



# ADT681A/681AEx Digital Pressure Gauge

## Quick Start Guide



[Version: 2403V01]

## Safety Instructions

**Warning** indicates conditions which may cause injury to operator.

**Note** indicates conditions which may damage the pressure gauge or impact the calibration result.

### **Warning:**

**To prevent the user from injury, please follow this user manual for use.**

**To prevent fire, electric shock, or personal injury, please do as follows:**

#### **1. General:**

**The pressure medium should be verified before use. Please adhere to the following instructions:**

- ◆ Please read the user manual before using the product, especially the “Safety Instructions”.

- ◆ Before using the product, please check the appearance of the product to ensure there is no damage.

- ◆ Please refer to the operation steps in the manual when using the product.

- ◆ Please be sure to store, transport and use this product in the correct direction.

- ◆ If the product is damaged or malfunctions, please do not use it and contact

Additel.

- ◆ Never use the non-Ex product in an explosive, steam, or dust environment.

#### **2. Electrical:**

- ◆ Before using the product, please make sure that the power supply is properly connected.

#### **◆Attention:**

**To prevent injury, please carefully follow the instruction manual.**

**To prevent damage:**

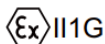
- ◆ Do not use the instrument in a high vibration environment.

- ◆ If the gauge is behaving abnormally, please stop using it and contact Additel.

## Intrinsically Safe Information

ADT681AEx has intrinsically safe certification:

1.IECEx&ATEx:



Ex ia IIC T4 Ga

Ta=-20°Cto+50°C

IECEX SIR 21.0018X

CSANe 21ATEX2078X

2.CSA:

Class I, Division 1, Groups A, B, C and D, T4

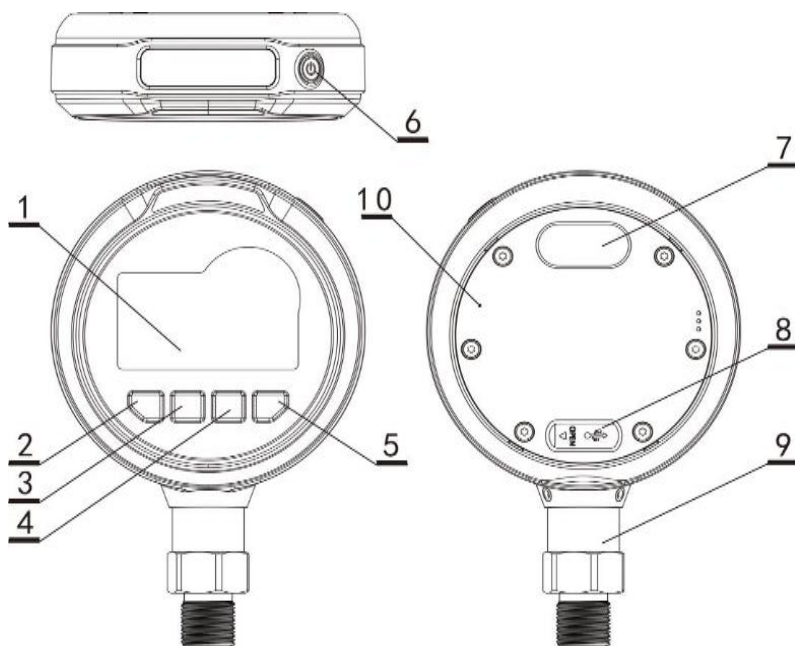
Class I, Zone 0, AEx ia IIC T4 Ga

CSA 21CA 80045682X

Ex ia IIC T4 Ga






Ta=-20°Cto+50°C

## Basic Structure



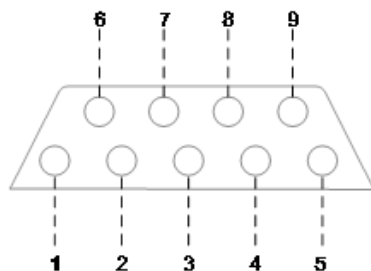
Basic structure

## Basic structure list

No.	Name	Description
1	Display	Show pressure, menu...
2	Log button 	Short press: Enter data log menu in main display or return to previous menu in non-main display.
		Long press: go to Settings in main display.
3	Unit button 	Short press: Switch units in main display or move to right in non-main display.
		Long press: view parameters in main display, or switch the features of fan-shape display
4	Backlight button 	Short press: Backlight on/off in main display or move downward in non-main display.
		Long press: view peak values in in main display
5	Zero button 	Short press: pressure zero in main display, or “Confirm” in non-main display
		Long press: Bluetooth On/Off in main display
6	Power button 	Long press to power On/Off, short press to lock/unlock
7	Communication module	RS232
8	USB TYPE-C	Communication or power supply
9	Pressure module	/
10	Barometer port	Visible after removing the back cover (with ATM mark), for barometer calibration connection

## RS232 DB9 Female pins description

Pins	Description
1, 4, 6, 7, 8, 9	Reserved
2	TXD
3	RXD
5	GND



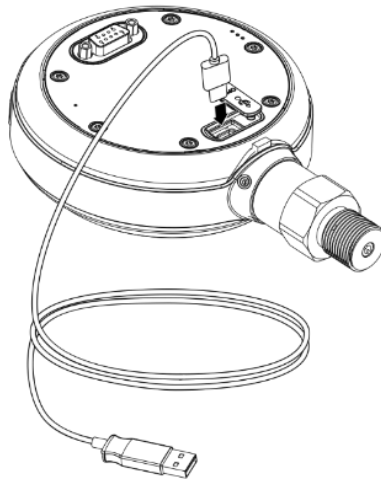
RS232 DB9 Female pins description diagram

**Warning:**

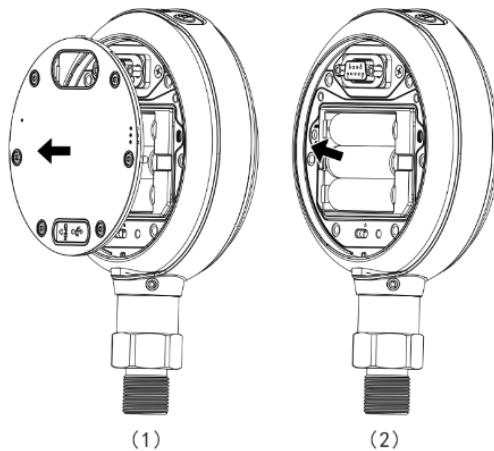
Any data communication devices connected to ADT681AEx shall be approved SELV or Class 2 equipment against IEC 60950 or an equivalent IEC standard. The maximum voltage  $U_m$  from the device shall not exceed 16 Vdc for RS232 port.

## Power Supply

1.ADT681A: Power can be supplied by 3\*AA(LR6) battery or USB TYPE-C 5V adapter.



ADT681A adapter diagram

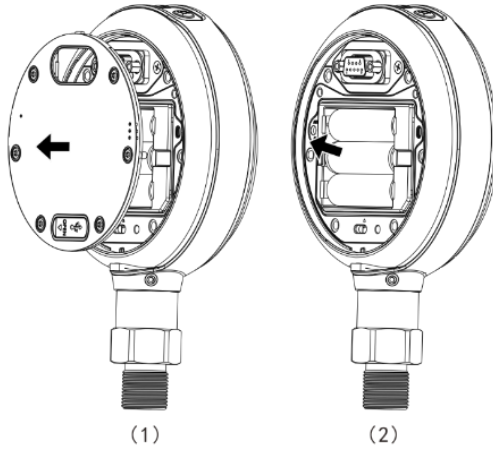


ADT681A battery installation

### Warning:

- ◆ When using battery as power supply, please replace batteries in case of low battery notice;
- ◆ When replacing the battery, please note the direction of battery electrodes.

