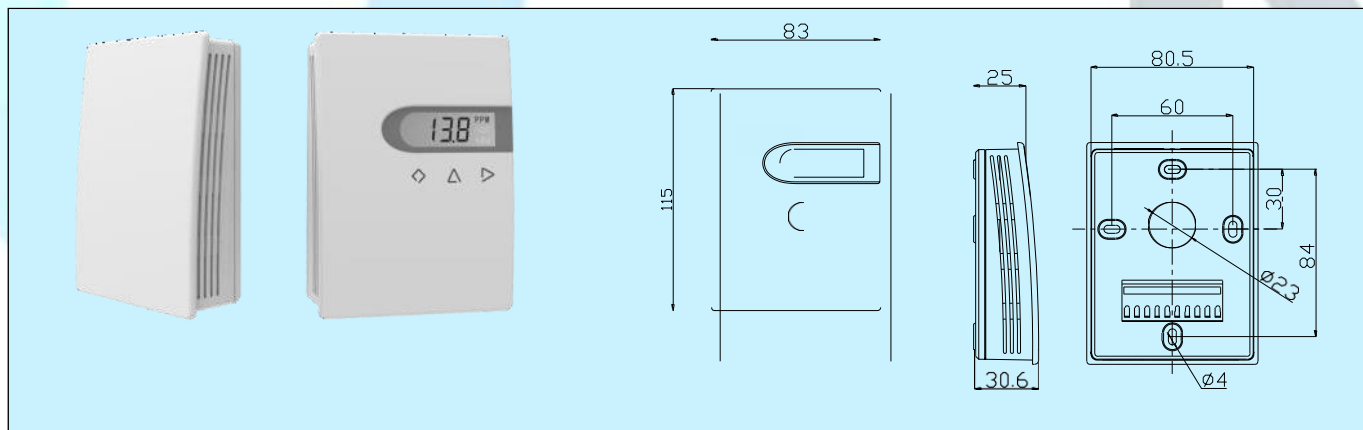


## RSA-MCAA&RSA-MCD Carbon Monoxide (CO) Transmitter/Controller



### Applications & Features

- It's necessary to control the ventilation of car park and vehicle maintenance and test work shop according to many building HVAC regulations. Considering of energy efficiency, demand controlled ventilation (MCV) is recommended to provide enough fresh air according to CO concentration and temperature. CM transmitter and controller are designed for these applications. It can effectively control the ventilation system to safety and energy-saving operations
- Environmental friendly electrochemical sensor gives good long term accuracy, sensitivity and reliability
- Better than most other similar sensors, it gives more than 7~10 years sensor life to protect customer's investment
- Better than most other similar sensors which maybe need recalibration every 6~12 months, it only need periodical recalibration as long as 3~5 years or more, maintain 5% accuracy
- All electrical terminals are on the inside bottom, avoid any possible destroy to PCB when wiring
- Digital technology applied, multiple outputs optional, over voltage and reverse polarity protection, high reliability and anti-interference capability
- Wide range of operating temperature, optional relays to actuate the alarm or control function output
- LCD & function keys can set various parameters, calibrate and adjust output, so that the product can be a stand alone controller

