Serial communication

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Catalog

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Serial Interface

Serial Interface

LX3V Hardware

COM1

- RS422，connect PI/LEVI HMI
- Download
- Upload
- Monitor

Serial Interface

LX3V Hardware

COM1

- RS485，connect PI/LEVI HMI
- Download
- Upload
- Monitor
- Support PLC protocol and modify baud rate

Note: com1 RS422 and RS485 can not work simultaneously

COM2

- RS485，connect PI/LEVI HMI
- Modbus RTU
- Modbus ASCII
- Support custom protocol communication

Serial Interface

Serial port setting（LX3V-COM2）

Protocol Setting (D8126)

Protocol	Description	Value of D8126
WECON PLC Protocol	Using WECON PLC Protocol	01H
MODBUS RTU Master	PLC is slave device	02H
MODBUS ASCII Master	PLC is slave device	03H
User-defined Protocol	Using User-defined Protocol	10H
MODBUS RTU Slave	PLC is master device	20H
MODBUS ASCII Slave	PLC is master device	30H

Serial Interface

Serial port setting （LX3V-COM2）

Communication Format (D8120)

Item	parameter	Bit value of D8120							
		b7	b6	b5	b4	b3	b2	b1	b0
Baud rate (Bps)	115200	1	1	0	0	-	-	-	-
	57600	1	0	1	1	-	-	-	-
	38400	1	0	1	0	-	-	-	-
	19200	1	0	0	1	-	-	-	-
	9600	1	0	0	0	-	-	-	-
	4800	0	1	1	1	-	-	-	-
Stop bit	1 bit	-	-	-	-	0	-	-	-
	2 bit	-	-	-	-	1	-	-	-
Parity	None	-	-	-	-	-	0	0	-
	Odd	-	-	-	-	-	0	1	-
	Even	-	-	-	-	-	1	1	-
Data bit	7 bit	-	-	-	-	-	-	-	0
	8 bit	-	-	-	-	-	-	-	1
Example: the communication format is 9600.1.8.None, b7b6b5b4=1000, b3=0, b2b1=00, b 0=1. D8120=81H ($(10000001)_2$=81H, 81H means hexadecimal number)									

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Modbus RTU Protocol

Modbus RTU Protocol

- Modbus function code

Code 0x01(01): read coil (bit address)

Code 0x05(05): write single coil

Code 0x0f(15): Write continuous coils

Code 0x03(03): read register (word address)

Code 0x06 (06): Write single register

Code 0x10 (10): Write continuous registers

Modbus RTU Protocol

- WECON PLC - MODBUS (Slave) addresses rules for LX3V

PLC Bit Address	MODBUS Address	
	Hex	Decimal
M0 ~ M3071	0 ~ 0xBFF	0 ~ 3071
M8000 ~ M8256	0x1F40 ~ 0x2040	8000 ~ 8256
S0 ~ S999	0xE000 ~ 0xE3E7	57344 ~ 58343
T0 ~ T256	0xF000 ~ 0xF100	61440 ~ 61696
C0 ~ C255	0xF400 ~ 0xF4FF	62464 ~ 62719
X0 ~ X377	0xF800 ~ 0xF8FF	63488 ~ 63743
Y0 ~ Y377	0xFC00 ~ 0xFCFF	64512 ~ 64767

Modbus RTU Protocol

- WECON PLC - MODBUS (Slave) addresses rules for LX3V

PLC Word Address	MODBUS Address	
	Hex	Decimal
D0 ~ D8255	0 ~ 0x203F	0 ~ 8255
T0 ~ T255	0xF000 ~ 0xF0FF	61440 ~ 61695
C0 ~ C199	0xF400 ~ 0xF4C7	62464 ~ 62663
C200 ~ C255	0xF700 ~ 0xF7FF	63232 ~ 63487