## 2. ADT681AEx: Use only approved battery models (see below)



ADT681AEx battery installation

Approved battery models:

Manufacturer	Type	Ta
ENERGIZER	E91	(-18~45)°C
Maxell	LR6	(-20~60)°C
Rayovac	815	(-30~55)°C

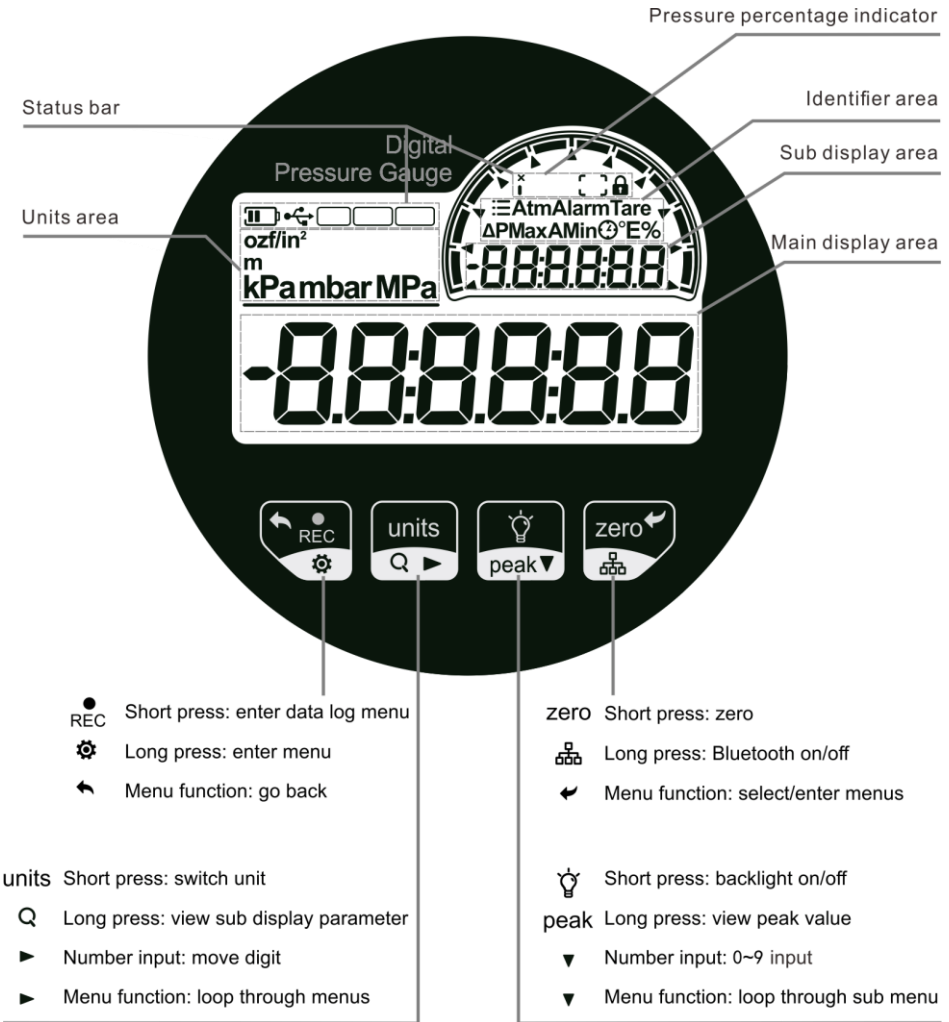
### Warning:

- ◆ When using battery as power supply, please replace batteries in case of low battery notice;
- ◆ When replacing the battery, please note the direction of battery electrodes;
- ◆ Never replace the battery in hazardous area;
- ◆ Use only the approved battery models.



