

WiRIO Industrial Wireless Temperature and Humidity Adapter

Model : CM120-C01

Feature

Sensor and Sensor Port

- AOSONG AM2320
- Digital signal output calibrated during manufacturing to ensure very high reliability and excellent long-term stability.
- Temperature resolution up to 0.1°C with accuracy up to $\pm 0.5^{\circ}\text{C}$.
- Humidity resolution up to 0.1%RH with accuracy up to $\pm 3\%\text{RH}$.
- Sensor output direct connect to the sensor port without any external component.
- No extra external power required for the sensor device.

Input Power Supply

- Width input power supply voltage range from 9V to 24V DC.
- Build in DC/DC adapter to reduce power lost during power regulation.
- Terminal block connector and DC Jack for easy installation.

Server Connectivity

- Support WiFi 2.4G 802.11 b/g/n and WPA/WPA2.
- Transmission power up to 16dBm \pm 2 dBm.
- Receive sensitivities up to -90dBm.
- Build in internal antennal for easy installation.
- All communication with server is fully encrypted with AES-128



Sensor Power Supply Output

- 5V Supply provided for sensor power supply requirement.
- Able to drive up to 5V 1A.

Easy Integration with User Backend System

- WiRIO Management Server (WMS) is provided for easy management of multiple WiRIO devices.
- Back End System only need to communicate with WMS to control and received information from WiRIO devices.
- Communication with WMS is based on JSON string.
- WMS server will be provided in multiple setup,
 - Standalone execution JAVA file for Windows and Linux
 - Docker container
- Detail installation information can be obtain from Github server at <https://github.com/Easyiot-Wirio/Wirio/wiki>

Sensor Input : Relative Humidity

Resolution	0.1%RH
Range	0%RH to 99.9%RH
Accuracy	±3%RH at 25°C
Repeatability	0.1%RH

