

Resistive level controller ES2001



- For electrically conductive liquids
- Settings for sensitivity, delay and operating modes
- Compatible with our resistive level probes

APPLICATIONS

- Control of Min./Max. level of electrically conductive liquids
- Monitoring of a level point (overflow/dry run alarm) with double electrode.
- Fill or drain automated operation
- Level limit controller for water, waste water, acids, alkalis
- Level regulation (filling/draining) between 2 thresholds (3 rods)

DESCRIPTION

The ES2001 resistive level controller principle use the electrical conductivity of the liquids properties; The liquid provides an electrical bridge between the immersed electrodes.

Operating limits

Resistive level controls are not suitable for liquids that contain oil or grease or when electrically insulating deposits can occur on the electrodes.

Detection limits

ES2001 controller can be used with liquids whose resistance between the electrodes is less than 150 k Ω (consider also the resistance from cable length).

TECHNICAL FEATURES

Power supply	Or 230, or 115, or 48, or 24 V AC, $\pm 10\%$ – 50/60 hz Or 24, or 12 V DC
Consumption	≤ 2 VA
Relay outputs	2 Change-over contacts Max. 250 V AC; 5 A; 500 VA Max. 125 V DC; 1 A; 40 W
Detection loop	Galvanic insulation < 6 V AC / < 2 mA
Hysteresis	About 20 % of sensitivity
Sensitivity	Adjustable on 2 ranges $\approx 1 \dots 70$ k Ω or $\approx 5 \dots 150$ k Ω ≈ 1 mS to 14 μ S or ≈ 0.2 mS to 6.5 μ S
Operating status	N.O. or N.C (Through DIP switch)
Timer	Delay OFF or ON (from 0.5 to 3 s) Adjustable with a potentiometer
Indicator	1x LED "Operating"; 1 LED "Relay status"
Electrical connection	Screw terminals; IP20 Cable cross-section max. 2.5mm ²
Cable length	Max. 300m (depending on liquid conductivity) Shielded cable; Min. wire cross-section 0.5mm ²
Ambient temperature	-15 ... +45 °C
Mounting	Rail DIN 46277
Protection	IP40 for DIN rail 35x7.5 mm (EN 50 022) or optional IP55 with our wall mounting cabinet 88x150x130mm

EC Conformity: The instrument meets the legal requirements of the current European Directives

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Resistive level controller
ES2001

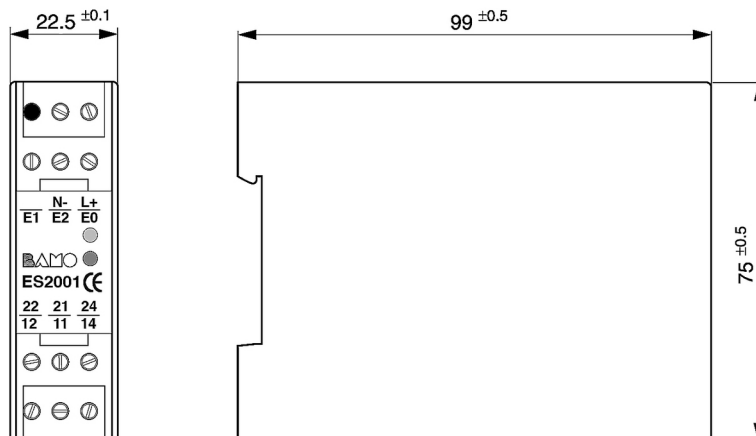
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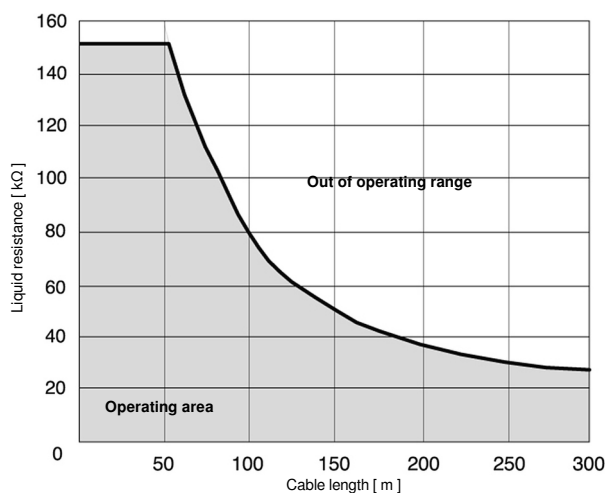
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DIMENSIONS



OPERATING RANGE

The resistance of the cable increases proportionally to the length.
 A standard cable, PVC, 3-wire, has a capacitance of ≈ 100 pF/m
 Therefore the operating range depends on the length of the cable and the liquid resistance according to the below diagram.



(Diagram for a relay ES2001 version AC power supply)

CODE NUMBERS AND REFERENCES

Code	Reference	Description
530 200	ES2001 / 230 AC	Resistive level controller, 230 V AC - 50/60 Hz
530 210	ES2001 / 115V AC	Resistive level controller, 115 V AC - 50/60 Hz
530 220	ES2001 / 48V AC	Resistive level controller, 48 V AC - 50/60 Hz
530 230	ES2001 / 24V AC	Resistive level controller, 24 V AC - 50/60 Hz
530 252	ES2001 / 12V DC	Resistive level controller, 12 V DC
530 254	ES2001 / 24V DC	Resistive level controller, 24 V DC

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