

# Oleotec DP1-series

## DP1 Digital Pressure Gauges & Bluetooth App User Manual



## Introduction

The DP1 digital pressure gauge combines cutting-edge precision with user-friendly features. Equipped with a high-accuracy pressure sensor, it provides real-time pressure readings alongside a secondary parameter of your choice: temperature, maximum pressure, minimum pressure, or full-scale pressure.

The built-in datalogging feature records pressure data over time and stores it internally. Transferring data is seamless—simply connect the device to your computer using the included USB cable. The gauge appears as an external drive on both

Windows and Mac systems, allowing you to export data in CSV format with ease.

Powered by three AAA batteries or the supplied USB cable, the DP1 also features Bluetooth® connectivity. Pair up to four gauges with the DataPressure App (available for iOS and Android) to monitor and log data with an impressive update rate of 100 ms. The large, backlit LCD display is designed for clarity and rotates up to 330°, ensuring an optimal viewing angle in any setup.

## DataPressure Bluetooth App



The image illustrates the DataPressure Bluetooth App and the DP1 digital pressure gauge. On the left, a smartphone displays the app's interface, which includes three sensor readings (Sensor 1, Sensor 2, and Sensor 3) with their current values, minimum, and maximum values. Below the readings is a line graph showing pressure data over time. On the right, the DP1 digital pressure gauge is shown, featuring a large green LCD display showing '0.0 bar' and '4000 FS'. The gauge has a Bluetooth icon and control buttons (UNIT, MENU, MODE, ZERO, SET, REC) below the display. A Bluetooth icon is also shown next to the gauge.

