

Attentions that should be paid when using digital pressure gauge HQ711

Firstly thanks for purchasing the digital pressure gauge HQ711

Please pay attentions to following:

- Make sure the service medium is the same to the media required on the data plate of HQ711.
- Working pressure can not exceed the loading pressure required on the data plate of HQ711.
- Only use HQ711 in the environment required in the brochure.
- Only charge the gauge battery by the way illustrated in the brochure.
- When the battery lower than demand, HQ711 will shut down automatically. Please change the battery or connect it to the specific power adapter to continue working.

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1. Brief Introduction

Adopting new generation of dynamic ratio measurement,with the help of selected imported pressure sensor and accurate temperature compensation, HQ711 largely improve its accuracy and long-term stability. The design of micro power consumption significantly lower the frequency of changing battery. Characterized by suitable for field pressure measurement and laboratory use, it can not only measure precision pressure but also can verify the general pressure gauge and precision gauge. It can completely replace the pointer precision pressure gauge.

2. Product specification

Pressure Unit: mmH₂O、 mmHg 、 inH₂O、 inHg 、 kgf/cm²、 psi、 kPa、 MPa、 Pa 、 mbar、 bar many units can switch. HQ711 can switch the units according to different measuring range

Working environment: Temperature: (-10~50) °C; Relative humidity:< 95%; Atmospheric pressure: (86~106) kPa; Temperature for Storage: (-20~70) °C

Display:Full view LCD screen,White back light, 5 digit number display

Ways of charging: The built-in section DC9V mercury free alkaline battery,or connected with the external power adapter

Diameter: head ϕ 109mm × 40mm,length 175mm

Weight: about 0.6kg

Thread: M20 × 1.5 (Can make to order)

Communication interface:RS232, The baud rate 9600bps

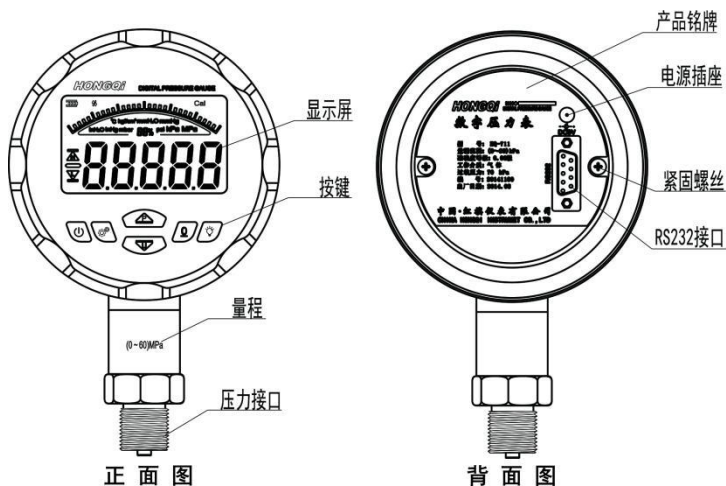
Additional functions:

Temperature measurement: resolution 0.1 C;

Automatic Peak Records: Record the max and min value during measuring

The pressure percentage : Showed on the dividing rule displayed

3.Product structure drawing



显示屏： Display

量程： Range

正面图： Front drawing

电源插座： Power charger

背面图： Back drawing

按键： Button

压力接头： Connection

产品铭牌： Data plate


紧固螺丝： Fixing thread

RS232 接头： Connection RS232

4. Button Function





 Power button: Press for 3 seconds to turn on/off the power supply

 Setting button: Press shortly to switch to temperature display; Press for a long time to enter setting menus

 Pitch button: switch between max, min and current pressure



 Unit button: Switch the pressure units.

 0-setting: Reset the pressure value

 Back-light button: Switch on/off the back light of display

Data input method:


Move the the cursor position by  and 

Adjust the cursor digits plus or minus 1 by  and 


Confirm the digit input by 

Withdraw the digit input by 

Menu operation methods:

