



ELA, spol. s r.o.

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Electrode Systems = type EL 1, EL 2

Description:

The electronic electrode systems are used in tanks for scanning and evaluating various levels of any conductive liquids.

They consist of two parts: the electrode sensor (not included) and the electronic evaluation unit. The electrodes are placed directly in the tank, the electronic evaluation unit itself is built-in a plastic box suitable for wall mounting and a panel or extra handles fitting on the "DIN" switchboard cabinet. The evaluation unit is powered by 230V / 50Hz through a gland and a terminal block.

More than three electrodes are used for scanning of the liquid level, one of which is shared by two independent ones. The vertical and the shared distance between the independent electrodes determine the desired liquid level scanning. The electrodes are wire connected through the conduit input terminal. They are powered by an AC voltage of 12V. The output power part of the electrode system is a switching relay leading to the output terminal block loadable at 8A / 250V / AC. The EL 1 type electronic evaluation unit contains two separate relays with a switchable contact (Section A, Section B) and EL 2 type contains only one relay with a switchable contact (section A).



Functions:

Type EL 1

After connecting the 230V voltage, both of the relay contacts will set to the position indicated in the figure. After flooding the electrode 11 the electrical circuit 0-11 closes and section A relay contact switch to second position. Exposure of the electrode 11 section A relay returns to its original position. By flooding the electrode 21 the electrical circuit 0-21 closes and the section B relay switches contacts to the second position. Exposing the electrode 21 the section B relay returns to its original position.

Type EL 2

After connecting the 230V voltage the section A relay will set to the position indicated in the figure. By flooding the electrode 11 the electrical circuit 0-11 closes but the set up of contact relay stays in the same position. Only when flooding the electrode 21 the electrical circuit 0-21 closes and the section A relay is switched to the second position. Exposure of the electrode 21 the electric circuit 0-21 disconnects but does not switch the contact relay to the initial position because of the build-in memory unit which will retain the last state of the contact. Only by the exposure of the electrode 11 the electrical circuit 0-11 is disconnected and the contact returns to its original position.

Specifications			
power supply	230V/50Hz	cover	IP 65
power	1VA	electrical protection	double isolation
electrodes voltage	12V/AC	contact load	250V/8A
input resistance (liquid, lead)	<100 kΩ	weight	0,4 kg
max. capacity lead	1nF		



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Application:

Type EL 1

Is particularly optimal for use when reaching signalization liquid level preset, rasp. as an input unit of the downstream system control which further proceeds these signals and controls the relevant aggregate units. Type EL 1 does not contain any memory unit and immediately shows, with an adjustable time delay, information on flooding or exposure of the independent electrodes 11 and 21.

Type EL 2

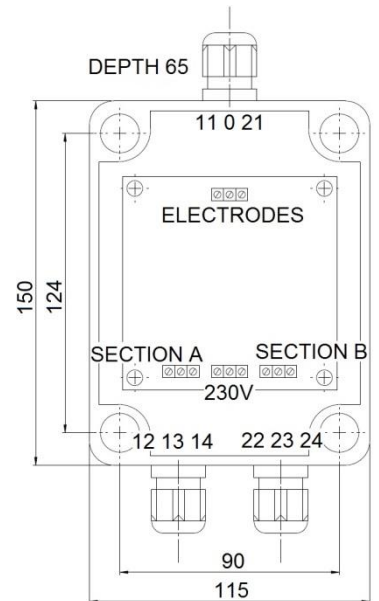
Is particularly optimal to use in the direct control of the aggregate unit e.g. pumps with two different modes of operation:

Mode 1 = pumping liquid from the tank

The contactor coil aggregate pump unit is connected to the grid network via the contact relay terminals 13,14. After the flooding of the upper electrode 21 in the tank the contact relay switches on and the contactor coil is connected to the mains and turn on the aggregate pump unit, which pumps the liquid from the tank. The aggregate pump unit will turn off when the lower electrode 11 is exposed.

Mode 2 = pumping liquid into the tank

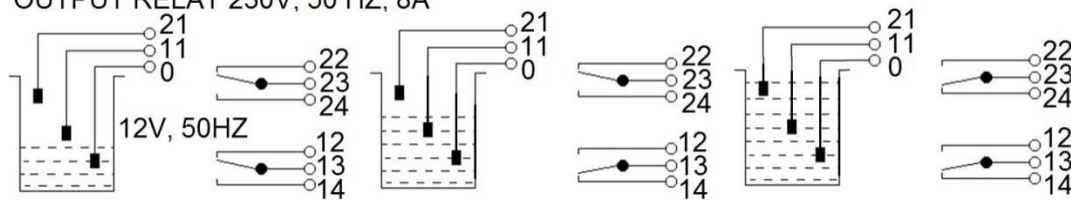
The contactor coil aggregate pump unit is connected to the grid network via the contact relay terminals 12,13. Once the lower lower electrode 11 is exposed in the tank, the relay switches and the contactor coil is connected to the mains and turn on the aggregate pump unit that pumps liquid into the tank. The aggregate pump unit will turn off only after the flooding of the upper electrode 21 in the tank.



Function:

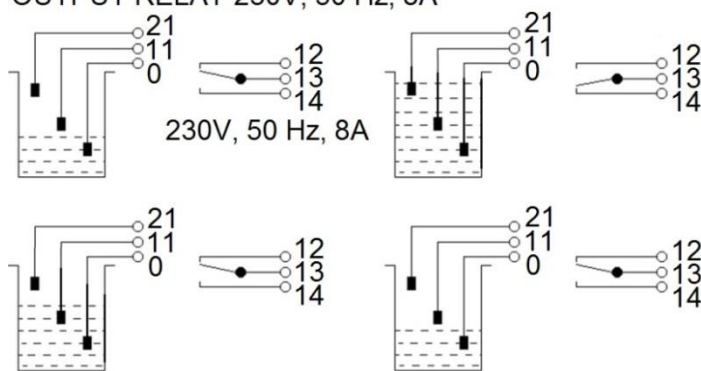
Type EL 1

OUTPUT RELAY 230V, 50 HZ, 8A



Type EL 2

OUTPUT RELAY 230V, 50 Hz, 8A



Type	
Serial number	
Issued	