

# CO<sub>2</sub> and temperature transmitter COT 212

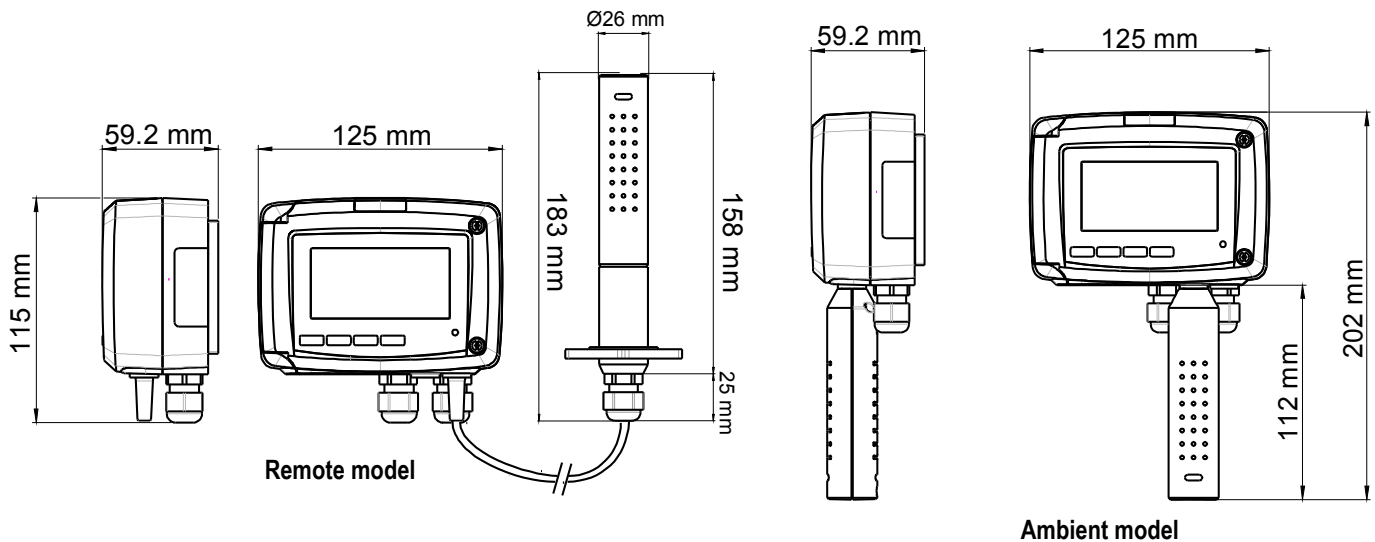


## KEY POINTS

- Configurable ranges from 0 to 5000 ppm\* and from 0 to 50 °
- 4 wires analogue output 0-5/10 V or 0/4-20 mA
- Power supply 24 Vdc/Vac or 230 Vac (optional 115 Vac)
- Trend indicator
- ABS V0 IP65 housing, with or without display
- "1/4 turn" system mounting with wall-mount plate

\*Other measuring range available on request : 0-20 000 ppm

## FEATURES OF THE HOUSING



**Material** : ABS V0 as per UL94

**Height of digits** : Values : 10 mm ; Units : 5 mm

**Protection** : IP65

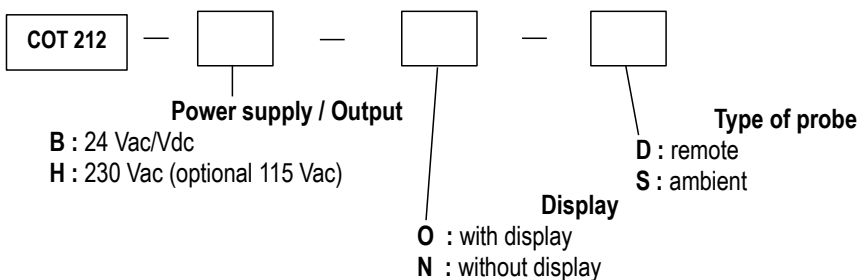
**Cable gland** : For cables Ø 8 mm maximum

**Display** : 75 x 40 mm, LCD 19 digits 2 lines.

**Weight** : 320 g

## PART NUMBER

To order, just add the codes to complete the part number :



**Example** : COT212 - BOS

Temperature and CO<sub>2</sub> transmitter, power supply 24 Vac/Vdc, with display and ambient probe

