SV-8 Communication Protocol

RS485 bps has 9.6K, 19.2K, 38.4K for optional. It uses standard non-return-zero format (one start bit, eight data bits and one end bit), altogether 10 bits. In case, the data flow of start bit, data bits and the end bits is not correct, the received data will be invalid. In case it is correct but the command or length of data is incorrect, it will return error information. All data in the meter is HEX 1 or 3 float bytes transmission.
The format of 8bytes:

	Address	Low	Mid	High
Mantissa		XX	XX	XX

Index, Offset 40H, more than 40H is integer, less than 40H is decimal fraction. Change to integer by shift left, change to decimal fraction by shift right. If the MSB is “1”, it means negative; if the MSB is “0”, it means positive number. To let mantissa to be available, this mantissa will be always formatted, the MSB is “1”.

Example:	1.234D=1.3BE7H=44.13BEH	Formatted to: 41.9DF3H=	F3	9D	41
	-1.234D=-1.3BE7H=C4.13BEH	Formatted to: C1.9DF3H=	F3	9D	C1
	0.5=0.8000H=40.8000H=		00	80	40
	-0.0625=-0.1000H=C0.1000H	Formatted to: BD.8000H=	00	80	BD

The format of writing and reading is the same for 1 or 3 bytes floating number. Considering the address of memory, in case state the length of communication is 4 bytes, the fourth byte can be added as any other figures. But the software will ignore it.

1. Host Computer transmission address

E0T	ENQ	Add	XOR	ETX
04	05	XX	XX	03

2. The meter return data

ACK	Add	XOR	ETX
06	XX	XX	03

3. Host Computer reading data.

ENQ	Add	Read	First Add	Length	XOR	ETX
05	XX	52	XX	XX	XX	03

The meter receiving correctly and returns data.

ACK	Add	Read	First Add	Length	Data	XOR	ETX
06	XX	52	XX	XX	XX	XX	03

4. Host Computer writing data.

ENQ	Add	Write	First Add	Length	Data	XOR	ETX
05	XX	57	XX	XX	XX	XX	03

The meter receiving correctly and returns data.

ACK	Add	Write	0	K	XOR	ETX
06	XX	57	4B	4F	XX	03

5. Host Computer reading name of the meter.

ENQ	Add	Name	XOR	ETX
05	XX	4E	XX	03

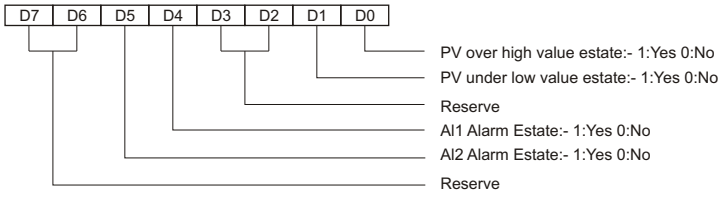
The meter receiving correctly and returns data.

ACK	Add	Name	Meter Name	XOR	ETX
06	XX	4E	XX	XX	03

6. The meter receiving incorrectly and returns data.

NAK	Add	Error Code	XOR	ETX
15	XX	XX	XX	03

Address	Type	Length	Range	Note
61H	FLAG (Read Only)	1	0~3FH	Estate Signal
62H-64H	PV (Read Only)	3	-1999~9999	Measuring Value
C8-CBH	AL1 (Read & Write)	4	-1999~9999	#1 Alarm Setting Value
CC-CEH	HV1 (Read & Write)	3	-0.0~9999	#1 Alarm Hysteresis
CFH	Ad1 (Read & Write)	1	0/1	#1 Alarm Mode
D0-D3H	AL2 (Read & Write)	4	-1999~9999	#2 Alarm Setting Value
D4-D6H	HV2 (Read & Write)	3	0.0~9999	#2 Alarm Hysteresis
D7H	Ad2 (Read & Write)	1	0/1	#2 Alarm Mode
D8-DAH	PS1 (Read & Write)	3	-50.0~50.0	Modify Value
DBH	Add (Read & Write)	1	0~255	Address
DCH	LOCK (Read & Write)	1	0~255	Password Setting
DDH	In1 (Read & Write)	1	0~8	In1 Input Display Unit Selection



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