

ELC - CONDUCTIVE LEVEL SENSORS

Level sensors control of all kind liquids that have a conductivity of $>25 \mu\text{S}$ (equivalent to a resistance of between 0 and $40 \text{ K}\Omega$) between the electrode and ground potential.



ELC 1



ELC 2



ELC 3



ELC 4

ELC 1 = 3/8" conductivity electrode , S.S./CERAMIC, PN25 - Diameter 5.2 mm, 1000 mm length

ELC 2 = 3/8" electrode holder probe S.S./ PTFE PN25 - for 1 electrode diameter 5,2 or 6 mm, 1000 mm length

ELC 3 = 3/8" electrode holder probe S.S./CERAMIC, PN25 - for 1 electrode diameter 5,2 or 6 mm, 1000 mm length

ELC 4 = 2" electrode holder probe, S.S./CERAMIC, PN25 - for 3 electrodes diameter 5,2 or 6 mm, 1000 mm length

DESCRIPTION

The conductive level control is based on the different values of conductivity that the various materials offer to the passage of an electric current : for example, the air is a poor conductor (insulator) , while drinking water is a good conductor . The measuring electrodes (or probes) for a level control are positioned in the tank so that the ends are exactly the quotas to control. Between the walls of the tank (if it is metallic) and the electrode, or between this and an additional ground electrode (if the container is of insulating material) is applied to a low voltage of 2 V ~ alternating current ($< 2 \text{ mA}$) by one external amplifier with relay output . Only when the electrode tip touches the fluid , the circuit closes by circulating a certain alternating current which is amplified by the electronic circuit triggers the output relay . The electrical conductivity can vary within wide limits , influenced not only by the type of fluid , also on its temperature and or pressure . The current measuring does not affect at all the characteristics of the liquid and is not dangerous for the operator.

RESTRICTIONS (Notes)

- The chemical aggressiveness of the product must not be such as to corrode the stainless steel electrodes.
- Greases, oils or other substances suspended in the product must be free to form insulating deposits on the electrodes.
- Condensation and / or dust should not form short circuit bridges between the electrode and ground conductors, that is, take care to isolate by coating electrodes surface over the tip.

TECHNICAL SPECIFICATIONS

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Sensor: Body probe holder: Electrodes: Electrode diameter mm.: Insulation: Electrodes numbers: Version: Length mm: Temperature: Connections: Protection:	Conductive			
	ELC 1	ELC 2	ELC 3	ELC 4
	304 SS	304 SS	304 SS	304 SS
	304 SS	316 SS OD 6 mm; 303 SS OD 5.2 mm	316 SS OD 6 mm; 303 SS OD 5.2 mm	316 SS OD 6 mm; 303 SS OD 5.2 mm
	5.2	5,2 or 6	5,2 or 6	5,2 or 6
	CERAMIC	PTFE	CERAMIC	CERAMIC
	1	1	1	3
	fixed	electrode holder		3 x electrodes holder
	1000	1000 extendable to desired length		1000 extendable
	PTFE 180°C - Ceramic 250°C			
	3/8"	3/8"	3/8"	2"
	IP40 with protection cap			IP65



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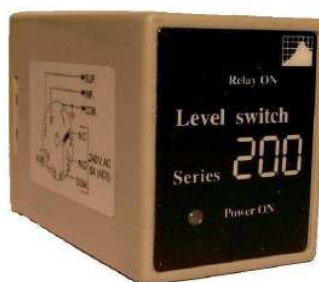
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CL200* - OCTAL CONDUCTIVE LEVEL AMPLIFIERS

CL200 amplifiers work on conductivity of liquids and controlling On/Off level quote via the electrodes placed in the liquid. Are used as level controls in tanks, boilers, deep wells and other containers and as alarm devices to detect flooding, presence or absence of water in any place or ice making control. This equipment is supplied in single voltage version with an octal base. CL200 are divided in ranges with a conductivity within 0.3 μ S to 10000 μ S. An internal trimmer sets "sensitivity" allows you to adjust the threshold as a function of the conductivity of the liquid.



Mod. CL200*: mono voltage 24Vac or 220Vac octal socket

Sensibility ranges

CL2000	0 ÷ 100 k Ω	standard	10÷10000 μ S
CL2001	0 ÷ 10 k Ω	Low	100÷10000 μ S
CL2002	50 K ÷ 1000k Ω	High	1÷20 μ S
CL2003	500 K ÷ 3000 k Ω	High	0.3÷2 μ S

Protection: IP40

Components: PCB

Reports: Green LED power line voltage

Red LED excitation relay

Electrolysis: none effect thanks to small VAC current

Contact: SPDT 5A - 230V ca

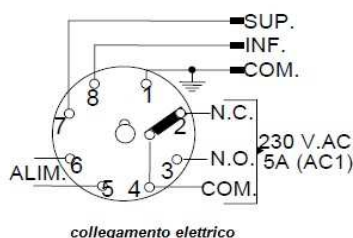
Supply 24V or 230Vac galvanically isolated

Frequency: 50 - 60 Hz

Power consumption: 5VA

Weight: 220 g

Accessory: Octal plugin base 06CONS408



wiring

CL203* - DIN RAIL CONDUCTIVE LEVEL AMPLIFIERS

Features such as CL 200 model, but with direct mounting on DIN rail reducing the overall height. In rows with a standard light switch.

