# JNC City weather detector

# CW9

## [Features]

- Small in size, light in weight, and waterproof quick connector, it's easy to install.
- With Automatic Temperature Compensation(ATC).
- RS-485 communication and Bluetooth(optional).
- It has software utility which can set ID/ Baud rate/ calibration and other functions.
- Outdoor louver shell design, accurate sensing, fast response and data transmission high efficiency.
- Multiple test items can be selected according to optional codes, with a maximum of 13 test items..
- The device can calculate the Heat Index (HI) in real-time and provide the corresponding hazard level for reading. (Temperature and humidity options are required.)
- JNC Cloud Box(optional) can directly transmit data to the cloud through NB-IoT.
- JNC BT function(optional) is able to establish the wireless BT network.
- CW9 passed ITRI certification, and it obtained the highest level (Level 1 ).

## [Applications]: Weather station、Environmental monitoring、Factory self-management、Apparatus agriculture.

## [Optional Code] CW9 – Code1 – Code 2

| Code1 | Sensors(multiple choice) | Code1 | Sensors(multiple choice) | Code 2 | Communication |
|---|---|---|---|---|---|
| TR | Temp / RH | H2S | H2S | N | RS-485 |
| TRHI | Temp/RH/Heat Index (HI) | NO2 | NO2 | | |
| CO2 | $CO_2$ | SO2 | SO2 | | |
| P2 | PM2.5 | CH4 | CH4 | | |
| H | HCHO | PID | Photoionization TVOC | BT | Bluetooth |
| CO | CO | 9 | Gas nine-in -one (V- Semiconductor) | | |
| V | TVOC (Semiconductor) | | | | |
| O3 | O3 | 9-PID | Gas nine-in -one (V-PID) | | |
| P1 | PM10(algorithm) | dB | Noise | | |
| O2 | O2 | PR | Pressure | | |
| NH3 | NH3 | | | | |

## [Specifications]

| | | | |
|---|---|---|---|
| Power | ◆DC input：9～36V ◆Power consumption：1.8W | | |
| Environment | -10℃~60℃，0~100%(non-condensing) | | |
| Communication | RS-485 Modbus RTU (optional Bluetooth) | | |
| Housing Material | ABS anti-UV | | |
| Installation | Louver wall mounting type | Certificate | CE,FCC |
| Dimension (mm) | 236X140/mm | Mounting bracket dimension | 195x90x125.9mm |
| Weight | ≦2 kg | Wire length | 3 meter |

## [Heat Index]

| | | | |
|---|---|---|---|
| First level notice | 26.7～32.2 | Third level danger | 40.6～54.4 |
| Second level extra attention | 32.2～40.6 | Fourth level extremely dangerous | > 54.4 |

| Sensors Principle | Range | T90 | Operating temperature | Resolution | | Accuracy | Environmental equilibrium time |
|---|---|---|---|---|---|---|---|
| Temp (Resistance) | -40~125℃ | <60 S | -20~60℃ | 0.1℃ | | ±0.4℃ | 10min |
| RH (Capacitive) | 0~100% | <60 S | -20~60℃ | 0.1% | | ±3% | 10min |
| $CO_2$ (Infrared) | 0~10,000ppm | <90 S | 0~50℃ | 1ppm | | ±30ppm ±3% of Reading | 10sec |
| PM2.5 (Laser) | 0~1,000μg / $m^3$ | <90 S | -10℃~65℃ | 0.1 μg/ $m^3$ | | ±10μg/ $m^3$ ±5% of Reading | 5min |
| HCHO (Electrochemical) | 0.01~2.00ppm | <120 S | -10℃~50℃ | 0.01ppm | | ≦±0.02ppm±2% of Reading | 10min |
| CO (Electrochemical) | 0~100ppm | <180 S | 0℃~50℃ | 0.1ppm | | ±5ppm | 10min |
| TVOC (Semiconductor) | 0~60ppm | <90 S | 0℃~40℃ | Range | Resolution | ±10% | 10min |
| | | | | ≦2.008 ppm | 1 ppb | | |
| | | | | ≦11.11 ppm | 6 ppb | | |
| | | | | ≦60 ppm | 32 ppb | | |
| $O_3$ (Semiconductor) | 0.01~2.00ppm | <120 S | 0℃~40℃ | 0.01ppm | | ±10% | 10min |
| PM10 (algorithm) | 0~1,200μg / $m^3$ | <90 S | -10℃~65℃ | 0.1 μg/ $m^3$ | | ±10μg/ $m^3$ ±5% of Reading | 5min |
| O2 (Electrochemical) | 0 ~ 30% | <60S | -10℃~55℃ | 0.05% | | ±1% of Reading | 5min |
| NH3 (Electrochemical) | 0-100ppm | <60S | -10~50℃ | 0.01ppm | | ±2% | 5min |
| H2S (Electrochemical) | 0~100ppm | <60 S | -10~50℃ | 0.01ppm | | ±2% | 5min |
| NO2 (Electrochemical) | 0-20ppm | <60S | -0~50°C | 0.01ppm | | ±2% | 5min |
| SO2 (Electrochemical) | 0-20ppm | <60S | -0~50°C | 0.01ppm | | ±2% | 5min |
| CH4 (Semiconductor) | 0-100ppm | <90 S | 0℃~40℃ | 0.1ppm | | ±10% | 10min |
| PID100 (Photoionization) | 0-100ppm | ≦5S | -10~60℃ | 25ppb | | ±2% | ≦60 sec |
| | | | | | | | |

| Noise Measurement Range | Frequency Range | Resolution | Accuracy | Operate Temperature |
|---|---|---|---|---|
| 30~120dB | 20~20K Hz | 0.1dB | 3%Fs | -20-60℃ |

| Pressure Range | Resolution | Accuracy | Operate Temperature |
|---|---|---|---|
| 300~1100 hPa | 1 hPa | ± 1hPa | -40~+85°C |

## [ Dimension] mm