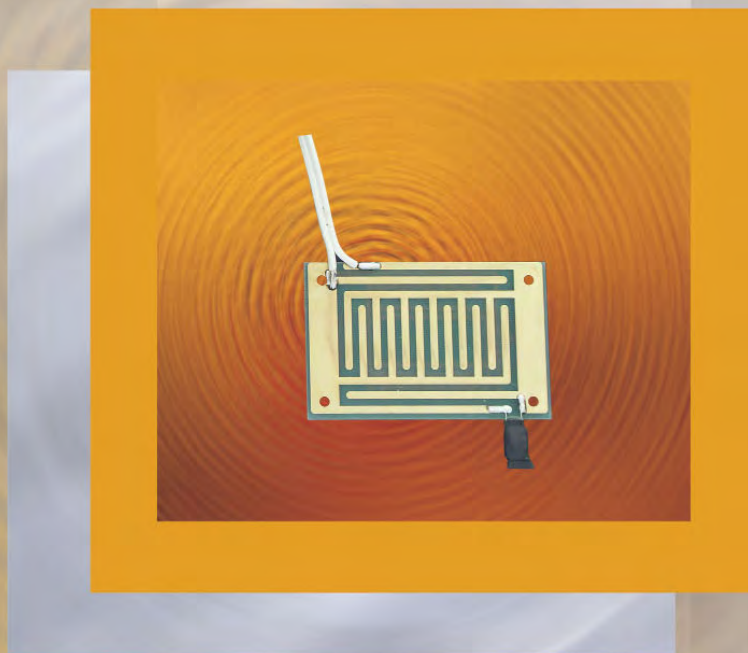


Condensate water detectors



8 KWS .-Z10 condensate water detectors

ÖKWS .-Z10 condensate water detectors can be used for the detection of condensate water, e. g. in a collection tray under an air conditioning unit.

The detectors are printed circuit boards, which can be disposed or glued at a straight even surface.

Each printed circuit board is fitted with two separate electrodes as sensitive elements : 1 control electrode and 1 earth electrode. As soon as a conductive liquid creates a conductive path between the control electrode and the earth electrode, an electrical contact is made and an alarm signal given.

Each 8 KWS .-Z10 condensate water detector is to be connected to 1 Leckstar 101 or Leckstar 101/S electrode relay.

Due to the comb-shaped structure of the conductors of each printed circuit board the condensate water detectors have a high sensitivity for the detection of electrically low conductive liquids (e.g. condensate). For a better surface protection, the conductors of each printed circuit board are gilded.

The detectors are fitted with a 3 m long, thin, white cable. Other cable lengths are available on request.

To avoid that the functional efficiency of the condensate water detectors could strongly be reduced or complete invalidated, it is absolutely necessary, that the sensitive surface of the printed circuit board is kept free of grease and that it does not come into contact with chemical agents.

The condensate water detectors have to be installed where condensation water is most probably expected to occur.

DKWS .-Z10 condensate water detectors

Technical data	DKWS 0-Z10	DKWS 1-Z10	DKWS 2-Z10	DKWS 3-Z10	DKWS 3-Z10/S	DKWS 4-Z10
Design	1 control electrode and 1 earth electrode					
Sensitive elements	2 comb-shaped conductors made of gilded copper					
Printed circuit board	film with adhesive agent	rigid sensor without adhesive agent				
Printed circuit board dimension	65 mm x 20 mm	50 mm x 15 mm	86 mm x 56 mm	500 mm x 30 mm	120 mm x 30 mm	220 mm x 100 mm
Electrical connection	white PVC cable; length 3 m, longer cable on request; halogen-free connecting cable on request					
Temperature range	– 20°C to + 60°C					
Cable break monitoring	with integrated Z10 cable break monitoring unit					
Max. length of connecting cable	1,000 m between DKWS .-Z10 and electrode relay					

