

Case Introduction (Temperature & Humidity Sensor)

1. Function Implementation

Collect data from a simple RS485 interface temperature and humidity sensor, and report to the 61850 master station.

2. Device RS485 Communication Parameters

Temperature & Humidity Sensor No.1: 4800 baud, no parity, 1 stop bit

3. Device Modbus Data Point Table

The following data points use Modbus 03 Read Holding Registers function code

Data Point Address	Name	Modbus Data Type	Additional Notes	61850 Data Type
0000H	Humidity	S_AB (16-bit signed integer)	Integer divided by 10, unit: 0.1%	YC_RM Telemetry-Float
0001H	Temperature	S_AB (16-bit signed integer)	Integer divided by 10, unit: 0.1 degree	YC_RM Telemetry-Float

4. How to Use This Case

- Copy the init folder in this case to completely overwrite the init folder in the FLEXLUA_61850 software directory, then click Generate in Step 4 of the software to generate the required 3 files (main.lua, model.cfg, rtu.cid).
- The main.lua and model.cfg files need to be placed into the protocol converter through the USB-C port. The rtu.cid file can be provided to 61850 master station developers for device import.

5. Testing

In the test folder of this case, there is a modbus slave device simulation file. If you have modbus slave and IEDScout testing tool software installed on your computer, they can be used to simulate modbus slave devices and 61850 master station software respectively to complete testing.

Modbus Slave - Mbslave1

File Edit Connection Setup Display View Window Help

Mbslave1

ID = 1: F = 03

	Alias	00000
0	湿度(Humi)	862
	温度(Temp)	352
2		
3		
4		

IEDScout

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File Browser Simulator Sniffer

Open SCL Save SCL Discover IED Close IED

Online IED properties Subscribe GOOSE Simulate

Read Read all Write Control Clear indications

Enable GI Add DataSet Setting Groups Copy GOOSE

☒ Navigation ☒ Details ☒ Monitor ☐ Descriptions

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IEDs

simple1

IP address: 192.168.0.111

GOOSE

Reports

Setting Groups

Files

DataSets

Data Model

LD ORTU

LN LLN0

LN GGIO3

simple1 • Data Model • ORTU • GGIO3

LN GGIO3 Generic process I/O

Name	Value
AnIn1	86.2
AnIn2	35.2
Mod	0
Beh	0
Health	0
NamPit	

Activity Monitor

simple1

86.2

35.2

DO ORTU/GGIO3.AnIn1

DO ORTU/GGIO3.AnIn2