

DATA SHEET

COT 212-R

CO₂ and temperature transmitter



Configurable ranges from 0 to 5000 ppm⁽¹⁾ and from 0 to 50 °C



4-wire analogue output
0-5/10 V or 0/4-20 mA



2 relay outputs



ABS V0 IP65 housing,
with or without display

Features

- Power supply 24 Vdc/Vac or 100-240 Vac
- Trend indicator
- "1/4 turn" system mounting with wall-mount plate

Part number

COT 212	—	B	—	N	—	S	—	R	—	●
		Power supply / Output B: 24 Vac/Vdc H: 100-240 Vac		Display N: without display (only for models with power supply of 24 Vac/Vdc) O: with display (only for models with power supply of 100-240 Vac)		Type of probe D: Remote S: Ambient		Relay outputs		Probe cable length (remote model only) () : cable length 2 m 05M: cable length 5 m 10M: cable length 10 m

Example: COT212 – BNS – R
Temperature and CO₂ transmitter, 24 Vac/Vdc power supply, without display, with ambient probe and relay outputs

Important note:
The model with power supply of 24 Vac/Vdc is available only without display.
The model with power supply of 100-240 Vac is available only with display.



Technical specifications

Parameter	Accuracy ⁽²⁾	Measuring range	Response time	Resolution
NTC Temperature	±0.3 °C	From 0 to +50 °C	T ₉₀ = 0.9 second for V _{air} = 1 m/s	0.1 °C / 0.1 °F
CO ₂ (Infrared sensor)	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	From 0 to 5000 ppm Other available range from 0 to 20 000 ppm	T ₆₃ = 35 s	1 ppm

⁽¹⁾ Other measuring range available on request: 0-20 000 ppm.

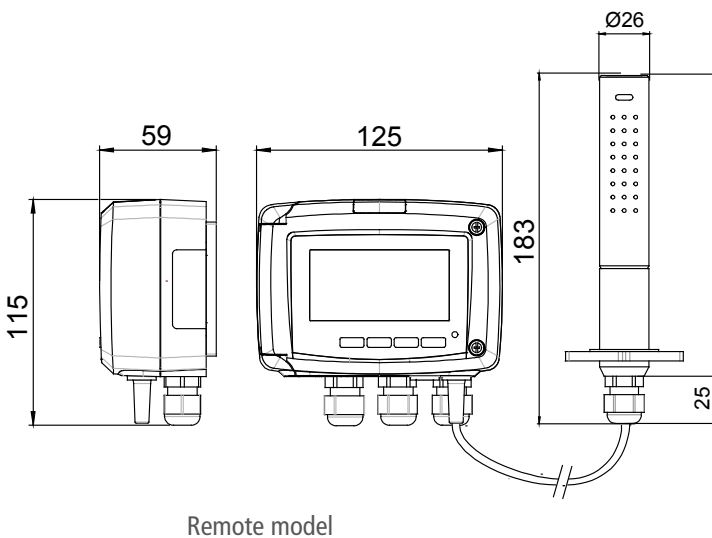
⁽²⁾ All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

General features

Power supply	24 Vac/Vdc $\pm 10\%$ 100-240 Vac, 50-60 Hz
	Warning: risk of electric shock 
Output	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) Common mode voltage < 30Vac Maximum load: 500 Ohms (0/4-20 mA) Minimum load: 1 K Ohms (0-5/10 V)
Relay outputs	2 changeover relays. NO: 5A/NC: 3A/240 Vac
Galvanic isolation	Inputs and outputs (100-240 Vac models) Device fully protected by DOUBLE ISOLATION or REINFORCED ISOLATION  Outputs (24 Vac/Vdc model)
Consumption	COT212-B: 6 VA / COT212-H: 8 VA
Electrical connection	Screw terminal block for cable 2.5 mm ² Carried out according to the code of good practice
PC communication	USB-Mini Din cable
Environment	Air and neutral gases
Type of fluid	Air and neutral gases
Conditions of use (°C/%RH/m)	From -10 to +50 °C. In non-condensing condition. From 0 to 2000 m.
Storage temperature	From -10 to +70 °C
Security	Protection class II; Pollution degree 2; Overvoltage category 2 (OVCI)
European directives	2014/30/EU EMC; 2014/35/EU Low Voltage; 2011/65/EU RoHS II; 2012/19/EU WEEE

Dimensions

All dimensions are in millimeters.



Probes technical specifications

Ambient probe

Dimensions Length: 112 mm
Diameter: 26 mm

Material Polycarbonate

Remote probe

Dimensions Length: 158 mm without cable gland,
183 mm with cable gland
Diameter: 26 mm

