sauermann CTV 210-R Air Velocity and Temperature Sensor User Guide

CTV 210-R Air Velocity and Temperature Sensor
User Guide

www.sauermanngroup.com

Quick Start Guide

CTV 210-R

Air velocity and temperature transmitter

	Airflow function
	Two 4-wire analog output 0-5 / 10 V 4-20 mA
	2 relay outputs
	ABS V0 IP65 housing, optional display

Contents

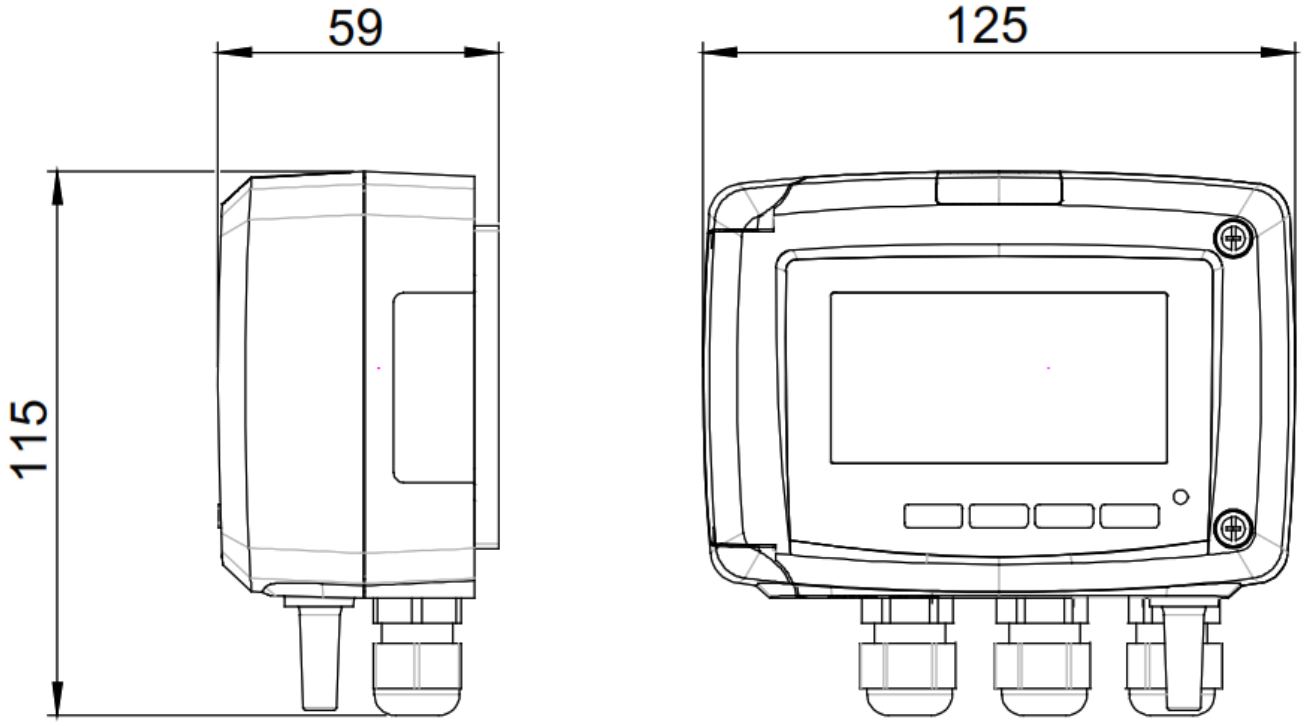
General features

Power supply	24 Vac / Vdc ±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 <3  0 Vac. Maximum load: 500 Ohms (0/4-20 mA). Minimum load: 1 K Ohms (0-5/10 V)
Relay outputs	2 changeover relays 3 A / 230 V. NO : 5A / NC: 3A / 240 Vac
Galvanic isolation	Inputs and outputs (models 100-240 Vac). The device fully protected by DOUBLE ISOLATION or REINFORCED ISOLATION Outputs (models 24 Vac/Vdc)
ExtinctionConsum	CTV210-B: 6 VA. CTV210-H: 8 VA
Electrical conn	Screw terminal block for cable 2.5 mm² Carried out according to the code of good practice
PC communicatio n	USB-Mini Din cable
Environment	Air and neutral gases
Conditions of use (°C/%RH/m)	From -10 to +50 °C. In non-condensing conditions. From 0 to 2000 m.
Storage temperat ure	From -10 to +70 °C
Security	Protection class II; Pollution degree 2; Overvoltage category 2 (OVCII)
European directiv es	2014/30/EU EMC; 2014/35/EU Low Voltage; 2011/65/EU RoHS II; 2012/19/EU WEEE

Features of the housing

Material	ABS V0 as per UL94
Protection	IP65
Display	75 x 40 mm, LCD 20 digits 2 lines. Height of digits: Values: 10 mm; Units: 5 mm
Cable gland	For cables Ø 8 mm maximum
Weight	340 g

All dimensions are in millimeters.

