

# STAND-ALONE REGULATION OF MINIMUM AND MAXIMUM FILLING LEVELS



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SAFETY AND ENVIRONMENTAL TECHNOLOGY

Conductive electrodes are applied to control and monitor the filling level of conductive liquids. For this reason, they are often used for min / max control, limit value signalling as well as for dry and overflow protection, combined with our electrode relays.

The electrode relays XR-4xx have been developed for conductive level detection in the Ex area. Possible applications include all areas in which liquid, conductive media must be detected, controlled or regulated in any way. This can include both limit level detection (overflow / dry run) and minimum / maximum control systems.

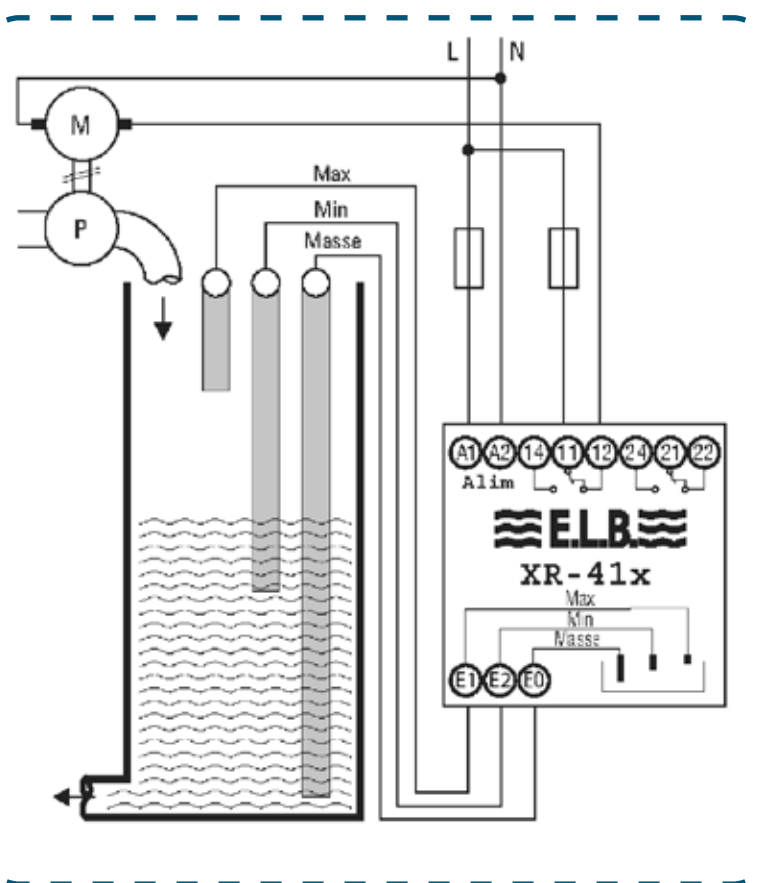
**Below you will find two examples for connection to check the filling level:**

**Example 1: Stand-alone system (without PLC) with relay 1 XR-41x // 1-channel relay**

The probe consists of three electrodes:

- ✓ A grounding electrode for measuring the reference value
- ✓ One electrode for the minimum level
- ✓ One electrode for the maximum level

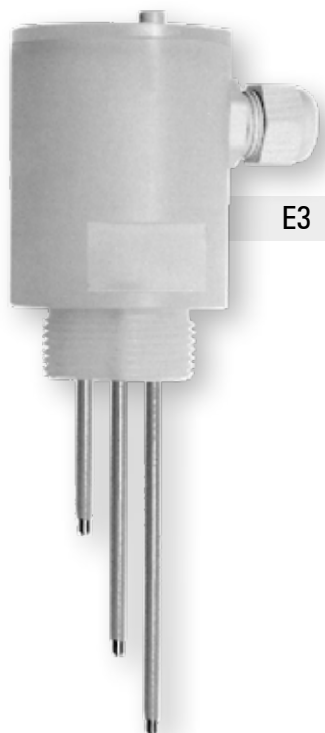
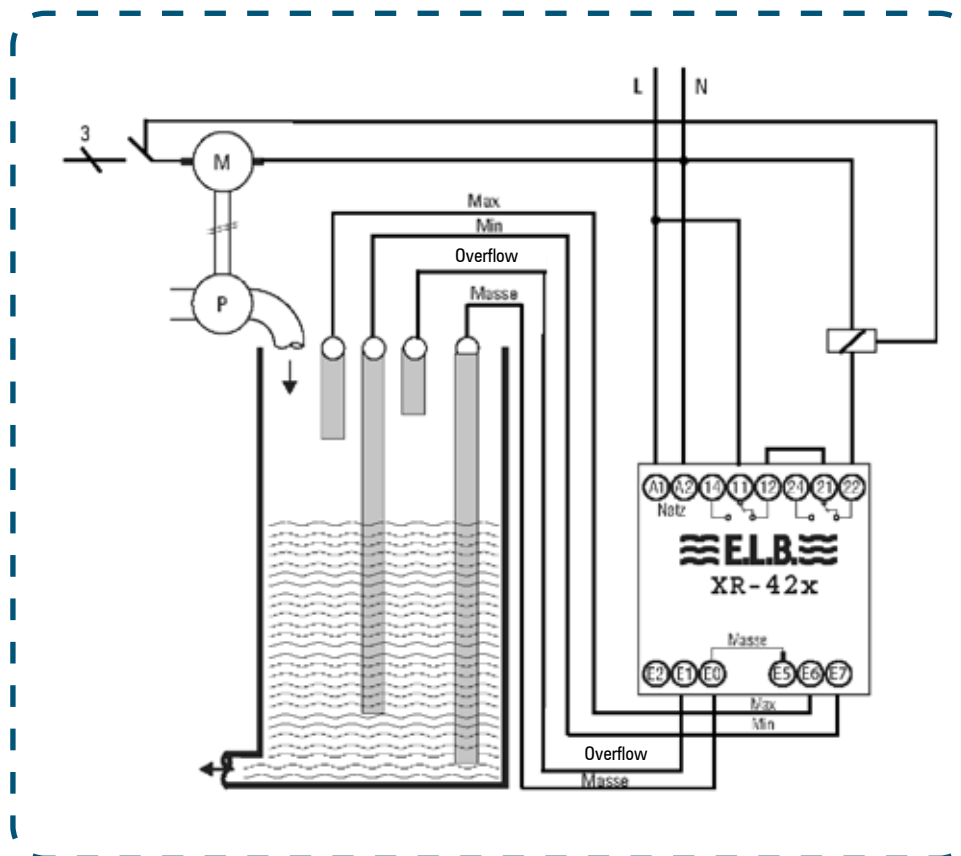
The relay XR-41x works as a stand-alone relay (no PLC is required here), which makes commissioning and maintenance of the system much easier.



XR-41x



## Example 2: Stand-alone system with relay XR-42x // 2-channel relay for overflow control



In this case, the probe has four electrodes each, the fourth being used together with the 2-channel relay XR-42x as a safety system with "overflow protection".

Another function of the four electrodes is to use them as a "dry run" safety system.

