



PCE Americas Inc.
711 Commerce Way
Suite 8
Jupiter
FL-33458
USA
From outside US: +1
Tel: (561) 320-9162
Fax: (561) 320-9176
info@pce-americas.com

PCE Instruments UK Ltd.
Units 12/13
Southpoint Business Park
Ensign way
Hampshire / Southampton
United Kingdom, SO31 4RF
From outside UK: +44
Tel: (0) 2380 98703 0
Fax: (0) 2380 98703 9
info@industrial-needs.com

www.pce-instruments.com/english
www.pce-instruments.com

THERMOMETER

PCE-HFX 100



USER MANUAL

I. Introduction

Formaldehyde(HCHO) is colorless, poisonous, highly water-soluble gas with an obnoxious odor. Used in the manufacture of disinfectants, preservatives, and hundreds of industrial and consumer products such as adhesives, carpeting, decorative paneling, foam insulation, drapery, fiber and particle boards, and permanent press fabrics. Formaldehyde is a prominent factor in sick-building syndrome(SBS) as its emissions(accelerated by heat and moisture) irritate eyes and mucous membranes in nose and throat, and cause headache and dizziness. It is classified as a possible carcinogen by EPA.

PCE-HFX 100 is an air quality monitor for real time monitoring of HCHO. This monitor is widely used in homes, shopping malls, offices, vehicles, stations etc.

II. Function

- A. Large LCD screen, direct reading
- B. HCHO measurement
- C. Temperature and humidity measurement
- D. °C/F unit switch
- E. Alarm: red backlight, grading emoticons
- F. Clock: Year-Month-Day 
- G. Low power indication: 
- H. Backlight: bi-color LED backlight




Please read carefully and follow all warnings, precautions and safety information before using the device.

III. Open box inspection

Open the box and take out the device. Please check whether the following items are deficient or damaged and contact your supplier immediately if they are.

PCE-HFX 100	1
User manual	1
USB cable	1

IV. Safety information

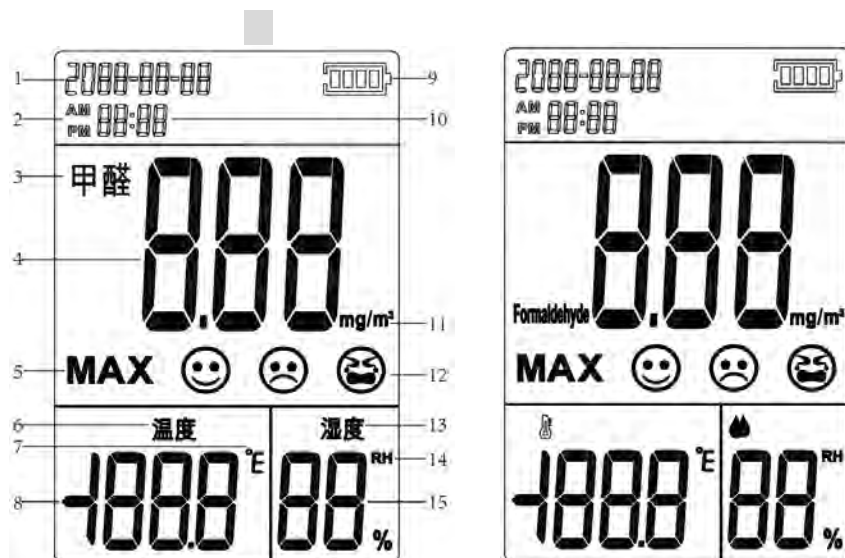
1. Check the device and its accessories for any damage or anomaly before use. Do not use the device if the cover is damaged, or has any other malfunctions.
2. Please follow the operation instructions.
3. Please do not open the device case and modify the internal circuit.
4. Do not store or use this device in high temperature, high humidity, flammable, explosive and strong electromagnetic environments.
5. Charge the monitor when  symbol is displayed.