Mod. CL203 *: mono voltage 24VAC, 220Vac and 24Vdc

Sensitivity ranges

CL2030	0 ÷ 100 k Ω	standard	10÷10000 μ S
CL2031	0 ÷ 10 k Ω	Low	100÷10000 μ S
CL2032	50 K ÷ 1000k Ω	High	1÷20 μ S
CL2033	500 K ÷ 3000 k Ω	High	0.3÷2 μ S

Protection: IP30

Components: PCB

Reports: Green LED power line voltage

Red LED excitation relay

Electrolysis: none effect for all models

Contact: SPDT 5A - 230Vac

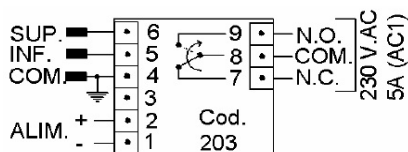
Supply 24V or 230Vac galvanically isolated, 24Vdc

Frequency: 50 - 60 Hz

Power consumption: 5VA

Weight: 190 g

Connection: by screw terminals



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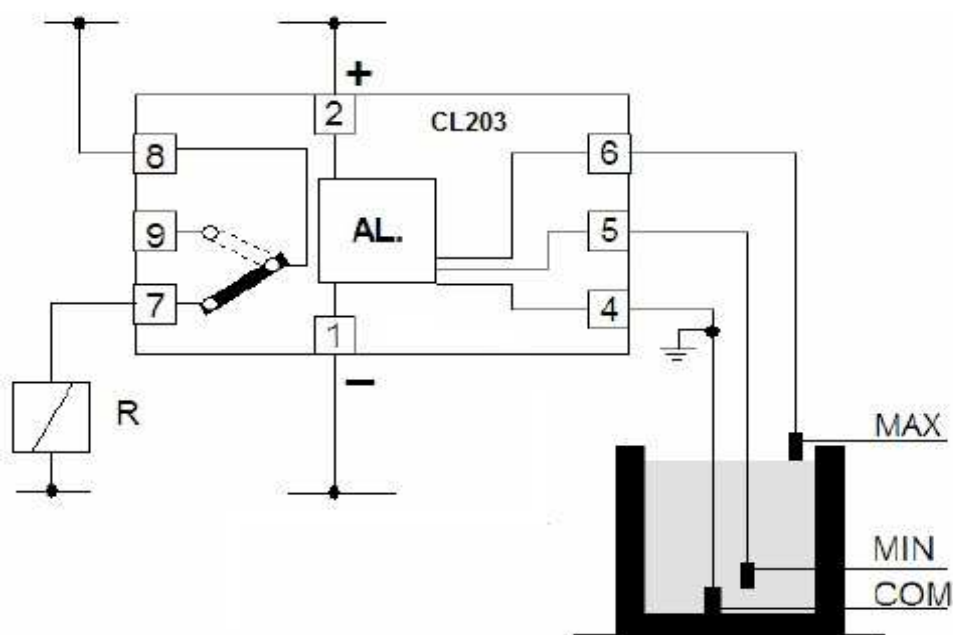
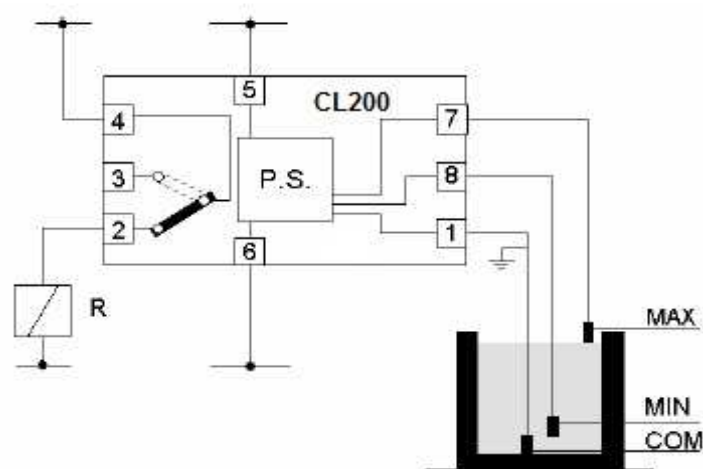
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ELECTRIC DIAGRAM CONDUCTIVE LEVEL AMPLIFIERS

SCHEMA ELETTRICO AMPLIFICATORI ELETTRODI CONDUTTIVI



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