

## DATA SHEET

# CO 110

## CO transmitter



**Configurable intermediary ranges**



**ABS V0 housing, IP20, with or without display**

- Range from 0 to 500 ppm
- 0-10 V active output, power supply 24 Vac/Vdc (3-4 wires) or 4-20 mA output, passive loop, power supply from 16 to 30 Vdc (2 wires)

- "1/4 turn" system mounting with wall-mount plate
- Housing with simplified mounting system

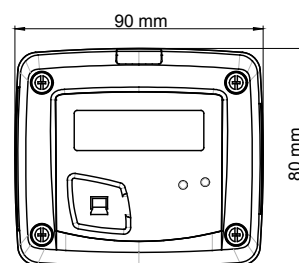
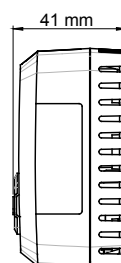
### Technical features

Unit of measurement	ppm
Measuring range	From 0 to 500 ppm
Accuracy*	±3 ppm or 3 % of the measured value
Type of sensor	Electrochemical sensor
Life-time of the sensor	5 years
Response time	T <sub>63</sub> = 35 s
Resolution	0.1 ppm
Type of fluid	Air and neutral gas
Conditions of use (°C/%RH/m)	From 0 to +50 °C. In non-condensing condition. From 0 to 2000 m.
Storage temperature	From -10 to 70 °C

\*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

### Features of housing

Material	ABS V0 as per UL94
Protection	IP20
Display	LCD 10 digits. Size: 50 x 17 mm
Height of digits	Value: 10 mm; Unit: 5 mm
Weight	138 g



### Part number

CO 110	—	<b>P</b>	—	<b>O</b>	—	<b>S</b>
		<b>Power supply / Output</b>		<b>Display</b>		
		A: Active – 24 Vac/Vdc – 0-10 V		O: With display		
		P: Passive – 16/30 Vdc – 4-20 mA		N: Without display		

**Example: CO 110-POS**  
CO transmitter, 4-20 mA passive transmitter, with display

## Technical specifications

Output / Power supply	Active 0-10 V (power supply 24 Vac/Vdc $\pm 10\%$ ), 3-4 wires Passive loop 4-20 mA (power supply 16/30 Vdc), 2 wires Common mode voltage $< 30$ VAC Maximum load: 500 $\Omega$ (4-20 mA) / minimum load: 1 k $\Omega$ (0-10 V)
Consumption	2 VA (0-10 V) or 0.6 VA (4-20 mA)
European directives	2014/30/EU EMC; 2014/35/EU Low Voltage; 2011/65/EU RoHS II; 2012/19/EU WEEE
Electrical connections	Screw terminal block for cables from 0.05 to 2.5 mm <sup>2</sup> or from 30 to 14 AWG Carried out according to the code of good practice.
PC communication	USB-mini DIN cable
Environment	Air and neutral gas

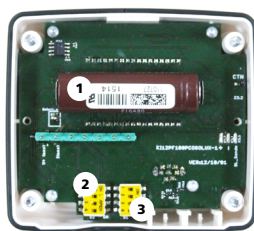


### Simplified calibration

Electronic board and measuring element fixed to the front panel of the sensor, allowing you to leave your installation intact to configure or calibrate your instruments.

## Connections

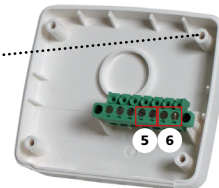
1. Electrochemical sensor
2. Inactive switch
3. Active switch
4. LCC-S software connection
5. Output terminal block
6. Power supply terminal block



Inside the front housing



Removable front face



Fixed back housing

## Symbols

For your safety and in order to avoid any damage of the device, please follow the procedure described in this document and read carefully the notes preceded by the following symbol:



The following symbol will also be used in this document, please read carefully the information notes indicated after this symbol:

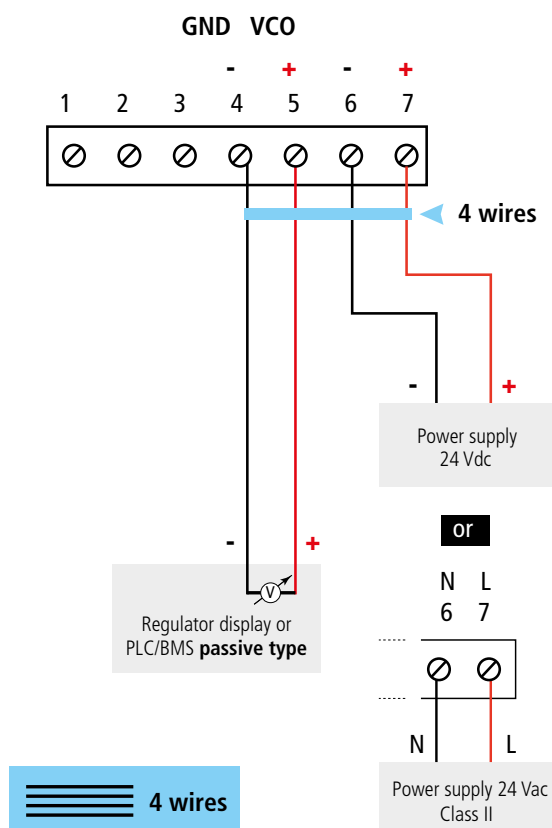


## Electrical connections – as per NFC15-100 standard

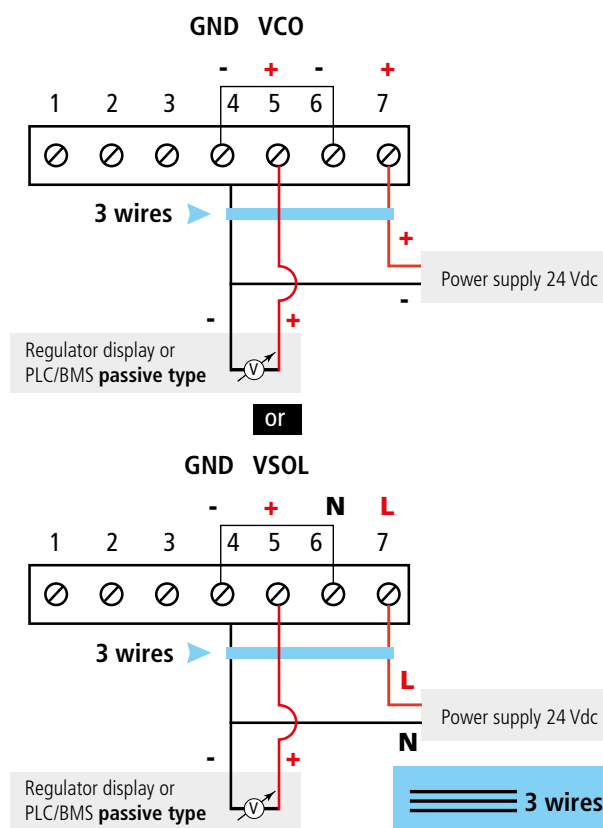


This connection must be made by a qualified and trained technician. To make the connection, the transmitter must not be energized.

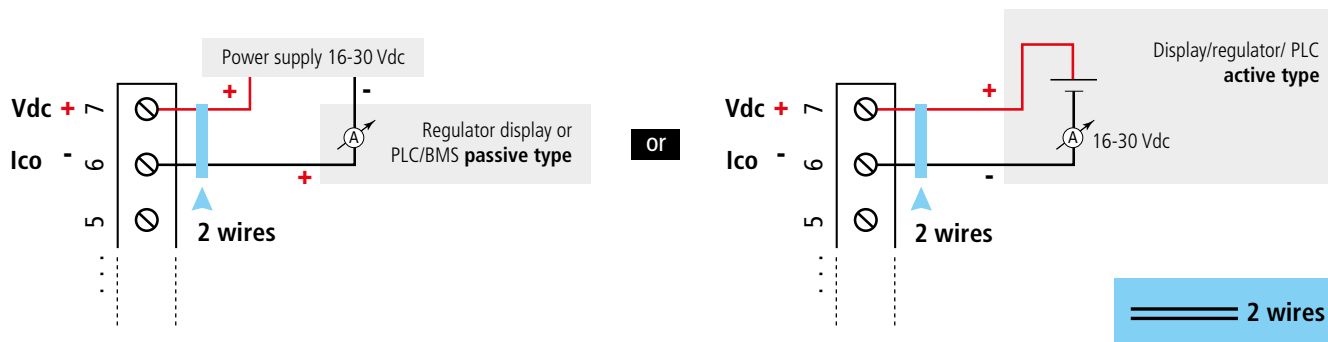
For CO 110-A models with 0-10 V output – active:



To make a 3-wire connection, before powering up the transmitter, please connect the output ground to the input ground. See drawing below.



For CO 110-P models with 4-20 mA output – passive:



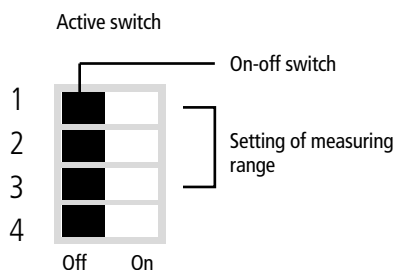
## Settings and use of the transmitter



To configure the transmitter, it must not be energized. Then you can make the required settings thanks to the DIP switches as shown on the drawing below. When the transmitter is configured, you can power it up.

### Configuration

To configure the transmitter, unscrew the 4 screws of the housing then open it. DIP switches allowing the different settings are accessible.



### Measuring range setting

To set a measuring range, put the on-off switches 2, 3 and 4 as shown below:

Measuring ranges	Configuration via PC (from 0 to 500 ppm by default)	From 0 to 100 ppm	From 0 to 200 ppm
Combinations	1 2 3 4	1 2 3 4	1 2 3 4

## Configuration via LCC-S software (optional)

### It is possible to configure intermediary ranges

Caution: the minimum difference between the minimum scale and the maximum scale is 20.  
 Example: for a 0-500 ppm transmitter, the minimum delta is 20 ppm.  
 So the transmitter could be configure from 0 to 70 ppm from 0 to 20 ppm.

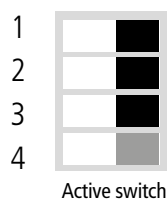
### Via software

### Configure the transmitter

Set the switch as shown beside  
 Connect the cable of the LCC-S to the connection of the transmitter

Please refer to the LCC-S user manual.

### Configuration via PC



**Caution:** the configuration of the parameters can be done either by DIP switch, or by software (you cannot combine both solutions).

