LamaPLC: UICPAL Temp.humi.sensor

Digital Display Transmitter with Temperature Humidity Sensor Probe RS485 Analog ~~0-5V 0-10V 4-20mA~~ Waterproof Temperature Sensors

The relative humidity of air is the ratio of the absolute humidity in the air to the absolute humidity at saturation at the same temperature, which is a percentage. (that is, the percentage of the amount of water vapor in the air in a certain time and the amount of saturated water vapor at the temperature) is expressed by RH.

The air temperature and humidity sensor adopts imported digital temperature and humidity sensor, which has been finely calibrated during production. The calibration data is stored in the internal memory. Relative humidity and temperature sensor has digital output, can be completely interrotating characteristics, do not need to go through the complex calibration, calibration process, measurement accuracy, linearity, repeatability, interrotating, consistency and other outstanding, it is suitable for environmental equipment matching, instrument equipment integration, general environmental testing.

Unfortunately, the unit (as far as I know) does not have a “CE” certification, which can make its application difficult in some cases.

- **Temperature range:** standard -40~80℃, other temperature range can be customized
- **Humidity range:** 0 ~ 100%RH (non-condensation state)
- **Accuracy:** ±0.3℃ (0℃-65℃); ±3%RH (10%-90%)
- **Repeatability:** ±0.1℃; Plus or minus 0.1% RH
- **Long-term stability:** < 0.04℃/ year; < 0.5%RH/ year
- **Output signal:** RS485 (Standard Modbus-RTU protocol, default device address: 01)
- **Power supply voltage:** 10~30V DC
- **Response time:** < 1S
- **Working environment:** Temperature: -40℃ ~ 120℃; Humidity: ≤95%RH
- **Load capacity:** Voltage output: output resistance ≤250Ω; Current output: ≤600Ω

wire color codes

color	function
black	ground
brown	24V DC power supply
yellow	TA; RS-485 A
blue	TB; RS-485 B

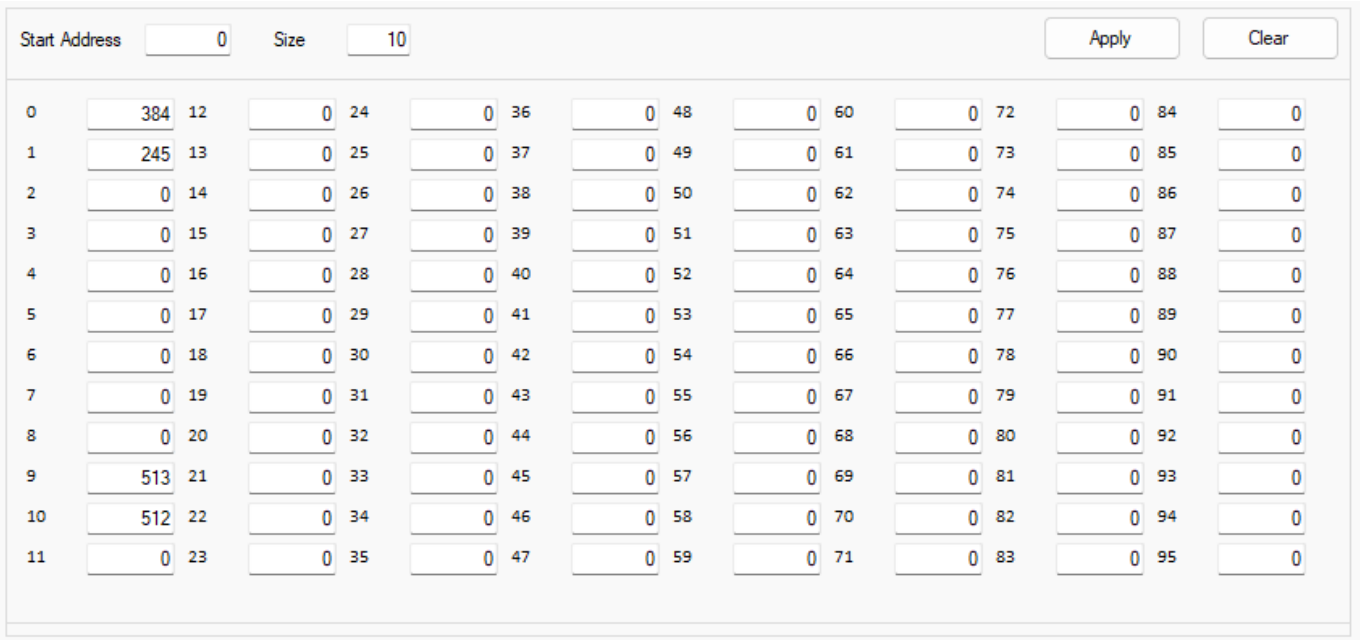
Modbus settings

- Modbus type: RTU
- baud rate: 4800
- Check bit: none
- Data bit: 8
- Stop bit: 1
- Default device address: 01

Modbus map

Holding registers:
The device also gives the same answer to the query “read input register”.

- 40'000: humidity * 10, example: 40.1 %rh → 401
- 40'001: temperature * 10, example: 23.7 °C → 237
- 40'009: some identifier; 513
- 40'010: some identifier; 512



simatic, s7, modbus, communication, temperature, humidity, sensor