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# Реле уровня токопроводящих жидкостей серии DNDA / PNDA

 **tecfluid**

## LEVEL RELAYS FOR CONDUCTIVE LIQUIDS FOR WELLS AND TANKS DNDA / PNDA SERIES



### Benefits

- Simple, reliable and economical
- Power supply 24...415 VAC
- 1 relay contact output
- Automatic control for wells and reservoirs
- Sensitivity: 10..100 KOhms
- Voltage (probes): 24 VAC
- Current 4mA
- Fill or empty function

### Functioning

D level controlservant according to the level of a well :

When the tank probes (8-9: PNDA - Y3-Y4: DNDA) are discovered by the liquid, the relay is activated, the well pump starts and fills the tank with liquid until the level high is reached by the probe (9:PNDA - Y4:DNDA), which stops the pump. This will not be restarted until the low level sensor (8: PNDA - Y3:DNDA) is exposed. If while the pump is running, the well level drops below the low level probe (6:PNDA - Y1:DNDA), the pump stop. When the well level recovers and reaches the high level probe (5: PNDA - Y2: DNDA), the pump starts up again.

### Technical data

LED indication: Voltage present: Green  
Relay On: Red  
Sensitivity range: Adjustable from 10 to 100 KOhms  
Probe voltage: 24 VAC  
Probe current: 4mA (Short-circuited)

### Characteristics of the probe cable

Normally 1 to 2.5 mm cables are used 2 section with good insulation and unshielded. In some installations, when the power line and probes are parallel in the same tube and with long distances, it is recommended to use an unshielded cable. The resistance between the cables and ground must be at least 200 KOhms. The braid is connected to terminal 7 (PNDA) or Z1 (DNDA-SNDA), which corresponds to the reference (ground).

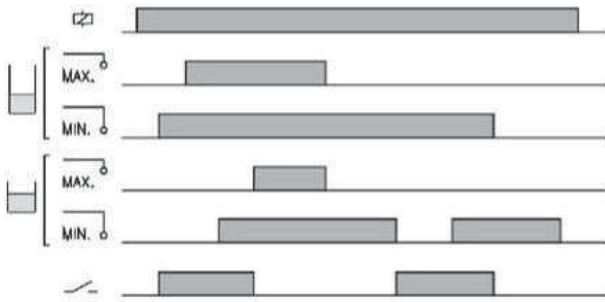
### Reference connection (ground)

If the tank is not conductive, an additional probe must be installed to connect the reference to terminal 7 (PNDA) or Z1 (DNDA-SNDA).

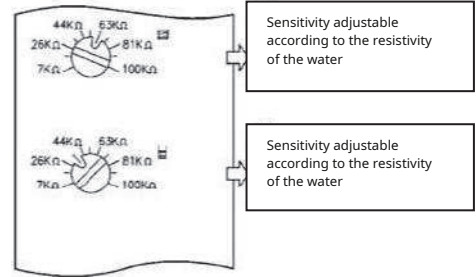
**Probes and accessories:** Electrodes: NS, NR 43650, NRA 43650, NR, NRA, NT, NRP, NP, NRT2.  
Electrode separators: NR.SEP, NRA.SEP - Nuts: NR.TUE/P, NR.TUE/T Surge protector: PS-3

Housing	Function	Exit	Tension	Range
P: Plug-in D: DIN rail	ND: Level control for wells and reservoirs	A: 1 NO	024 24VAC	100K 10KΩ..100KΩ
			048 48VAC	
			110 110..125VAC	
			230 220..230 VAC	
			400 380..415 VAC	

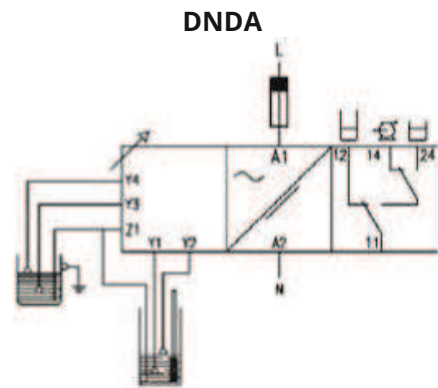
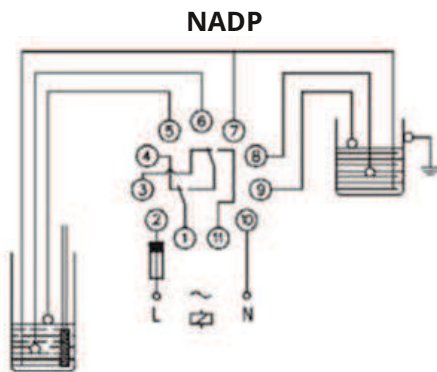
Operation diagram



Setting



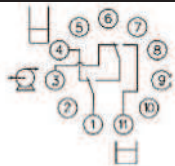
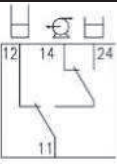
Connection diagram



	AC	
	NADP	DNDA
Isolation galvanic	Yes	
Consumption	1.6VAC	
Frequency	50/60Hz	
Margins of work	+ /-10%...-15°C	
Positive	-	
Polarity protected	-	

