Hidronivel TH6

tcontrol

Level control

Well or Tank | **Probe control**

USER MANUAL

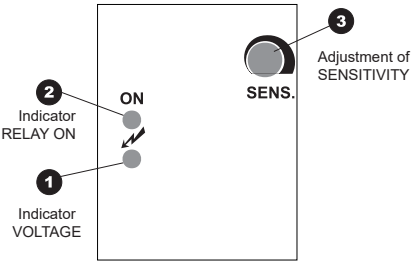
Description

Probe-based level relay using a conductive system. Well or Tank control. Adjustable sensitivity. Dual voltage 230 or 400 V. Plug-in 11-pin socket base. Maximum and minimum probes. Remote control.

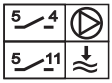
Insulation of the low-voltage auxiliary input (4 kV) for float switch, pressure switch, etc., ensuring complete safety for users.



Front panel



Wiring

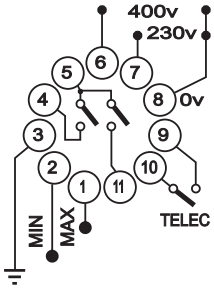


Well:

MIN: Stops.
MAX: Starts.

Tank:

MIN: Starts.
MAX: Stops.



Probe installation

Tank: Install the upper probe (Max.) immediately before the overflow outlet and the lower probe (Min.) at the height required for the desired reserve.

Well: Install the lower probe (Min.) higher than the suction valve. The height of the upper probe (Max.) may, in many cases, need to be adjusted depending on the time of year to make optimal use of the well's flow rate.

IMPORTANT: The probe cables must be sufficiently insulated, since a false contact to earth would cause the unit to malfunction.

Earth connection

A correct earth connection is essential for the Hidronivel to operate properly. It is recommended to connect it to any point on the pipework or pump (screw, flange, valve, etc.), to an earth rod, or by means of a probe submerged at the bottom of the vessel if the vessel is made of an insulating material (asbestos cement, fibreglass, and plastics in general).

Remote control (Terminals 9 and 10)

Remote control input via voltage-free contact (float switch, pressure switch, etc.). Control elements at 12 Vdc for added safety.
If this input is not used, terminals 9 and 10 must be bridged.

Sensitivity adjustment

The unit leaves the factory with sensitivity set to maximum, at which it should operate normally, except in cases where particular installation conditions (high humidity, a considerable distance between the probes and the unit, or earth capacitance of the probe cable) make it necessary to reduce the sensitivity to prevent the Hidronivel from activating due to the causes mentioned.

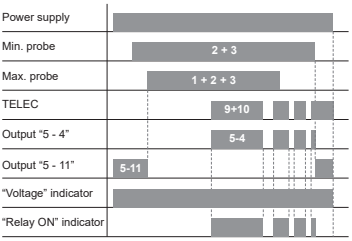
Operation check

To check that the unit is working correctly:

1. Check the voltage (230V at terminals 7-8 / 400V at terminals 6-8).
2. Disconnect the probe cables from the terminals.
3. Power up the unit ("Voltage" indicator lights up). Alarm activated (5 and 11 closed). Bridge terminals 2 and 3 (nothing should happen). Connect this bridge to terminal 1, so that terminals 1, 2 and 3 are joined together (alarm deactivated). Bridge terminals 9 and 10: the relay activates (5 and 4 closed) and the "RELAY ON" indicator lights up. Remove the bridge from terminal 1 (the relay remains activated).
4. Finally, remove the bridge between 2 and 3 (the relay deactivates and the indicator turns off). The alarm activates. Remove the bridge between 9 and 10.

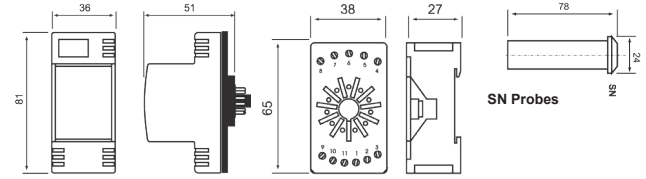
If the unit works correctly in these tests, when connecting the probes check that the vessel is in contact with "earth"; if this is not the case, because the vessel is made of an insulating material, install a third probe at terminal 3, positioned at the bottom of the well or tank.

Operating diagram



Technical specifications

Indicators	VOLTAGE and RELAY
Operating voltage	240/400 VAC (other voltages on request)
Frequency	50-60 Hz
Power consumption	2 VA
Permissible voltage variations	+10% -20%
Response sensitivity	Adjustable from 3 to 60 kOhm
Probe voltage	12 VAC 50 Hz
Probe current	1.2 mA max. short-circuit
Maximum terminal cross-section	2 x 2.5 mm^2
Contact rating	AC1: 10 A - 250V AC AC11: 2.5 A - 230V AC DC1: 1 A - 250V DC DC11: 5 A - 24V DC
Environmental limits	-10°C to +60°C
Approx. average weight	140 g (320 g incl. base and 2 probes)



Toscano Línea Electrónica, S.L.
P.I. La Isla c/Río Viejo, 50 - 41700 - Dos Hermanas - SEVILLA - SPAIN - (+34) 954 999 900 - www.toscano.es - info@toscano.es

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