## TECHNICAL FEATURES IN TEMPERATURE

<b>Measuring range</b>	From 0 to +50 °C
<b>Unit of measurement</b>	°C / °F
<b>Accuracy*</b>	±0.3°C
<b>Response time</b>	$T_{90} = 0.9$ second for $V_{air} = 1$ m/s
<b>Resolution</b>	0.1 °C
<b>Type of sensor</b>	NTC
<b>Type of fluid</b>	Air and neutral gases

## TECHNICAL FEATURES IN CO<sub>2</sub>

<b>Measuring range</b>	From 0 to +5000 ppm Other available range : from 0 to 20 000 ppm
<b>Unit of measurement</b>	ppm
<b>Accuracy*</b>	From 0 to 5000 ppm : ±3% of the measured value ±50 ppm From 0 to 20 000 ppm : ±5% of the measured value ±100 ppm
<b>Response time</b>	T63 = 35 s
<b>Resolution</b>	1 ppm
<b>Type of sensor</b>	Infrared sensor
<b>Type of fluid</b>	Air and neutral gases

\*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.

## TECHNICAL FEATURES OF THE PROBES

### > Ambient probe

<b>Size</b>	Length : 112 mm ; Diameter : 26 mm
<b>Material</b>	polycarbonate

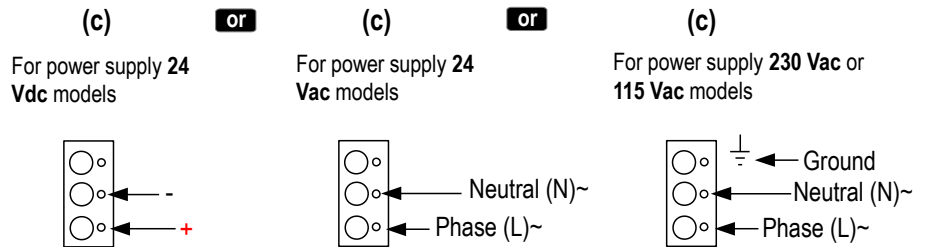
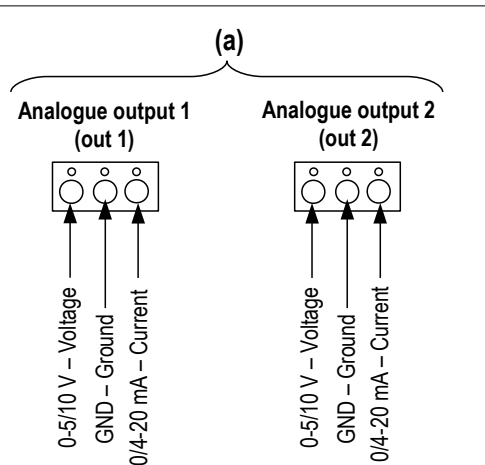
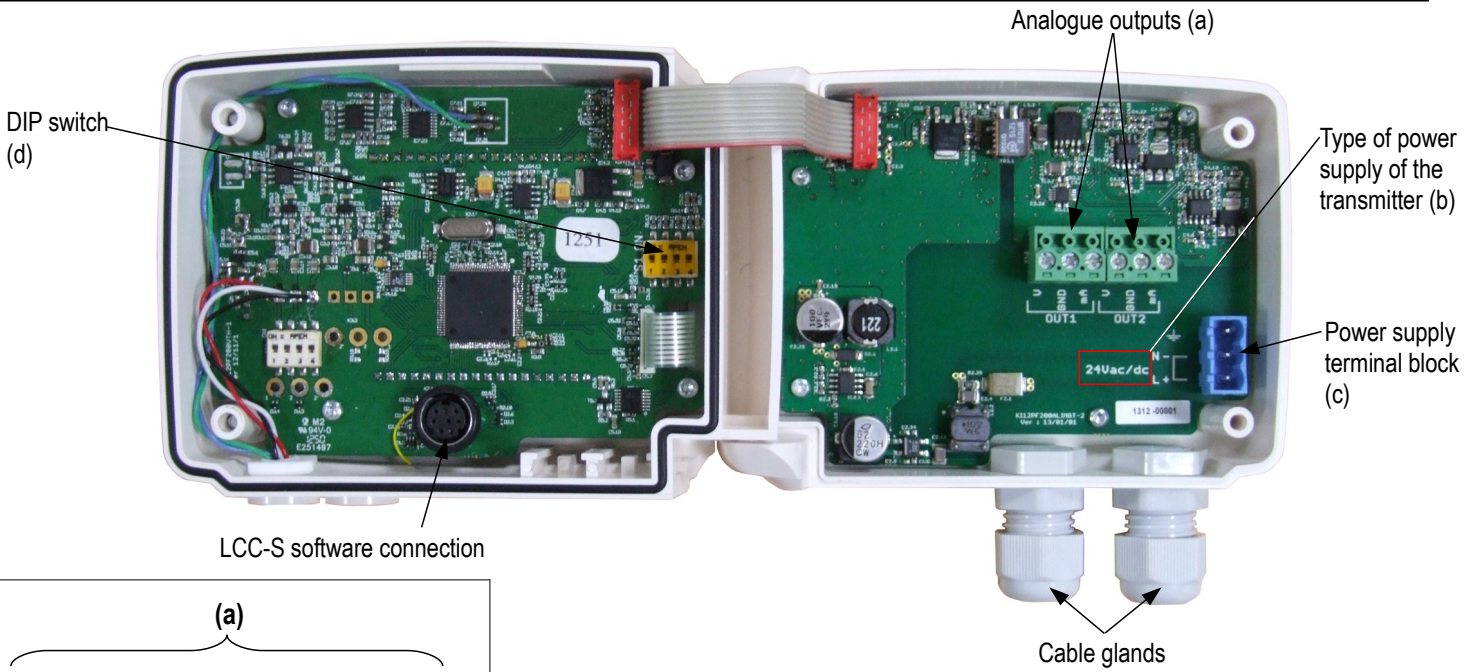
### > Remote probe