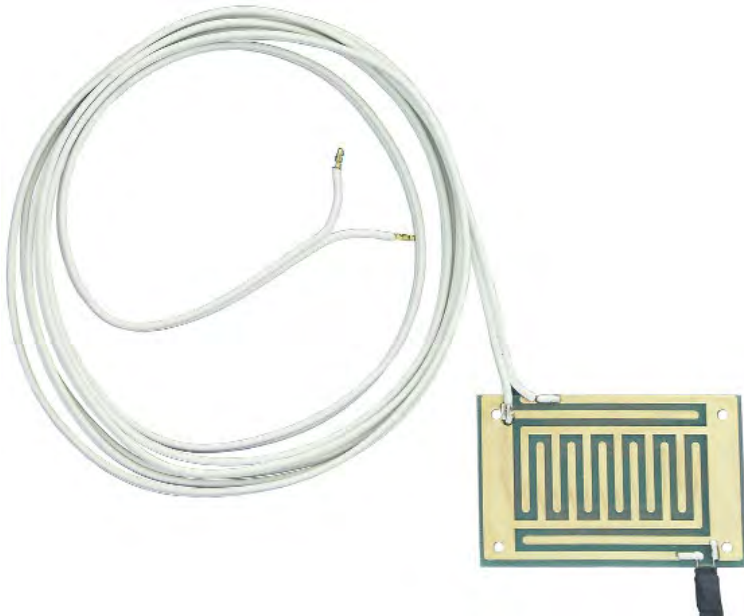
DKWS .-Z10 condensate water detectors



DKWS 0-Z10



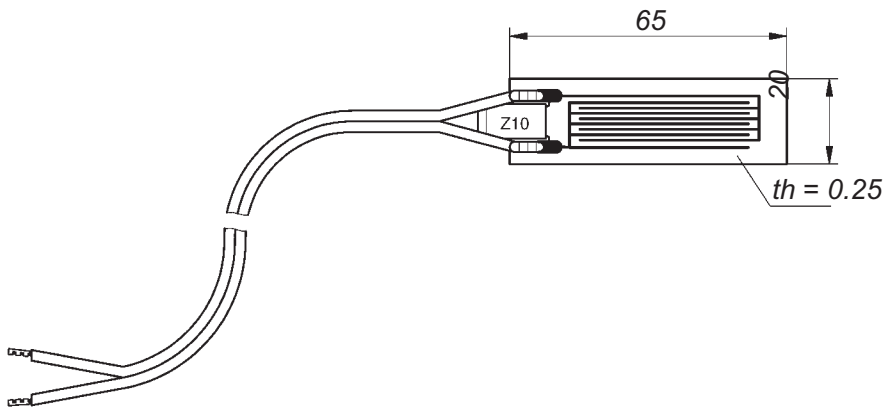
DKWS 1-Z10



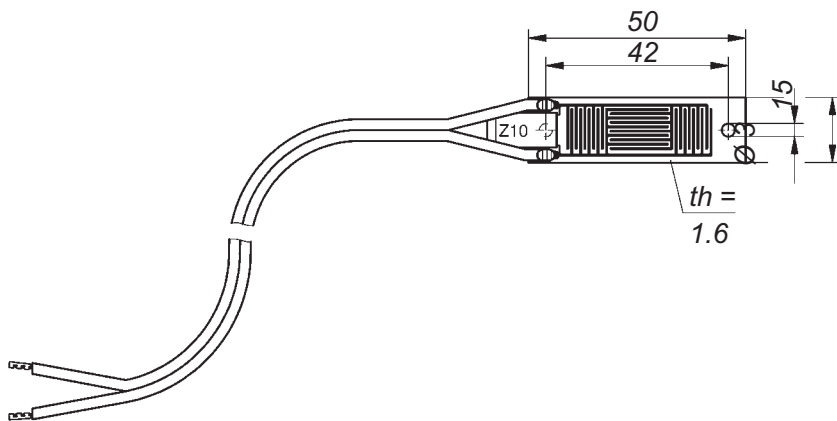
DKWS 2-Z10

DKWS .-Z10

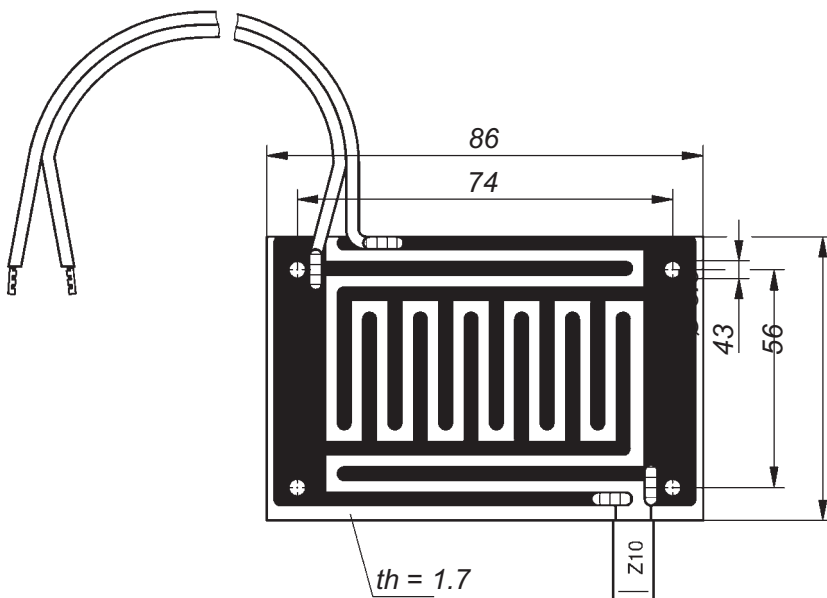
condensate water detectors



DKWS 0-Z10



DKWS 1-Z10



DKWS 2-Z10

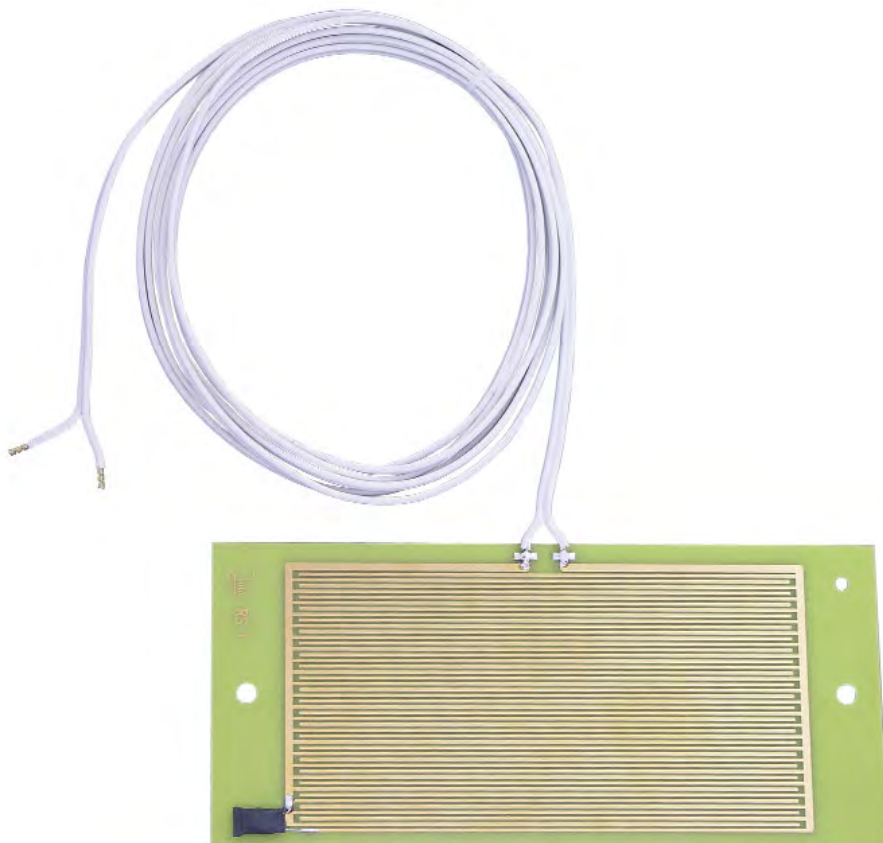
