

HIGH PRECISION PRESSURE GAUGE

MANUAL

I: NOTICE

1. Please check the packaging and appearance after you received the product.
- 2.Please check the mode and specification of the product. Keep correct electrical connection and mounting method.
- 3.Power: three pieces of AA battery or USB-power.
- 4.During using, please notice the technical and operation conditions: the temperature of medium, burst pressure, power supply.
5. This product is a precision device, DO NOT use hard objects to touch the diaphragm or disassemble.
6. During installation, do not install or disassemble strongly, especially the installation of thread.
7. Please install or disassemble with a suitable wrench, Otherwise, the damage is not in the scope of warranty.
8. After starting the gauge, it is a normal phenomenon to take a few minutes to keep it stable and work normally.
9. If the product is out of order, please contact our after-sale technical staff.
- 10.During installation, the gauge will be affected by installation stress. After installation, please zero clearing.

(!)The product damage caused by non-professional operation according to the operation regulation is not the scope by the warranty.

II: WARNING

1. This product is a precision instrument, it should be regularly calibrated or submitted to ensure the accuracy of the product.
2. Product storage should be moisture and dust, as far as possible in the dry and normal temperature environment.
3. The company does not undertake any direct or indirect loss other than the product itself.
4. The company reserves the right to change the specifications of the product without notice.

III: DESCRIPTION

The high-precision digital pressure gauge is a high-precision pressure gauge that can rotate 330°. It uses split-screen display on the main screen and the secondary screen. While the main screen displays real-time pressure, the split-screen displays the ambient temperature, maximum pressure, and minimum pressure. Reference data such as measuring range.

The product has powerful functions and can switch between multiple common pressure unit displays. The pressure collection rate is adjustable, the collected data can be recorded, and the recorded data can be exported through a type-c data cable or Bluetooth function. Various parameters can be set through Bluetooth function or buttons.

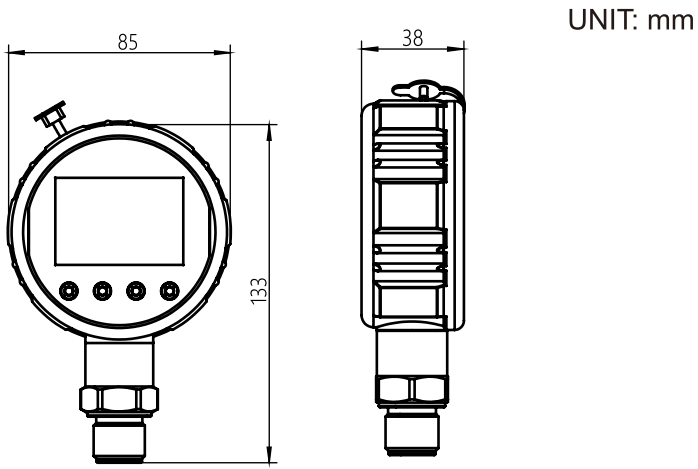
The device comes standard with type-c external power supply, optional type-c external power supply + 3 AAA battery power supply mode or type-c external power supply + rechargeable battery power supply, multiple power supply modes, more convenient to use.

- ☆ Original imported pressure sensor, accuracy 0.05%, 0.1%, 0.5% optional
- ☆ Dial can rotate 330°
- ☆ Can record up to 270,000 pieces of data, and can export data through a computer or Bluetooth app
- ☆ Multiple power supply modes: optional type-c external power supply + 3 AAA battery mode or type-c external power supply rechargeable battery power supply
- ☆ Up to 10 pressure units can be switched, with a wider range of applicationsBluetooth function: can set various parameters and export recorded data

