

PNHA DNHA



DOUBLE LEVEL CONTROL NC CONTACTS



Field of application	<ul style="list-style-type: none"> Control of two independent tanks Control of two pumps with stop at an only level Control of level and an alarm of maximum or minimum.
Character differential	It is composed of two independent controls of level with a relay (contacts NC) associated to each one of them. They can work of individual form or related among them (see the application examples in page 2).
Principle of operation	<p>Control of maximum and minimum level: Relay 1 activates when the level of the liquid reaches the electrode of maximum level (5:PNHA - Y2:DNHA) and it is deactivated when the liquid descends below the electrode of minimum level (6:PNHA - Y1:DNHA).</p> <p>Relay 2 activates when the level of the liquid reaches the electrode of maximum level (9:PNHA - Y4:DNHA) and it is deactivated when the liquid descends below the electrode of minimum level (8:PNHA - Y3:DNHA).</p> <p>Control of maximum or minimum level: The terminals of maximum and minimum electrodes have to be linked (Relay 1: 5-6:PNHA; Y1-Y2:DNHA) (Relay 2: 8-9:PNHA; Y3-Y4:DNHA).</p> <p>The relay activates when the liquid level reaches the electrode and it is deactivated when it descends below the same one.</p>
Leds indicating	Supply voltage: Green Relays activated: Red
Current in soundings	24 VCA
Tension in soundings	4 mA (in short circuit).
Characteristic of the cable of soundings	Normally are used cables from 1..2.5 mm ² of section with a good isolation and without screening. In some installations, when the supply and the probe lines are parallel in the same tube and with long distances, it is recommendable to use shielded cable. The resistance between cables and ground must at least be of 200KΩ. The screen is connected to ground.
Connection of the common electrode	If the tank is not conductive, an additional probe must be fitted for connecting the common electrode, terminal 7(PNGA) or Z1 (DNHA).
Length cable sound.	Without certain specification.
Accessory	Electrodes: NS, NR 43650, NRA 43650, NR, NRA, NT, NRP, NP, NRT2. Separators of electrodes: NR.SEP, NRA.SEP Nuts of attachment: NR.TUE/P, NR.TUE/T Protective of surge: PS-3

Reference	BOX	FUNCTION	OUT PUT	TENSION	RANGE
	P Plug-in D Rail DIN	NH Double level	A 2 NO	024 24 VAC 048 48 VAC 110 110..125 VAC 230 220..240 VAC 400 380..415 VAC	100 10..100 KΩ

In order to compose the reference, to select an option of each one of the columns. Example: **PNHA 230 100**

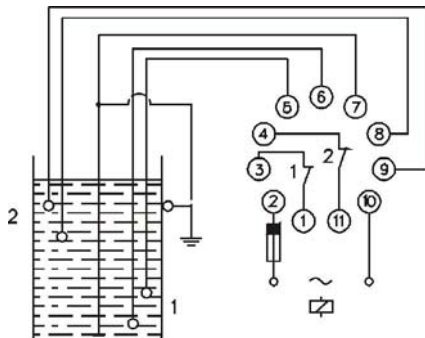
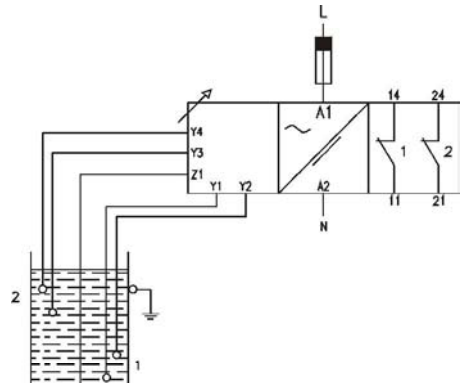
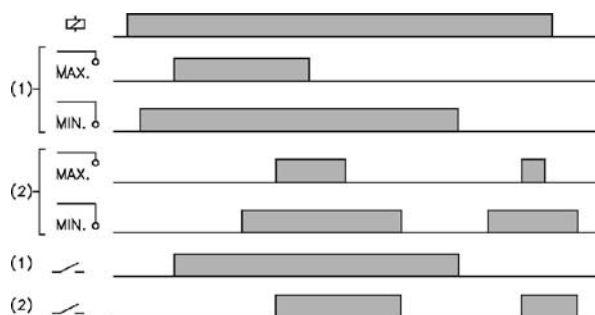
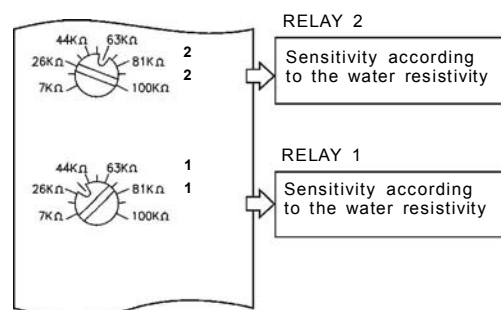
Connection diagram	PNHA	DNHA
		

