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Data Logger
PCE-RCM 11/12
INSTRUCTION MANUAL



1-Description

This device is an air quality detector included several measures, intelligent induction and cloud data storage. It can detect PM2.5, PM10, CO2, HCHO, TVOC, temperature and humidity.

This device uses laser scattering weight test method, with professional structure design, professional fan and original particle. It can sensitively and precisely detect and monitor PM2.5 and PM10, help you know indoor air quality and take actions to make the air clean. It uses professional CO2 Sensor, can remind you to open windows when indoor concentration of CO2 is too high. HCHO can detect formaldehyde and TVOC can detect indoor harmful gas, help you know environmental pollution. In order to detect PM2.5, PM10, CO2, HCHO, TVOC at the same time, it adopts reliable power supply circuit to ensure all measures are precise and stable and work time is as long as possible.

This device adds rich experience of intelligence. Noise detection module is equipped. You can awaken device to start measure by generate a slight noise when device is sleeping.

2-Features

	PCE-RCM 11	PCE-RCM 12
Measure Mass Concentration of PM2.5/PM10/HCHO	√	√
Measure CO2		√
Measure HCHO	√	√
Measure TVOC	√	
Measure Temperature & Humidity	√	√
3''TFT LCD Display, 240*400 Pixels	√	√
5000 groups of sampling data	√	√