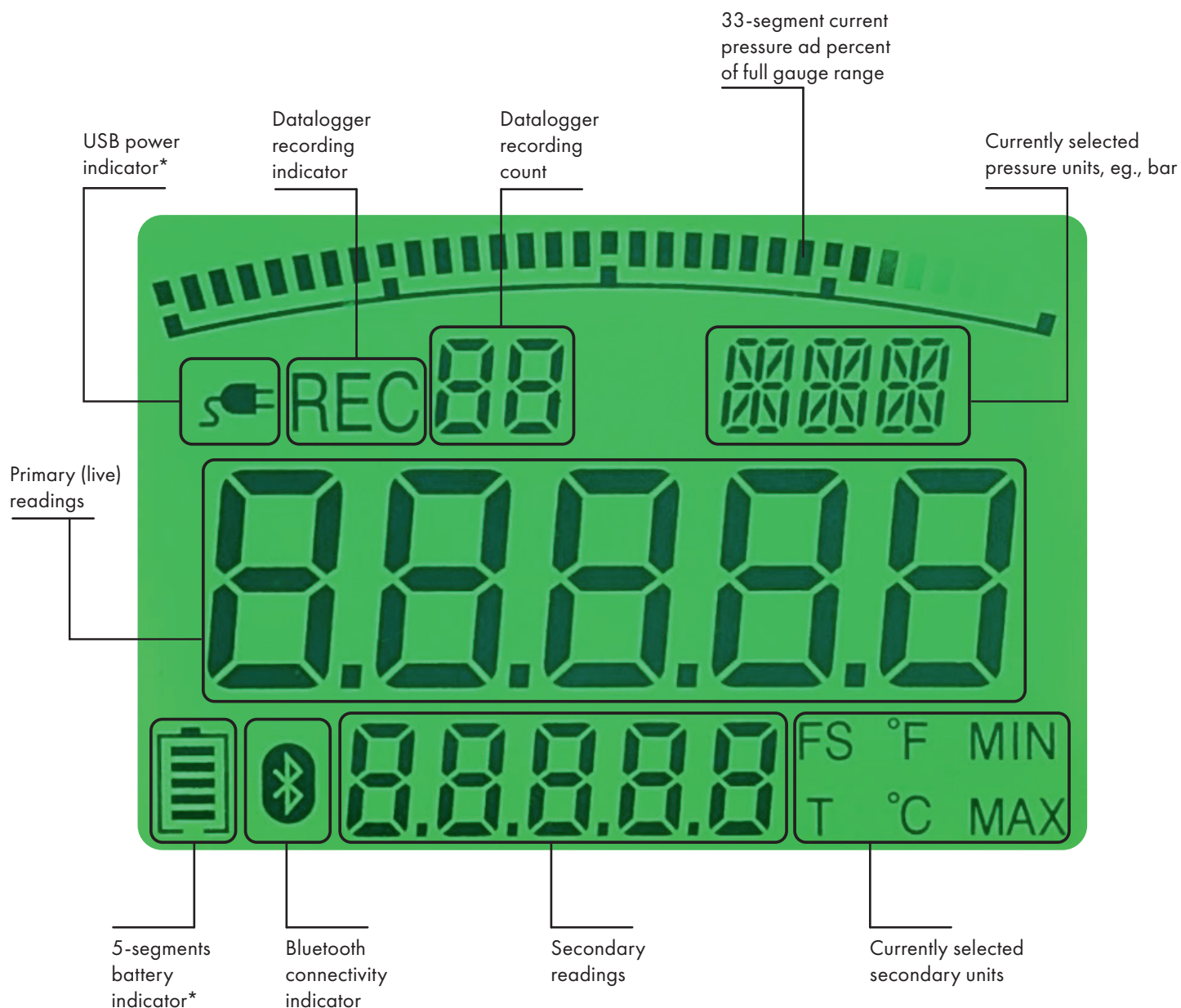
Google Play

App Store

## Notes

- Operating temperature: -20°C to +65°C
- A zero reset may be necessary after powering on the gauge
- Avoid touching the measuring diaphragm or disassembling the device
- Ensure the gauge is not over-tightened during installation
- Do not install the device while it is powered on
- Use a properly sized wrench or spanner to securely tighten the sensor to the connection port
- Rotate the dial only after installation and never exceed its maximum rotation limit

## LCD Display



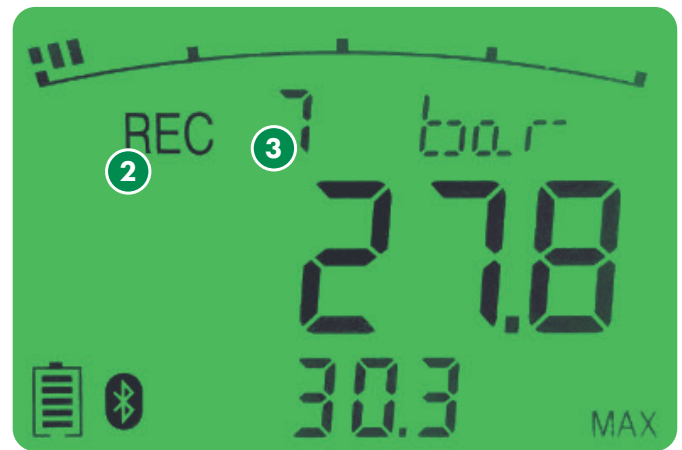
\*The onboard power management will use USB power where possible, meaning USB power may be used without removing the 3x AAA batteries.

The current publication of this operating instruction supersedes all information from previous publications. Oleotec reserves the right to make changes and substitutions. Oleotec is not liable for any printing errors. Reproduction, including excerpts, is permitted only after written approval by Oleotec. Oleotec reserves the right to modify technical data at any time. Last revised: 11/2024



## Datalogging

- 1 Press and hold (for 3 seconds) the button (1) to begin logging data. Another long-press ends datalogging.
- 2 **REC** (2) will be displayed on screen showing that the gauge is now logging measured data.
- 3 The gauge shows a number (3) representing how many recordings are now stored on the device. For example (3) shows that the current recording is the 7th to be saved to the gauge's built-in storage.







## Downloading & Reading Test Data

- 4 Using the supplied USB-C cable, connect the gauge to a Windows or Mac PC via the USB-C port on top of the device (4).
- 5 When connected to a PC the gauge will display **PC USB** (5) until disconnected.
- 6 Opening the drive will show all logged data as a series of CSV files (6). These can be dragged or copied and pasted to your desktop or another folder on your PC in the same way you would use a standard USB drive.
- 7 The CSV files can be opened in a spreadsheet applications such as Microsoft Excel (7).