Supply voltage

**Output relay**

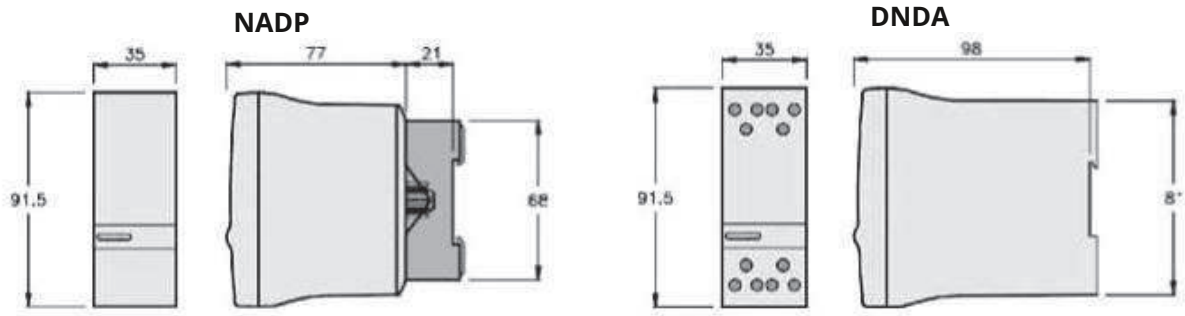
		<b>NADP</b>	<b>DNDA</b>	
				
resistive load	AC	8A / 250V	8A / 250V	8A / 250V
	CC	0.25A / 200V 8A / 24V	0.25A / 200V 8A / 24V	0.25A / 200V 8A / 24V
Inductive load	AC	2.5A / 250V	2.5A / 250V	2.5A / 250V
	CC	4A / 24V	4A / 24V	4A / 24V
Mechanical life		> 30x10 <sup>6</sup> operations		> 30x10 <sup>6</sup> operations
Max. mechanical operation		72,000 operations / hour		72,000 operations / hour
Electrical life at full load		360 operations / hour		360 operations / hour
Contact materials		Ag Ni 90/10		Ag Ni 90/10
Max voltage		440VAC		440VAC
Operating voltage		250VAC		250VAC
Voltage between inverters		2500VAC		2500VAC
Voltage between contacts		1000VAC		1000VAC
Coil/contact voltage		5000VAC		5000VAC
Coil/contact distance		10mm		10mm
Insulation resistance		> 10 <sup>4</sup> MΩ		> 10 <sup>4</sup> MΩ

**Technical data**

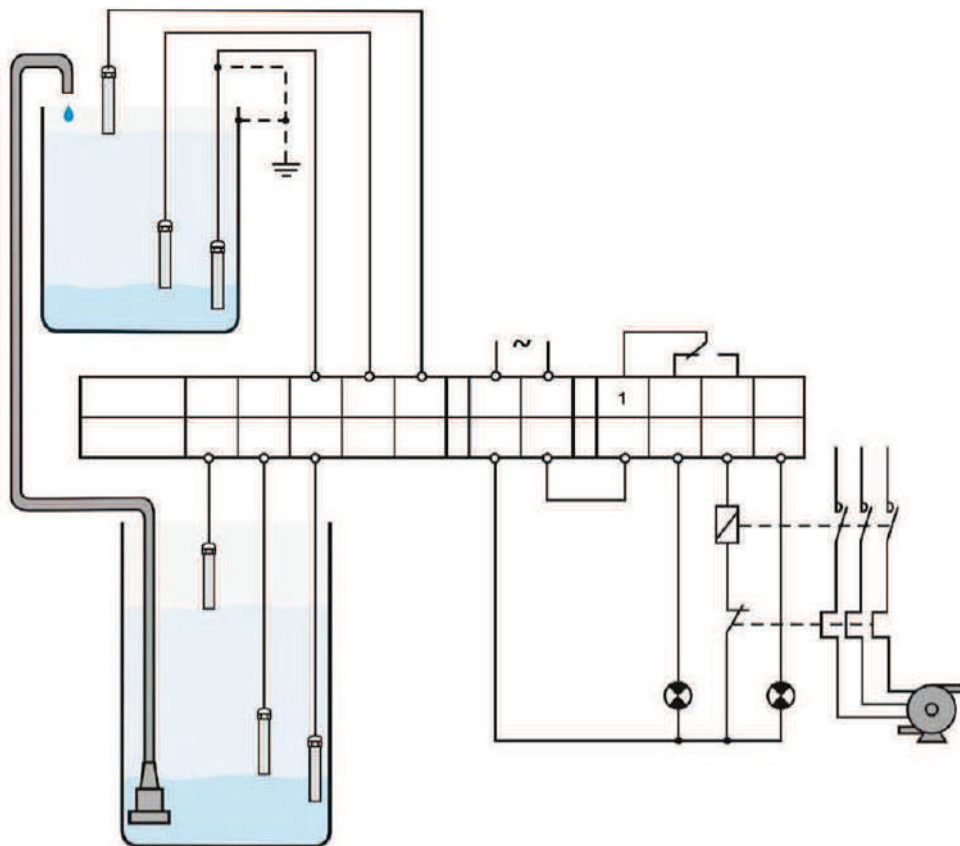
	<b>NADP</b>	<b>DNDA</b>
Neutral phase voltage	300V	
Overvoltage category	III	
Impulse voltage	4kV	
pollution degree	2	3
Degree of protection	IP 20 B	IP20
Approximate weight	250g	280g
Storage temperature	- 50...85°C	
Temp. Operating	- 20...+50°C	
Humidity	30...85% RH	
Housing	Cycloy, light gray	
Base	Lexan, light gray	-
LED indicators	Lexan, Clear	
Buttons, terminals and base	Technyl, dark blue	
Basic terminal blocks	Nickel-plated brass	-
Screw terminals	-	Brass

**Standards:** Designed and manufactured under EEC regulations.  
 Electromagnetic compatibility, directives 89/366/CEE and 92/31/CEE.  
 Electrical safety, directive 73/23/CEE.  
 Plastic materials: UL 91 V0

Dimensions



Examples of connections





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