# Display and Buttons


## 1.ADT681A/ADT681AEx display and buttons description:

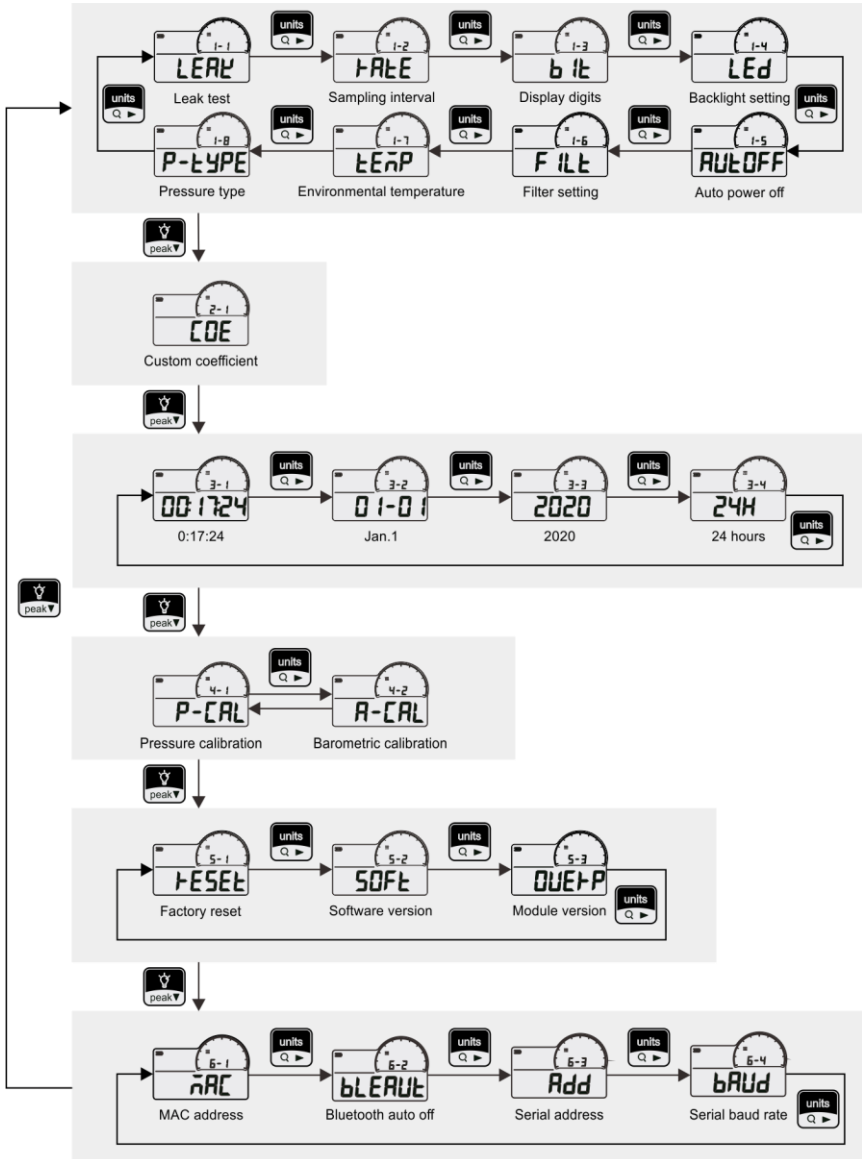


Display and buttons description

# Menu Structure and Operation

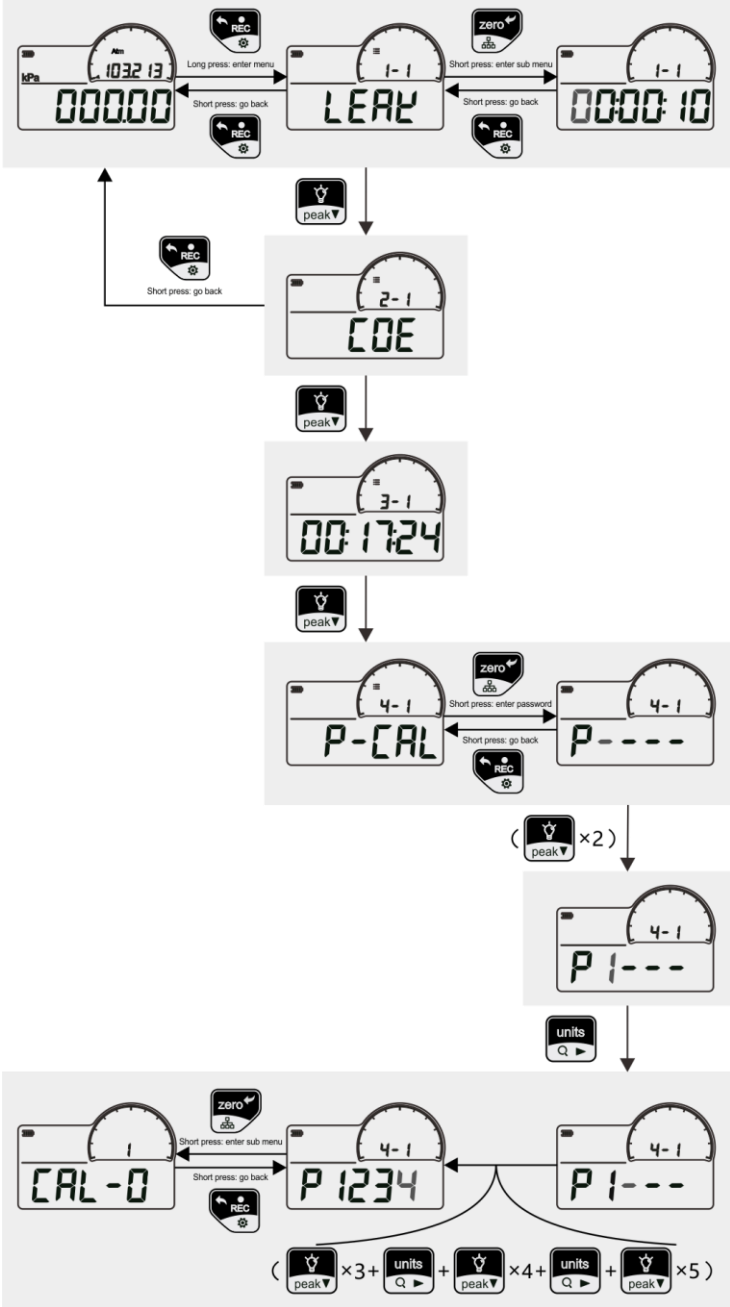
## 1. Menu structure

Long press  to enter menu and start, please also refer to display and buttons description diagram.



Menu structure

## 2. Basic menu operation



Basic menu operation

# Link App Connection

## 1. Menu structure

Additel Link is a mobile app available on Android and iOS system. It can connect to pressure gauges through Bluetooth, display real-time pressure reading and status, configure gauge parameters, switch pressure units, pressure zero, start/stop data log, download and view data from the gauge, calibrate pressure gauges and export CSV data for sharing.