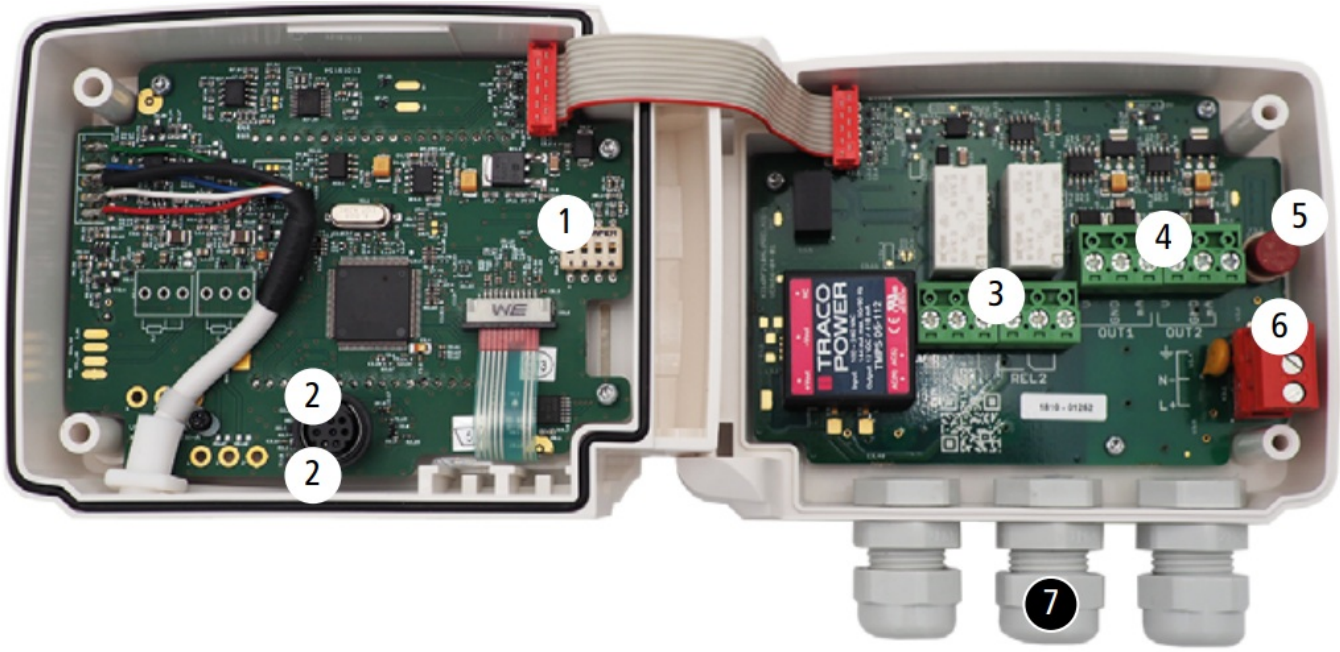


Used symbols

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:

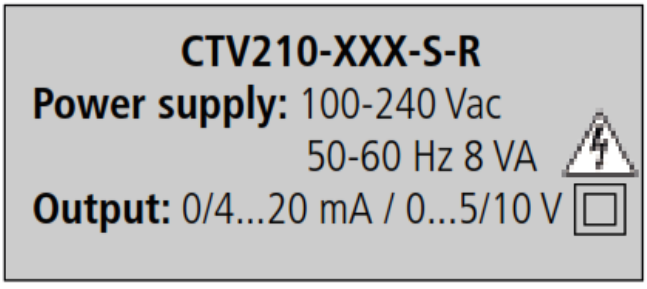
The following symbol will also be used in this document, please read carefully the information notes indicated after this symbol:

Connections

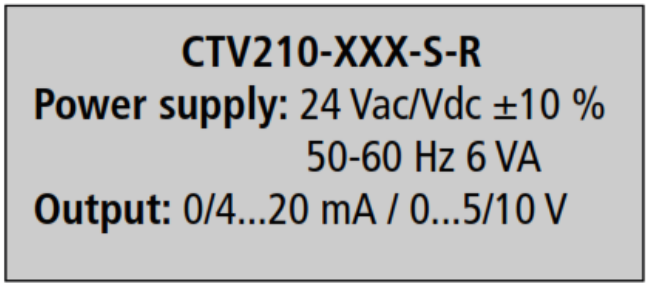


1. DIP switch (d)
2. LCC-S software connection
3. Relays
4. Analogue outputs (a)
5. F3.20* fuse
6. Power supply terminal block (c)
7. Cable glands