V. Structure



1	LCD screen	2	Setup	3	ON/OFF
4	MODE	5	USB port		


VI. Symbols



1	Year-Month-Day	6	Temperature icon	11	HCHO unit
2	AM/PM	7	Temperature unit	12	HCHO Grading emoticon
3	HCHO	8	Temperature value	13	Humidity icon
4	HCHO value	9	Battery icon	14	Humidity unit
5	HCHO max value	10	Time	15	Humidity value

VII. Operation instructions






1. Functional buttons

Button	Functions
	Long press: turn on/off the monitor
	Short press: turn on/off the backlight When the backlight is OFF: @HCHO>0.09mg/m ³ , red backlight will be on. You can short press this button to turn off the red light. @HCHO≤0.09mg/m ³ , red backlight will be off.
Setup	Short press to switch temperature unit °C/°F
MODE	Short press: switch between real-time value and max value (since the latest turning on)
	Long press: reset the value to 0.

➤ Note: Reset

Turn on the monitor, and leave it at a place like balcony, corridor or ledge where there is fresh air for 5~10 minutes, long press MODE to reset the value to 0. Do not turn off the monitor and use it to take measurement directly.

2. Battery

	Enough power
	
	Suggest to charge the battery
	Power is running out, please charge the battery
	Power off

➤ Notes

- Use USB cable to charge the device.
- It takes around 3 hours to fully charge the device. This device can be used while charging.
- Power supply: 5V/ 1A.

VIII. Time setup

- Turn on the monitor
- Press SETUP and MODE buttons at the same time until skipping to the setup interface.
- Short press MODE to cycle switch through year-month-day-hour-minute-12/24-zero calibration-high concentration calibration. When setting the year-month-day-hour-minute, you can press SETUP to increase value, ON/OFF to decrease value. (Long press for fast increase)
- After the setup of minutes, long press MODE until S1 is shown on the lower right corner of the screen to save the data or this setting will be invalid.
- In selecting 12/24 hour mode, long press MODE to switch.
- At any interface, press SETUP and MODE at the same time to enter into setup interface. Failure to press at the same time may result in exiting the setup interface or save the data automatically.




IX. Specifications

1. Technical specifications

Function	Range	Resolution	Accuracy	Remark
HCHO	0~2mg/m ³	0.01mg/m ³	±0.06 mg/m ³ @0~0.6 mg/m ³ ±10% @0.6~2mg/m ³	Ambient temperature: 18~28°C; Ambient humidity: 40%~75%RH
Temperature	-10~50°C	0.1°C	±1°C	
Humidity	0~99%RH	1%RH	±5%RH@30%~80%RH ±8%RH@<30%RH,>80%RH	Temperature: 18~28°C

Reference standard: JJG 1022-2016

2. HCHO concentration grading emoticons

Concentration (mg/m ³)	Emoticon	Note
0-0.1		Safe
0.1-0.3		Exceeding safe concentration (open the window and keep the fresh air flow)
0.3-2.0		Dangerous (open the window and door, leave this place)

3. Environmental constraints

A. Indoor, outdoor and vehicles

B. Altitude≤2000m

C. Operating temperature: -10~50°C; operating humidity: 0~99%RH

D. Storage temperature: -20~60°C

4. Precautions

- For accurate measurement of formaldehyde concentration, it is better to keep space confined for 10 minutes before measurement. Take the average value of multiple spots.
- For accurate readings, keep the device away from alcohol, perfume, H₂S, CO, SO₂, H₂, etc.
- Do not block off the air inlet or outlet. Do not use the fan, hair dryer or fan heater to blow the monitor directly.
- The value of formaldehyde concentration may be large due to fog or abrupt change of weather. For example, if the environment abruptly changes from low temperature and humidity to high temperature and humidity, condensation may occur to influence the performance of this monitor.
- When measuring the temperature and humidity, it takes 20~30 minutes for the device to obtain the accurate value.
- Please do not place this device in a high concentration formaldehyde environment beyond the specified range. Otherwise there is a risk of damaging the device.
- To avoid anomaly, please use the device under specified operation environment.

X. Maintenance&Warranty

1. Maintenance

Warning: To avoid false readings and damages, please do not open the device case. Do not crash, drop, bash, or soak the device.

- a. The maintenance and service of the device must be implemented by qualified professionals or the designated departments.
- b. Regularly use dry cloth to clean the cover. Do not use the detergent containing solvent composition.
- c. To conserve battery, please turn off the device if not being used for a long time.

2. Warranty

The following situations are beyond the scope of the warranty.

- Damage caused by users' disassembling or improper use of the device
- Purchase without receipts