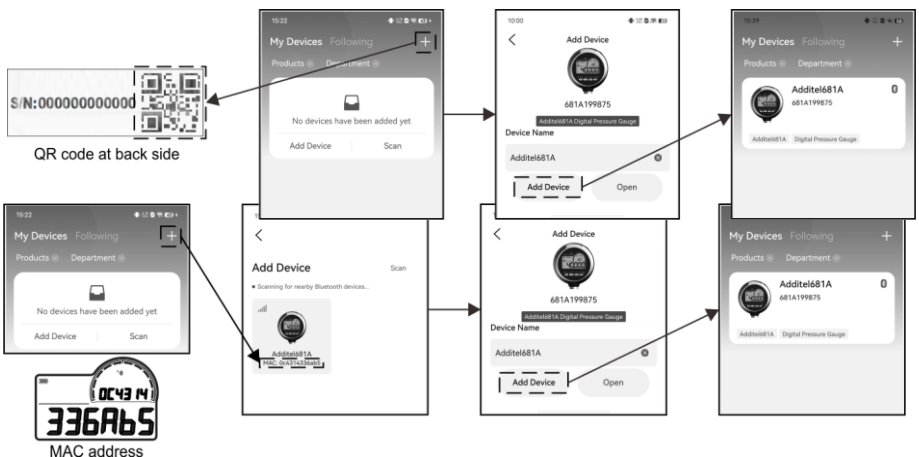


## 2. Enable the Bluetooth

Check and make sure the Bluetooth of the cell phone is enabled, then go to the gauge and long press Zero button to turn on the Bluetooth.

## 3. Connect to the gauge

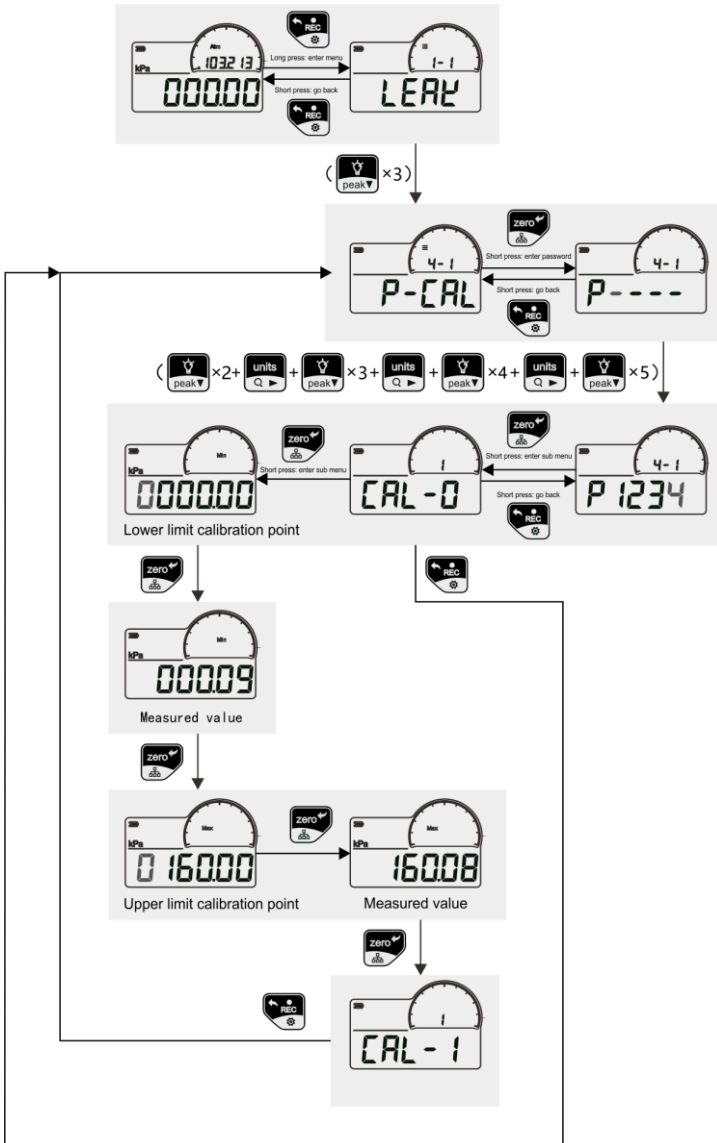
### 3.1 Scan the Code



### 3.2 Manual Connection by Searching MAC Address

# Calibration Example

Enter password "1234" to calibrate, complete the calibration by go to: lower limit calibration point -> show lower limit measured value -> upper limit calibration point -> show upper limit measured value.



Calibration example

# Metrology Made Simple

## Statement

The product technical specifications, accessories and other related information in this manual are subject to change without prior notice. Please contact Additel Corporation if you have any questions.

Additel Corporation

Website: [www.additel.com](http://www.additel.com)

TEL: 714-998-6899



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