

Filter basin control

Task

In order to prevent the excessive contamination of a filter tank in a waterworks, “easy” is required to rinse the basin at regular intervals.

The filter basin is rinsed weekly (every Monday at 12 PM) for a quarter of an hour. At the start of rinsing the water supply must be disconnected. A pump is then switched on with a time delay, in order to backwash the drained basin.

After a runtime of 15 minutes the pump is switched off again.

After a further time delay the valve for the water supply is reopened again
An indicator light (H1) switches on as soon as the rinsing operation is started.

A short horn signal sounds at the start and the end of each rinsing operation.

Wiring

1. Inputs:

I1 Switch S1 (system ON/ OFF)

2. Outputs:

Q1 Supply valve Y1 (OPEN / CLOSE)

Q2 Pump M1 (flood filter basin ON / OFF)

Q3 Indicator light H1 (“Filter basin cleaning”)

Q4 Horn E1 (“Rinsing - Start / End”)

3. Parameters:

T1 On-delay pump M1 (rinsing)

T2 On-delay, open water supply valve Y1

T3 Pulse duration for horn (rinsing)

H1 Weekly time of filter basin - rinsing