IV: SPECIFICATION

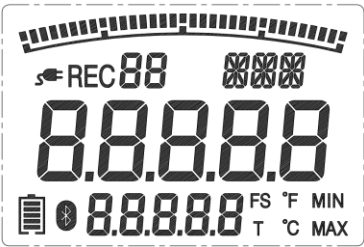
Pressure range:-0.1MPa...0~1...10...40...70MPa (for specificrange, see the label on the device)
Overload pressure:150%
Backlight color: green
Dial size: 85mm
Accuracy grade: 0.05%,0.1%,0.5% (for the specific range, see themarking on the equipment label)
Output: without
Long-term stability: better than 0.05% FS/year
Working temperature:-5~40°C
Electrical protection: anti-electromagnetic interference design
Sampling frequency:0.1~10 times/second
Measuring medium: gas or liquid compatible with 316 stainless steel
Connection: M20*1.5 G1/4 or customized thread
Connection material: 304 stainless steel
Rotation angle: 330° degree
Product function: Power on/off, backlight, clear, unit switching, extreme value display, temperature display, range display, data recording and export functions
Power supply voltage: 3 AAA batteries + type-c external power supply; rechargeable + type-c external power supply
Shell material: cast zinc
Protection class: IP65 (IP67 optional)

V: DIMENSION



VI: BUTTON

6.1. LCD screen and code description:



Code	Description
	Pressure percentage bar
	Power supply
REC88	The number of data recorded
0000	Pressure unit
8.8.8.8	Main Screen: Current Pressure Value
	Battery power
	Bluetooth

8.8.8.8	Secondary screen: current temperature/ extreme values
FS	Pressure range
T	Temperature sign
°F	Temperature: Fahrenheit
°C	Temperature: Celsius
MIN	Pressure minimum
MAX	Maximum pressure

6.2. Key and function description:

Button	Name	Button & function description
	Power	Short press to turn on, long press to turn off, power on state, short press to turn on the backlight
UNIT/MENU	Unit/Set	Short press to switch units; long press to enter parameter setting interface
MODE/ZERO	Mode/ Zero clear	Short press to switch to secondary screen mode, long press to clear the device
SET/REC	Confirm/ Record	Short press to confirm settings and exit; long press to enter or exit the recording function

VII: POWER SUPPLY

This product can be powered in two modes, battery or USB.

Battery power	Powered by 3 AAA batteries or a rechargeable battery pack. When the battery indicator alarms, the batteries need to be replaced/charged in time.
USB power supply	Adopts type-c power supply, and the power supply is 5V * This product comes with a standard power cord (5V, 0.15A) * The product is equipped with power management, plug into the type-c port without removing the battery.

For battery replacement:
First remove the protective cover, there are 3 screws on the back cover, after removing it, open the back cover, you can see the battery, just replace it.

VIII: FUNCTION DESCRIPTION

8.1 Change device parameters

Long press the UNIT/MENU button and P0 will appear. At this time, press this button continuously and the following table code will appear; short press the MODE/ZERO button to set the function parameters; short press the SET/REC button to save the settings and return to the pressure display. home page:

Code	Function	Description
P0	Automatic switch on and off	This function is turned off by default. After the function is turned on, the device will automatically shut down after 5 minutes of no key operation.
BLE	Bluetooth function	It is turned on by default. After turning it on, you can use the Bluetooth function to turn it off. After turning it off, you cannot use Bluetooth.
RATE	Acquisition rate	Default is 0.3 seconds, can be changed from 0.1 to 10 seconds.
FLTR	Filter coefficient	Default 5, can be changed to 1~7 times
E000	Full scale compensation	Default 1.000, 0.500~1.500
rES	Reset	
DEL	Clear storage	Click the SET button to clear all recorded data

8.2 Change device time device

To change the time, you can accurately record the time. The specific operation is as follows. Press and hold the UNIT/MENU key and MODE/ZERO key at the same time until the YEAr page appears. This page is the year setting. At this time, short press the UNIT/MENU key number. Decrease, press the UNIT/MENU key briefly, the number will increase, and the year is set. At this time, press the key continuously, nnth (month), dAY (day), HOUr (hour) nit (minute), SEC (second) will appear respectively.) ; Change the same way as the year: After setting the time, press the SET/REC key briefly to save the settings and exit.

Note: After the device is connected to Bluetooth, it will automatically obtain the current time and save it to the device without pressing the button to set it.

8.3 Record data export

- There are two situations for exporting recorded data:
- Export through the standard data cable: There is a USB port on the device. Connect it to the computer through the data cable. A folder will appear on the computer in which the recorded data is stored.
 - Export through APP Bluetooth function: see 9 for tutorial details.

IX: BLUETOOTH DESCRIPTION

This product can debug the device through the APP client. Theset parameters include: data collection frequency, currentpressure data, clearing function, etc.

