



- **Standalone Vacuum Meter 5-Digit LED Display**
- **Built-in lithium battery ensures long continuous operation**
- **Wireless communication transmission facilitates data collection and storage**
- **Pa、mBar、Torr Unit Display**

RCP231 Piezo and Pirani Combined Vacuum Gauge

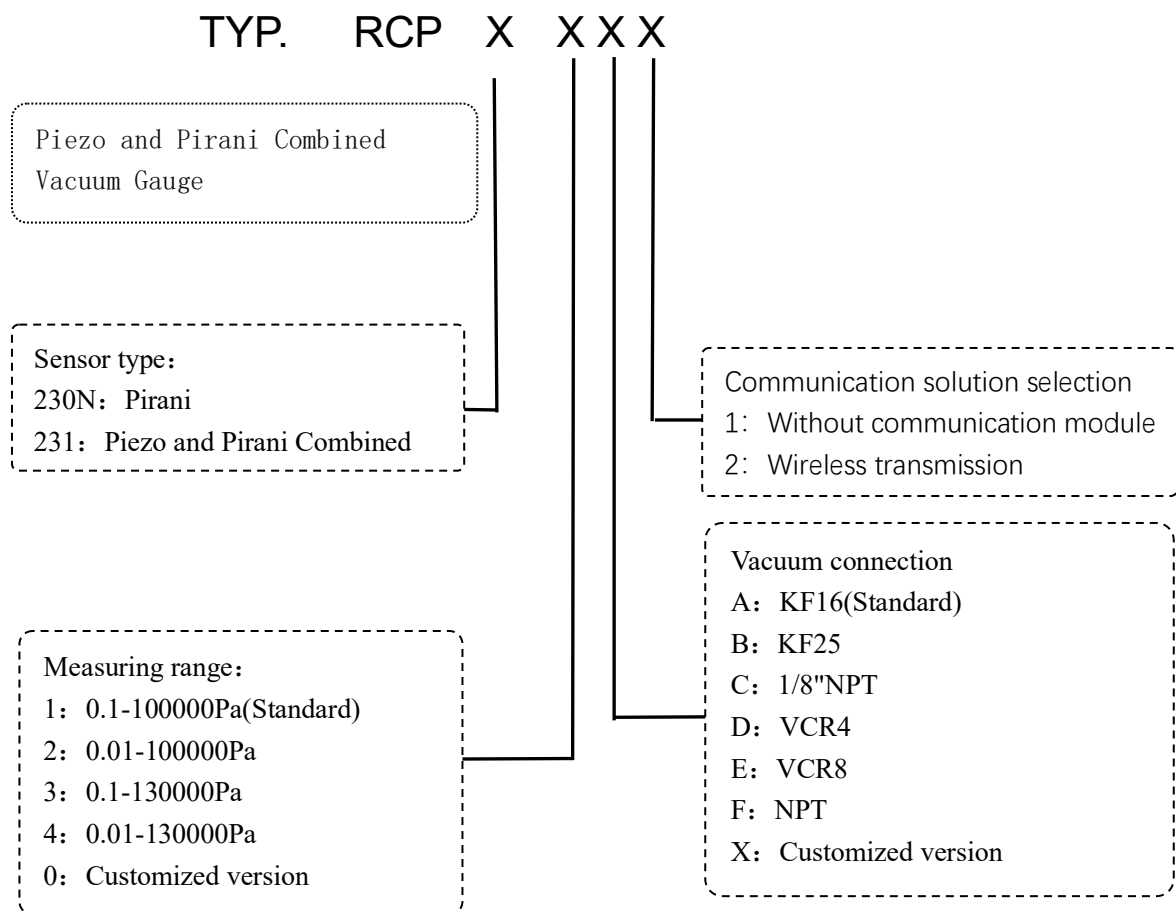
Operation Manual

INSTRUE, Makes Vacuum Measurement *Easy and Simple*.