Modbus RTU Protocol

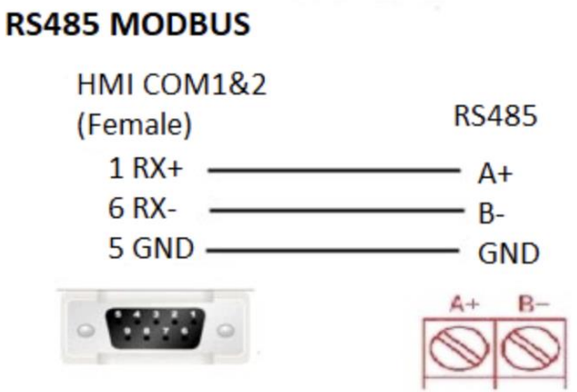
WECON HMI - MODBUS (Slave) addresses rules for PI3070i

HMI Settings

Items	Settings	Note
Protocol	MODBUS RTU Master	
Connection	RS485/RS232	
Baud rate	2400~187500	
Data bit	8	
Parity	Even/ Odd/ None	
Stop bit	1/2	
Station No.	0~255	

Cable Wiring

- **RS485**



Address List

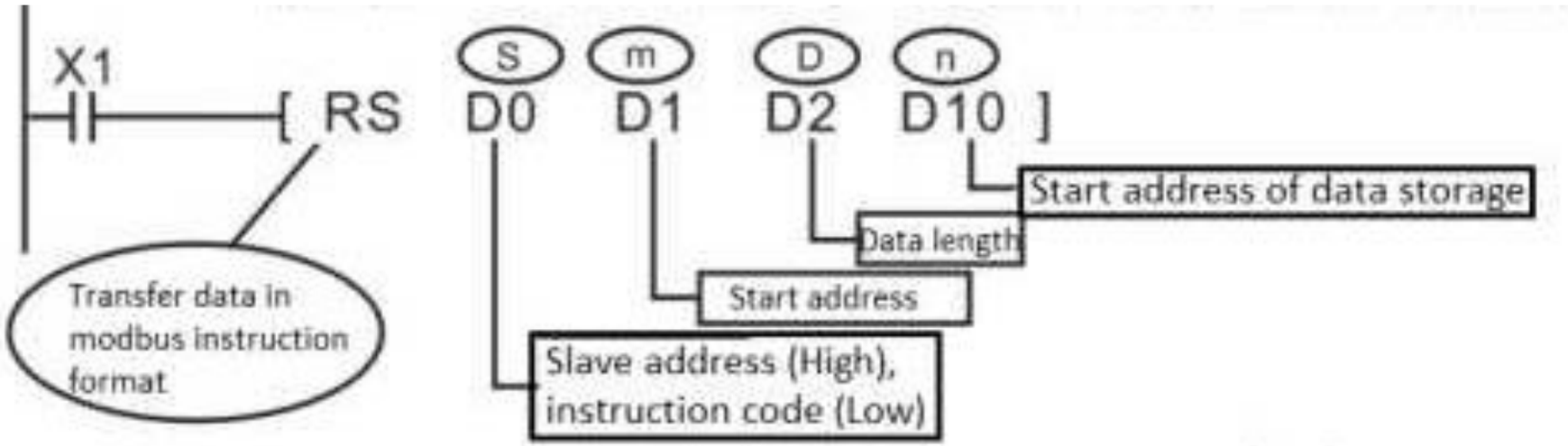
Type	HMI address	MODBUS code	Range
Bit	HDX3000.0~HDX3499.15	0	0~7999
Word	HDW3500~HDW7999	4	0~4499

Modbus RTU Protocol

RS instruction(modbus mode)

