Design

The probe works without any moving parts. The probe rod, which is insulated by a ceramic tube, is inserted through a hole in the probe flange such that pressure-tight sealing is ensured. The ceramic tube is closed at the lower end and covered by a protection tube. The electronic control unit is housed in the terminal box. The wiring is effected via a 6 pole connector with crimp connection.

Operation

The principle of capacitance measurement is used to sense liquid levels. The probe rod and the protection tube form a capacitor, with air or the particular liquid being the dielectric. In electrically conductive liquids the probe insulation serves as dielectric. As the level rises or falls, the capacitance of this assembly changes, is converted in the integral measuring transducer into a signal, and is then fed to the associated electronic control unit.

NRG 211

In combination with level switch NRS 2-4 for indicating high-water level at very high pressures and temperatures (up to PN 320, 550 °C).
Application in draining systems of conventional power stations and high-pressure steam boilers.

NRS 2-4

The level switch NRS 2-4 is an analogue electronic amplifier for the capacitance electrode type NRG 211.

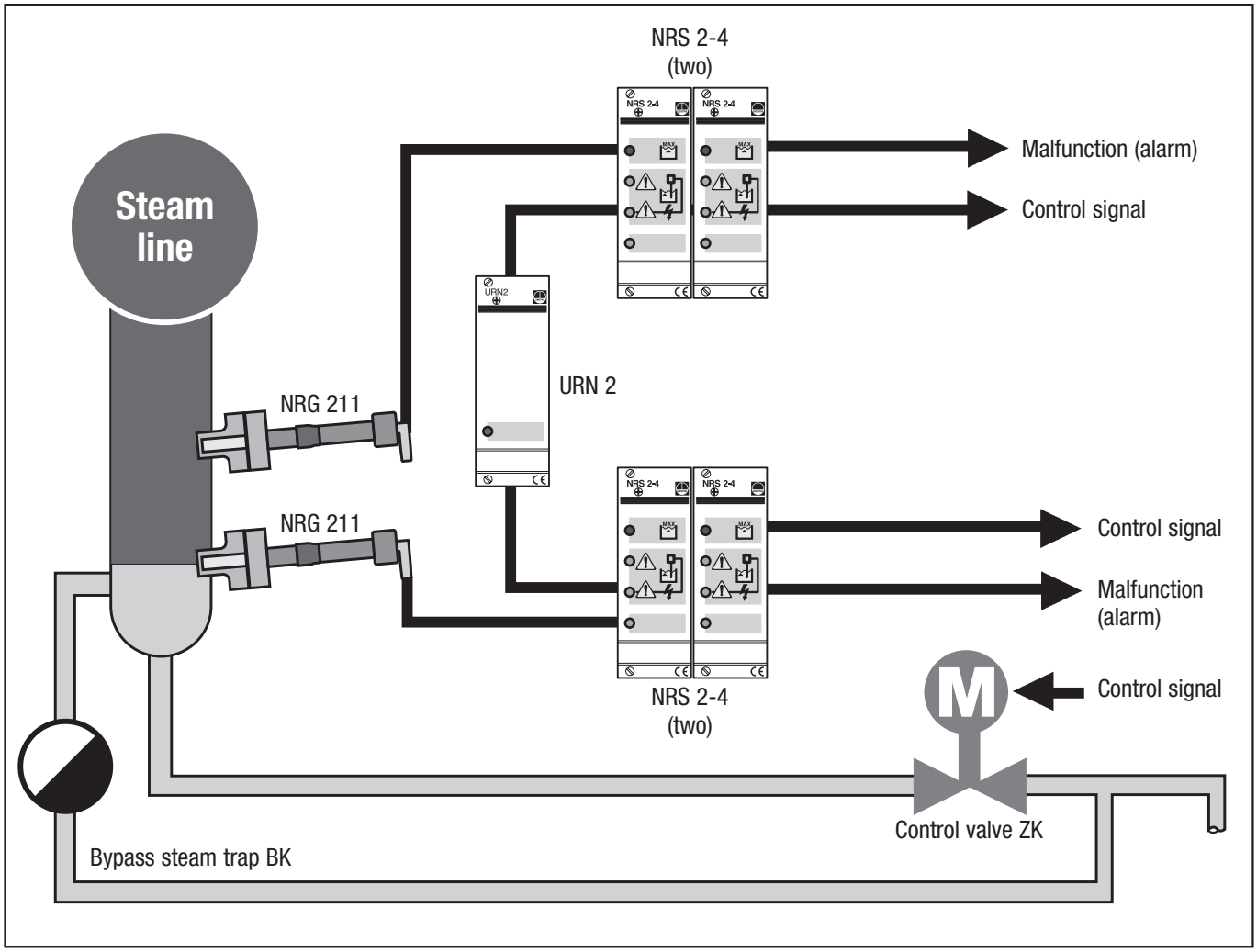
In combination with this level electrode the unit can detect high water level. In addition, the level switch evaluates possible malfunction signals coming from the electrode and monitors the electrode supply cable and can therefore be used as part of a controlled draining system in power stations.

URN 2

The power supply unit type URN 2 in combination with up to four level switches and the cycling timer can be used as part of a controlled drainage system in power stations or for low level indication.

Example of installation

Use the PSU type URN 2 only for the power supply of a maximum of four level switches type NRS 2-4.



Type	Material	PN		Stock code
NRG 211 *)	1.5415	320	200 bar at 450 °C 320 bar at 120 °C	350100130 ≤ DN 100 350100140 > DN 100
	1.7380		200 bar at 500 °C 320 bar at 120 °C	350100231 ≤ DN 100 350100241 > DN 100
	1.4922		230 bar at 550 °C 320 bar at 120 °C	350100332 ≤ DN 100 350100342 > DN 100
URN 2				3372042
NRS 2-4	HW			3233142

*) with welding connection, nuts, bolts and seals for pipes ∅ > DN 100 or < DN 100