TC-700 Air Quality Detector



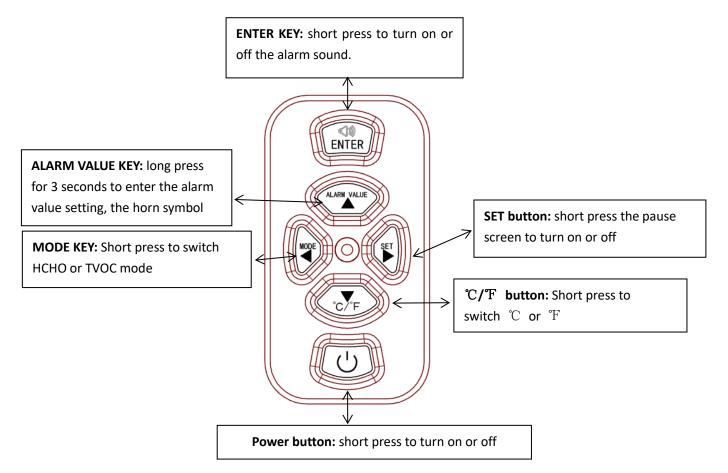
Features:

- 1. The sensor of the detector uses the principle of non-dispersive infrared (NDIR) to detect CO2 in the air.
- 2. 3.2-inch VA screen with larger viewing angle.
- 3. PM2.5 uses the principle of laser scattering, AQI detects environmental quality, PM2.5 and PM10 concentration.
- 4. Can detect TVOC and formaldehyde.
- 5. Temperature and humidity detection, using imported sensors.
- 6. Rechargeable lithium battery or a separate external USB power supply.
- 7. The service life of the sensor is more than 10 years.
- 8. High-precision sensors and imported chips.
- 9. Detector body is made of ABS material, non-slip and dust-proof silicone keyboard.

Specifications:

