

CLS-RCO2 Room Carbon Dioxide (CO2) Transmitter

Applications & Features

- This series transmitters/controllers are designed for monitoring & controlling indoor air quality(CO₂ concentration)
- Suitable for wall mount.
- High performance NDIR digital sensor and circuit, ensure precise measurement and temperature compensation
- Stable, reliable and fast response
- 15 years sensor life without maintenance
- Digital technology applied, over voltage and reverse polarity protection, high reliability and anti-interference capability
- Multiple outputs selection

Specifications

Sensor: NDIR sensor, with ABC algorithm*

Sampling Method: diffusion

Accuracy: see models

Response time(T90): <120s (30cc/min, low airflow)

Drift: <±10ppm/year

Range: 0~2000ppm (measurement range 400~2000 ppm)

Output: 4~20mA, 0~10V, RS485/Modbus

Load resistance: ≤500Ω(Current output), ≥2kΩ(Voltage output)

Power supply: 16~28VAC/18~35VDC

Working environment: 0~50°C, 0~85%RH (Non-cond.)

Temp. Compensation: 10~40°C

Storage temperature: -20~60°C

Housing: fire retardant PC(UL94V-0)

Protection: IP30

Weight: 135g

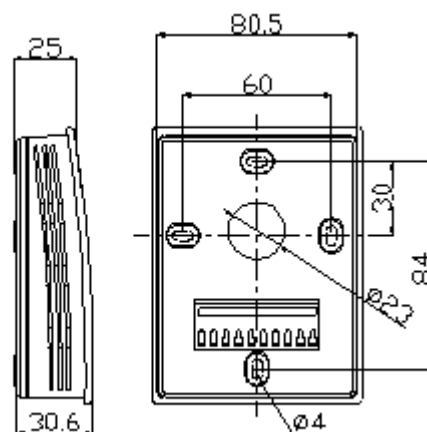
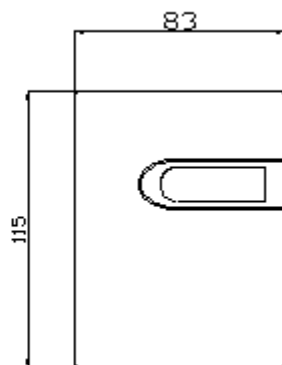
Approval: CE

*ABC algorithm: Automatic Baseline Correction, it constantly keeps track of the sensor's lowest reading over a few days interval and slowly corrects for any long term drift detected as compared to the expected fresh air value of 400 ppm CO₂.

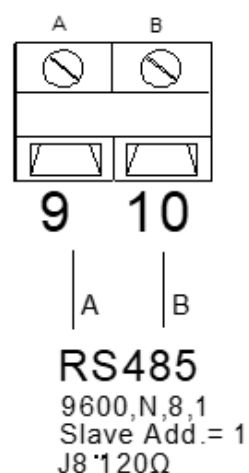
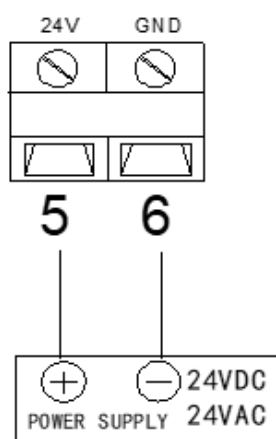
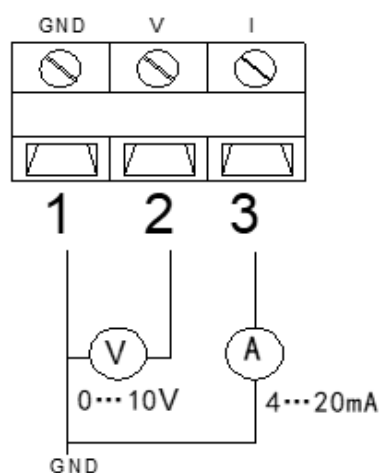
Selection table

ABB series	Description
CLS-RCO2-0VA0	Room Carbon Dioxide (CO2) Transmitter,4~20mA/0~10V,400~2000ppm,±50ppm,5%,IP30
CLS-RCO2-0M0	Room Carbon Dioxide (CO2) Transmitter,RS485,400~2000ppm,±50ppm,5%,IP30

Appearance & size



Connection



RS485/Modbus communication refers to "CLS-RCO2 carbon monoxide transmitter Modbus communication instruction".

RS485 terminal resistance jumper J8 description:

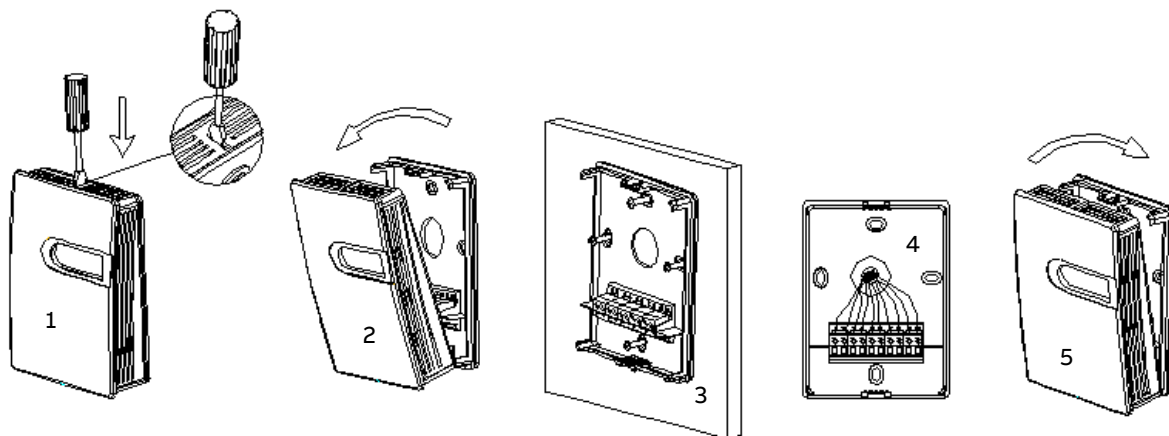
Terminal resistance 120Ω: left short pin2 and pin3 from J8.

Terminal resistance None: right short pin1 and pin2 from J8, as the following figure:



Terminal resistance :None Terminal resistance :120 Ω

Wall mount installation



- 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 SO₂ concentration environment.
- The product needs to warm up for 180 seconds. In normal application environment, the transmitter could reach to the accuracy stated in the specifications after 3 ABC cycles of continuing work. Especially within 3 days after the initial power on, the measured value may not be accurate. But after 3 cycles of the internal ABC operation, the function can correct the output to the real value and meet the accuracy.
- 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 equipment such as controllers, transmitters or actuators, please make sure the terminals 24V and GND are connected correctly. Otherwise, it will perhaps reduce serious damages.

Maintenance

ABB LV Installation Materials Company Limited, Beijing CN

No.17 Kang ding Street, Beijing Economic-Technological Development Area 10076, P.R. China. Zip code: 100176

<http://www.abb.com>

Tel: +86 400-820-9696

Scan the QR code to go ABB official web page and get more product info



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Warning! Installation by person with electrotechnical expertise only.

Warnung! Installation nur durch elektrotechnische Fachkraft.

Avvertenza! Fare installare solo da un elettricista qualificato.

Avertissement! Installation uniquement par des personnes qualifiées en électrotechnique.

¡Advertencia! La instalación deberá ser realizada únicamente por electricistas especializados.