Material Polycarbonate

Cable Length: 2 m
Diameter: 4.8 mm

Features of housing

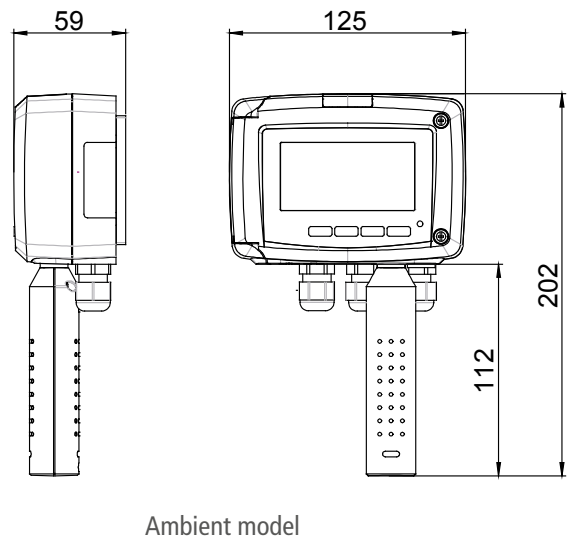
Material ABS V0 as per UL94

Protection IP65

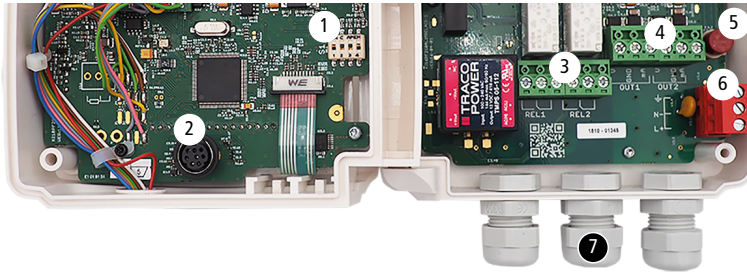
Display 75 x 40 mm, LCD 19 digits 2 lines
Height of digits:
Values: 10 mm; Units: 5 mm

Cable gland For cables Ø 8 mm maximum

Weight 340 g

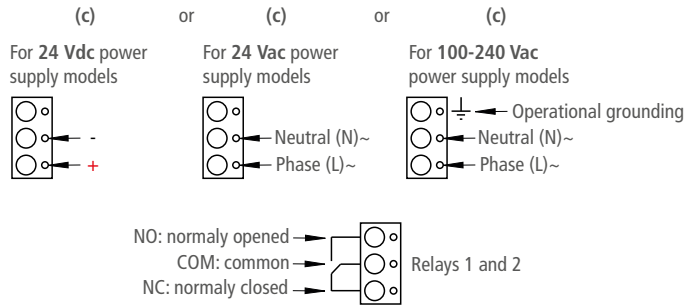
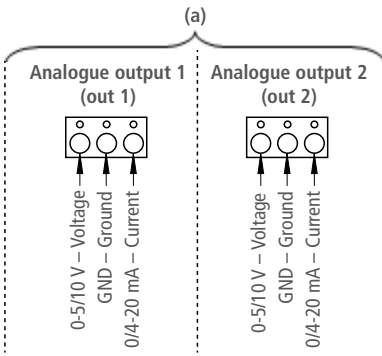
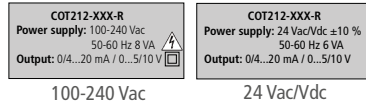


Connections

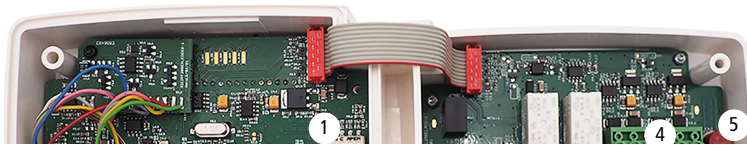


1. DIP switch (d)
2. LCC-S software connection
3. Relays
4. Analogue outputs (a)
5. F3.20* fuse
6. Power supply terminal block (c)
7. Cable glands

Type of power supply (b) specified on the label on the side of the transmitter



*Fuse present only for 100-240 Vac models.
Every fuse replacement must be performed with a power off device using a TR5 630 mA 250 V fuse.

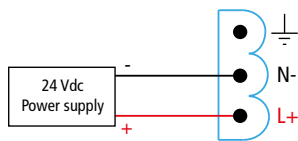


Electrical connections as per NFC15-100 standard

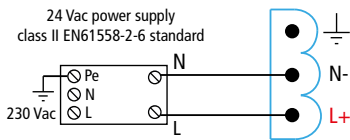


This connection must be made by a formed and qualified technician. To make the connection, the transmitter must not be energized. Before making the connection, you must first check the power supply indicated on the transmitter board (see (b) on "Connections" part). The presence of a switch and a circuit breaker upstream the device is compulsory.

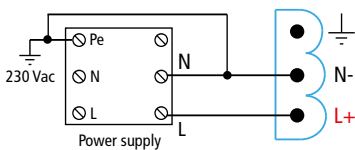
- For transmitters with 24 Vdc power supply:



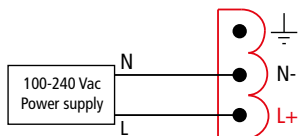
- For transmitters with 24 Vac power supply:



or



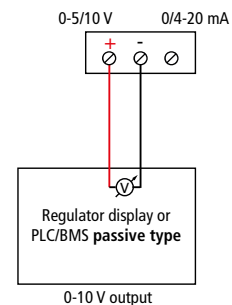
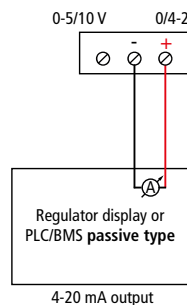
- For transmitters with 100-240 Vac power supply:



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				

- Connection of the output in current 4-20 mA:
- Connection of output in voltage 0-10 V:



On 100-240 Vac models, if a fuse protection is used for the power line, it is imperative to use delayed-action fuses in order to absorb the surge of current when first turned on the transmitter.