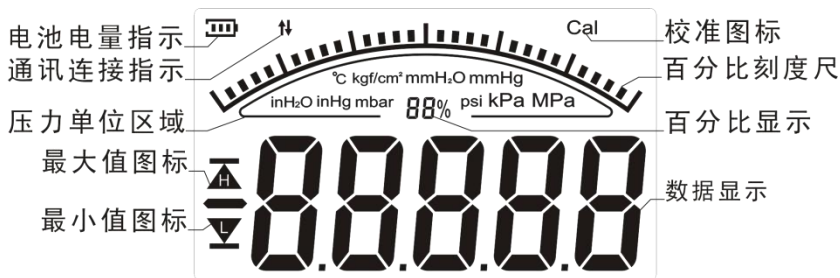
Press  for a long time to enter menus

Switch the menu options by  and 

Execute the menu options by 

Back to the former menu by 

5. Display instruction



电池电量指示: Battery indicator

通讯连接指示: Communication connection indicator

压力单位区域: Pressure units area

最大值图标: Maximum value

校准图标: Calibration

百分比显示: Percentage


最小值图标: Minimum value

百分比刻度尺: Percentage scale

数据显示: digital display

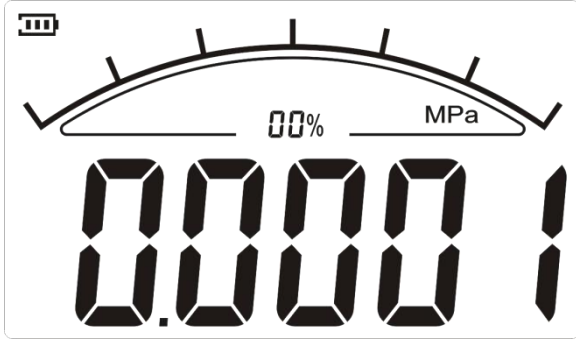
6. Operation instruction

1). on/off


Long-press  for 3 seconds to turn on the device. Pressure range will be displayed before getting into the pressure measurement interface.


2). pressure measuring

After power-on, HQ711 will enter the pressure measuring interface, which shows the Battery power, pressure value, pressure unit and pressure percentage. The unit of pressure is determined by the last set. When the measured value of the pressure exceeds 120%FS, the screen display -OH-, please release pressure immediately to avoid damaging the pressure sensor.

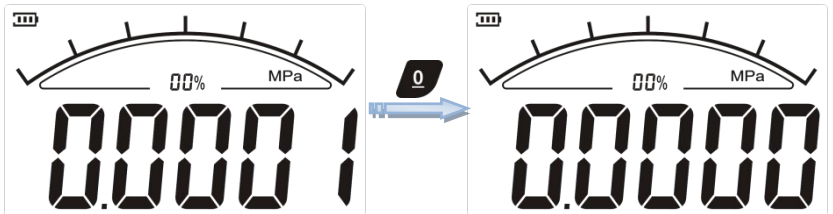


3). Pressure zero-setting


The connector of the gauge should be connected to the atmosphere and make sure it is vertically downward. Press , reset the pressure value.

Long press , withdraw zero reset.

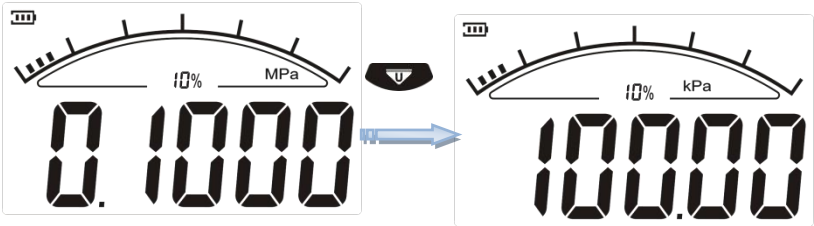
Zero setting shows as below:







4). Pressure unit switch

Press , switch the pressure unit. To ensure the normal display of pressure value, HQ711 will set the unit automatically according to the pressure range. Not all pressure units can be switched.

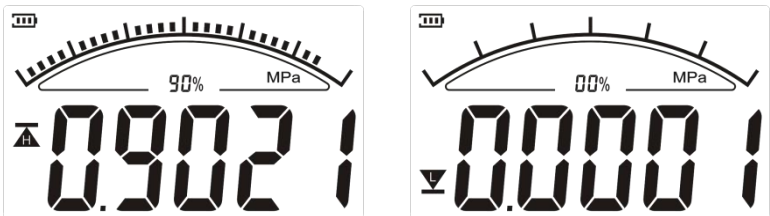
Units switch as below:





5). Show peak value

In the display of pressure measuring, pressing , the screen will show the max pressure, min pressure and current pressure. When showing the max pressure, the screen will appear . When showing the min pressure, the screen will appear . When showing max or min pressure, pressing , it can delete the former peak value and set to the current pressure.

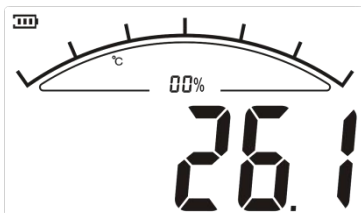
Peak value display shows as below:




6). Temperature measurement

In the condition of pressure measurement, press  button long to switch to the temperature measurement interface . Press  button again to switch from the temperature measurement interface to pressure measurement interface.


Temperature display as shown in the figure below:



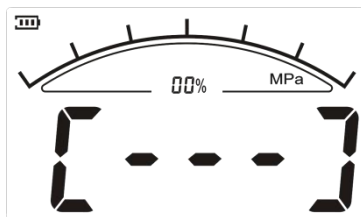
7). LCD Back-light

Under the pressure measurement interface,press  button to open/close the screen back-light. After a certain period of time, Back-light will automatically shut down. if you need it on, you can set it up in the user menu. Check the menu introduction for details!

No.7 Usage menu

When on the pressure measurement interface, long press  button to enter the menu, then the screen will ask you to import password which is 711. If the password is wrong, it will return to the pressure measurement interface.

