

MODBUS Pressure Transmitter Communication Protocol

Communication format:

I. Read command format (03 function code) example:

A. Send Read command format

Register Address	function code	Register High Address (H)	Register Low Address (L)	Register Quantity High Byte (H)	Register Quantity Low Byte (L)	CRC16 (L)	CRC16 (H)
0X01	0X03	0X00	0X00	0X00	0X01	0X84	0X0A

B. Return Read data format:

Register Address	function code	Data Bytes	data (H)	data (L)	CRC16 (L)	CRC16 (H)
0X01	0X03	0X02	0X00	0X01	0X79	0X84

II. Write command format (06 function code) example

A. Send write command format

Register Address	function code	Register High Address (H)	Register Low Address (L)	Register Quantity High Byte (H)	Register Quantity Low Byte (L)	CRC16 (L)	CRC16 (H)
0X01	0X06	0X00	0X00	0X00	0X02	0X08	0X0B

B. Return write data format example:

Register Address	function code	Register High Address (H)	Register Low Address (L)	Register Quantity High Byte (H)	Register Quantity Low Byte (L)	CRC16 (L)	CRC16 (H)
0X01	0X06	0X00	0X00	0X00	0X02	0X08	0X0B

III. Abnormal response return

Register Address	function code	Abnormal code	CRC16 (L)	CRC16 (H)
0X01	0X80+ function code	0x01(illegal function) 0x02(illegal data address) 0x03(illegal data)		

Supported command, meaning of command and data

MODBUS-RTU protocol command list is as follows:

function code	Register High Address	Register Quantity High Byte	Data byte	Data scope	Command meaning
0x03 function code read data					
0x03	0x0000	1	2	1-255	Read slave address
0x03	0x0001	1	2	0-1200 1-2400 2-4800 3-9600 4-19200 5-38400 6-57600 7-115200	Read Baud rate
0x03	0x0003	1	2	0-#### 1-###.# 2-##.## 3-#.###	Decimal point stands for 0-3 digits decimal points
0x03	0x0002	1	2	0- Mpa/°C 1- Kpa 2- Pa 3- Bar 4- Mbar 5- kg/cm ² 6- psi 7- mh ² o 8- mmh ² o	Pressure unit
0x03	0x0004	1	2	-32768-32767	Measurement output value
0x03	0x0005	1	2	-32768-32767	Zero point of transmitter range
0x03	0x0006	1	2	-32768-32767	Full point of transmitter range
0x03	0x000c	1	2	-32768-32767	Zero point offset value, generally factory sets as 0.
0x06 function codes write data					
0x06	0x0000		2	1-255	Write slave address
0x06	0x0001		2	0-1200 1-2400 2-4800 3-9600 4-19200 5-38400 6-57600 7-115200	Write Baud rate
0x06	0x000c		2	-32768-32767	Zero point offset value* pressure

					output value= calibration measurement value + Zero point offset value
Save and factory reset					
0x06	0x000F		2	0- save to user area	
0X06	0x0010		2	1- factory reset	

Connection mode

Red: V + ; Green: V- ; yellow:RS485 A ; blue:RS485 B