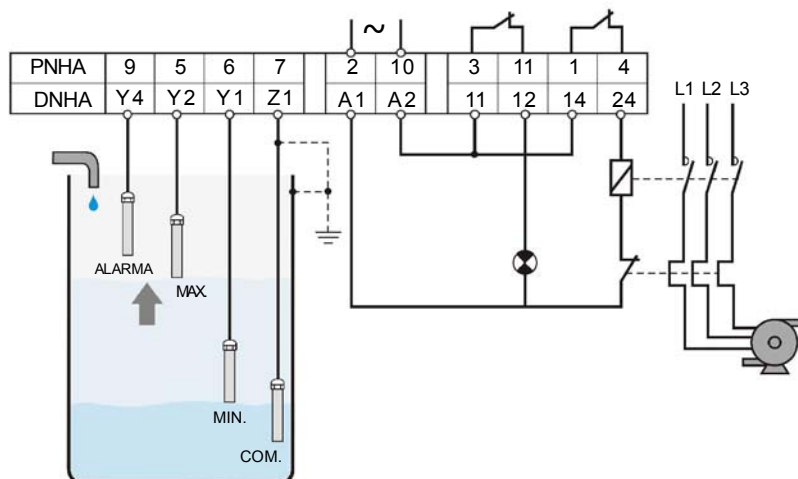
Diagram of operation



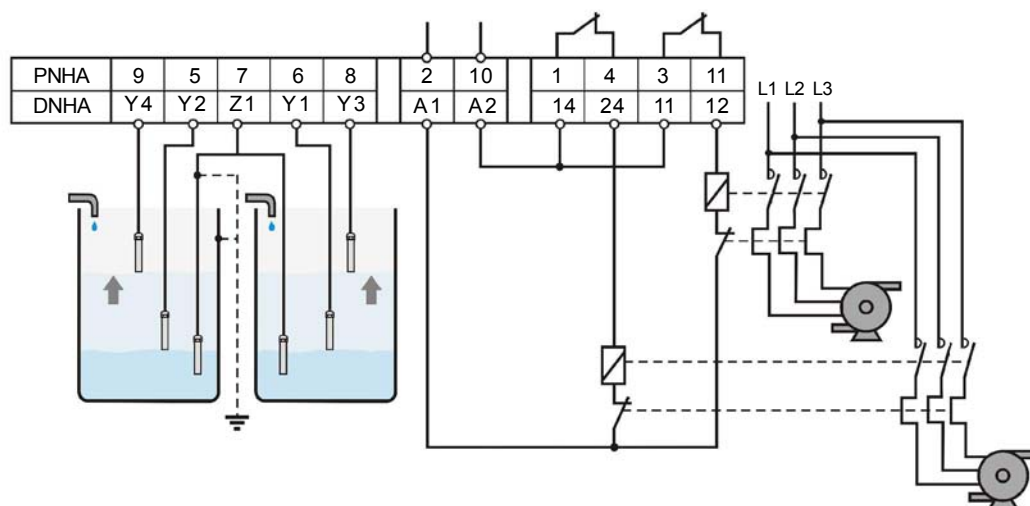
Adjustment buttons



Control of filling and alarm of maximum level



Filling control of two independent tanks



LEVEL SENSORS FOR CONDUCTIVE LIQUIDS

- Compact and electrode holder exclusive use electrodes in conductive liquids. Control points are used to separate or combined level including wells and reservoirs of different height.
- They need to connect to a level relay for conductive liquids.
- The number of electrodes is determined by the chosen relay function.

