

CA 310

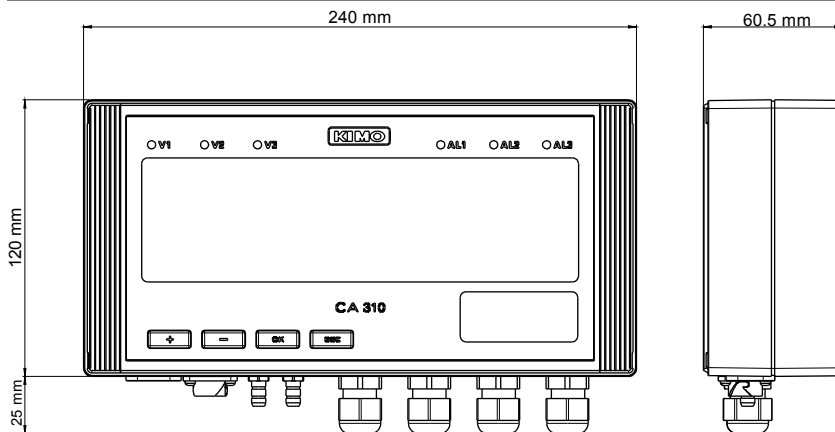
Large display multifunction transmitter



KEY POINTS

- 1 input for interchangeable probe
- 1 location for SPI-2 or MVA interchangeable board
- Alternating display of 1 to 3 parameters
- 3 audible and visual (dual-color LEDs) alarms
- 3 analogue outputs (4 wires) 0/5-10 V or 0/4-20 mA
- 3 reverse relays 3 A/230 Vac
- 24 Vdc/Vac or 115/230 Vac power supply
- Outputs diagnostic
- Ethernet communication (optional)
- MODBUS network RS485 system (optional)
- ABS V0 swivelling housing
- Large display : 50 x 190 mm

FEATURES OF THE HOUSING



Housing : swivelling (30°)

Material : ABS V0 as per UL94

Protection : IP63

Cable gland : in polyamide for cables Ø 8 mm maximum

Fitting : barbed fittings Ø6.2 mm

Weight : 1150 g

PART NUMBERS

• **CA310-B** : multifunction transmitter, 24 Vac power supply

CA310-H : multifunction transmitter, 115-230 Vac power supply

TECHNICAL SPECIFICATIONS

Power supply	24 Vac / Vdc $\pm 10\%$ 115 Vac to 230 Vac $\pm 10\%$, 50-60 Hz
Output	3 x 0/4-20 mA or 3 x 0-5/10 V (4 wires) Maximum load : 500 Ohms (0/4-20 mA) / Minimum load : 1 K Ohms (0-5/10 V)
Galvanic isolation	On the outputs
Consumption	6 VA or 250 mA (model 24 V) / 8 VA (model 230 Vac)
Relays	3 reverse relays 5 A / 230 Vac
Audible alarm	Buzzer (80 dB)
Conformity	CEM 2004/108/CE and NF EN 61010-1 directives
Electrical connection	Screw terminal block for cables from 0.05 to 2.5 mm ² or de 30 à 14 AWG
RS485 communication	Digital : Modbus RTU protocol, configurable communication speed from 2400 to 115200 Bauds (optional)
Ethernet communication	Ethernet communication module allowing transmission, monitoring and maintenance of transmitters via an Ethernet network in 10 BASE-T and 100 BASE-TX LAN/WAN supporting TCP/IP protocol (optional)

TECHNICAL SPECIFICATIONS

Environment and type of fluid	Air and neutral gases
Operating/Storage temperature	From -10 to +50 °C / From -10 to +70 °C