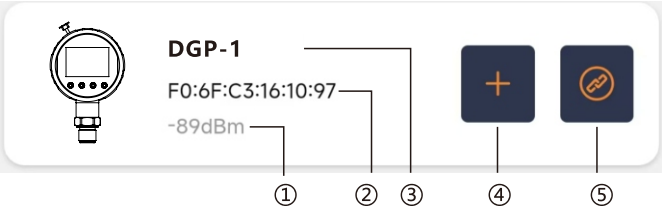
9.1 Use the mobile phone system to "scan" or the browser's "scan" to scan the QR code below and use the APP installation package to install it.



Note:
To ensure that the mobile phone is connected to the device normally, please keep the mobile phone's cellular data, positioning and Bluetooth functions turned on at all times.

9.2 After the installation of "SECA" is completed, the equipment can be debugged through the following operations:

9.2.1 Main interface composition



- ①: Bluetooth communication signal condition, the larger the value, the worse the signal.
- ②:Device MAC address.
- ③:Device model name.
- ④:Join multi-device group connection mode.
- ⑤:Enable single device connection mode.

9.2.2 Sub-interface composition

Note: 1) The version number of the software function can be viewed in the secondary interface.
2) Users can switch the app language in the language function menu. (You need to restart the APP after selecting)



9.2.3 Multi-device connection group mode



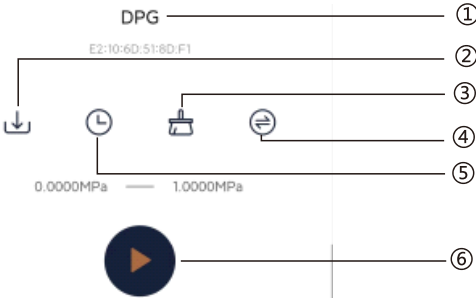
- ①:Delete key to remove the device from the group list.
 - ②:Turn on all devices in the group.
- Note: Up to 4 different Bluetooth devices can be added to the same group.

9.2.4 Data observation under multi-device connection



Note:
1)You can enter this interface by opening all in 9.2.3.
2) In this interface, data can be observed on up to 4 Bluetooth devices at the same time through the same mobile phone. 3) Users can click the play button below to turn on/off remote data recording. Finally, the mobile phone will organize the collected data into EXCEL format.

9.2.5 Single device connection mode



- ①Device name changeThe name of this device is DPG. You can connect to this device by searching for "DPG" on Bluetooth. Click 1 to display the icon, and you can change the device to another name, such as "123456"
- ② Local record data export functionFor devices that support local storage, the device supports exporting data and clearing records. Select "Start Time" and "End Time", click the reader to read the data recorded in the time period, and click "Export Data" to export the time. The data recorded in this time period, or click "Clear Records" to clear the data recorded in this time period.
- ③Device resetNote: Clear the device without pressure.
- ④ Display unit changesThe displayed pressure unit is changed, such as "KPa" to "MPa", there are more than ten kinds of unit changes.
- ⑤ Change the acquisition rateThe data collection rate can be changed between 0.1s~10s.
- ⑥ Real-time data collection and export functionClick the record button to turn on the real-time data recording function, and the data begins to be recorded. After the recording is completed, click the record button again. After the recording is completed, a csv format file is generated.