DKWS .-Z10 condensate water detectors



DKWS 3-Z10/S

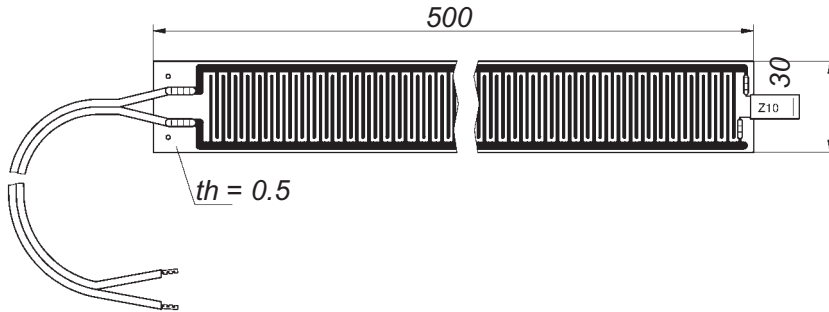


DKWS 3-Z10

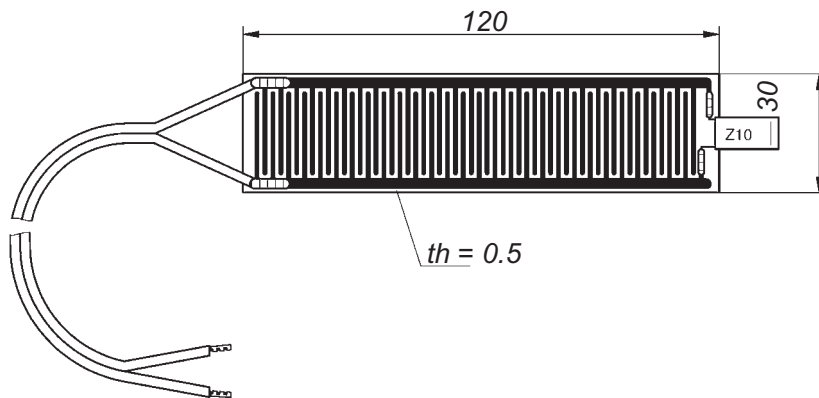


DKWS 4-Z10

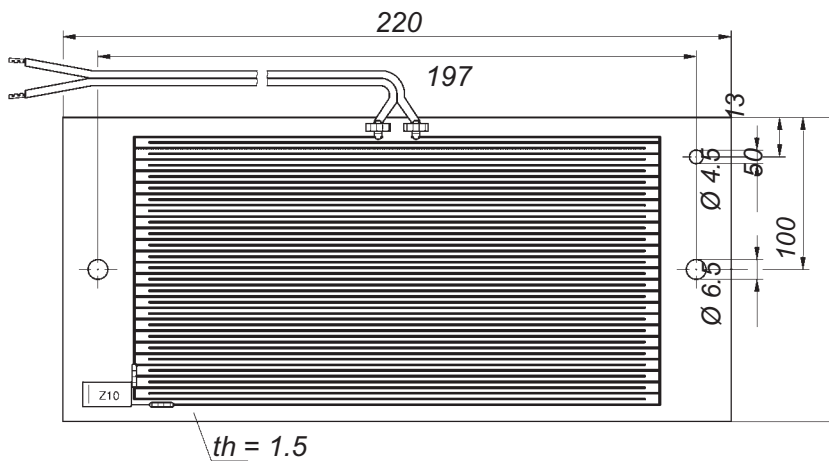
DKWS .-Z10 condensate water detectors



DKWS 3-Z10



DKWS 3-Z10/S



DKWS 4-Z10

Leckstar 101 electrode relay

- with cable break monitoring feature and switchable self-hold
- for connection of 1 condensate water detector with Z10 cable break monitoring unit
- with 1 potential-free changeover contact at the output

Electrode relay for U-bar mounting or surface mounting, with connection terminals on top and with 3 built-in LEDs for signalling the operating statuses.

