

# KARI

## ELEKTRODE SWITCH EL-22 FINNISH QUALITY PRODUCT

- to prevent dry running of deep well pumps
- to control charging and discharging
- to control motor and magnetic valves
- high and low level alarm
- dosing

**ADJUSTABLE SENSITIVITY**  
Approved by SGS Fimko.



### USE

Electrode switch EL-22 is used to control pump according to liquid level changes. Single phase motors rated under 0,37 kW can be controlled directly by EL-22. The electrode switch can be used in conductive liquids only. The sensitivity is adjustable from 0 to 100 kohm to correspond with the conductivity of the liquid. The safety of its use is assured with a double insulated transformer and by placing the electrode connectors and the connectors of the high voltage circuit to different sides of the pc-board.

### FUNCTION

In the discharge case the liquid rises to the upper electrode level until the relay picks up (pump starts). Relay drops out when the liquid has sunken under the lower electrode level. The start and stop level differential is determined by the height difference between the electrodes. In charging case the pump starts at the lower level and stops at the higher level.

### SENSITIVITY ADJUSTMENT

Sensitivity increases when the adjustment score in the right corner is rotated clockwise.

### INTRODUCTION

When both electrodes are under liquids surface the sensitivity is slowly increased until the relay picks up (indicated by the yellow LED, too). It is important that the relay is not adjusted too sensitive, for it may cause operational hazards due to leakage currents.

### ELECTRODE CABLE

We recommend the use of polyethylene covered shielded cable. Essences or flavours don't dissolve from polyethylene. Shielding improves the immunity to electromagnetic disturbances. If the electrode cables are led more than 50m alongside with a high voltage cable it is absolutely necessary to use shielded cable.



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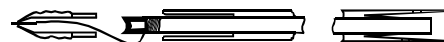
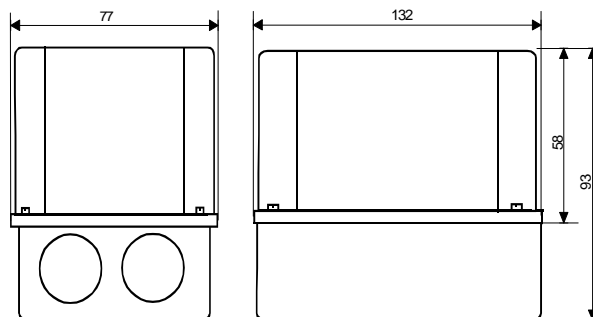
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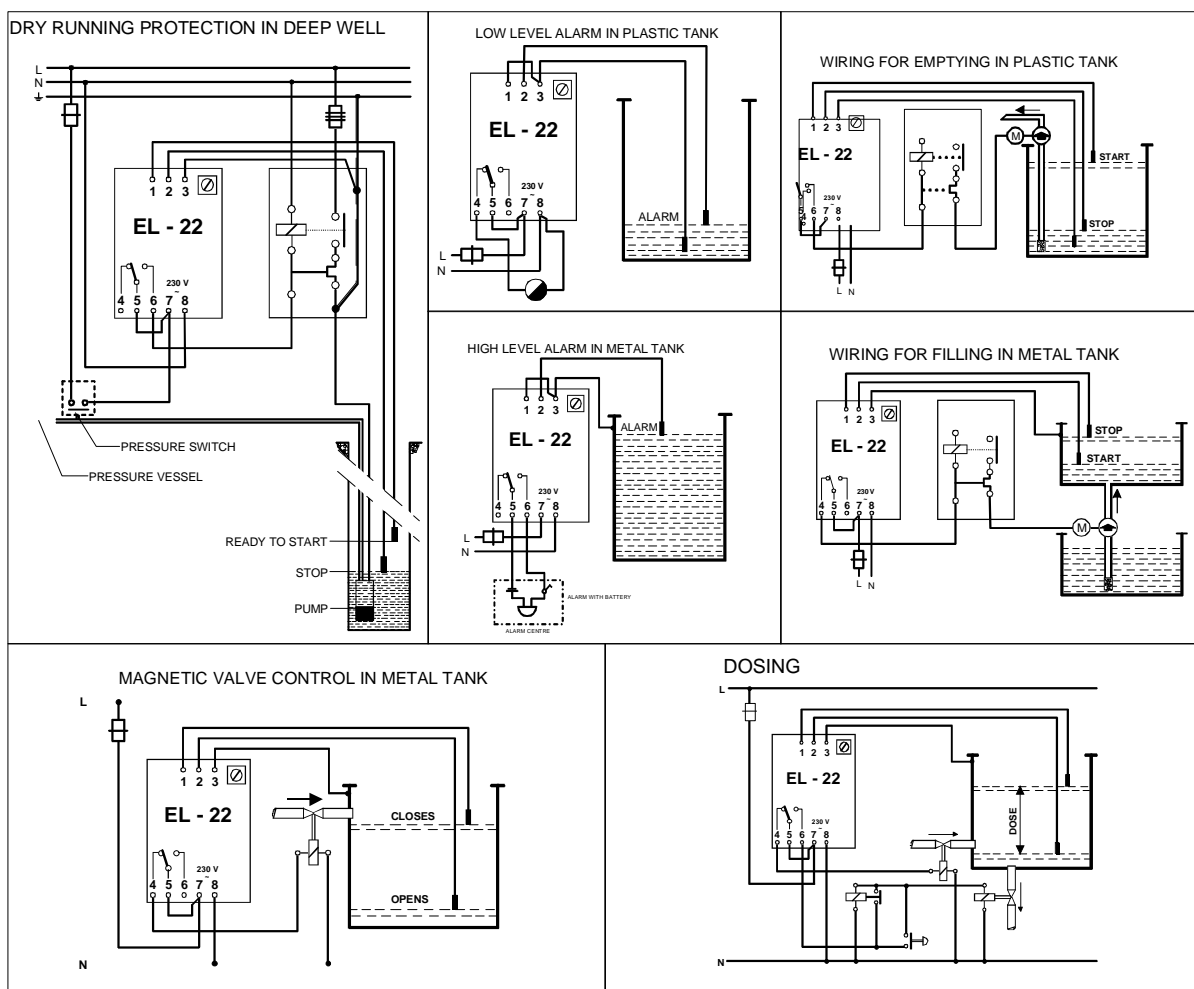
## EL-22 TECHNICAL DATA

|                         |   |
|-------------------------|---|
| Mains voltage           | 230 V AC  |
| Electrode voltage       | 18 V AC   |
| Electrode current       | 0,7 mA (max.)                                   |
| Power consumption       | 2 VA  |
| Rated switching current | 10 A (resistive load)                           |
| Sensitivity range       | 0 ... 100 kohm                                  |
| Casing                  | Polycarbonate                                   |
| Tightness               | IP 44   |
| Weight                  | 300 g   |
| Cases measures          | 132 x 77 x 93                                   |
| Length of electrode     | 220 mm  |
| Diameter of electrode   | 12 mm   |
| Insulation of electrode | Polypropen (PP)                                 |
| Electrode               | Steel AISI 304, length 220 mm<br>Diameter 12 mm |
| Operating temperature   | 0 ... 50°C                                      |

## CASE MEASURES



## CIRCUIT DIAGRAMS



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