



sauermann CA 310 Multifunction Sensor with Large Electroluminescent Display User Guide

[Home](#) » [sauermann](#) » sauermann CA 310 Multifunction Sensor with Large Electroluminescent Display User Guide 

Contents

- 1 sauermann CA 310 Multifunction Sensor with Large Electroluminescent Display User Guide
- 2 CA 310
 - 2.1 Large display multifunction transmitter
- 3 General features
- 4 Features of the housing
- 5 All dimensions are in millimeters.
- 6 Used symbols
- 7 Connections
- 8 Electrical connections as per NFC15-100 standard
- 9 Transmitters configuration Français Guide rapide
- 10 Mounting
- 11 Accessories
- 12 Read More About This Manual & Download PDF:
- 13 Documents / Resources
 - 13.1 References
- 14 Related Posts



CA 310

Large display multifunction transmitter



1 input for interchangeable probes



3 analogue outputs (4 wires)
0/5-10 V or 0/4-20 mA



3 audible and visual (dual-color LEDs) alarms



Alternating display of 1 to 3 parameters

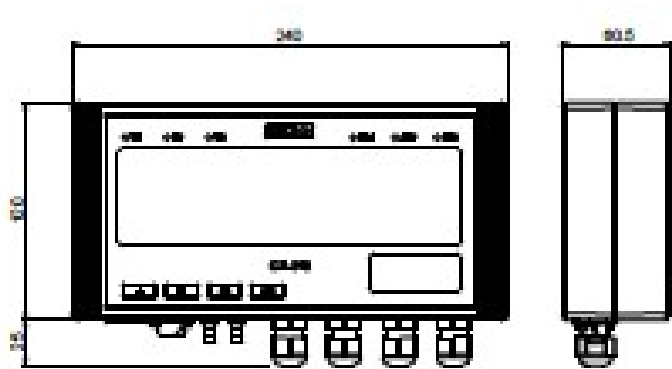
General features

Power supply	24 Vac/Vdc ±10%. 100-240 Vac, 50-60 Hz Warning: risk of electric shock
Output	3 x 0/4-20 mA or 3 x 0-5/10 V (4 wires) Common mode voltage <30 VAC. Maximum load: 500 Ohms (0/4-20 mA). Minimum load: 1 K Ohms (0-5/10 V)
Galvanic isolation	On the outputs. Device fully protected by DOUBLE ISOLATION or REINFORCED ISOLATION
Consumption with probe and without option	CA310-B: 11 VA. CA310-H: 16 VA (CO ₂ probe additional consumption for 24 V and 115-230 V models: 2 VA)
Relays	3 reverse relays 5 A/230 Vac. NO: 5A/NC: 3A/240 Vac
Audible alarm	Buzzer (70 dB at 10 cm)
Electrical connection	Screw terminal block for cables from 0.05 to 2.5 mm ² or from 30 to 14 AWG Carried out according to the code of good practice
RS485 communication (optional)	Digital: Modbus RTU protocol, configurable communication speed from 2400 to 115200 Bauds
Ethernet communication (optional)	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 Modbus TCP/IP protocol (additional consumption for 24 V and 115-230 V models: 1 VA)
Environment & 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 2; Pollution degree 2; Overvoltage category 2
European directives	2014/30/EU EMC; 2014/35/EU Low Voltage; 2011/65/EU RoHS II; 2012/19/EU WEEE

Features of the housing

Housing	Swivelling (30°)
Material	ABS V0 as per UL94
Protection	IP63
Cable gland	In polyamide for cables Ø8 mm maximum
Fitting	Barbed fittings ¹ Ø6.2 mm
Weight	1150 g

All dimensions are in millimeters.