	A	B	C	D
1	Date	2024/10/15	14:35	
2	Pressure Unit	BAR		
3	Temperature Unit	C		
4	Range	0.0	250.0	
5	Maximum Value	86.4		
6	Minimum Value	18.3		
7	Time	Maximum Value	Minimum Value	Real-time
8	0:0:0:000	00.0	00.0	29.0
9	0:0:0:200	29.0	18.3	50.4
10	0:0:0:400	50.4	39.6	72.0
11	0:0:0:600	72.0	61.2	85.8
12	0:0:0:800	85.8	82.7	86.1
13	0:0:1:000	86.1	86.0	86.4
14	0:0:1:200	86.4	86.3	86.3
15	0:0:1:400	86.4	86.3	85.5
16	0:0:1:600	85.9	85.5	84.0
17	0:0:1:800	84.9	84.0	81.6
18	0:0:2:000	82.9	81.6	78.4
19	0:0:2:200	80.1	78.4	74.9
20	0:0:2:400	76.7	74.9	71.4
21	0:0:2:600	73.1	71.4	68.1
22	0:0:2:800	69.7	68.1	65.0





Name	Date modified	Type
1.CSV	30/09/2024 08:35	Microsoft Excel
2.CSV	11/10/2024 12:42	Microsoft Excel
3.CSV	17/10/2024 14:41	Microsoft Excel
4.CSV	17/10/2024 17:23	Microsoft Excel
5.CSV	18/11/2024 11:33	Microsoft Excel


Button	Short press	Press and hold (for 3 seconds)
	Backlight on (when gauge is powered on). Power on (when gauge is powered off).	Power off (when gauge is powered on).
	Toggle between pressure units. PSI, mH2O, inHg, Mpa, ATM, kgf, or bar.	Enter settings menu (see settings page).
	Change displayed secondary readings. Full Scale (FS), Temp (T) °C, Temp (T) °F, Pressure (MIN) or Pressure (MAX).	Set the tare point to be considered zero system pressure and zero the min/max values.
	Confirm selected settings (when in settings menu).	Start or stop datalogging.

## Setting the Date and Time


- Press and hold (for 2 seconds) both the  (2) and  (3) buttons to enter the time and date settings. Release the buttons when **YEAr** is displayed on the screen.

- In this mode use each button as follows:

-  (1) Cycle through each setting
-  (2) Decrease the current value
-  (3) Increase the current value
-  (4) Save and return to the main screen


- The settings available appear in the following order.  
Cycle through each setting using  (1):

- YEAr** (Year)
- nnTH** (Month)
- dAY** (Day)
- HOUr** (Hour, using the 24-hour clock)
- Nit** (Minutes)
- SEC** (seconds)

- After selecting the correct value for each setting press  (4) to save and return to the main screen.



## Changing Configuration Settings

- Press and hold (for 3 seconds) the  (2) button to enter the gauge configuration settings. Release the button when PO is displayed on the screen.

- In this mode use each button as follows:




- (2) Cycle through each setting





- (3) Increase/toggle the current value



- (4) Save and return to the main screen

- Note that you cannot decrease the current value. Instead,  (3) will continue to loop through all options from low to high. Keep pressing the button until you reach the desired value.
- The settings available appear in the following order. Cycle through each setting using  (2):

Code	Setting	Range/Options	Default value
PO	Automatic power off	On/Off	Off
BLE	Bluetooth on/off	On/Off	On
RATE	Acquisition rate	0.1...0.9, 1...10 seconds	0.3 seconds
FLTR	Filter coefficient	x1...x7	x5
E000	Full scale compensation	0.5, 1.01...1.50	1.00
rES	Reset	Press  (4) to reset all settings	
DEL	Clear all data stored	Press  (4) to reset all settings	

- After selecting the correct value for each setting press  (4) to save and return to the main screen.