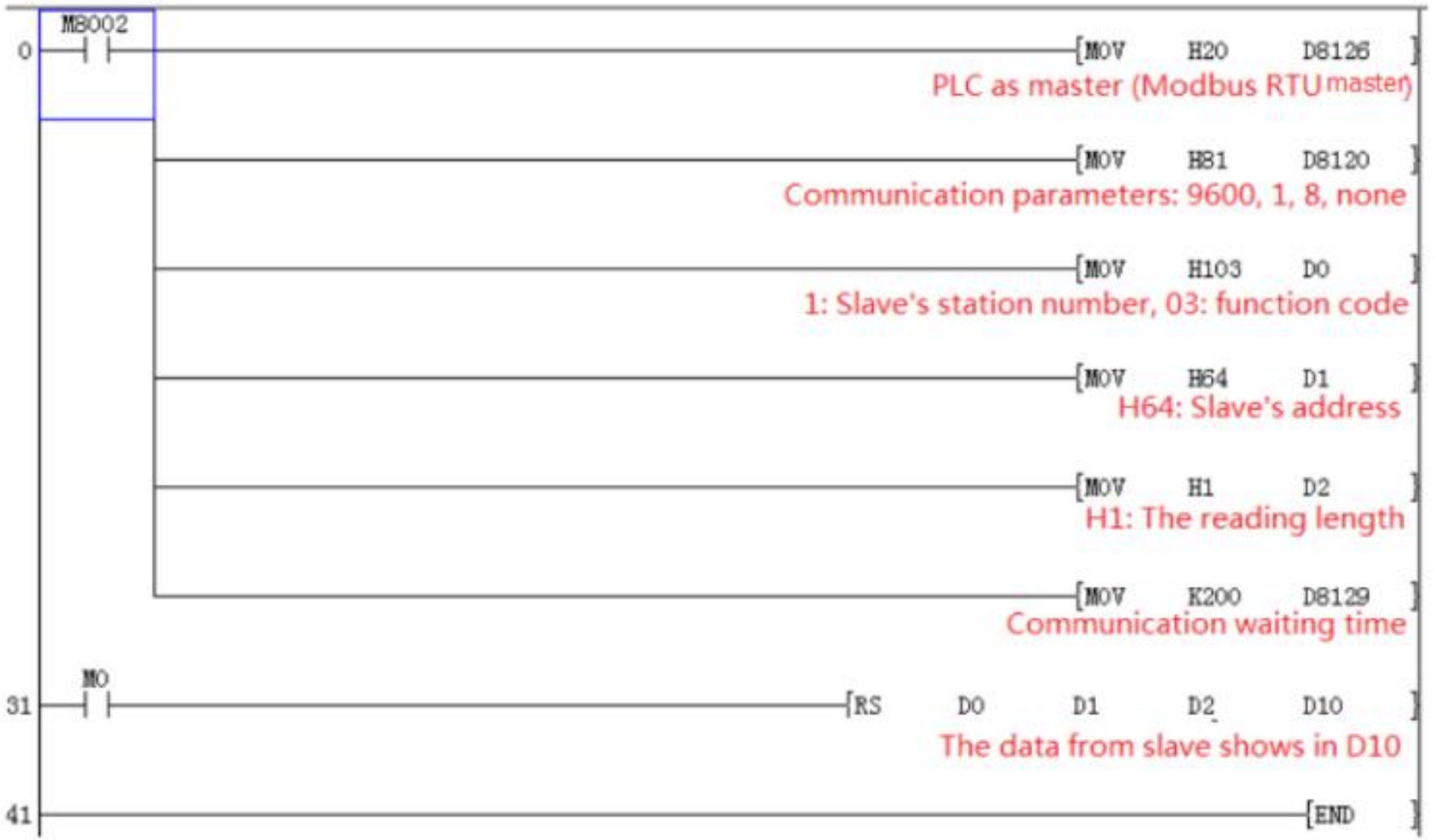
The definitions of each operand in the RS (MODBUS mode) instruction

- S: Slave address (high byte), communication command (low byte, defined by MODBUS protocol);
- m: Start address of accessing slave;
- D: Data length, unit: word;
- n: Start address of data storage, the take up length of the subsequent address defined by D;



Modbus RTU Protocol

- Example



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Thank you