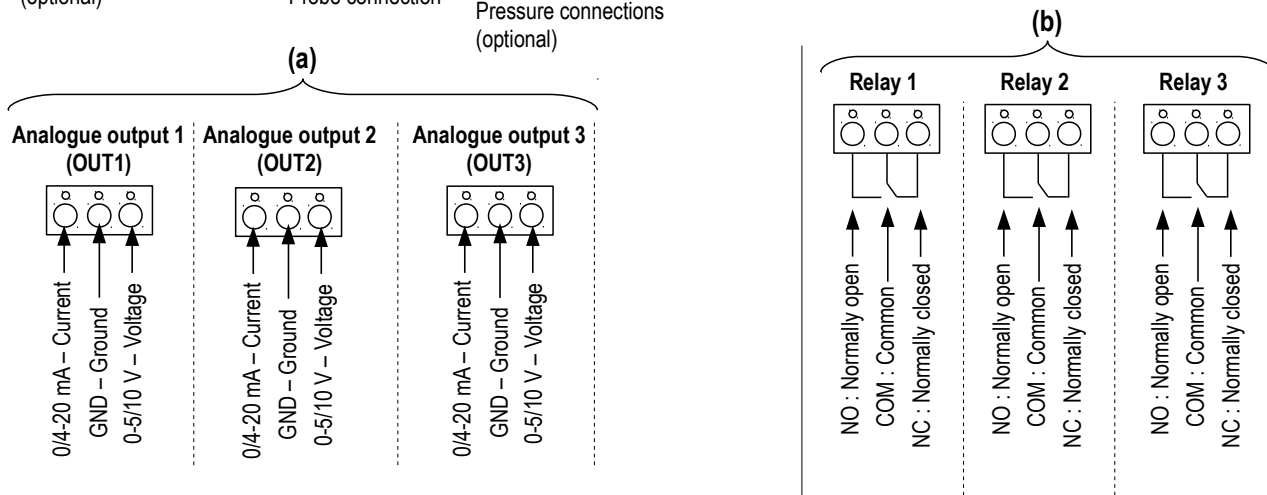
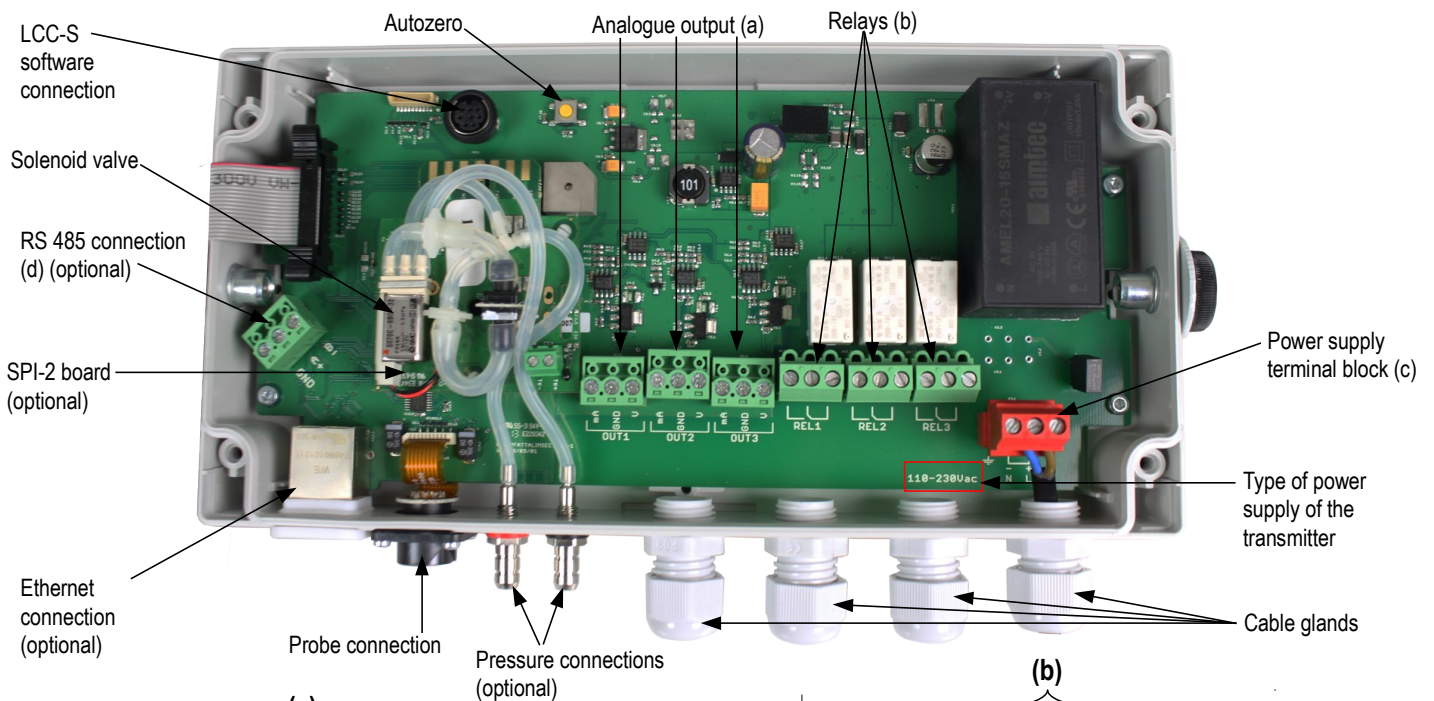
RELAYS AND ALARMS