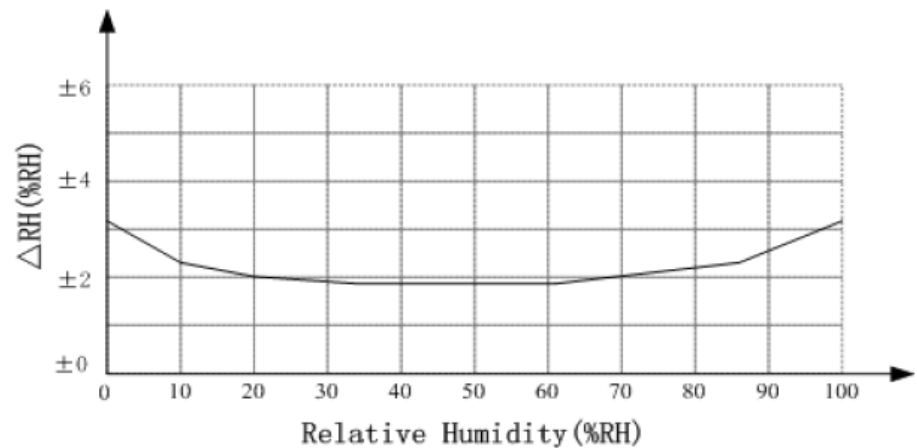


Figure 1 Relative Humidity of Maximum Error

Sensor Input: Temperature

Resolution	0.1°C
Range	-40°C to 80°C
Accuracy	±0.5°C
Repeatability	±0.2°C

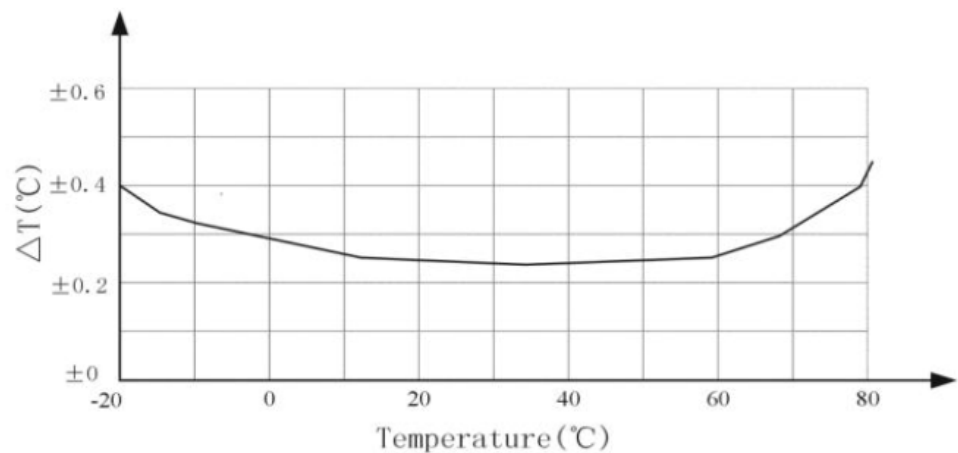


Figure 2 Maximum Error of the Temperature Sensor

WiFi Linkage

<i>Frequency Range</i>	2412-2484Mhz
<i>Antenna</i>	PCB
<i>Transmit Power</i>	802.11b: 16±2 dBm (@11Mbps) 802.11g: 14±2 dBm (@54Mbps) 802.11g: 13±2 dBm (@HT20, MCS7)
<i>Receiving Sensitivity</i>	CCK, 1Mbps: -90dBm CCK, 11Mbps: -85dBm 6Mbps(1/2 BPSK): -88dBm 54Mbps (3/4 64-QAM): -70dBm HT20, MCS7 (65Mbps, 72.2Mbps):-67dBm
<i>Security</i>	WEP/WPA-PSK/WPA2-PSK

System Power

<i>Input Voltage</i>	9V to 24V DC
<i>Current Usage</i>	250mA @ 12V, 125mA @ 24V
<i>Output Supply Port</i>	5V @ 1A Max or According to Input voltage @ 1A Max

Environment

<i>Operating Temperature</i>	0°C to 70°C
<i>Storage Temperature</i>	-40°C to 85°C, <90%RH

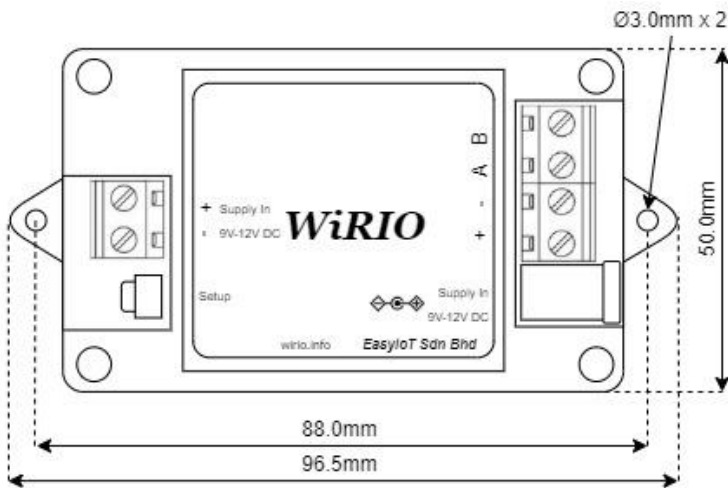


Figure 3 CM-120 Dimension (Top View)



Figure 4 CM-120 Dimension (Side View)

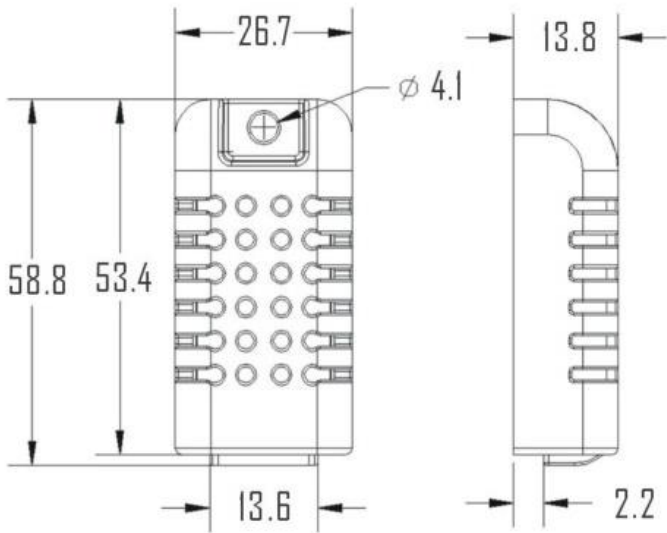


Figure 5 Sensor Dimension (in mm)