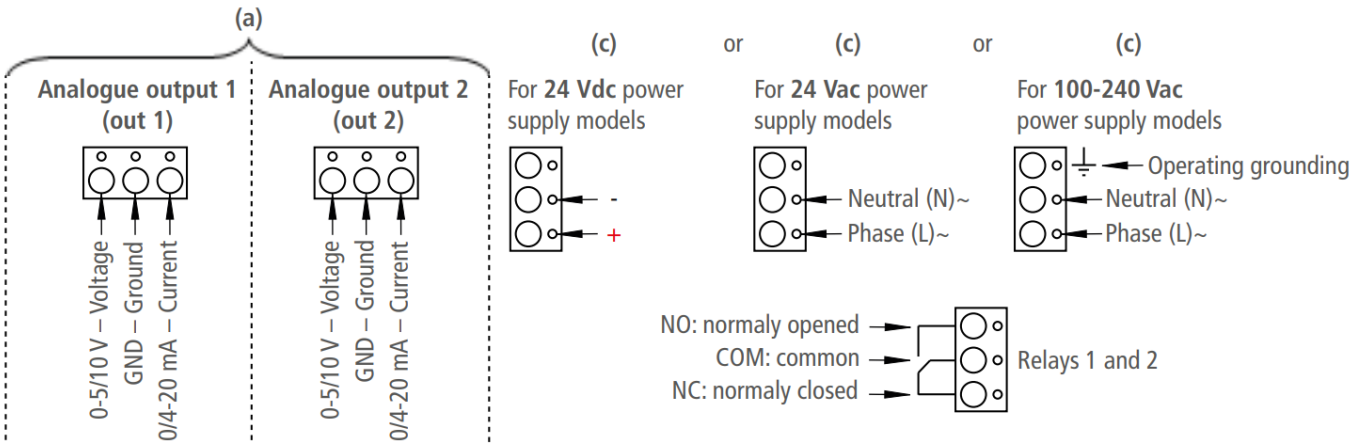
Power supply type (b) specified on the label on the side of the transmitter