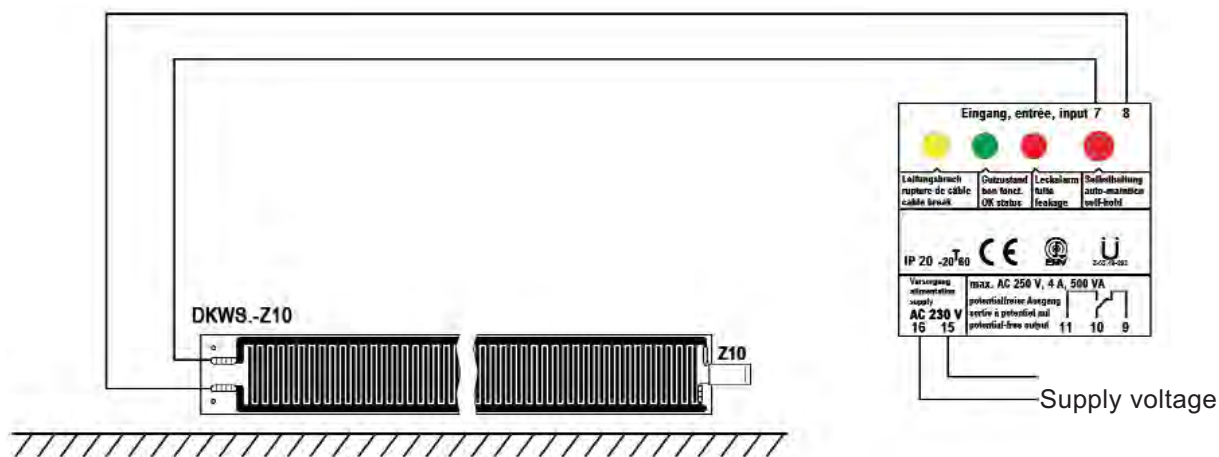
Self-hold:

- If the switch for self-hold is switched on, an alarm is stored. The relay continues to signal the alarm even if the cause of the alarm (e.g. the presence of condensate water or a cable break) is no longer present – in other words, if the sensor is dry again or if the line has contact. The alarm is acknowledged by switching off the switch for self-hold.
- If the switch for self-hold is not switched on, the alarm is not maintained when the cause of the alarm has been remedied but is terminated.



Technical data	Leckstar 101
Alternative supply voltages (AC versions: terminals 15 and 16; DC versions: • terminal 15: – • terminal 16: +)	AC 230 V (supplied if no other supply voltage is specified in the order) or AC 240 V or AC 115 V or AC 24 V or DC 24 V or } in these two cases, the unit must only be DC 12 V or } connected to a low safety voltage which corresponds to the safety regulations relating to the application further supply voltages on request approx. 3 VA
Power consumption	
Electrode circuit (terminals 7 and 8)	2 terminals (under safety extra low voltage SELV) acting on 1 output relay with switchable self-hold
No-load voltage	18 V _{eff} $\sqrt{2}$ 10 Hz (safety extra low voltage SELV)
Short-circuit current	max. 0.5 mA _{eff}
Response sensitivity	approx. 30 k Ω or approx. 33 μ S (electric conductance)
Cable break monitoring	via Zener diode circuit (Z10) at the end of the electrode line
Power circuit (terminals 9, 10, 11)	1 single-pole potential-free changeover contact based on the quiescent current principle
Switching status indication	3 LEDs
Switching voltage	max. AC 250 V
Switching current	max. AC 4 A
Switching capacity	max. 500 VA
Housing	insulating material, 75 x 55 x 110 mm
Connection	terminals on top of housing
Protection class	IP20
Mounting	clip attachment for U-bar to DIN 46277 and EN 50022 or fastening via two boreholes
Mounting orientation	any
Temperature range	– 20°C to + 60°C
Max. length of connecting cable	1,000 m between electrode relay and Z10 cable break monitoring unit
EMC	for interference emission in accordance with the appliance-specific requirements for households, business and commerce as well as small companies, and for interference immunity in accordance with the appliance-specific requirements for industrial companies