<b>Size</b>	Length : 158 mm (without cable gland), 183 mm (with cable gland) mm ; Diameter : 26 mm
<b>Material</b>	polycarbonate
<b>Cable</b>	Length : 2 m ; diameter : 4.8 mm

## TECHNICAL SPECIFICATIONS

<b>Power supply</b>	24 Vac / Vdc ±10 % 230 Vac ±10 %, 50-60 Hz 115 Vac ±10 %, 50-60 Hz
<b>Output</b>	2 x 4-20 mA or 2 x 0-20 mA or 2 x 0-5 V or 2 x 0-10 V (4 wires) Maximum load : 500 Ohms (0/4-20 mA) Minimum load : 1 K Ohms (0-5/10 V)
<b>Galvanic isolation</b>	Inputs and outputs (115 Vac/230 Vac models) Outputs (24 Vac/Vdc model)
<b>Consumption</b>	5 VA
<b>Electromagnetical compatibility</b>	EN61326
<b>Electrical connection</b>	Screw terminal block for cable 2.5 mm <sup>2</sup>
<b>PC communication</b>	Kimo USB-Mini Din cable
<b>Environment</b>	Air and neutral gases
<b>Type of fluid</b>	Air and neutral gases
<b>Operating temperature</b>	From 0 to +50 °C
<b>Storage temperature</b>	From -10 to +70 °C

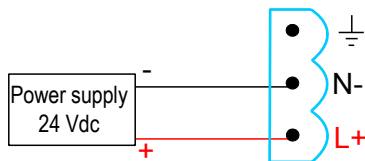
# CONNECTIONS



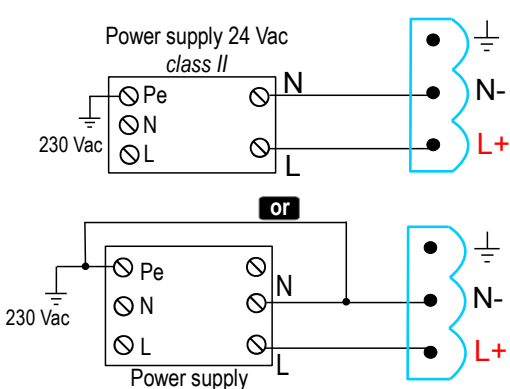
## ELECTRICAL CONNECTIONS – as per *NFC15-100* standard

**⚠ This connection must be made by a qualified technician. To make the connection, the transmitter must not be energized. Before making the connection, you must first check the power supply indicated on the transmitter board (see (b) on “Connections” part).**

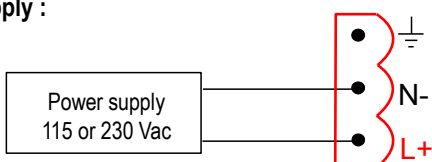
➤ **For transmitters with 24 Vdc power supply :**



➤ **For transmitters with 24 Vac power supply :**



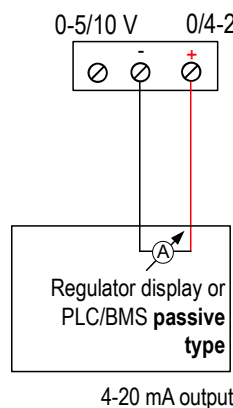
➤ **For transmitters with 115 or 230 Vac power supply :**



