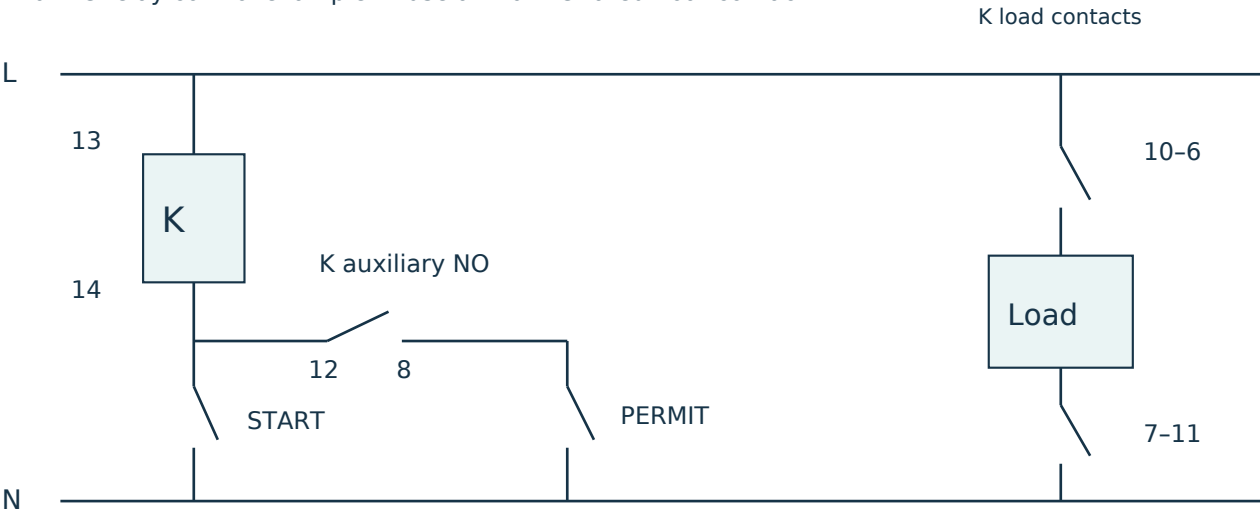


External relay control for float switches

Two-level filling and drainage | English circuit edition

This circuit uses two level signals and a 14-pin, four-pole changeover relay with the terminal arrangement shown below. It is a controller example for a suitably wired double-float assembly or two separate float switches. It does not assign the internal pins of every connector or sealed-head assembly.

220VAC relay control example — use a 220VAC-rated float contact



Both float contacts return to N / terminal 11. Only functional connections are shown.

1. Connections in the supplied control diagram

Connection	Purpose
L → 10; jumper 10-13	Live supply to one load common and relay coil terminal 13
N → 11 and float common	Neutral supply to the second load common and the float signal return
Jumper 12-14	Connect the auxiliary-contact common to coil terminal 14
Start-signal lead → 14	The start contact completes the coil circuit to neutral
Permit / stop-signal lead → 8	The permit contact maintains the circuit through auxiliary NO contact 12-8
Load between 6 and 7	Two relay NO contacts switch the live and neutral load connections
Relay coil between 13 and 14	Use the correct 220VAC coil for this mains-voltage example

The original diagram calls the start lead “NO” and the permit lead “NC,” and lists jumpers 12-14 and 10-13, signal terminals 14 and 8, common 11, supply 10/11 and load 6/7. Those labels describe the illustrated control signals; verify the actual float states and wire identification before connection.

Operating sequence and selection limits

2. Filling control

Level	Start signal	Permit signal	Relay action
Below lower level	Closed	Closed	Energizes
Between the two levels	Open	Closed	Remains energized if previously started
Above upper level	Open	Open	Releases

For filling, use the lower level as the start signal and the upper level as the permit / stop signal. Both contacts close on the low side of their respective operating levels. The relay's 12-8 NO contact holds the coil on after the lower start contact opens.

3. Drainage control

Level	Start signal	Permit signal	Relay action
Above upper level	Closed	Closed	Energizes
Between the two levels	Open	Closed	Remains energized if previously started
Below lower level	Open	Open	Releases

For drainage, the upper level becomes the start signal and the lower level becomes the permit / stop signal. Both contacts close on the high side of their respective operating levels. The external relay topology is the same, but the float orientation and signal assignments must provide these states.

4. Electrical selection

The 220VAC example requires a 220VAC-rated float contact, such as the relevant 2A1 option. Do not apply 220VAC to a 1A1 contact rated for 100V. Respect contact power, switching current, relay-coil demand and temperature limits simultaneously.

The original illustration labels the pump or valve "220V / 5A" and names HH54P or MY4NJ relays. The 5A label is not a float-contact rating or a rating for every compatible-looking relay. Select the exact relay and socket for the load; use a suitably rated contactor or motor starter for pump duty. An OMRON MY4N AC220/240 reference specifies 3A resistive or 0.8A inductive at 220VAC, so the illustrated 5A load is not appropriate for that specific relay.

5. Relay and socket selection

The illustrated MY4 terminal arrangement uses coil terminals 13/14, commons 9-12, NO contacts 5-8 and NC contacts 1-4. Select a relay and socket with this arrangement, and apply the load rating of the exact relay. The circuit provides two-level self-holding control.

Primary references: OMRON MY relay datasheet, terminal-arrangement drawing on printed page 21; and MY4N AC220/240 ratings.

OMRON MY relay terminal arrangements

OMRON MY4N AC220/240 product specifications