| humidity, AQITVOC measuring range0-2.000mg/m³CO2 measuring range370-9999ppmCO2 accuracy $\pm 3\%$ of readings of ± 40 PPMHCHO measuring range0-1.000mg/m³AQI measurement range0-500ug/m³AQI accuracy $\pm 10\%$ (@100~500µg/m³) $\pm 10µg/m³$ (@0~100µg/m³Temperature measurement range $-20-60^{\circ}C$ Temperature accuracy $-30^{\circ}C$ Humidity measurement range0-100% RHHumidity accuracy $\pm 10\%$ (@100~500µg/m³)Humidity accuracy $\pm 10\%$ (@100~500µg/m³)PM10 measuring range0-1000µg/m³PM10 measuring range0-1000µg/m³PM10 accuracy $\pm 10\%$ (@100~500µg/m³) $\pm 10µg/m³$ (@0~100µg/m³)Particulate matter concentration range (PM2.5 standard value)PM2.5 accuracy $\pm 10\%$ (@100~500µg/m³) $\pm 10µg/m³$ (@0~100µg/m³)Single response time ≤ 15 Working current220mAnPreheat time605Measurement interval (s)4SOperating temperature range $-r \circ \sigma^{\circ}$ Operating humidity range0-90%RH nonSupply battery $200mAh for >7 hours of continuous operationWeight269gSize140*134*33mm$ | Measurement | CO2, TVOC, HCHO, PM2.5, PM10, temperature, |
|---|----------------------------------|---|
| CO2 measuring range $370-9999ppm$ CO2 accuracy $\pm 3\%$ of readings of $\pm 40PPM$ HCHO measuring range $0-1.000mg/m^3$ AQI measurement range $0-500ug/m^3$ AQI accuracy $\pm 10\%$ (@100~ $500\mug/m^3$) $\pm 10\mug/m^3$ (@0~ $100\mug/m^3$)Temperature measurement $-20-60^{\circ}C$ range $-20-60^{\circ}C$ Humidity measurement range $-0-100\%$ RHHumidity accuracy $\pm 3^{\circ}C$ PM10 measuring range $0-1000\mug/m^3$ PM10 accuracy $\pm 10\%$ (@100~ $500\mug/m^3$) $\pm 10\mug/m^3$ (@0~ $100\mug/m^3$)Particulate matter concentration range (PM2.5 standard value) $0-1000\mug/m^3$ PM2.5 accuracy $\pm 10\%$ (@100~ $500\mug/m^3$) $\pm 10\mug/m^3$ (@0~ $-100\mug/m^3$)Single response time ≤ 15 Working current $220mAn$ Preheat time $60S$ Measurement interval (s) 45 Operating temperature range $0-90\%$ RH nonSupply batteryConfigured with removable $3.7V/18650$ battery or external 5V USB power supplyStandby time $2200mAh$ for >7 hours of continuous operationWeight $269g$ | | humidity, AQI |
| CO2 accuracy $\pm 3\%$ of readings of ± 40 PPMHCHO measuring range0-1.000mg/m³AQI measurement range0-500ug/m3AQI accuracy $\pm 10\%$ (@100~500µg/m³) $\pm 10\mu g/m^3$ (@0~100µg/m³Temperature measurement range-20-60°CTemperature accuracy | TVOC measuring range | 0-2.000mg/m ³ |
| HCHO measuring range $0-1.000 \text{mg/m}^3$ AQI measurement range $0-500 \text{ug/m}3$ AQI accuracy $\pm 10\% (@100 \sim 500 \mu \text{g/m}^3)$ $\pm 10\mu \text{g/m}^3 (@0 \sim 100 \mu \text{g/m}^3)$ Temperature measurement range $-20-60^\circ\text{C}$ Temperature accuracy -20° Humidity measurement range $0-100\% \text{RH}$ Humidity accuracy -3°C PM10 measuring range $0-1000\mu \text{g/m}^3$ PM10 accuracy $\pm 10\% (@100 \sim 500\mu \text{g/m}^3)$ $\pm 10\mu \text{g/m}^3 (@0 \sim 100\mu \text{g/m}^3)$ Particulate matter concentration range (PM2.5 standard value)PM2.5 accuracy $\pm 10\% (@100 \sim 500\mu \text{g/m}^3)$ $\pm 10\mu \text{g/m}^3 (@0 \sim 100\mu \text{g/m}^3)$ Single response time ≤ 15 Working current 220mAn Preheat time $60S$ Measurement interval (s) $4S$ Operating temperature range Operating temperature range $-2\pi^\circ \sigma^\circ$ Operating temperature range Operating temp | CO2 measuring range | 370-9999ppm |
| AQI measurement range 0-500ug/m3 AQI accuracy ±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³ Temperature measurement range -20-60°C Temperature accuracy | CO2 accuracy | ±3% of readings of ±40PPM |
| AQI accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Temperature measurement range-20-60°CTemperature accuracy | HCHO measuring range | 0-1.000mg/m ³ |
| ±10µg/m³ (@0~100µg/m³Temperature measurement range-20-60°CTemperature accuracy | AQI measurement range | 0-500ug/m3 |
| Temperature measurement range-20-60°CTemperature accuracy | AQI accuracy | $\pm 10\%$ (@100~500µg/m ³) |
| range-20-60°CTemperature accuracy | | ±10μg/m³ (@0~100μg/m³ |
| rangeImage Product StandardTemperature accuracy | Temperature measurement | 20 60°C |
| Humidity measurement range0-100% RHHumidity accuracy-3°CPM10 measuring range0-1000µg/m³PM10 accuracy±10% (@100~500µg/m³)±10µg/m³ (@0~100µg/m³)Particulate matter concentration range (PM2.5 standard value)0-1000µg/m³PM2.5 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Single response time≤15Working current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range Operating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | range | -20-80 C |
| Humidity accuracy | Temperature accuracy | 1.2% |
| PM10 measuring range0-1000µg/m³PM10 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Particulate matter concentration range (PM2.5 standard value)0-1000µg/m³PM2.5 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Single response time≤1SWorking current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Humidity measurement range | 0-100%RH |
| PM10 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Particulate matter concentration range (PM2.5 standard value)0-1000µg/m³PM2.5 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Single response time vorking current≤1SWorking current220mAnPreheat time Operating temperature range Operating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Humidity accuracy | 1.2% |
| ±10µg/m³ (@0~100µg/m³)Particulate matter concentration range (PM2.5 standard value)0-1000µg/m³PM2.5 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Single response time≤1SWorking current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | PM10 measuring range | 0-1000µg/m³ |
| Particulate matter concentration range (PM2.5 standard value)0-1000µg/m³PM2.5 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Single response time≤1SWorking current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range Operating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | PM10 accuracy | $\pm 10\%$ (@100~500µg/m ³) |
| range (PM2.5 standard value)PM2.5 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Single response time≤15Working current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range Operating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | | |
| PM2.5 accuracy±10% (@100~500µg/m³) ±10µg/m³ (@0~100µg/m³)Single response time≤1SWorking current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range0.50%COperating humidity range0.90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Particulate matter concentration | 0-1000µg/m³ |
| ±10µg/m³ (@0~100µg/m³)Single response time≤1SWorking current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range0 - 20 °COperating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | range (PM2.5 standard value) | |
| Single response time≤1SWorking current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range0-90%RH nonOperating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | PM2.5 accuracy | $\pm 10\%$ (@100~500µg/m ³) |
| Working current220mAnPreheat time60SMeasurement interval (s)4SOperating temperature range0-90%RH nonOperating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | | ±10μg/m³ (@0~100μg/m³) |
| Preheat time60SMeasurement interval (s)4SOperating temperature range0.000 COperating humidity range0.90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Single response time | ≤1S |
| Measurement interval (s)4SOperating temperature range0.000 COperating humidity range0.90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Working current | 220mAn |
| Operating temperature range Operating humidity range Operating humidity range 0-90%RH non Supply battery Configured with removable 3.7V/18650 battery or external 5V USB power supply Standby time 2200mAh for >7 hours of continuous operation Weight 269g | Preheat time | 60S |
| Operating humidity range0-90%RH nonSupply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Measurement interval (s) | 4S |
| Supply batteryConfigured with removable 3.7V/18650 battery or external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Operating temperature range | 0 F0 °C |
| external 5V USB power supplyStandby time2200mAh for >7 hours of continuous operationWeight269g | Operating humidity range | 0-90%RH non |
| Standby time2200mAh for >7 hours of continuous operationWeight269g | Supply battery | Configured with removable 3.7V/18650 battery or |
| Weight 269g | | external 5V USB power supply |
| | Standby time | 2200mAh for >7 hours of continuous operation |
| Size 140*134*33mm | Weight | 269g |
| | Size | 140*134*33mm |