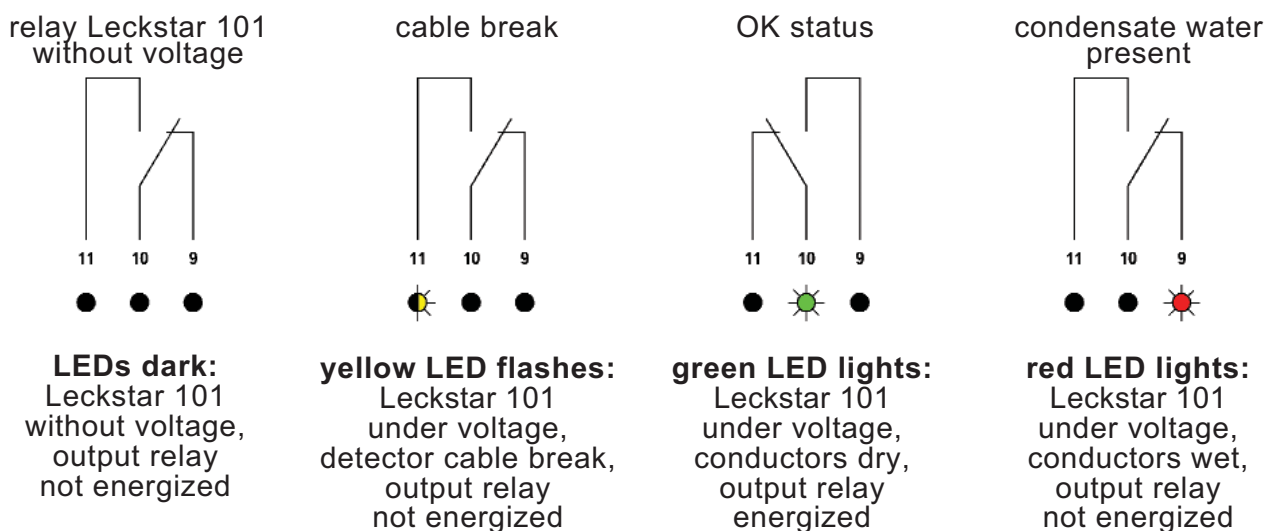
Connection diagram of Leckstar 101 electrode relay



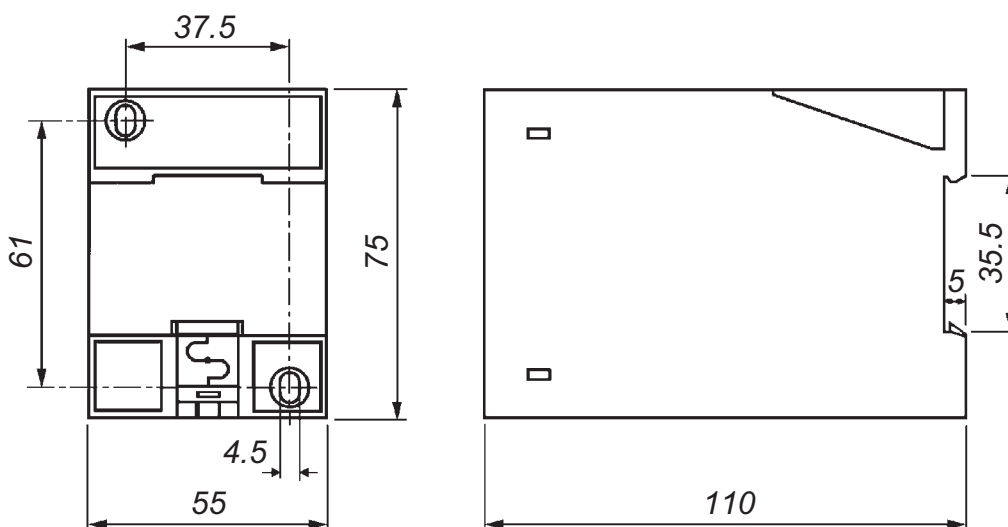
Position of contact when Leckstar 101 without voltage

Each ÖKWS .-Z10 condensate water detector is to be connected to 1 Leckstar 101 or Leckstar 101/S electrode relay.

Position of output contact of the Leckstar 101 electrode relay



Dimensions Leckstar 101



The unit is designed for switch cabinet mounting or installation in a suitable protective housing and may therefore only be mounted / installed in these locations. It is suitable for use in clean environments only.

Leckstar 101/S electrode relay

- with cable break monitoring feature and switchable self-hold
- with separately routed cable break monitoring output
- for connection of 1 condensate water detector with Z10 cable break monitoring unit
- with 2 potential-free break (NC) contacts at the output

Electrode relay for U-bar mounting or surface mounting, with connection terminals on top, and with 3 built-in LEDs for signalling the operating statuses.