100-240 Vac



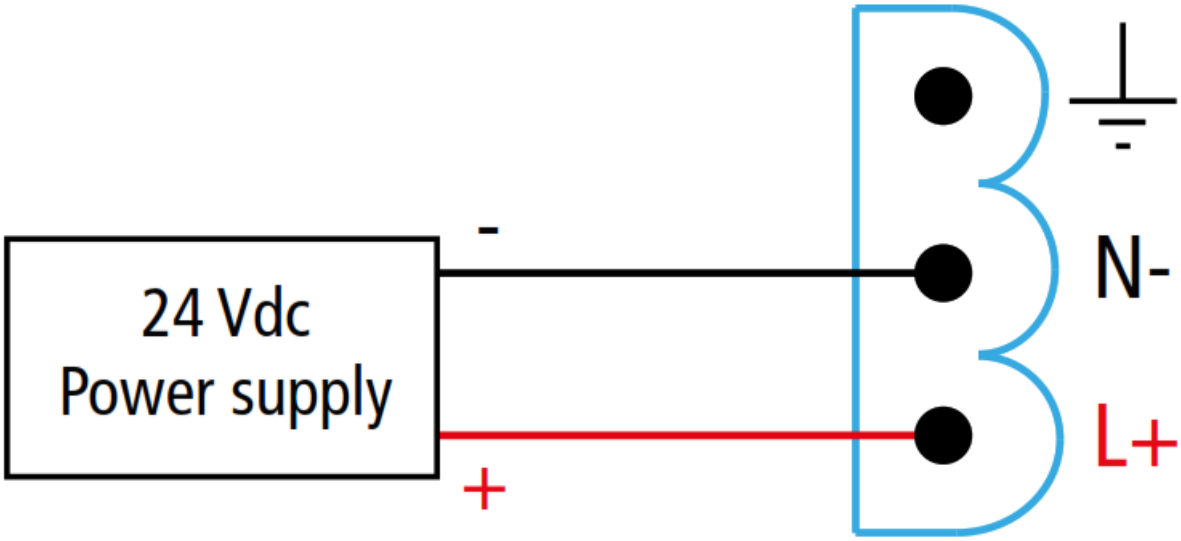
24 Vac/Vdc



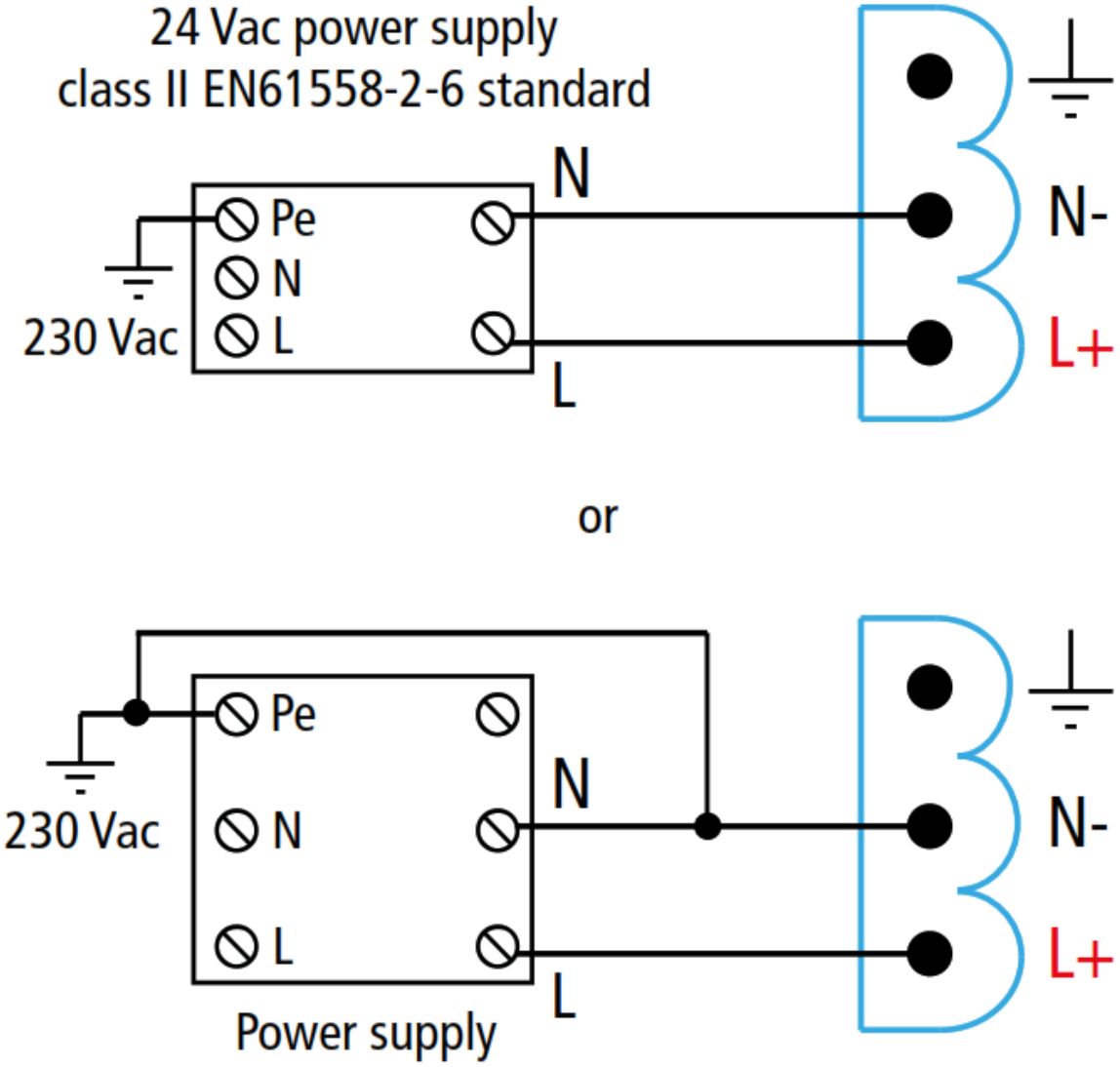
*Fuse present only for 100-240 Vac models.
Every fuse replacement must be performed with a power-off device using a TR5 630 mA 250 V fuse.
Electrical connections as per NFC15-100 standard

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 the “Connections” part). The presence of a switch and a circuit breaker upstream of the device is compulsory.

