Usage of KS expansion module as ModBusRTU slave station

KS series expansion modules all provide a standard RS485 interface, which can be accessed by the master as a ModBus RTU slave at present. (You can check if the middle 5 digits of the serial number ******19150**** are after this, only after this is supported).

➤ KS expansion module factory default communication parameters:

Station number:	1
baud rate:	38400
parity:	None
data bits:	8
Stop bits:	1

Modify communication parameters:

Use the gadget (Kinco_Modbus_Module_Config_V10) to modify through the RS485 port (the computer needs to be connected to USB to 485, or 232 to 485) Note: After the change, the factory value cannot be restored with one key, so it is required to remember the changed parameters! How to use: Open the gadget (as shown in Figure 1), select the serial port of the computer on the left and set the communication parameters to the same parameters of the currently connected module (such as default: station number is 1, baud rate 38400, no verification), right Select read on the side, prompting that the reading is successful, the communication parameters of the currently connected module are displayed in the right box, change the station number in the right box (the maximum station number can be set to 128) or the baud rate or checksum mode, click Modify, and it will prompt that the modification is successful, that is, the modification of the RS485 communication parameters of the currently connected module is completed.
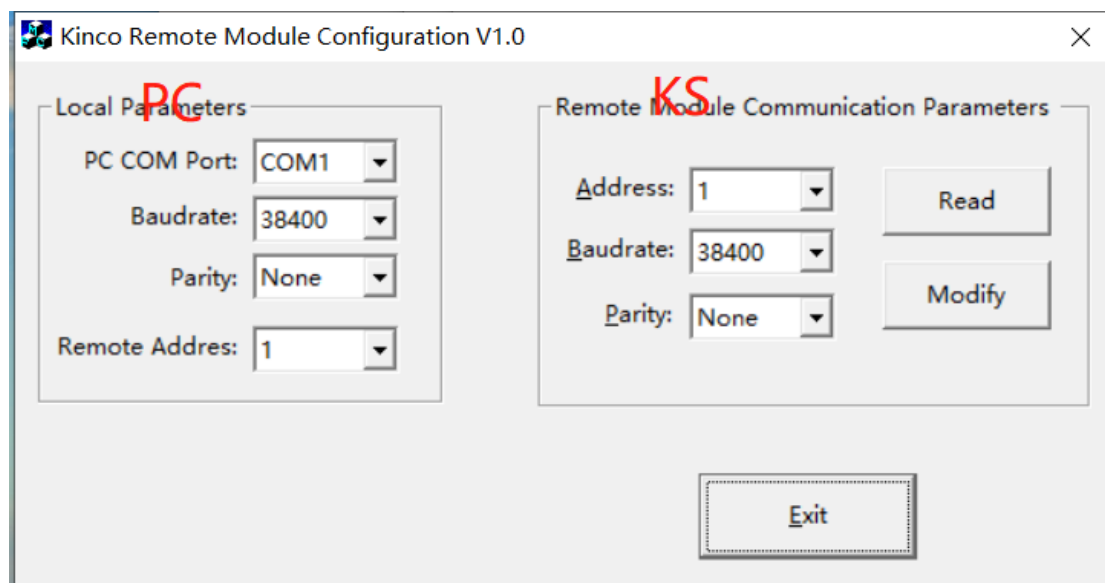
Figure 1: Widget interface

➢ Expansion module ModBus register memory area comparison

*Note: The registers of some ModBus RTU master stations are numbered from 1, at this time add the data in the table directly 1 can

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Specifications	memory area	range	type	Modbus function code	Corresponding Modbus register number* (decimal)
KS121-16DX	I	I0.0-I1.7	DI	02	0-15
KS122-12XR	Q	Q0.0-Q1.3	DO	01, 05, 15	0-11
KS122-14DT	Q	Q0.0-Q1.5	DO	01, 05, 15	0-13
KS123-14DR	I	I0.0-I0.7	DI	02	0-7
	Q	Q0.0-Q0.5	DO	01, 05, 15	0-5
KS131-04RD	AI	AIW0-AIW6	AI	04	0-3
KS133-06IV	AI	AIW0-AIW6	AI	04	0-3
	AQ	AQW0-AQW2	AO	03, 06, 16	0-1

➢ Simple application example:Configuration:

K209M-56DT

Port1 (parameters: baud rate 38400, no parity, 8 data bits, 1 stop bit) + 1*KS122-14DT (station
No. 1)+1*KS133-06IV (station No. 66);

Port2 (parameters: baud rate 9600, no parity, 8 data bits, 1 stop bit) + 1*KS121-16DX (station
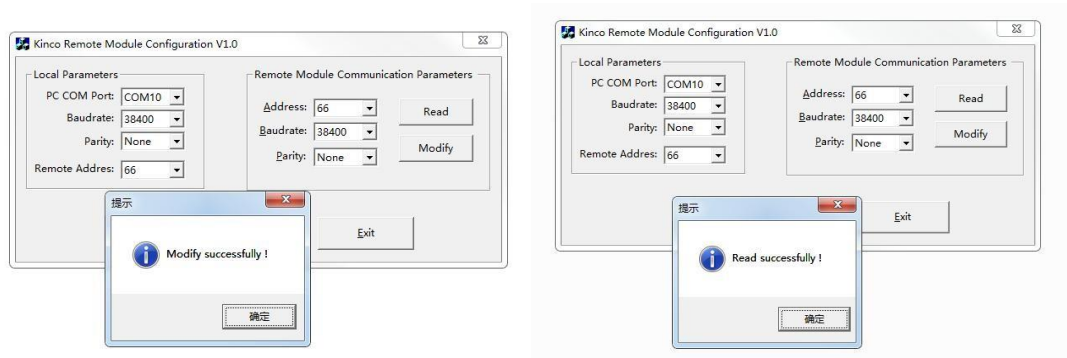
number is 128)

Figure 2 Example: After modifying the module station number to 66, the reading is successful

hint:

①Ks expansion module hardware parameters and general expansion usage can refer to the official website www.kinco.cn KS series manual.

②When the KS expansion module does not use the expansion port to connect to the CPU, the RUN light (green) flashes when it is powered on, which means it is normal.