Password input interface as shown in the figure below:



1). Menu option instruction


1-CAL	用户校准选项
2-CLE	校准数据选项
3-rAR	采样周期选项
4-bLT	背光常亮选项

- 1-CAL implement this item to enter into calibrating process;
- 2-CLE implement this item to set up calibrating data ;
- 3-rAR implement this item to set up pressure sampling period;
- 4-bLF implement this item to set up back-light constantly on ;

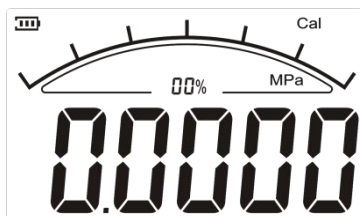
2). Pressure calibration item



Pressure calibration function is used to verify the accuracy rate of HQ711. It requires metro logical verification professionals to verify it when the environment and the pressure medium accord with the standards. Any improper operation can impact the accuracy of the gauge. If you verify it improperly, please re-verify it or choose non-calification date on the menus.

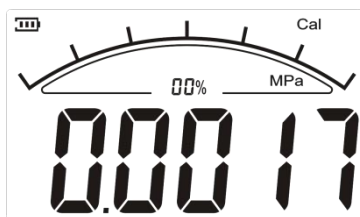
For HQ711 with single range, there are two implied adjusting points ---lower limit and upper limit. For HQ711 with compound range, there are three implied adjusting points---lower limit, zero and upper limit. Calibration point value can be adjusted by the users, but must meet the standard that the first value is less than the second point, the second value is less than the third. The implied calibration order should be like this: firstly for lower limit, secondly for zero calibration and finally for upper limit. When finished, return to the menu. Meanwhile calibration data option is automatically set to enabled condition.

After choosing 1-CAL, press  button for execution. The screen shows minimal calibration value and Cal cons. When the first digit flashing, the user can modify the calibration value according to the data input method.

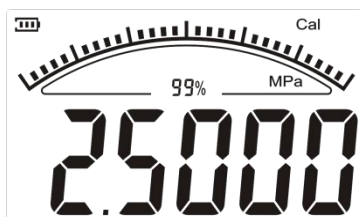
Shown as the following figure:





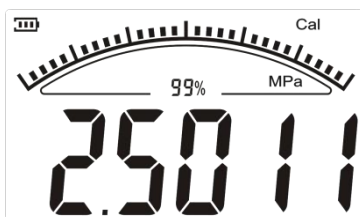
If there is no need to modify, press  button to confirm, and begin to adjust the minimal value. Screen shows the actual pressure measurement values. After pressure is stable, press  button to finish minimal value calibrating. Shown as the following figure:



After completing the minimal value of calibration, screen enters into the maximal value calibration interface. (Take 2.5MPa as an example) Screen shows the calibration point of norminal value and **Cal** icons. The user can input data to modify the norminal value. Shown as the following figure:




If there is no need to modify, press  button to confirm, and begin to adjust the maximal value. Screen shows the actual pressure measurement values. When the pressure is stable, press  button to finish the maximal value calibrating, and it will return to the menu. Shown as the following figure:



HQ711 with compound range has 3 points of calibration. Apart from the range of upper and lower limits, there is a zero. Operation method is the same to the 2 points calibration.

3).Calibration data options

After choosing **2-CLE**, press  button for execution. Screen shows 

or **OFF**. Choose **ON** to use calibration data, and choose **OFF** to close calibration. When finished, press  button to confirm.



4). Sampling period options

After choosing **3-RR**, press  button for execution. Menu options are following:

1-8 (1second 8 times) 1-4 (1second 4times) 1-2 (1second 2times)
1-1 (1second 1times) 2-1 (2second 1times) 3-1 (3second 1times)
4-1 (4second 1times) 5-1 (5second 1times) 6-1 (6second 1times)
7-1 (7second 1times) 8-1 (8second 1times) 9-1 (9second 1times)
A-1 (10second 1times)

When finished, press  button to confirm.

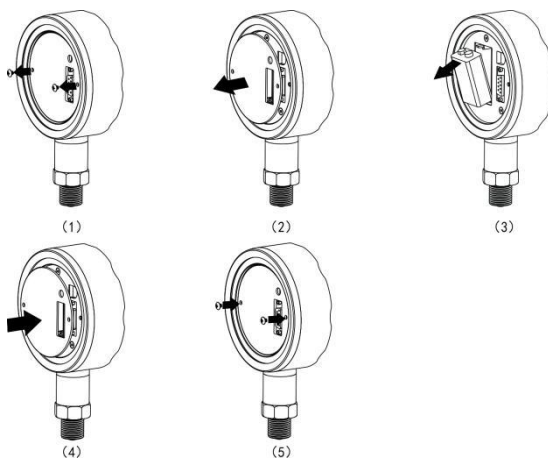
5). Back-light normally on options

After choosing **4-BLF**, press  button for execution. Screen shows **ON** or **OFF**. Choose **ON** to open back-light constantly on, and choose **OFF** to close back-light. When finished, press  button to confirm.

No.8 power supply

HQ711 has two ways for power supply : A 9V battery for power supply or A 9v special power adapter for power supply.

Battery installation way:



Power adapter installation way:

