LoRaWAN Wireless pressure sensor Operating instruction

I. product overview (Model HPT-23)

LoRaWAN Wireless pressure sensor HPT-23 with high precision and sensitivity and the ultra-low power consumption microprocessor are adopted to process the pressure signal of the medium under test into digital signal, which can display the pressure value on site and transmit the measured data wireless through the standard LoRaWAN protocol. It has the advantages of convenient installation and use, further transmission distance, stable and reliable performance and so on. It is widely used in intelligent fire protection, intelligent water supply, intelligent factory and other wireless pressure monitoring field.

II. Technical parameters

1. Display mode: No display
2. The test medium: Liquid or gas compatible with material
3. Scale range:-1.5~ 0.5KPa Inner arbitrary interval
4. Precision grade: 0.5%FS
5. Stability: ±0.5%FS/Y
6. Working voltage:3.6VDC battery
7. Battery capacity:19000mAh
8. Sleep currency: <30uA
9. Transmit currency: <140mA
10. Receive currency: <15mA
9. LoraWan frequency: EU868Mhz
10. Communication protocol: Standard LoRaWAN agreement
11. Working temperature:-20~60°C
12. Overload capacity:300%
13. Service life:>9 million Pressure cycle
14. Install the screw:G1/2
15. Protection grade:IP68

⚠ Warning: Unauthorized disassembly of the product is strictly prohibited!

Never press the measuring element diaphragm with your finger!

Do not insert any sharp object into the pressure orifice!

III. Data communication format:

byte number	1	2	3	4-5	6	7-8	9-10	11	12-13	14-15
Content	1E	XX	XX	XXXX	XX	XXXX	XXXX	XX	0014	00F0
Definatio n	The total numb er of byte	The total messa ge sent	data numb er	Current value	Dot	Unit	Batter y voltag e	Reserv ed	sensor sampli ng rate	Sensor data uplink rate
Byte type	No symb ol	No symbo l	No symb ol	with symbol	no symb ol	no symb ol	no symbo l	Reserv ed	no symbol	no symbol
Value range	1E	0~255	1	-1999~+9 999	0-3	0~16	0~655 35	Reserv ed	1~999 9S	1~9999 min

16-17	18-19	20-21	22-23	24	25	26	27	28	29-30
0005	0001	270F	D8F1	02	XX	02	XX	XX	XXXX
Collecti on rate in alarm status	Alarm uplink rate	High alam threshol	Low alarm threshold	Alarm mode	reserve d	sensor alarm confirmati on times	reserve d	wireles s signal strengt h	CRC

no symbol	no symbol	with symbol	with symbol	no symbol	reserved	no symbol	reserved	no symbol	no symbol
1~9999S	1~9999min	-1999~9999	-1999~9999	0~3	reserved	‘1~99	reserved	0~31	0~65535

III. Downlink data format:

Serial No.	command byte number	Command	Menu name	Value range	Remard
1	3	A1	data upload interval	1~9999min	default 240min
2	3	A2	sampling interval	1~9999sec	default 20sec
3	3	A3	high alarm value	-9999~9999	Default is 1999, decimal point follows display
4	3	A4	low alarm value	-9999~9999	Default is -1999, decimal point follows display
5	3	A5	alarm mode	HL(0)/IN(1)/CAPH(2)/CAPL(3)	0: Out of range alarm; 1: Alarm within the range; 2 high alarms; 3 low alarms. Default high alarm

6	3	A6	Alarm output	NO/NC	Normally open/normally closed
7	3	A7	sensor alarm confirmation times	1~99	Default is 2 times
8	3	A8	Set cutting value	-9999~9999	Set cutting value
9	3	A9	sampling rate in alarm status	1~9999sec	In the alarm state, the sampling rate is set to 5 seconds by default
10	3	AA	Alarm uplink rate	1~9999min	In the alarm state, the upload rate defaults to 1 minute
11	3	AB	Unit option	MPa、KPa、Bar 等	Multiple units such as pressure and liquid level
12	3	AC	decimal	0~3	Up to 3 decimal places can be set
13	3	AD	Set the minimum range value	-9999~9999	Set the minimum range value
14	3	AE	Set the maximum range value	-9999~9999	Set the maximum range value
15	3	AF	Set compensation value	-9999~9999	Set compensation value

"For example: (Command is in hexadecimal, 4G product is a string):

1. Modify a single parameter: change the upload time to 10 minutes: write A1 00 0A;

2. Modify multiple parameters simultaneously: upload time is 10 minutes, decimal point is 2: write A1 00 0A AC 00 02;

3. If a negative number is input, the data will be Symbolic shaping. For example, to input a low level alarm of -5; Actual input FFFB; Input: A4 FF FB;"

IV. After-sales service

1. All orders of our products are guaranteed for one year;
2. If the product fails within the warranty period, it is a quality problem detected by the company, and the company shall bear all the maintenance costs;
3. Failure to follow this manual or disassemble of the product, resulting in damage to the components or pressure diaphragm, is not covered by the product warranty。
4. Please contact our company to confirm the repair after product failure. Please attach the following information:

a. Product failure phenomenon;
b. Description of the product using site environment;
c. Delivery address and contact information;