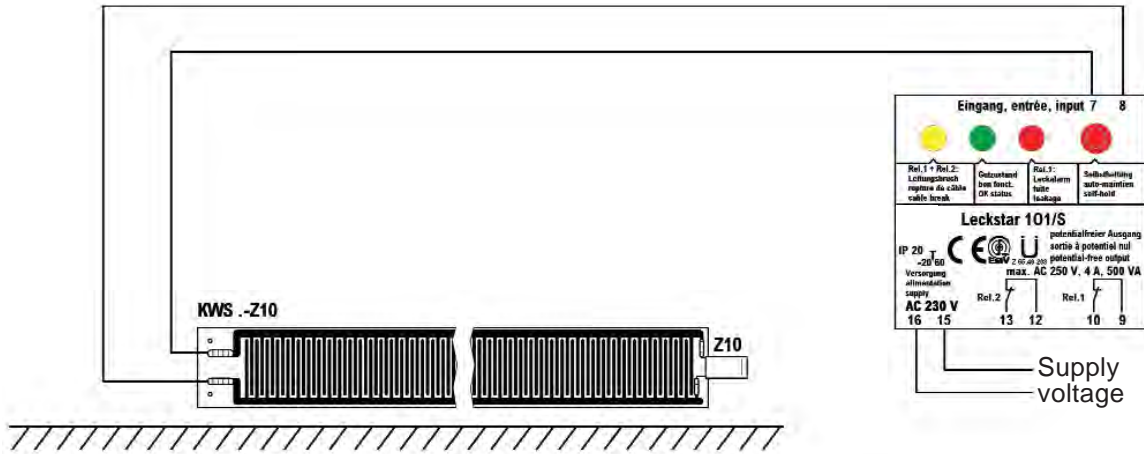
Self-hold:

- If the switch for self-hold is switched on, an alarm is stored. The relay continues to signal the alarm even if the cause of the alarm (e.g. the presence of condensate water or a cable break) is no longer present – in other words, if the sensor is dry again or if the line has contact. The alarm is acknowledged by switching off the switch for self-hold.
- If the switch for self-hold is not switched on, the alarm is not maintained when the cause of the alarm has been remedied but is terminated.



Technical data	Leckstar 101/S
Alternative supply voltages (AC versions: terminals 15 and 16; DC versions: <ul style="list-style-type: none"> • terminal 15: – • terminal 16: +) 	AC 230 V (supplied if no other supply voltage is specified in the order) or AC 240 V or AC 115 V or AC 24 V or DC 24 V or } in these two cases, the unit must only be DC 12 V or } connected to a low safety voltage which corresponds to the safety regulations relating to the application further supply voltages on request approx. 3 VA
Power consumption	
Electrode circuit (terminals 7 and 8)	2 terminals (under safety extra low voltage SELV) acting on 2 output relays with switchable self-hold
No-load voltage	18 V _{eff} $\sqrt{1}$ 10 Hz (safety extra low voltage SELV)
Short-circuit current	max. 0.5 mA _{eff}
Response sensitivity	approx. 30 k Ω or approx. 33 μ S (electric conductance)
Cable break monitoring	via Zener diode circuit (Z10) at the end of the electrode line
1 st power circuit (terminals 9, 10)	1 single-pole potential-free break (NC) contact based on the quiescent current principle for signalling the presence of condensate water or cable break
2 nd power circuit (terminals 12, 13)	1 single-pole potential-free break (NC) contact based on the quiescent current principle for additional signalling in the event of a cable break
Switching status indication	3 LEDs
Switching voltage	max. AC 250 V
Switching current	max. AC 4 A
Switching capacity	max. 500 VA
Housing	insulating material, 75 x 55 x 110 mm
Connection	terminals on top of housing
Protection class	IP20
Mounting	clip attachment for U-bar to DIN 46277 and DIN 50022 or fastening via two boreholes
Mounting orientation	any
Temperature range	– 20°C to + 60°C
Further technical data	see Leckstar 101, page 37-2-7