Follow these links for:

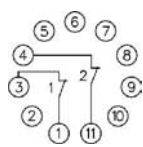
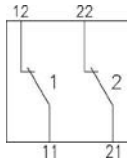


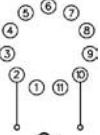
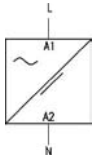
[Further information on the level sensors](#)

[Know the installation conditions of the conductive level relays](#)

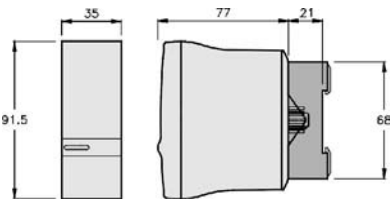
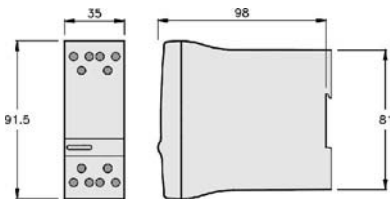


Examples of connections

		PNHA		DNHA	
					
Output relays	Resistive load	AC	10 A / 250 V	10 A / 250 V	
		DC	0,4 A / 200 V 10 A / 24 V	0,4 A / 200 V 10 A / 24 V	
	Inductive load	AC	5 A / 250 V	5 A / 250 V	
		DC	5 A / 24 V	5 A / 24 V	
	Mechanical life		> 30 x 10 ⁶ operations	> 30 x 10 ⁶ operations	
	Max. switching rate, mech.		72.000 operations / hour	72.000 operations / hour	
	Electrical life at full load		360 operations / hour	360 operations / hour	
	Contact material		AgNi 90/10	AgNi 90/10	
	Maximum voltage		440 VAC	440 VAC	
	Operating voltage		250 VAC	250 VAC	
	Volt. between changeovers		2500 VAC	2500 VAC	
	Voltage between contacts		1000 VAC	1000 VAC	
	Voltage coil/contact		5000 VAC	5000 VAC	
	Distance coil/contact		10 mm	10 mm	
Isolation resistance		> 10 ⁴ MΩ	> 10 ⁴ MΩ		

Supply	AC	
	PNHA	DNHA
		
	Yes	
	50 / 60 Hz	
±10...-15%		
Galvanic isolation	Yes	
Frequency	50 / 60 Hz	
Operating margins	±10...-15%	
Positive	-	
Protected polarity	-	
Consumption	3,2 VA	

Constructive and enviromental data		PNHA	DNHA
	Voltage phase-neutral	300 V	300 V
	Overvoltage category	III	III
	Rated impulse voltage	4 kV	4 kV
	Pollution degree	2	3
	Protection	IP 20 B	IP 20
	Approximate weight	250 g	280 g
	Storage temperature	-50..+85°C	-50..+85°C
	Operating temperature	-20..+50°C	-20..+50°C
	Humidity	30..85% HR	30..85% HR
	Housing	Cycoloy - Light grey	Cycoloy - Light grey
	Socket	Lexan - Light grey	-
	Visor leds	Lexan - Transparent	Lexan - Transparent
	Button, terminal block, clip	Technyl - Dark blue	Technyl - Dark blue
	Pins of the socket	Nickel-plated brass	-
Pins of the terminal block	-	Brass	
Approvals	Designed and manufactured under EEC standards. Electromagnetic compatibility , directives 89/366/EEC and 92/31/EEC. Electric safety, directive 73/23/EEC. Plastics: UL 91 V0		

Dimensions		PNHA	DNHA
			

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