### Specifications

**CO sensor:** Electrochemical gas sensor **Range:**

0~100ppm, or others (0-400ppm) **Accuracy:** ±5%  
@ 0-400ppm

**Temperature sensor :** Digital temperature sensor

**Range :** 0~50℃ **Accuracy :** ±0.5℃ @0~50℃  
(≥1m/s airflow)

**Output:** 4~20mA (3 wires), 0~10VDC, RS485 / Modbus; OUT1: T,  
OUT2: CO

**Relay :** 2xSPST, 3A/30VDC, 3A/250VAC

**Alarm :** buzzer+LCD's backlight

**Response Time:** ≤60s

**Power:** 16~28VAC/16~35DC

**Output Load:** ≤500Ω (current) ,≥2KΩ (voltage)

**Display & Keys:** optional LCD Display & Keys, see more details  
on LCD & Keys operation

**Working environment:** -10~60℃ (continuous),  
-40~70℃ (intermittent, LCD:-20~70℃),  
0~95%RH (Non- cond.)

**Housing:** ABS+PC

**Protection:** IP30

**Weight:** 150g

**Agency Approval:** CE

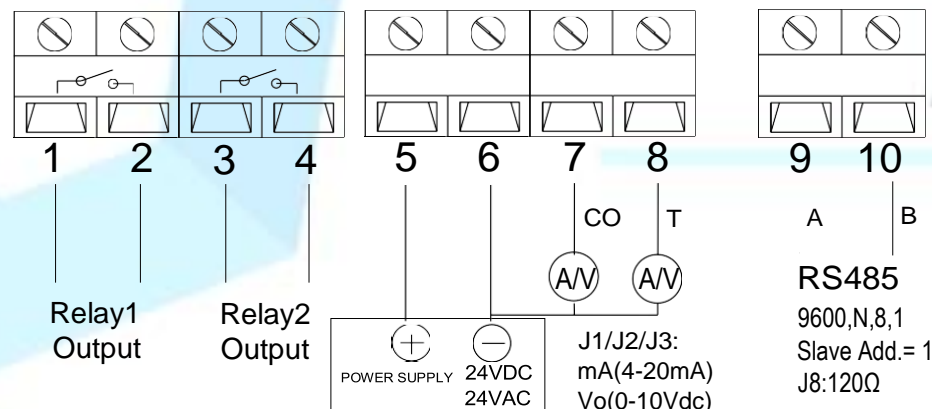
### Models

Model	RSA-MCAA				Wall mount CO transmitter/ Controller
Output		1 B			4~20mA/0~10VDC 4~20mA/0~10VDC RS485/Modbus
Range			0 7		0~100ppm/0~50℃ 0~400ppm/0~50℃
Relay			0 1 2		N/A 2xSPST 1xBuzzer
LCD&Keys				0 1 2	N/A LCD LCD&Keys

Note: All products are factory set to 4-20mA as output default, and can be set to 0-10V by jumper on the PC

## Connection

Different models have different electrical terminals. Please wire specific model according to the wiring diagram inside the front cover.

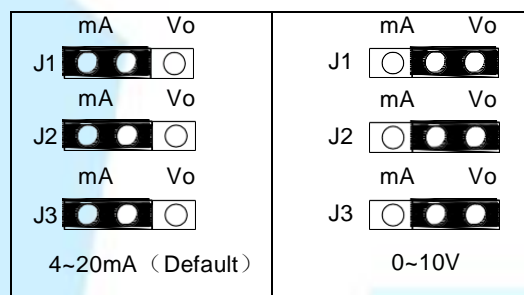


### 1. 4-20mA/0-10V output jumper J1/J2/J3 description:

4-20mA output (Default): left short J1/J2/J3 pin1 and pin2.

0-10V output: right short J1/J2/J3 pin2 and pin3.

As follow figure:



### 2. RS485/Modbus communication refer to 《RSA-MCAA series carbon monoxide transmitter Modbus communication instruction

》 RS485 terminal resistance jumper J8 description:

Terminal resistance 120 Ω: left short J8 pin1 and pin2.

Terminal resistance 0 Ω(None): right short J8 pin2 and pin3.

As follow figure:



Terminal resistance: 120 Ω

Terminal resistance: None

### 3. Relay output settings refer to 《RSA-MCAA series carbon monoxide transmitter MMI operation instruction》

## Installation

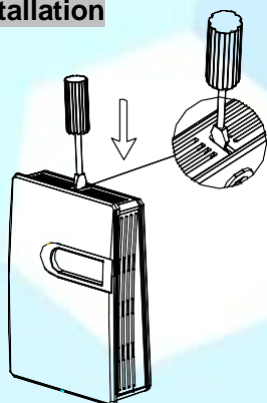


Fig.1

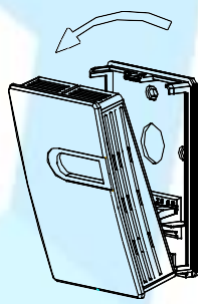


Fig.2

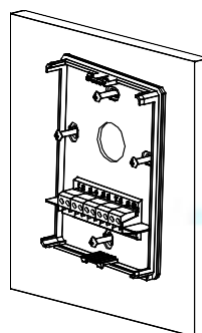


Fig.3

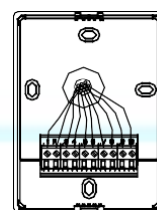


Fig.4

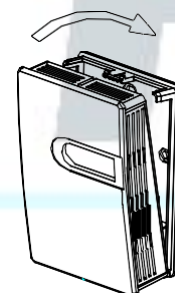


Fig.5

- It should be installed vertically on the wall. The installation site should be far away from heater, cooler, fan, humidifier, dehumidifier, and other heat/cool/humidity sources.
- Use a screwdriver, insert into the snap at the upper side of the housing, and push down a little, then open the front cover.
- Feed the cable into the housing before installing the base on the wall according to the diagram.
- Finish electrical connection according to the wiring diagram.
- Restore the front cover, and finish the installation.

#### **Attention**

- The product is not suitable for high H<sub>2</sub> concentration environment.
- It is recommended to test the sensor's performance after 1~3 years continuous operation, and decide if it needs to be recalibrated.
- In very slow air flow, the temperature output may be more than its accuracy due to the transmitter's self-heat.
- It should be power OFF during installing and wiring. When using 24VAC, it is strongly recommended to power the unit with independent transformer. If sharing a 24VAC transformer with other equipments such as controllers, transmitters or actuators, please make sure the terminals 24V and GND are connected correctly. Otherwise, it will perhaps reduce serious damages.

#### **Warranty**

- It has limited warranty for eighteen (18) months after the production date.