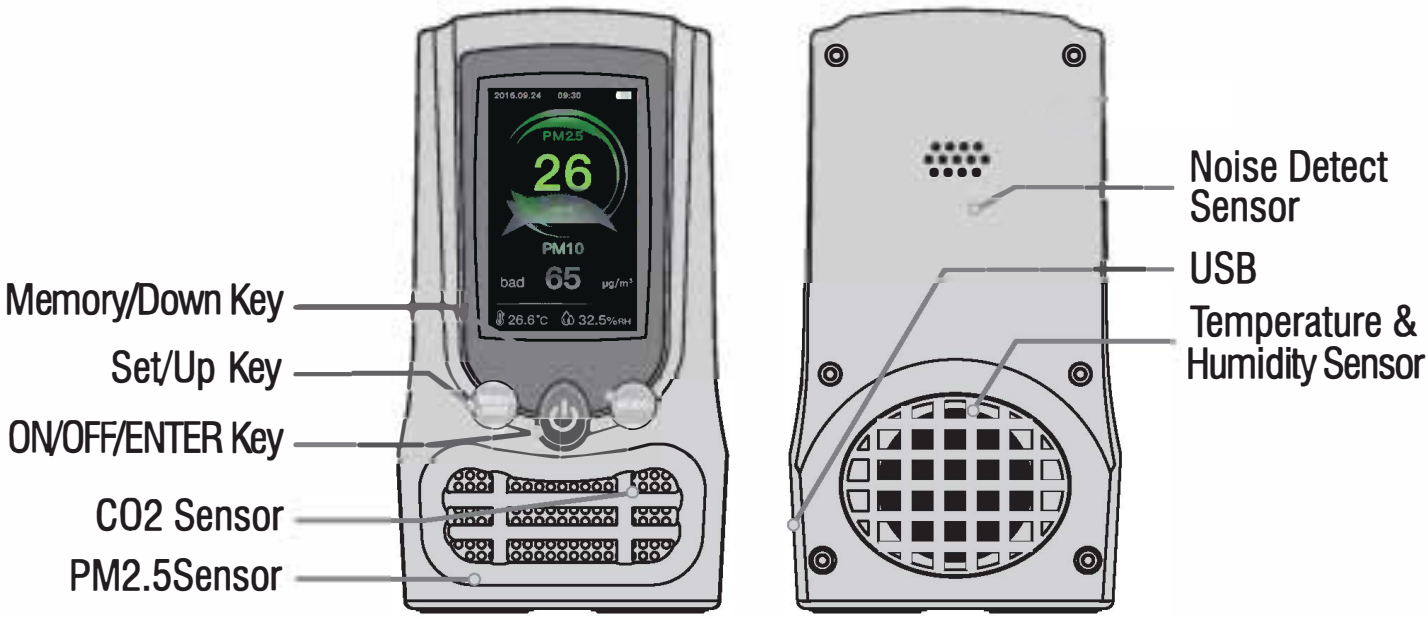
3-Specifications

Particle Measure	
Particle Channels	PM2.5/PM10
Mass Concentration Range	0～2000μg/m^3
Resolution	1μg/m^3
CO_2 Measure	
Range	0～9999ppm
Accuracy	±5%±75ppm
Resolution	1ppm
HCHO	
Range	0.00～5.00mg/m^3
Accuracy	±5%F.S
Resolution	0.01mg/m^3
TVOC Measure	
Range	0.00～9.99mg/m^3
Accuracy	±5%F.S
Resolution	0.01mg/m^3
Temperature & Humidity Measure	
Temperature Range	-20～70°C(-4～158°F)
Temperature Accuracy	±2°C
Temperature Resolution	0.1°C
Humidity Range	0～100%RH
Humidity Accuracy	±3.5%RH(20～80%RH) ±5%RH(0～20%RH or 80～100%RH)
Humidity Resolution	0.1%RH
Intelligent Sensor	
Noise Detect Sensor	A slight noise can awaken device

Power	
Battery	2400mAh Recharge Li-ion Battery
Work Time	Able to continue work almost 5 hours
Charging	USB 5V/1A
Charging Time	Almost 2 hours when shutdown
Auto Sleep	Able to set auto sleep time
Others	
Display	3"TFT LCD Display, 240*400Pixels
Data Storage	5000 groups of sampling data
Work Temperature	0~50°C
Storage Temperature	-10~60°C
Size	85*75*155mm
Weight	360g

4-Function

1-Machine Function
2-Key Function

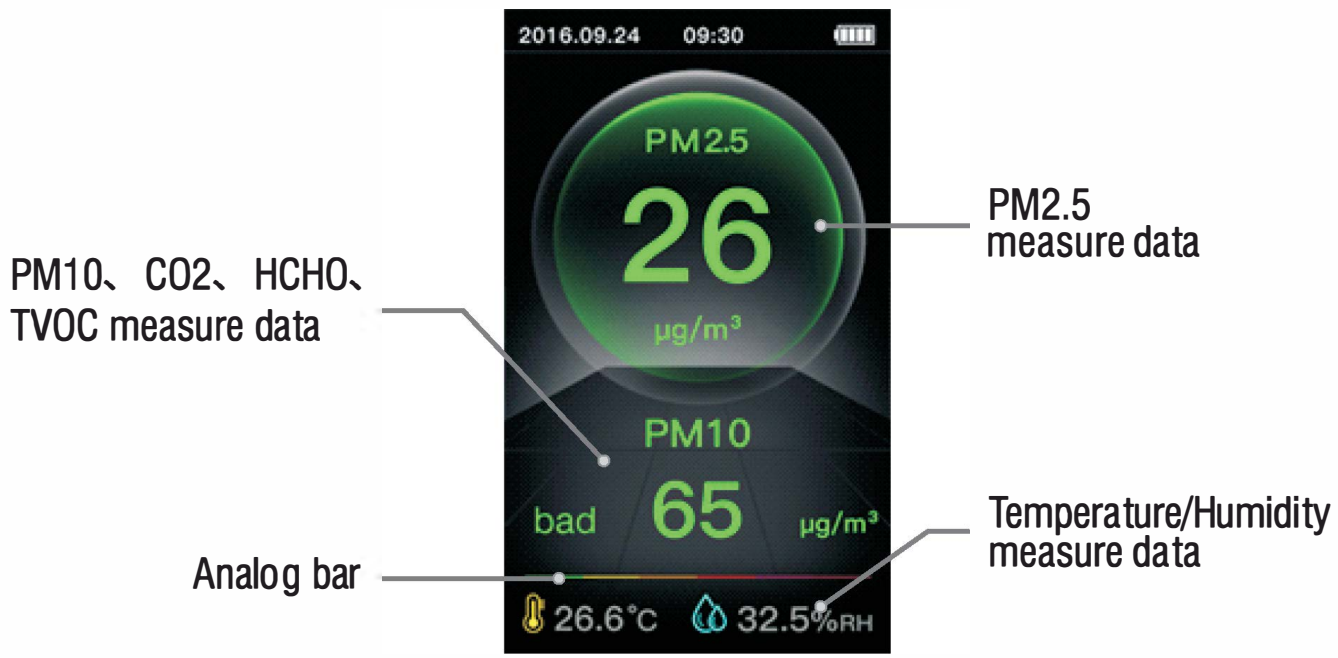


Set/Up Key: Long press to enter/exit the settings page; Short press to switch measurement displaying in measure page, or to turn on in settings/memory page.
ON/OFF/ENTER Key: Long press to startup/shutdown; Short press to enter/exit in settings/memory page.
Memory/Down Key: Long press to enter/exit the memory page; Short press to switch measurement displaying in measure page, or to down on in settings/memory page.