RCP231 Piezo and Pirani Combined Vacuum Gauge

The RCP231 handheld piezoresistive and Pirani combination vacuum gauge features a high-efficiency built-in lithium battery, allowing over 40 hours of continuous operation on a single charge. Data is transmitted wirelessly to a standard computer. It is an ideal vacuum measurement tool for on-site maintenance and field operations.





1. Technical Specifications

1	Measurement range (air, N ₂)	$1.0 \times 10^{-1} \sim 1.0 \times 10^{+5}$ Pa (air, N ₂)
2	Accuracy	$1.0 \times 10^{+5} \sim 1.0 \times 10^{+3}$ Pa : $\pm 2.5\%$ $1.0 \times 10^{-1} \sim 1.0 \times 10^{+3}$ Pa : $\pm 15\%$
3	Repeatability	$1.0 \times 10^{-1} \sim 1.0 \times 10^{+3}$ Pa : $\pm 2\%$ $1.0 \times 10^{+3} \sim 1.0 \times 10^{+5}$ Pa : $\pm 5\%$
4	Measuring Cycle	<100ms
5	Ambient Temperature (Operation)	0°C~ +45°C
6	Ambient Temperature (Storage)	-40°C~ +75°C
7	Power Supply	Built-in lithium battery; comes with +8.4V 3A charger; continuous operation >40 hours on a full charge.
8	Wireless transmission	Built-in antenna; includes USB transceiver module for standard computers and application software.
9	Vacuum connection	DN16ISO-KF (standard)
10	Weight	480g (DN16ISO-KF)

2. Key operation

MENU key	LED Display	> key	^ key
1st Push	ARP	Hold 1 sec for atmosphere calibration	NA
2nd Push	HUC	Hold 1 sec for zero calibration	NA
3rd Push	U	Select Unit: mBar,Torr,Pa	NA
4th Push	A	Select 1=Wireless; 0=Wireless disable	NA
5th Push	d	Select“S”Science display; “n”floating display.	NA
6th Push	Cycle to beginning		

3. Data Transmission

RCP230 Real-time exchange with upper computer by wireless transmission method。

Step 1. Download the USB/RS485 converter driver software suitable for your computer version from the www.instrue.com.

Step 2. Download the vacuum gauge application interface software from the www.instrue.com.

Step 3. Install USB/RS485 driver software and vacuum gauge application interface software according to computer prompts.

Step 4. Set the wireless function of RCP230 to enable state, $A = 1$.

Step 5. Open the vacuum gauge application interface software VacGauge.exe, display the following interface, configure the parameters according to the graphic interpretation, press the "START" key, synchronously display RCP230 vacuum reading. The customer's further programming design can be carried out accordingly.

4. Battery Charging

The RCP231 is powered by a built-in battery. When the battery voltage becomes too low, the red "Low PWR" LED on the panel starts flashing, indicating that the vacuum gauge can only maintain operation for another 3 to 5 hours and needs to be charged.

Charging Precautions

1. For safety reasons, only the standard +8.2 VDC / 3 A three-pin AC socket charger provided by Yizheng must be used.
2. During charging, the vacuum gauge and the charger must be kept away from flammable and explosive materials.
3. Insert the three-pin plug of the charger into a grounded three-pin AC socket. Connect the DC plug of the charger to the DC5.5-2.1 socket at the bottom of the vacuum gauge. While charging, the indicator light on the charger is red; when charging is complete, the indicator light turns green.
4. When the vacuum gauge battery is completely depleted, the charging time is approximately 3 hours. When the vacuum gauge battery is fully charged, the continuous operating time under atmospheric pressure is no less than 35 hours, and the total accumulated operating time is approximately 50 hours

5. Gauge Reader Application Software

For use with RS485 and Window based PC, a RS485\USB converter is normally needed. You can follow the coming-with instruction to install a related driver.

For use with wireless transceiver and Window based PC, please install the transceiver USB driver.