9.2.6 Data export mode

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
序号	压力	温度	湿度	风速	风向	雨量	光照	土壤湿度	土壤温度	空气温度	空气湿度	大气压力	海拔高度	经纬度	设备名称	设备型号	设备MAC	设备固件	设备版本	设备状态	设备电量	设备信号
1	1	308	0	307	2024-05-22 16:44:09:000																	
2	2	308	0	308	2024-05-22 16:45:00:000																	
3	3	308	0	308	2024-05-22 16:46:01:000																	
4	4	308	0	307	2024-05-22 16:46:02:000																	
5	5	308	0	307	2024-05-22 16:46:03:000																	
6	6	246	0	246	2024-05-22 16:46:49:000																	
7	7	246	0	246	2024-05-22 16:46:50:000																	
8	8	247	0	247	2024-05-22 16:46:53:000																	
9	9	247	0	247	2024-05-22 16:46:54:000																	
10	10	248	0	246	2024-05-22 16:46:56:000																	
11	11	248	0	248	2024-05-22 16:46:56:000																	
12	12	248	0	246	2024-05-22 16:46:57:000																	
13	13	248	0	247	2024-05-22 16:46:58:000																	
14	14	248	0	246	2024-05-22 16:46:59:000																	
15	15	248	0	247	2024-05-22 16:47:00:000																	
16	16	248	0	247	2024-05-22 16:47:01:000																	
17	17	248	0	247	2024-05-22 16:47:02:000																	
18	18	248	0	246	2024-05-22 16:47:03:000																	
19	19	248	0	246	2024-05-22 16:47:04:000																	
20	20	248	0	247	2024-05-22 16:47:05:000																	
21	21	248	0	247	2024-05-22 16:47:06:000																	
22	22	248	0	247	2024-05-22 16:47:07:000																	
23	23	248	0	247	2024-05-22 16:47:08:000																	

Note:
1) In data export mode, the exported data includes parameters such as collection time, real-time pressure status, serial number, etc.
2) The total amount of exported data is related to the collection time and sampling frequency.
3) The larger the data volume, the longer the export time. If the data exported at a time exceeds 1,000 pieces, please be sure to maintain Bluetooth communication between the digital pressure gauge and your mobile phone at all times.

X: CODE DESCRIPTION

NO	SYMBOL	MEANING
1	BLE	Bluetooth function, you can use Bluetooth debugging after turning it on
2	E-H	The current pressure exceeds the range or the sensor is damaged
3	RATE	Sensor sampling interval setting
4	E000	Display error correction coefficient setting
5	FILT	Filter constant settings
6	MAX	Maximum value identifier
7	MIN	Minimum value identifier

XI. PROBLEM & SOLUTION

NO.	PROBLEMS	REASONS	SOLUTIONS
1	The backlight is very dim	Battery is low	Replacement battery
2	Pressure does not change	1. The pressure hole is blocked 2. Caused by pressure clearing 3. Sensor damaged	1. Check the pressure hole 2. Reset without pressure 3.Return to factory for repair
3	Display E--H	1. Pressure exceeds range block 2. The sensor is damaged	1. Be careful not to overpressure 2.Return to factory for repair
4	Value jumps too slowly	Adjust filter constants	See nine items at 2 points
5	Value jumps too fast	Adjust filter constants	See nine items at 2 points
6	Frequent shocks of pressure	1. Easily damage the sensor 2. Easily cause leakage	Add buffer tube
7	There is high temperature on site	1. Easily damage the pressure gauge 2.Cause pressure deviation	Add heat pipes/fins

XII : AFTER-SALES SERVICE

After-sales service and warranty terms
1. The product warranty period is 12 months from the date of delivery. If our company's products malfunction during normal use within 7 days from the date of sale, consumers can choose refunds, exchanges, maintenance and other services. After consumers purchase our company's products, if there is a failure that is not caused by human damage within one year, they can receive free warranty. For consumers who do not meet the free replacement or free warranty services, our company will still provide technical services. The time of purchase is based on the invoice issued by the dealer. Or the date of receipt is,
2. The product is mainly divided into housing, control components and pressure-sensing components.1) If the casing is worn out due to normal wear and tear, we will not be responsible for the warranty and will not replace the casing.2) If the circuit board is damaged due to incorrect wiring or excessive load on the control components, we will not be responsible for the warranty.3) We are not responsible for the damage to the pressure-sensitive element caused by over-pressure use or touching the diaphragm with a hard object.
3. Those who have any of the following circumstances cannot enjoy the "Three Guarantees" service:
1) Any damage caused by human factors and use in abnormal working environment, failure to follow instructionsMalfunctions and damage caused by use of the manual or use in an environment that does not follow the instruction manual;
2) Without the consent of the company, users disassemble, repair, modify products, etc. without permission:
3) Damage caused by poor transportation after purchasing our company's products;
4) Damage caused by other force majeure (such as floods, lightning strikes, earthquakes, abnormal voltage);
5) Normal use, wear, cracks and discoloration, etc.:
6) Products that do not belong to our company (such as fakes)
7) Unable to present valid shopping voucher, no warranty card, etc.;