

## 2-point water level controller DLR1/DHR1

with low alarm (DLR1) or  
high alarm (DHR1)

### Application and function

As two-point water level controller plus low level alarm (DLR1) or high level alarm (DHR1) together with the IGEMA conductivity probes, e.g. in steam boilers acc. to TRD/EN or as level controller in tanks with conductive liquids.

The product according to PED directive 97/23/EEC annex VII (Module B+D, category II) has the CE-mark no. 0035 of the notified body.

Applied rules as per TRD and AD2000.

### Function DLR1/DHR1

The indicator lamp "U<sub>B</sub>" shows that the power supply is on.

- Two-point control (pump on-off) by two probes of different length "Pump on" if both probes are out of water, "pump off" if both probes are immersed.
- Feed control with one probe and one (external) time relay. Only one probe (rod) is needed for pump control. "Pump on" if the probe is out of water and at the same time start of an external time relay. After an adjusted time, the time relay switches "pump off".
- Outlet control (flow-off) by two probes of different length "Valve open" when both probes are immersed, "valve closed" when both probes are out of water.

Outlet control: special version as DLR1-A/DHR1-A

Level alarms:

Low level alarm (DLR1)

When the probe is immersed, the relay is energised and the alarm contacts are closed. No alarm (LED "NW") should be indicated. If the low level probe is out of water, the relay is de-energised and the low level alarm contact opens. The red indicator lamp "NW" lights.

High level alarm (DHR1)

When the probe is out of water, the relay is energised and the alarm contacts are closed. No alarm (LED "HW") should be indicated. If the low level probe is immersed, the relay is de-energised and the low level alarm contact opens. The red indicator lamp "HW" lights.



### Technical basic equipment

- DLR1/DHR1 is delivered in a plastic plug-in housing for installation in control panels
- Fixation on standard rail 35 mm according to DIN EN 50022 or directly screwed to chassis plate

### Technical data

Component mark	TÜV WR 06-383
CE-mark	0035
Power supply	230V ± 10% / 50-60 Hz
Input	ca. 4,5 VA
Fuse	80 mA/T
Protection as per DIN EN 60529	IP40 <sup>1)</sup>
Allowable ambient temperature	0 – 60° C

<sup>1)</sup> according to the German regulations VdTÜV-Wasserstand 100, 4.90 a protection of IP54 has to be maintained in the boiler area

Max. operating data of potential free contacts	
Voltage	max. 250 Vac
Current	max. 5 A ohmsch
Electrical conductivity of the liquid	5 µS/cm ≤ $\rho$ ≤ 10.000 µS/cm
	0,5 µS/cm ≤ $\rho$ ≤ 2.000 µS/cm
Length of connection line	max. 100 m at 5 – 10.000 µS/cm
	max. 30 m at 0,5 – 2.000 µS/cm