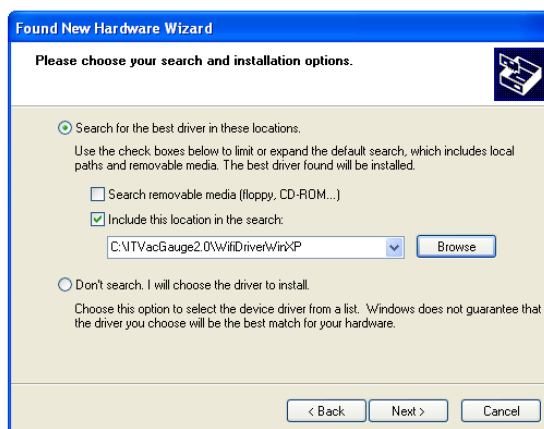
Install USB transceiver driver

Step 1. Copy the “IT VacGAuge 2.0” folder to a temporary folder of your computer.

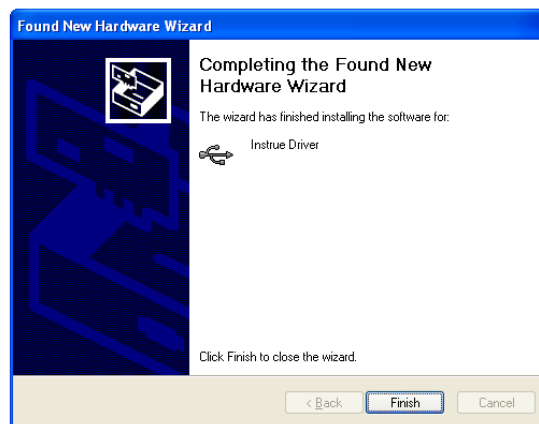
Step 2. Plug in the transceiver module in the computer USB port, the computer will pop up a window: Found New Hardware Wizard. Click “Install from a list or specific location”, then location”, then Next.



Step 3. Click Browse and find the IT VacGAuge 2.0 folder, then Next.



Step 4. Click Finish to complete the driver installation.



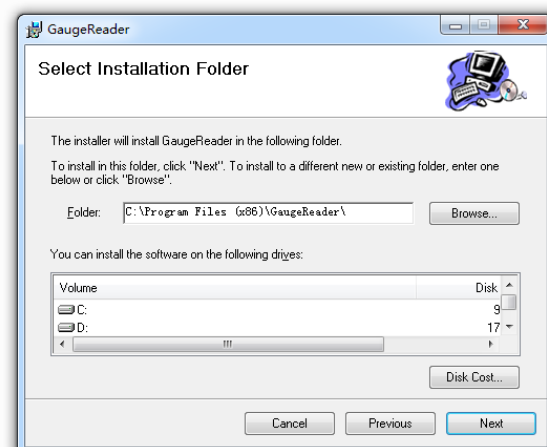
Install INSTRUE “Gauge Reader 2.0”

Step 1. Double click the file GaugeReader.msi, then Next.

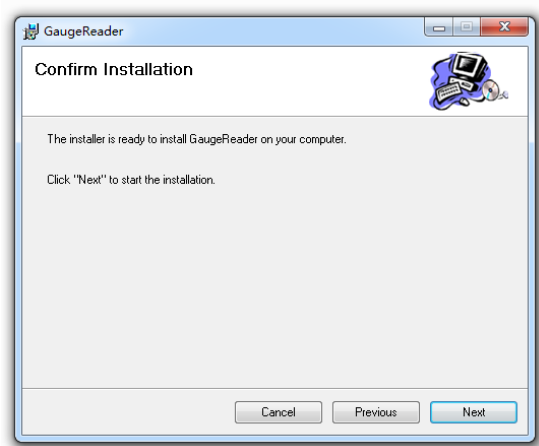


Step 2. Click the Browse and find a target folder path you want install the application software, then

Next.



Step 3. Then Next



Start using GaugeReader

Find the file VacGauge.exe in your target folder path, double click, then start to use it.

