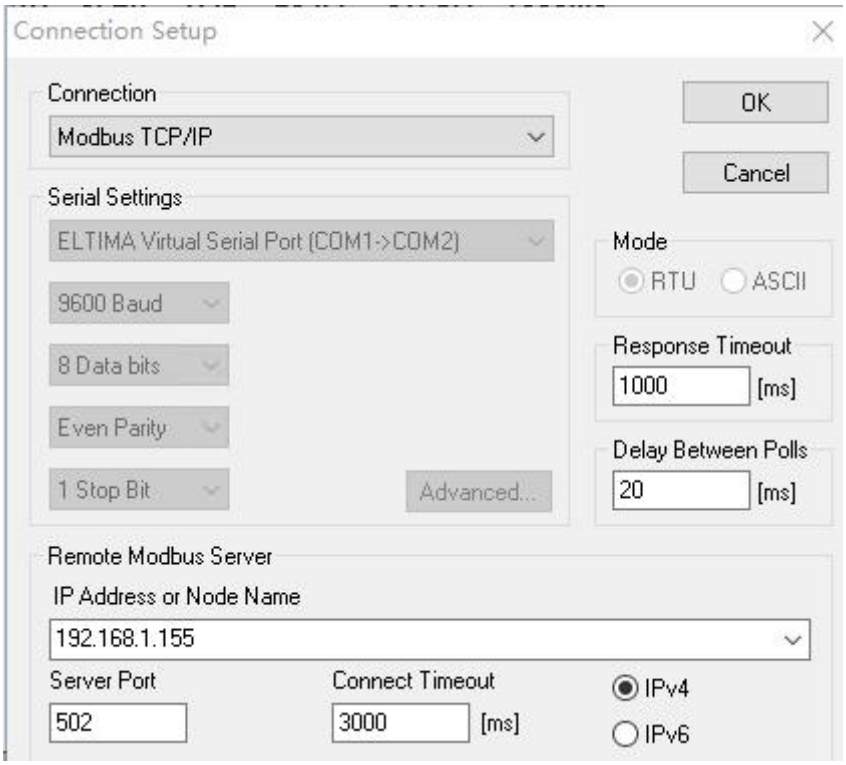
(2) Plug in cable,make sure the device and PC are in the local network.

(3) Power on the devices, either support 9-24VDC.

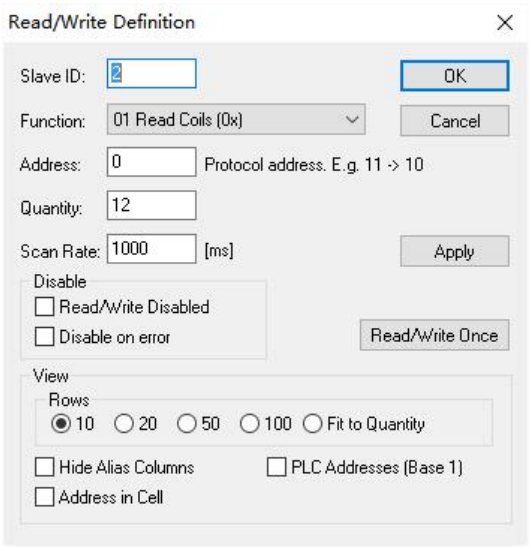
(4) Enable the RTU to TCP modbus in 192.168.1.166/rs485.cgi .



(5) Select “Modbus TCP/IP” in MODBUS poll Connection,IP is 192.168.1.155(the device IP),Server Port is 502 as figure.



(6) Set Read/Write Definition in ”Setup”,Write 2 in Slave ID2 (the address of RS485 relay module),Function select 01(Read Coils),Address is 0,Qunatity is 12(the number of relay module),other is default, as figure.



(7) The state of RS485 relay module can be read as below figure.The ‘05’ fucntion command can control single relay out.The ’15’ fucntion command can control multiple relays out.