5-Power ON/OFF

In shutdown mode, long press ON/OFF/ENTER key until the screen light, device power on.
In startup mode, long press ON/OFF/ENTER key until the screen off, device power off.

6-Measure



After startup and display measure data, the device will keep measuring not stop, contents of measure are PM2.5, PM10, CO2, TVOC, HCHO, temperature and humidity. Device will refresh screen every and switch the display of PM10, CO2, TVOC, and HCHO every 15 seconds. You can short press ON/OFF/ENTER key to switch display manually. PM2.5, PM10 and CO2 need 3~5 seconds warm-up time, TVOC need 40 seconds warm-up time, keep for the last time the measurement values at this time. Before warm-up finish, measure data are old data. As analog bar shows, air quality has six alarm level. If air is polluted, device will alarm based and number of measure data will change color. All alarms are based on real measure data. If WiFi is able, alarm information can be pushed to your mobile phone.



7-Shutdown, Sleep and Awaken

7-1.Shutdown/Sleep

Device can set auto power off or auto sleep. If long time without operation, device can auto power off or auto sleep to save consumption. The PCE-RCM 11 and PCE-RCM 12 can set auto power off.

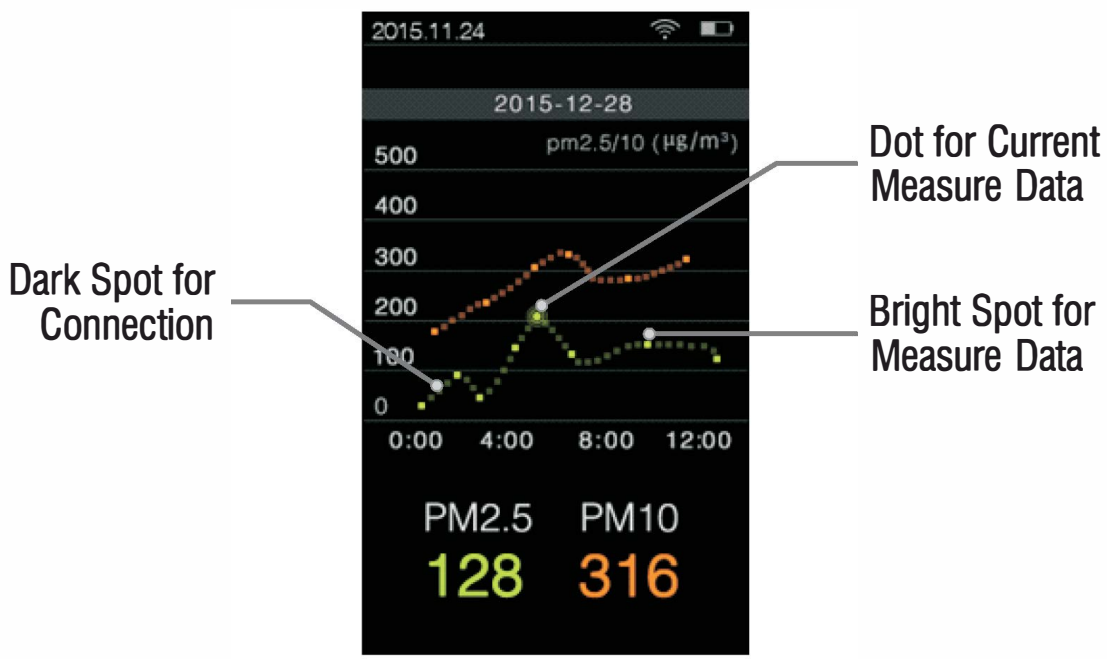
7-2.Awaken by key

The PCE-RCM 11 and PCE-RCM 12 can awake form shutdown status by long press of ON/OFF/ENTER key.

7-3.Awaken by noise

Noise also can be used to awaken device, for example striking table can awaken device from sleep status to measure status. The PCE-RCM 11 and PCE-RCM 12 can awake by noise within 30 minutes after shutdown.

8-Memory



In measure page, long press MEM/Down key to enter/exit memory page.

Memory page will dynamically display the latest curve of measurement data. To view the static measure data you can short press ON/OFF/ENTER key. In static memory page, device display static curve of measure data, and you can short press Up/Down key to view the detail of historical data one by one.