CA310 transmitter has 3 independent and configurable alarms : these are visual and audible alarms and it is possible to couple them with 3 relays.

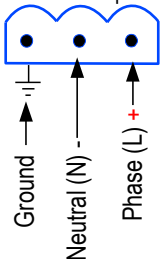
Available settings :

- Selection of the parameter (pressure, air velocity, temperature,...)
- Time-delays durations from 0 to 600 s
- Alarm action : rising edge, falling edge, monitoring or state of the transmitter
- Operating mode of the relays : negative or positive safety
- Activation of the audible alarm (buzzer), that can be acknowledge by the front keypad

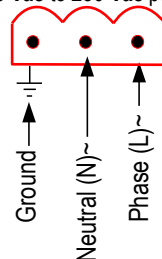
CONNECTIONS



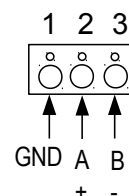
(c) For 24 Vdc/Vac power supply models :



(c) For 115 Vac to 230 Vac power supply models :



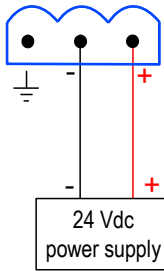
(d) Modbus :



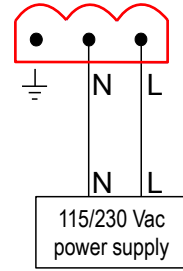


This connection must be made by a qualified technician. Whilst making the connection, the transmitter must not be energized.

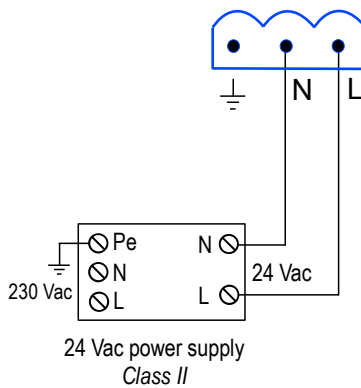
> For 24 Vdc power supply model :



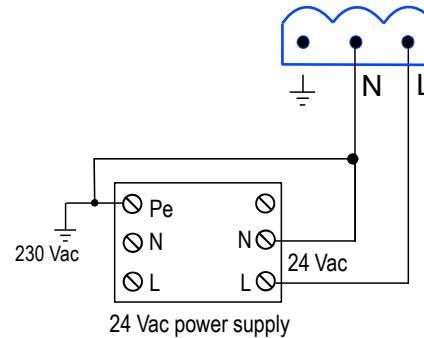
> For 115 Vac to 230 Vac power supply models :



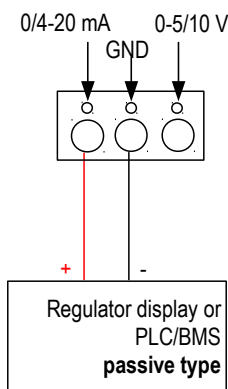
> For 24 Vac power supply model :



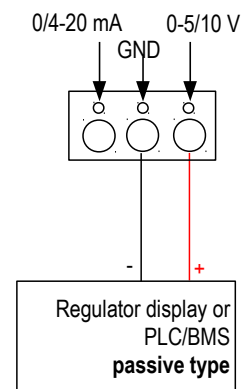
ou



> 0/4-20 mA current output connection :



> 0-5/10 V voltage output connection :



RS 485 MODBUS PROTOCOL (optional)

Class 310 transmitters can be linked in one network operating on a RS485 home bus.