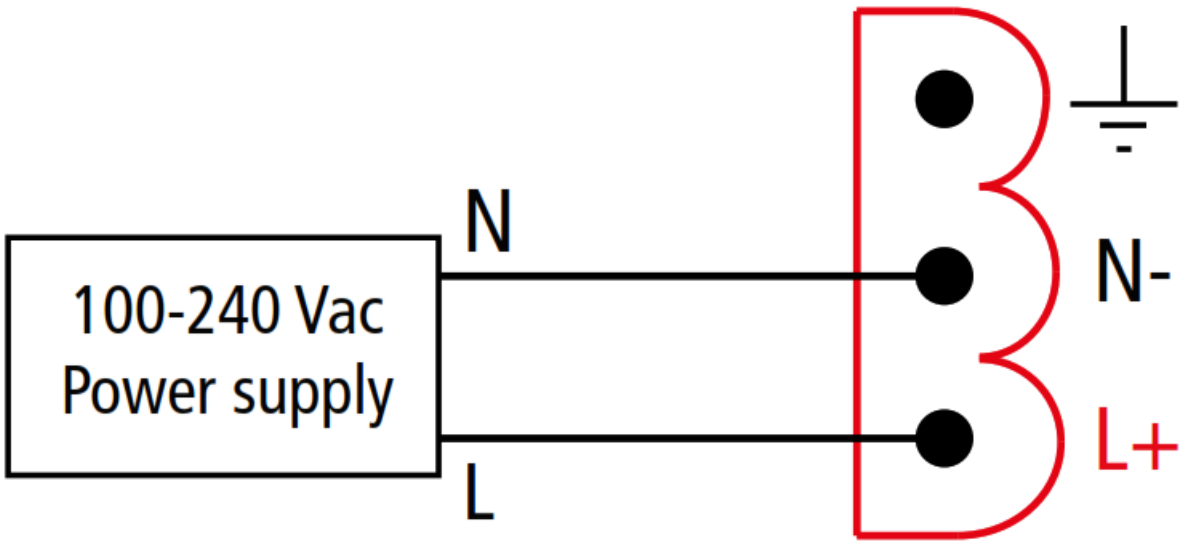
- For transmitters with a 24 Vdc power supply:



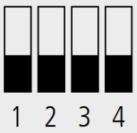
- For transmitters with 24 Vac power supply:
-



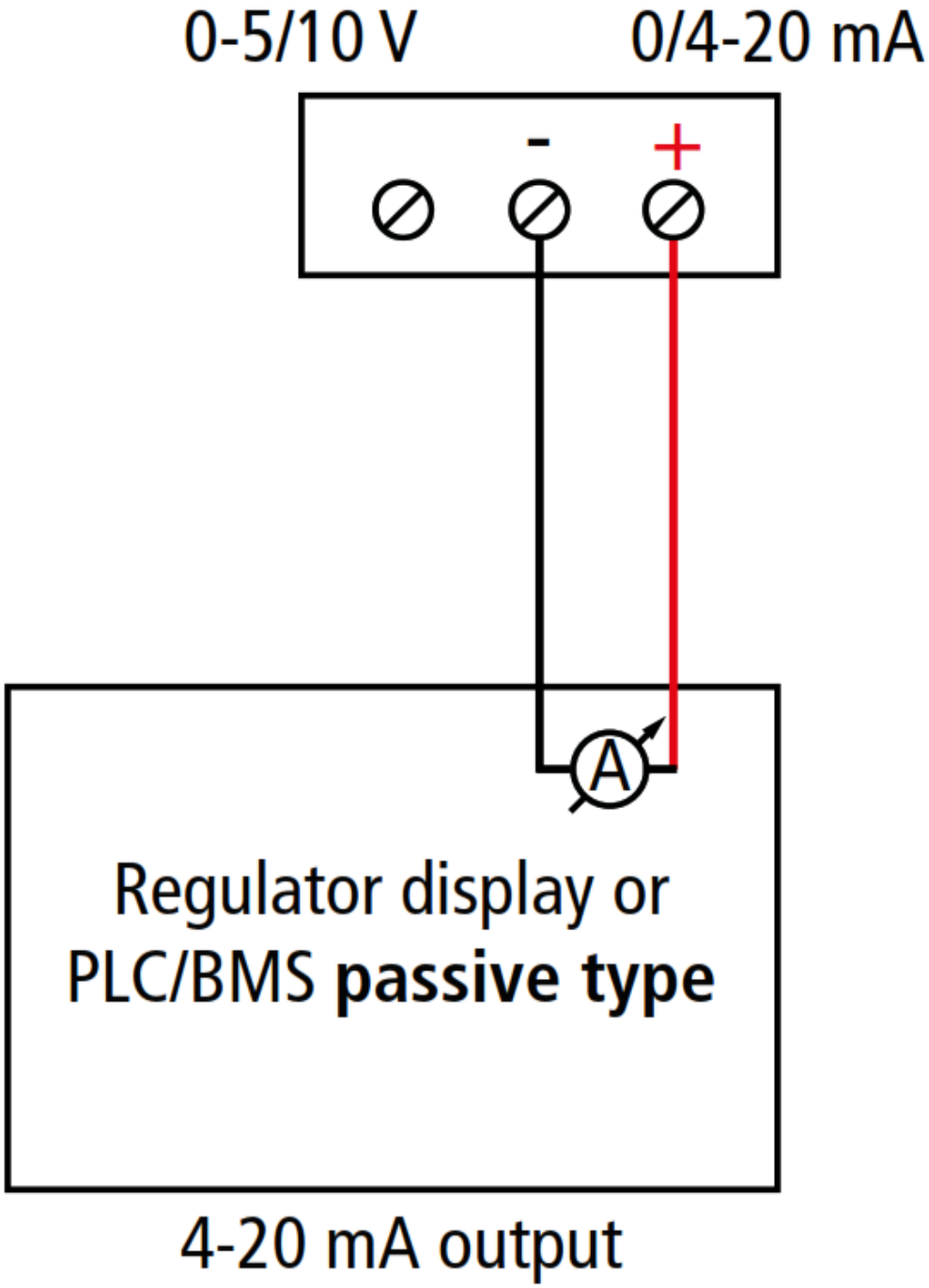
For transmitters with 100-240 Vac power supply:



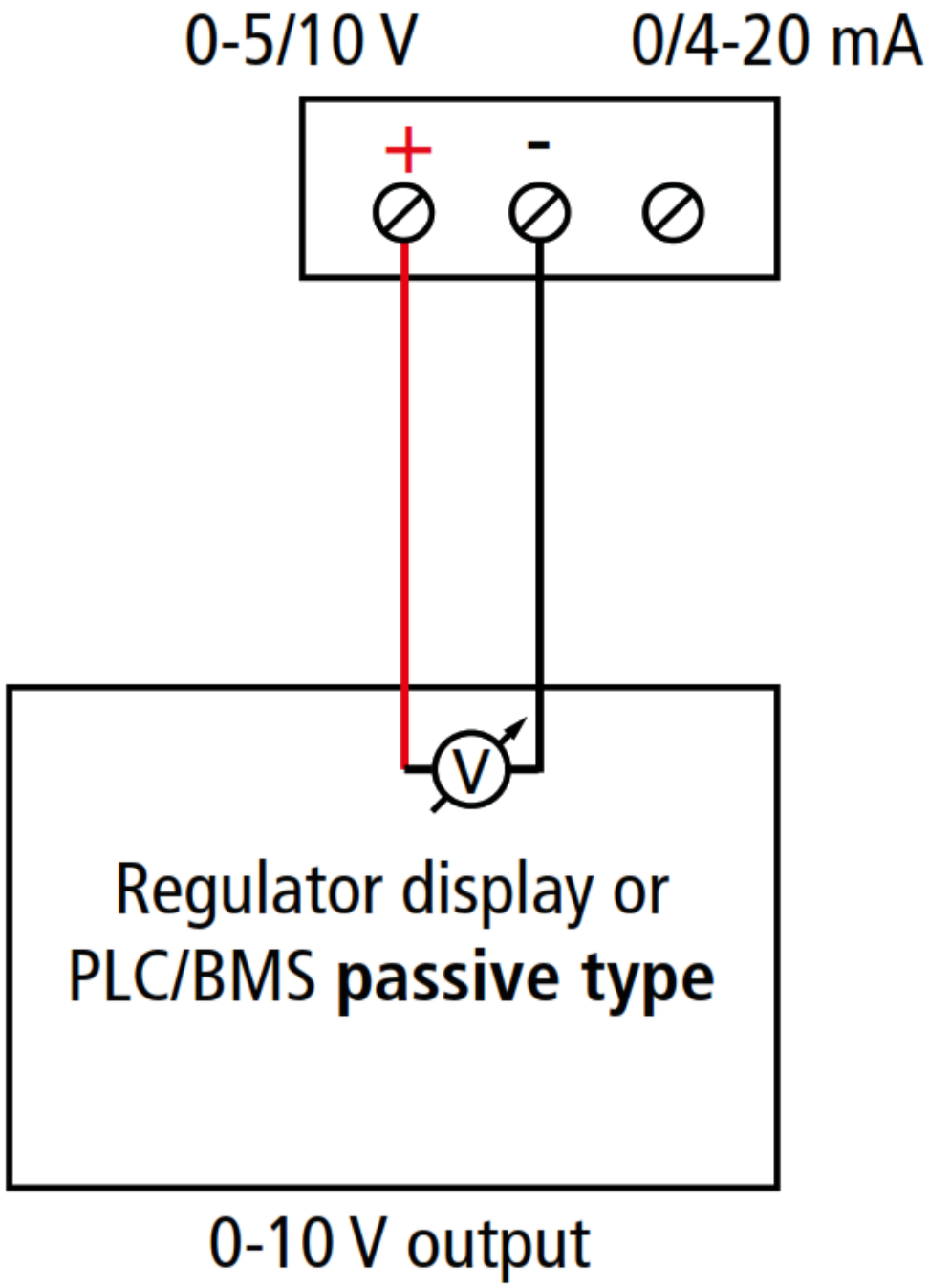
The selection of the output signal in voltage (0-10 V or 0-5 V) or in the current (4-20 mA or 0-20 mA) is made via the DIP switch (d) of the electronic board of the transmitter: put the on-off switches as shown in the table below:

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 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.

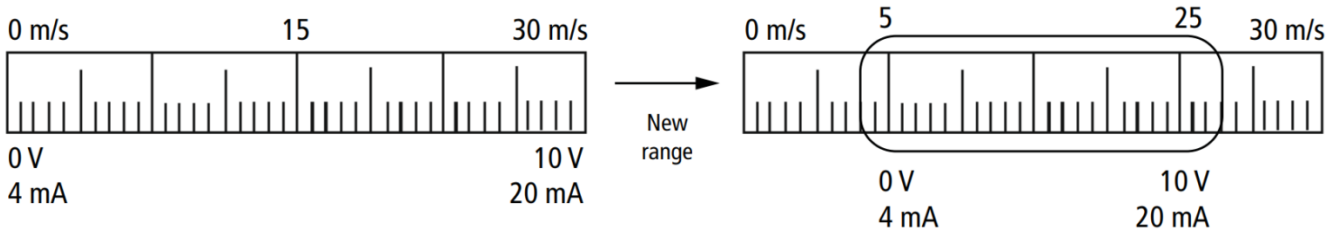
Transmitters configuration

It is possible on class 210 to configure all the parameters managed by 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.

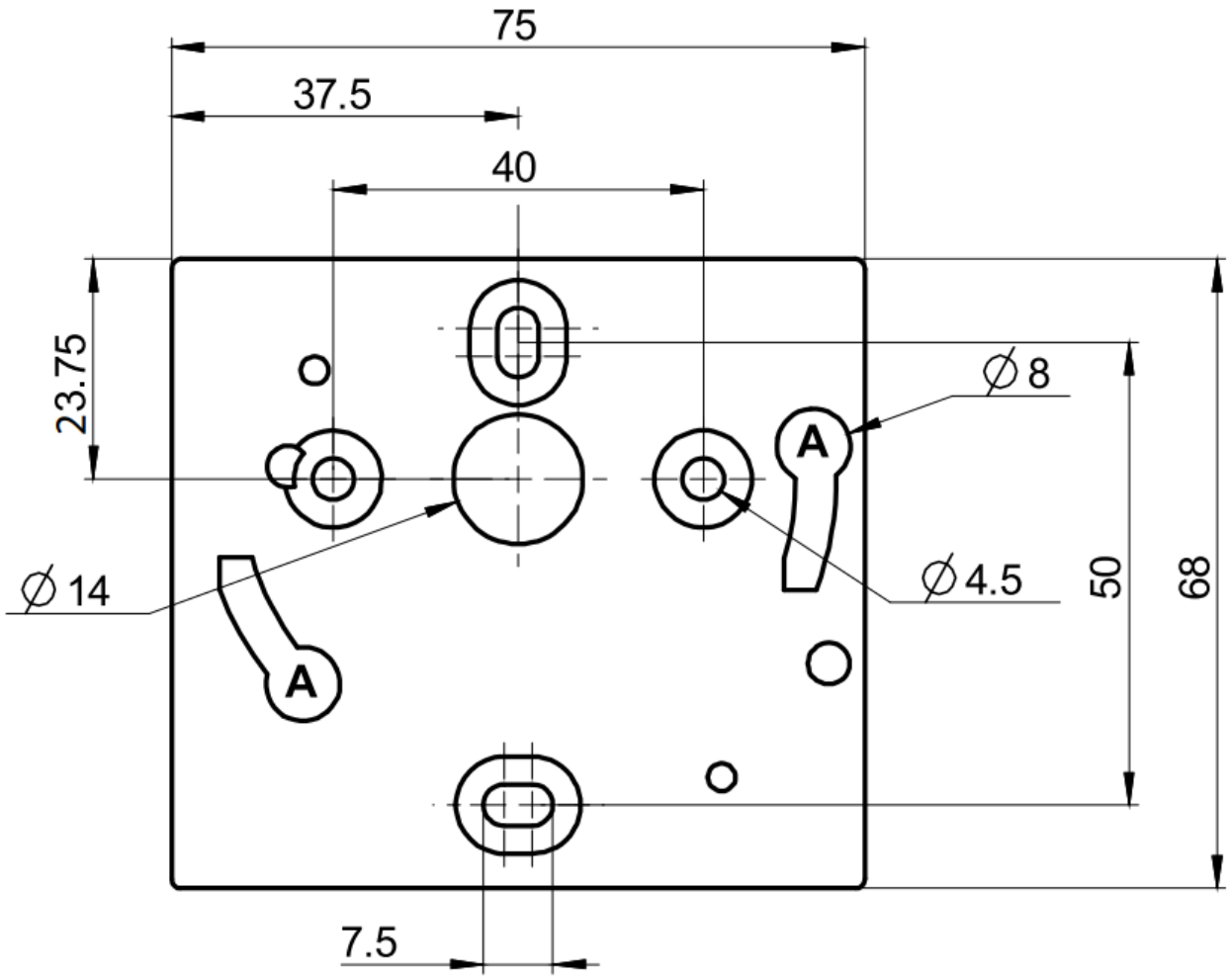
Configurable analog output:
Range with central zero (-50/0/+50 Pa), with offset zero (-300/0/+70 Pa) or standard range (0/+100 Pa), it is