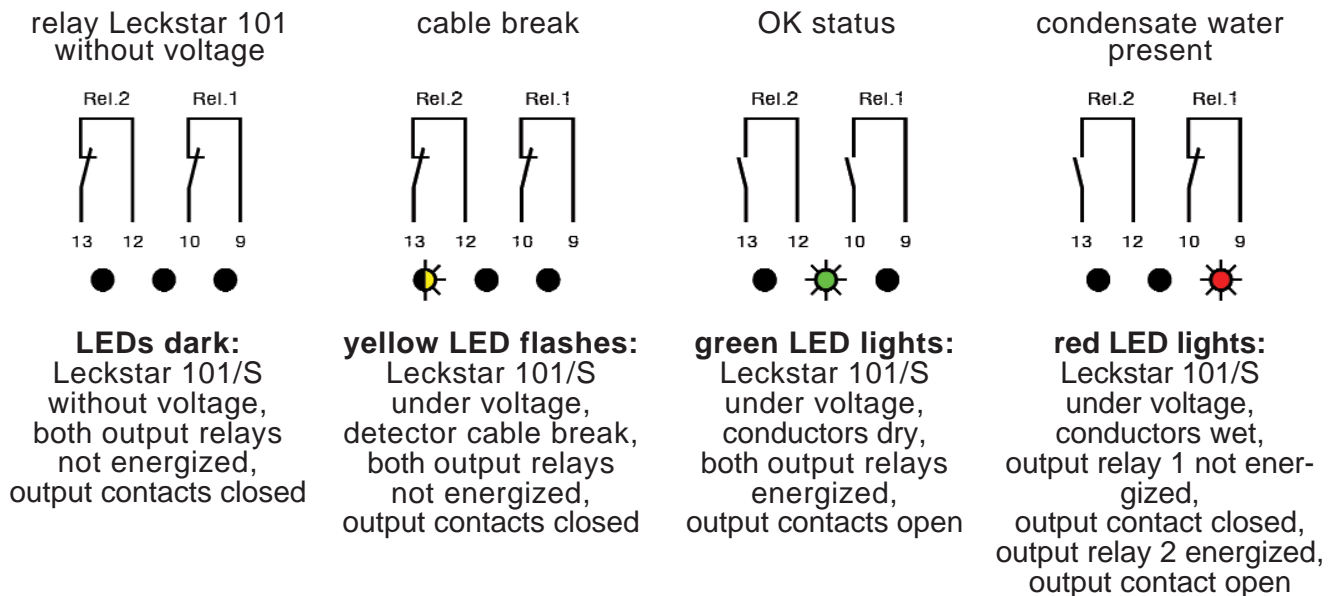
Connection diagram of Leckstar 101/S electrode relay



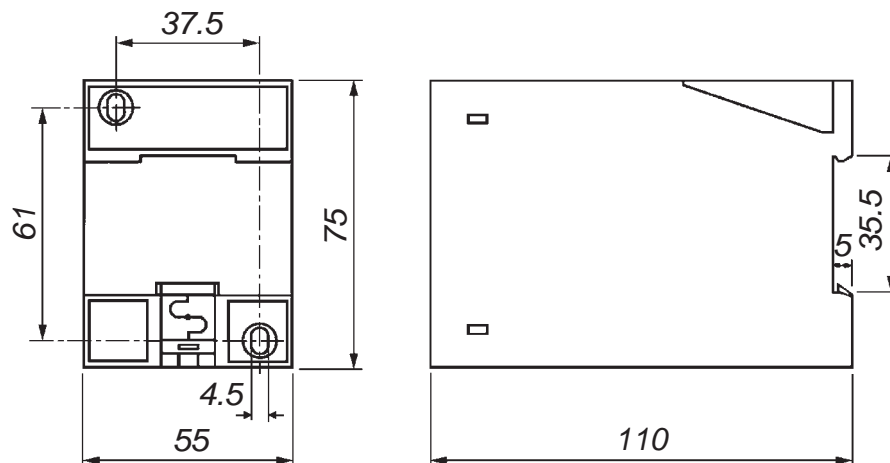
Position of contact when Leckstar 101/S without voltage

Each DKWS.-Z10 condensate water detector is to be connected to 1 Leckstar 101 or Leckstar 101/S electrode relay.

Position of output contact of the Leckstar 101/S electrode relay



Dimensions Leckstar 101/S



The unit is designed for switch cabinet mounting or installation in a suitable protective housing and may therefore only be mounted / installed in these locations. It is suitable for use in clean environments only.

**The units described in this documentation
may only be installed, connected and
started up by suitably qualified personnel!**

**Subject to deviations from the diagrams
and technical data.**

**The details in this brochure are product
specification descriptions and do not
constitute assured properties in the legal
sense.**