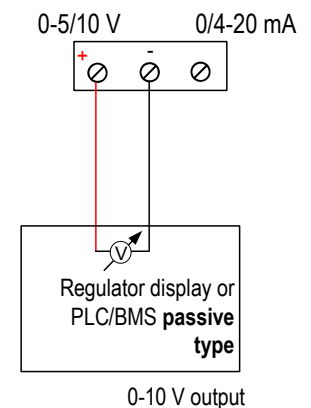
The selection of the output signal in voltage (0-10 V or 0-5 V) or in current (4-20 mA or 0-20 mA) is made via the DIP switch (d) of the electronic board of the transmitter : put the on-of switches as shown in the table below :

Configurations	4-20 mA	0-10 V	0-5 V	0-20 mA
Combinations	<p>1 2 3 4</p>	<p>1 2 3 4</p>	<p>1 2 3 4</p>	<p>1 2 3 4</p>

➤ **Connection of the output in current 4-20 mA :**



➤ **Connection of output in voltage 0-10 V :**



## CONFIGURATION OF THE TRANSMITTERS

It is possible on the class 210 to configure all the parameters of the transmitter : units, measuring ranges, outputs, channels, calculation functions, etc, via different methods :

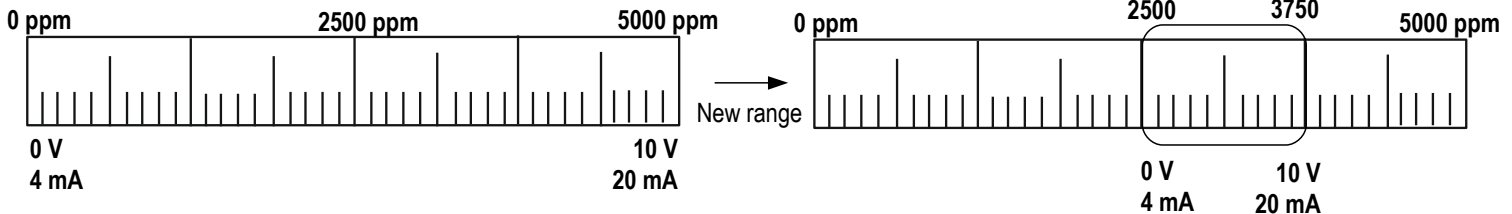
- **Keypad** for models with display : a code-locking system allows to secure the installation (See class 210 user manual).
- **Software** (optional) on all models. Simple user-friendly configuration. See LCC-SD user manual.

### Configurable analogue output :

It is possible to configure your own intermediary ranges in CO<sub>2</sub> and in temperature.

**Caution : the minimum difference between the high range and the low range is 20.**

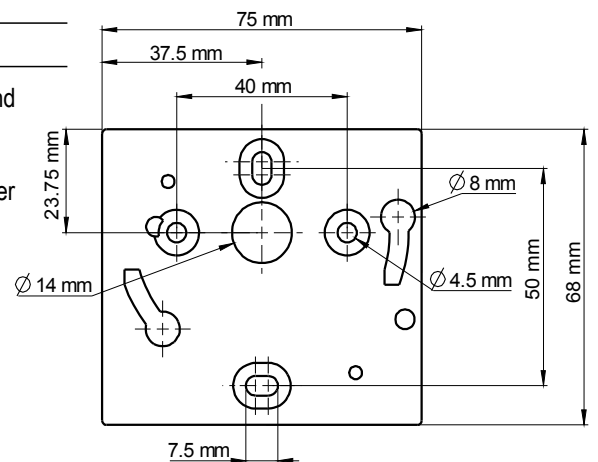
Configure the range according to your needs : outputs are automatically adjusted to the new measuring range



## MOUNTING

To mount the transmitter, mount the ABS plate on the wall (drilling :  $\varnothing 6$  mm, screws and pins are supplied).

Insert the transmitter on the fixing plate (see A on the drawing beside). Rotate the housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.



## CALIBRATION

**Outputs diagnostic :** With this function, you can check with a multimeter (or on a regulator / display, or a PLC / BMS) if the transmitter outputs work properly. The transmitter generates a voltage of 0 V, 5 V and 10 V or a current of 4 mA, 12 mA and 20 mA

**Certificate :** Class 210 transmitters are supplied with adjusting certificates. Calibration certificates are available as an option.

## MAINTENANCE

Please avoid any aggressive solvent. Please protect the transmitter and its probes from any cleaning product containing formalin, that may be used for cleaning rooms or ducts.

## OPTIONS AND ACCESSORIES

- **LCC-S** : configuration software with USB cable
- **Calibration certificate**
- 115 Vac version transmitter

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