The RS 485 digital communication is a 2-wire network, on which the transmitters are connected in parallel. They are connected to a PLC/BMS via the RTU Modbus communication system. Since the C310 can be configured with the keypad, the MODBUS enables remote configuration, to measure 1 or 2 parameters or to see the status of the alarms...

ETHERNET BOARD (optional)

An Ethernet board can be put on a CA310 transmitter allowing for each transmitter to have a specific configurable IP address. So the user can remotely interrogate the transmitter, retrieve data, modify the configuration,...

It is also possible to integrate CA310 transmitters into a computer network via the RJ45 connection located at the bottom of the transmitter.

CONFIGURATION

Class 310 transmitters allows you to set all the parameters managed by the transmitter : units, measuring ranges, alarms, outputs, channels... via the different methods shown below :

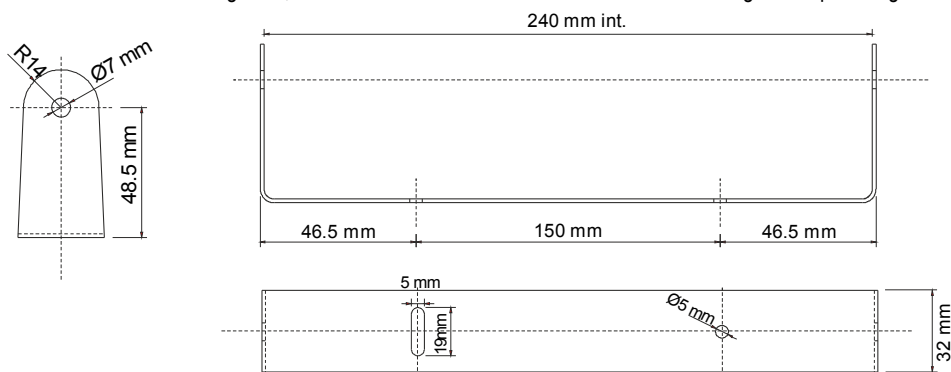
- > **Via keypad**, only on models with display. A code-locking system for keypad guarantees the security of the installation. See configuration manual.
- > **Via software (optional)** : simple and user-friendly. See LCC-S user manual.
- > **Via Modbus (optional)** : configuration of all parameters from your PC, via the supervision or data acquisition software.
- > **Via Ethernet (optional)** : configuration of all parameters from your PC, via the supervision or data acquisition software.

MOUNTING

Install the mounting bracket in horizontal position along a plane wall (see below dimensions / drilling drawing).

Put the display inside the mounting bracket, with the 2 screws. Remove the screw covers located on the right and left side of housing, in order to have access to the 4 shutting screws.

Make the electrical connection with the connection glands, with soft cable \varnothing 7 mm maximum. Close the housing before powering on.



CALIBRATION

Adjusting and calibration on site : the professional configuration interface, with a dynamic pressure calibration bench, allows you to adjust and calibrate your transmitters directly on site or in laboratories.

Outputs diagnostics : with this function, you can check with a multimeter (or on a regulator/display, or on 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 0 mA, 4 mA, 12 mA and 20 mA

Certificate : transmitters are supplied with an individual adjusting certificate and can be supplied with a calibration certificate as an option.

MAINTENANCE

Avoid aggressive solvents. When cleaning rooms or ducts with products containing formol, protect the the transmitter.

OPTIONS

- **LCC-S** : configuration software with USB cable
- **SQR/3 function** : square root extraction function for the calculation of air velocity and airflow.
- **RS5** : RS 485 Protocol Modbus digital output
- **CETHE** : Ethernet board
- **HRP** : high resolution (example in pressure : 0.1 Pa) with SPI2-100 board
- **Calibration certificate**

www.kimo.fr

Distributed by :



EXPORT DEPARTMENT

Tel : + 33. 1. 60. 06. 69. 25 - Fax : + 33. 1. 60. 06. 69. 29

e-mail : export@kimo.fr