

## IQPT Intelligent Transmitter Communication Instruction Version 2.3

Data Format : 1 start bit, 8 data bit, 1 stop bit, no parity bit.

Instruction Format

Send Instruction:

\$	xx	YY	[S #. ###]	PP	Chr ( 13 )
Start character	Address	Instruction	Parameter	Check	End character

Answer Instruction:

*	xx	[ S #. ### ]	PP	Chr (13)
Start character	Address	Parameter	Check	End character

Instruction Explaining : The instruction format is flexible, contents in “[ ]” are optional.

\$	Start character of sending instruction, 1 byte, ASCII code is 24H
*	Start character of answering instruction, 1 byte, ASCII code is 2AH
Return	End character of instruction, 1 byte, ASCII code is 0DH
xx	Address mark, 2 bytes, from 01 to 99, totally 99 optional addresses and one omnipotent address 00
YY	Instruction code, 2 bytes, composed by capital letter, details to see detailed rules
S	“+” or “-”, 1 byte
.	Decimal, 1 byte, in the middle of the number, could be changed due to different units
####	Number, 4 bytes, algorithm
PP	Check character, 2 bytes; PP value could be got from one byte which will be calculated (XOR) by ASCII between start character and check character one bit by one bit; the byte's high and low nibbles are indicated by ASCII, therefore, two bytes “PP” could be got.

Special Indication

Address “00” is universal address. When user inputs “00” address, please be sure there is only one transmitter in the bus line. Otherwise, bus line transmitters will compete with each other, and this will result in wrong return value.

Instruction Detailed Rules:

The usage of detailed rules on the following table, take transmitter parameter as example:

Address : 55  
 Baud Rate : 9600bps  
 SN : 02461232  
 Transmitter : - 0.1~1MPa  
 Temperature : 25  
 Current Pressure : 0.500MPa  
 Pressure Type : Absolute

**Communication Instruction:**

In the following table, check character and end character have been omitted. When using, the instruction could be valid by adding these two characters.

Instruction	Details	Parameter	Instruction Example	Answer Example	Explain						
AD	Read address		\$00AD	*5555	Parameter range is number 01~99.						
	Write address	##	\$55AD34	*3434							
BD	Read baud rate		\$55BD	*551	Parameter 0,1,2,3 could be optional, stands for 1200,2400,4800,9600 bps respectively						
	Write baud rate	#	\$55BD1	*551							
RP	Read transmitter pressure value	#	\$55RP0	*55+0.500	#:channel No., the ranges are different according to different transmitter types						
ID	Read SN		\$55ID	*5502461232	SN is 02461232						
DL	Read zero display		\$55DL	*55-0.100							
	Setup zero display	S#.###	\$55DL-0.100	*55-0.100							
DH	Read FS display		\$55DH	*55+1.000							
	Setup FS display	S#.###	\$55DH+1.000	*55+1.000							
OL	Read zero transmitting output		\$55OL	*55-0.100							
	Read zero transmitting output	S#.###	\$55OL-0.100	*55-0.100							
OH	Read FS transmitting output		\$55OH	*55+1.000							
	Read FS transmitting output	S#.###	\$55OH+1.000	*55+1.000							
DP	Read decimal position		\$55DP	*553	Parameter range is 0, 1, 2, 3 and 4, display integer correspondingly, 1, 2, 3, or 4 decimals						
	Setup decimal position	#	\$55DP3	*553							
WU	Save setting value to user		\$55WU	*55OK	OK means save successfully.						
LD	Restore factory setting		\$55LD	*55OK	OK means save successfully.						
UT	Read transmitter unit		\$55UT	*551	Returning value range is 0, 1, 2, 3, 4 and 5 , means kPa、MPa、mH <sub>2</sub> O、bar、Psi、mbar respectively						
SZ	zero		\$55SZ	*55OK	OK means save successfully						
ZF	Read zero final		\$55ZF	*55+1224	Parameters are 4 algorism numbers with symbol						
	Setup zero final	S####	\$55ZF+1233	*55+1233							
FF	Read FS final		\$55FF	*55+3453	Parameters are 4 algorism numbers with symbol						
	Setup FS final	S####	\$55FF+3244	*55+3244							
TY	Read type Pressure type Output type		\$55TY	*55460-1000	Type code	Type	Out put	Chann el	Reserv e		
					## ## #	#	#	#	#		
					4 6 0 0	Gauge	0	No output	0	Single	0
					4 6 2 E 1	Sealed gauge	1	4-20mA	0	channe l	0
					4 6 2 B 1		2	0-10mA			
					4 8 4 A 2	Absolute	3	0-20mA	1	Double	channe l
4 8 4 Z 3	Differential Pressure	4	0-5V								

										5	1-5V		
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