possible to configure your own intermediate ranges.
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: Ø6 mm, screws and pins are supplied). Insert the transmitter on the fixing plate (see A on the drawing beside). Rotate the housing in a clockwise direction until you hear a “click” which confirms that the transmitter is correctly installed.

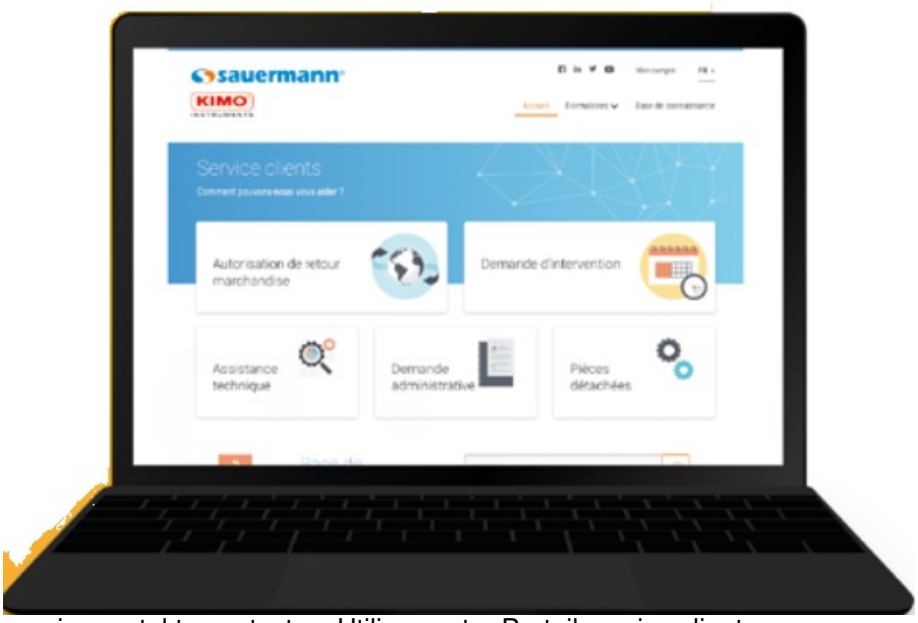


Accessories

Please refer to the datasheet 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 the parameters described in the technical features in order not to compromise the protection ensured by the device.
Download the full manual

https://sauermanngroup.com/fr-INT/technical-documents?search=ctv+210

Customer service portal



Use our Customer service portal to contact us Utilisez notre Portail service clients pour nous contacter

QSG CTV 210-R 14/01/2022

Non-contractual document

We reserve the right to modify the characteristics of our products without prior notice

https://sauermann-en.custhelp.com

www.sauermanngroup.com

Documents / Resources

	**sauermann CTV 210-R Air Velocity and Temperature Sensor** [pdf] User Guide CTV 210-R, Air Velocity and Temperature Sensor

References

- **Manufacturer of Condensate Pumps and Measuring Instruments | Sauermann group**
- **Services - Homepage**