Key Function:



Carbon dioxide calibration function: press and hold the ALARM VALUE button in the off state, and then press the power button to enter 400PPM calibration and display a countdown of 600 seconds Return directly to the main interface after completion

Carbon Dioxide Concentration Level:

400-450PPM (Excellent): The usual outdoor air level.

450-700PPM (good) typical value in a well-ventilated living space.

700-1000PPM (slight pollution) poorly ventilated living environment.

1000-2000PPM (moderately polluted) air level that is insufficient, drowsy, and enough to cause complaints.

2000-5000PPM (heavy pollution) stagnant, stale, sultry air level. It causes headaches and drowsiness, accompanied by lack of concentration, decreased concentration, rapid heartbeat, and slight nausea.

Exposure to more than 5000PPM (severe pollution) may cause severe hypoxia, resulting in permanent brain damage, coma or even death.

TVOC Concentration Level (mg/m3)

Very good: ≤0.6mg/m³ General: >0.6mg/m³; ≥1.6mg/m³ Not good: >1.6mg/m³

HCHO Concentration Level (mg/m3)

Very good: ≤0.08mg/m³ General: >0.08mg/m³; ≤0.12mg/m³ Not good: >0.12mg/m³

PM2.5 Concentration Level (mg/m3):

| Excellent: 0-35 | Moderate pollution: 115-150 |
|-------------------------|-----------------------------|
| Good: 35-75 | Severe pollution: 150-250 |
| Light pollution: 75-115 | Serious pollution: 250-500 |

Common Problem Analysis:

 Inaccurate data on the concentration of carbon dioxide in the air Analysis 1: The concentration and content of the environment itself are not stable, keep it in the same place for a period during measurement Analysis 2: There is debris, dirt in the sampling window of the carbon dioxide sensor, and the airflow ventilation window is blocked by something Analysis 3: The carbon dioxide sensor has a deviation, and the equipment needs to be recalibrated

2) Inaccurate temperature and humidity

Analysis 1: Analysis of debris and dirt in the temperature and humidity sensor sampling window

Analysis2: The ventilation window is blocked by something

3) Doesn't boot

Analysis 1: If the battery is dead or damaged, use the USB socket to supply power. If it can be turned on and there is a change in the power grid in the upper right corner, the battery is dead. If there is no change, only the OK icon is displayed, indicating that the battery is damaged.

Analysis 2: The +/- polarity of the battery is reversed. Please note that the battery without a protruding contact point is the "-" pole, and the one with a protruding contact point is the "+" pole.