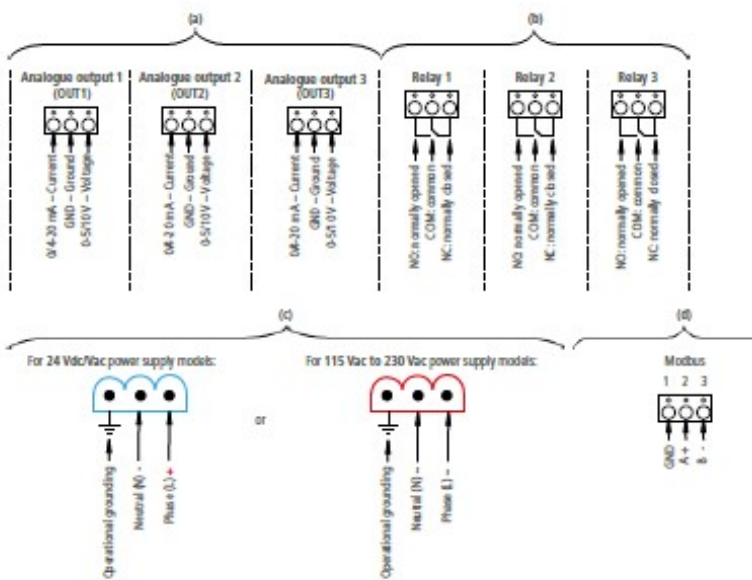
Used symbols

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: CA 310

Connections

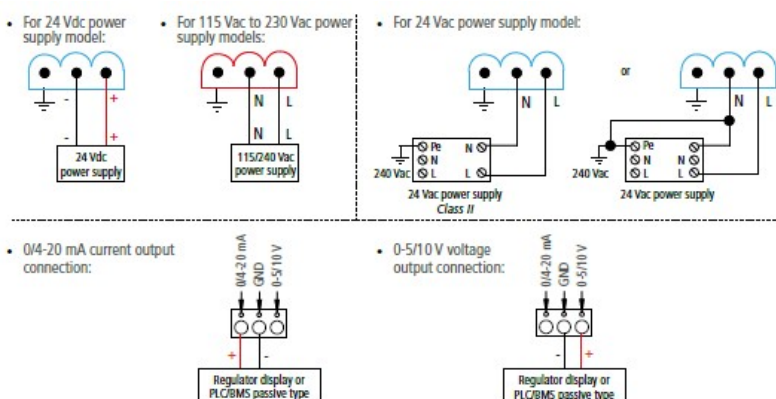


1. LCC-S software connection
2. Autozero
3. Solenoid valve
4. RS 485 connection (d) (optional)
5. SPI-2 board (optional)
6. Ethernet connection (optional)
7. Analogue output (a)
8. Relays (b)
9. Power supply terminal block (c)
10. Type of power supply of the transmitter
11. Probe connection
12. Pressure connections (optional)
13. Cable glands



Electrical connections as per NFC15-100 standard

This connection must be made by a formed and qualified technician. Whilst making the connection, the transmitter must not be energized. The presence of a switch or a circuit breaker upstream the device is compulsory.



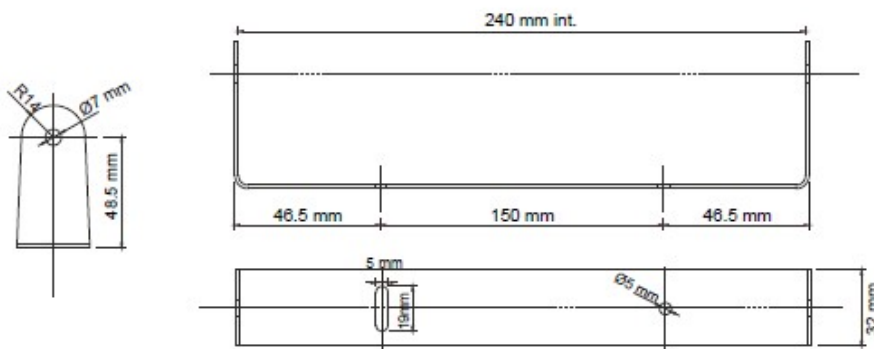
Transmitters configuration Français Guide rapide

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

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.



Accessories

Please refer to the data sheet to get more information about available accessories.

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

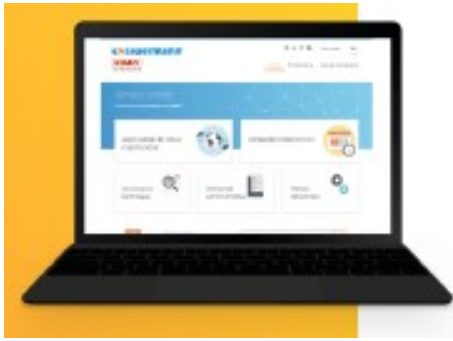
Precautions for use: please always use the device in accordance with its intended use and within parameters described in the technical features in order not to compromise the protection ensured by the device.



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References

- [Manufacturer of Condensate Pumps and Measuring Instruments | Sauermann group](#)
- [Services - Homepage](#)