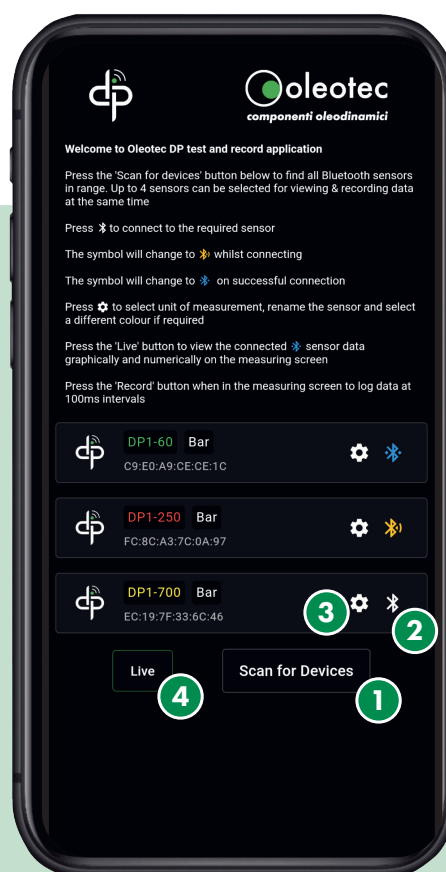
## DataPressure Bluetooth Live View and Datalogging App

The DataPressure Bluetooth App allows you to numerically and graphically view data from up to four DataPressure sensors at one time as well as log the data over time then share directly from your mobile device. To download the DataPressure Bluetooth app scan the QR code with your mobile device or visit our website [www.oleotec.it/en/dp1-series.html](http://www.oleotec.it/en/dp1-series.html)



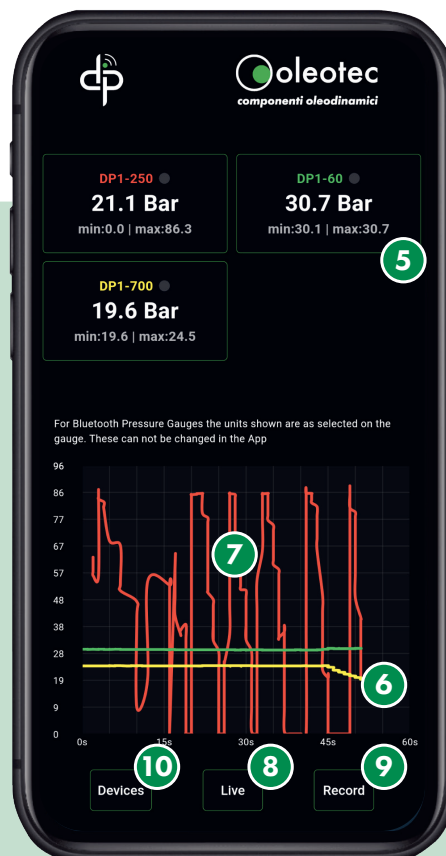
## Connecting your Devices

- 1 When opening the app for the first time no devices will be present. Press the **'Scanning'** button or **'Scan for Devices' (1)** to scan for any local devices which are powered on.
- 2 To connect to a device, tap the white **bluetooth icon (2)** for the relevant device. The icon will turn yellow when a connection is being attempted, then blue once the connection has been established. The first time a device is connected you will be prompted to enter a name, displayed units and device colour. The chosen colour will be used for this device on the live page graphs.
- 3 Press the **gear cog icon (3)** to edit the name, display units and/or colour of a previously connected device.
- 4 When at least one connection has been established press the **'Live'** button (4) to move to view numerical and graphical sensor data for all connected sensors.



## Viewing Live Data

- 5 Each connected sensor is represented by a **title (5)** containing the sensor name, live pressure, and min/max values.
- 6 Below the tiles, sensor data for all sensors is displayed graphically using the selected colour for each sensor (6).
- 7 Tapping the graph at any point will display the values for all sensors at that point in the time axis (7).
- 8 The graph can be scrolled left and right once at least 60 seconds of data have been displayed. Press the **'Live'** button (8) at any time to return to the most recent live point in the graph.
- 9 Pressing the **'Record'** button (9) will begin to record all live data from that point. Tap the button again to stop recording. Share options will then be shown allowing the data to be shared with another device or computer.
- 10 Pressing the **'Devices'** button (10) to return to the devices page to make changes to change your connection and/or device settings.





Oleotec S.r.l.  
Via Varese 19  
21050 Cantello (VA)/Italy  
Phone +39 03 32 / 41 97-11  
info@oleotec.it  
oleotec.it

A company of  
**e.holding**  
FLUID TECHNOLOGY GROUP