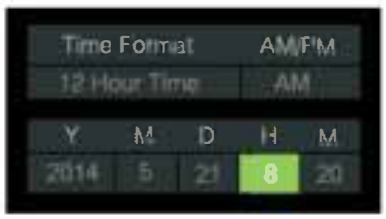
Device can record memory data as many as 5000, which contents are PM2.5, PM10 and record time. In memory page, one curve include eight measure data, bright spot for the data, dark spot for connection, dot for the current data. You can short press the Up/Down key to see before and after historical data.

9-Settings

In measure page, long press SET/Up key to enter/exit settings page.

In settings page, short press Up/Down key to choose the item to be set and short press ON/OFF/ENTER key to enter the submenu of item needed to be set. To exit from submenu, short press ON/OFF/ENTER key to confirm all setting items then exit and back to the main menu of settings page.

9-1.Time Settings



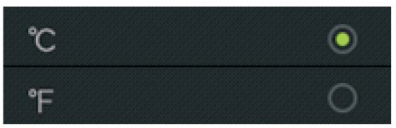
It is able to set up hourly(12 hours or 24 hours), AM/PM, date and time. Short press Up/Down key to change time settings, and short press ON/OFF/ENTER key to confirm, after confirm all setting items then exit and back to the main menu of settings page.

9-2.Auto Power Off/Auto Sleep Settings



It is able to set up auto power off/auto sleep time as 10-120 minute or no auto power off/auto sleep. Device with WiFi can set up auto power off time in regular measure mode or auto sleep time in monitor measure mode.

9-3.Unit Settings



It is able to set up the unit of temperature as Celsius(℃) or Fahrenheit(℉), which default is Celsius.

9-4.Alarm Settings



It is able to set up the start point of PM2.5 alarm as 10ppm, 35ppm, 75ppm, 150ppm, 200ppm or no alarm, which default is 35ppm. If PM2.5 alarm is enable, device will beep when concentration of PM2.5 is so high as to beyond the set start point of PM2.5 alarm.

9-5.Brightness Settings



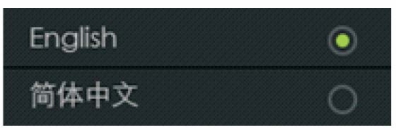
It is able to set up screen brightness which is a total of 5 brightness.

9-6.Noise Sensor Settings



It is able to enable/disable noise sensor. If enable, device can be awake from shutdown/sleep status by noise sensor.

9-7.Language Settings



It is able to set up language as English or Chinese, which default is English.

9-10. About Software

It is able to view device´s IMEI number, software version and MAC adress.

10. Product Service

- Maintenance or service is not includest in this manual, the product must be repaired by professionals.
- All repaired parts must be replaced with specified parts.
- Any changes in the operating manual, please refer to our instrument without prior notice.

Attention:

- Please don't use in terrible environment like heavy dust environment, in order to avoid a lot of particles be into the meter.
- To ensure accuracy, please don't use in heavy fog weather.
- Please don't used in explosive environment.
- Please be in accordance with the operating manual, shall not disassemble instrument.

11-Attached

11-1.Air Quality Standard

Chat 1.1 PM2.5 Concentration and Corresponding Index Color Table

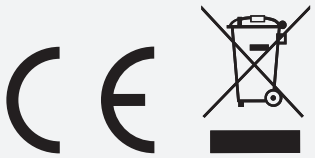
Color	Green	Yellow	Orange	Red	Purple	Deep Purple
Concentration	0～35 μg/m^3	35～75 μg/m^3	75～150 μg/m^3	150～200 μg/m^3	200～250 μg/m^3	>250 μg/m^3
Air Quality	Good	Normal	Mild Polluted	Middle Polluted	Heavy Polluted	Serious Polluted

Chat 1.2 PM10 Concentration and Corresponding Index Color Table

Color	Green	Yellow	Orange	Red	Purple	Deep Purple
Concentration	0～75 μg/m^3	75～150 μg/m^3	150～300 μg/m^3	300～400 μg/m^3	400～500 μg/m^3	>500 μg/m^3
Air Quality	Good	Normal	Mild Polluted	Middle Polluted	Heavy Polluted	Serious Polluted

Chat 1.3 PM10、CO2、HCHO、TVOC Concentration and Corresponding Index Color Table

Color	Green	Orange	Red
CO_2 Concentration	0～800ppm	800～1500ppm	1500～9999ppm
HCHO Concentration	0～0.05mg/m^3	0.05～0.1mg/m^3	0.1～5.00mg/m^3
TVOC Concentration	0～0.6mg/m^3	0.6～1.8mg/m^3	1.8～9.99mg/m^3
Air Quality	Good	Normal	Bad



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