DISIBEINT

PNFA
DNFA

LEVEL AND PHASE FAILURE CONTROL RELAY

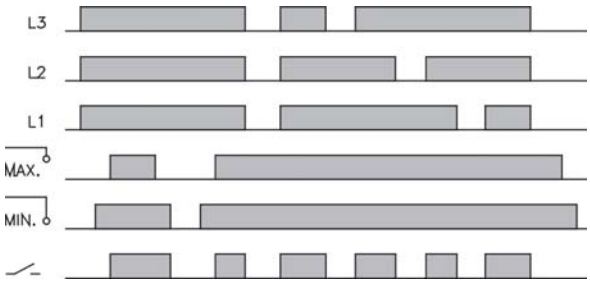
Field of application	· Level control for conductive liquids. · Simultaneous control of level and phase failure.
Operating principle	**Maimum and Minimum control.** The relay operates when the liquid reaches the electrode (5-6:PNFA; Y1/Y2:DNFA) and releases when it goes below the electrode. When a failure is produced in one or more phases, the relay releases. When only one phase fails, the relay releases at -20 % of the nominal voltage. When the three phases fail, it releases at -15%
Leds indication	Power on: Green Relay on: Red
Sensitivity	Adjustable from 10..100 KΩ
Voltage in probes line	24 VAC
Current in probes line	4mA (in shortcircuit)
Probes connection cables	Usually 1..2,5 mm² section cables are used, with good insulation and without shielding. In some installations (when the supply and probe lines are parallel in the same tube and with long distances) shielded cable is recommended. The resistance between cables and ground must be at least 200 KΩ. 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(PNFA) or Z1 (DNFA).
Resist. cables/ground	> 200KΩ
Probes cable length	No especification detailed.
Accesories	Electrodes type: NS, NR 43650, NRA 43650, NR, NRA, NT, NRP, NP, NRT2. Separators: NR.SEP, NRA.SEP Attachment nuts: NR.TUE/P, NR.TUE/T Overvoltage protector: PS-3

Reference

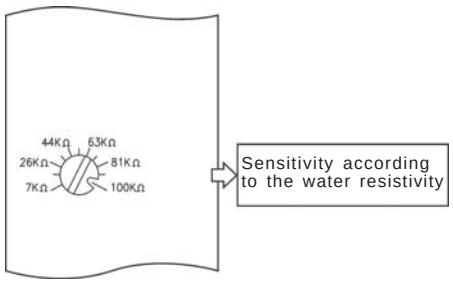
HOUSING		FUNCTION		OUTPUT		SUPPLY		RANGE	
P	Plug-in	**NF**	Level and phase failure control	**A**	1 NANC	**380**	3 x 380 VAC	**100**	10KΩ..100KΩ
D	Rail DIN					**400**	3 x 400 VAC		
						415	3 x 415 VAC		
						440	3 x 440 VAC		

To compose the reference, select one option of each column. Example: **PNFA 400 100**

Operating diagram

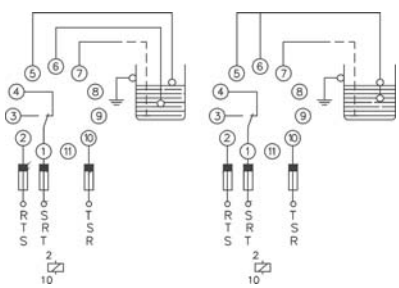


Adjustment buttons

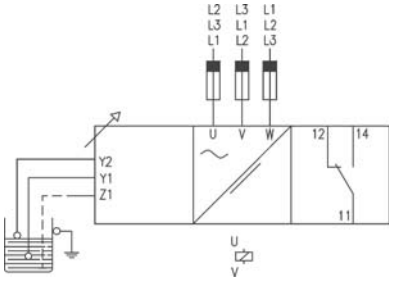


Connection diagram

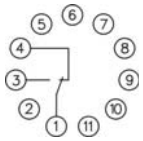
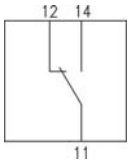
PNFA



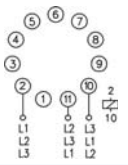
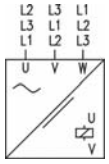
DNFA



Output relays

		PNFA	DNFA
			
Resistive load	AC	8 A / 250 V	8 A / 250 V
	DC	0,25 A / 200 V	0,25 A / 200 V
		8 A / 24 V	8 A / 24 V
Inductive load	AC	2,5 A / 250 V	2,5 A / 250 V
	DC	4 A / 24 V	4 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

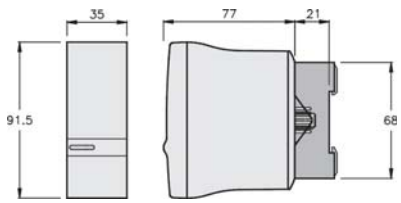
	AC	
	PNFA	DNFA
		
Galvanic isolation	Yes	
Frequency	50 / 60 Hz	
Operating margins	±10..-15%	
Positive	-	
Protected polarity	-	

Constructive and anviromental data

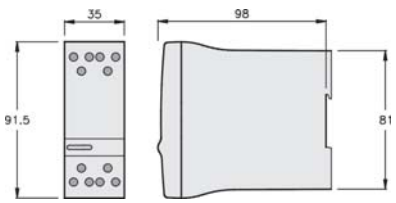
	PNFA	DNFA
Voltage phase-neutral	300 V	300 V
Overvoltage category	III	III
Rated impulse voltage	4 kV	4 kV
Pollution degree	2	3
Protection	IP 20 B	IP 20
Approximate weight	250 g	280 g
Storage temperature	-50..+85ºC	-50..+85ºC
Operating temperature	-20..+50ºC	-20..+50ºC
Humidity	30..85% HR	30..85% HR
Housing	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

PNFA



DNFA



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