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Датчики и трансмиттеры резистивные серии NCPR / NCPRI

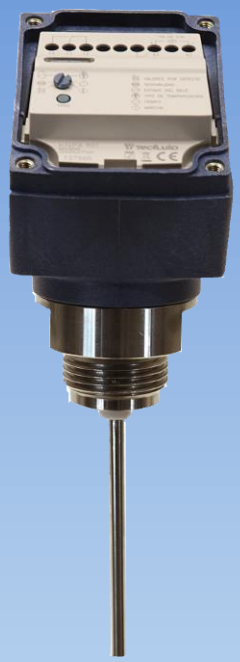
TECFLUID

TecFluid
The art of measuring

LEVEL CONDUCTIVE ELECTRODE WITH INTEGRATED AMPLIFIER Series NCPR TB / NCPRI TB

Introduction

The NCPR conductive electrodes use their own thread or flange INOX as the reference electrode and the stems are used to detect the level liquid that you want to control.
The integrated amplifier into the housing detects the differences points level and activates the relay output.
There is an adjustable time delay for the detection in the tanks containing liquid with turbulence.
You can also select the output state of the relay contacts to adapt it to the characteristics of the installation.

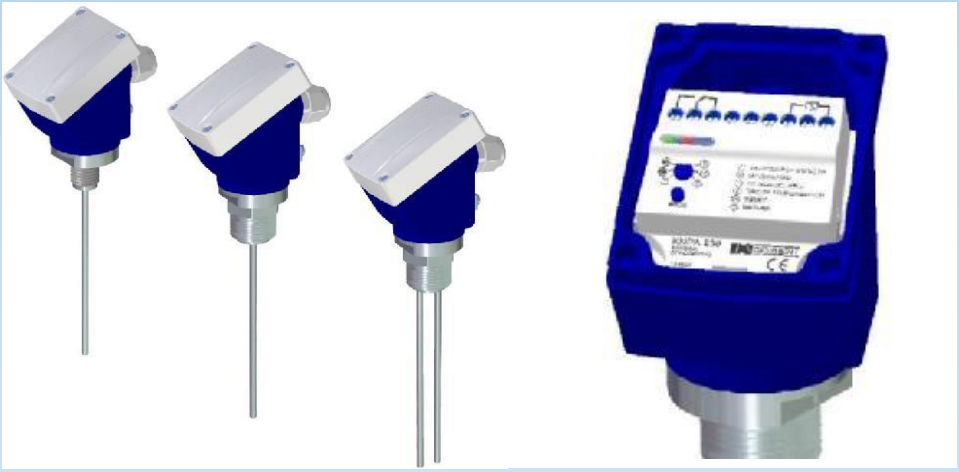


Benefits

• Simple, reliable and economic
• Electronics integrated in the housing
• Adjustable time delay 0 .. 9 seconds
• Housing IP67, rotatable 350 °
• Convenient adjustment on-site of the lengths of stems, for regulating levels
• Reference thread SS-316 or flange for models with one or two detection points.

Applications

• Water Treatment
• Pumping Stations
• Beverage Industries
• Chemical Industries
• Industrial boiler
• Cosmetology



Level conductive electrode with integrated amplifier NCPR

Sensor

Process connection :	Threaded connection 1″ AISI 316
Rods :	AISI 316 ∅5 mm
Rod length :	1000 mm (standard)
Volt. / Power supply elect. :	5 Vpp / 4 mA (short-circuit)
Process temperature :	-20..+70°C. Others temperatures, please consult us.
Process pressure :	5 Kg/cm²
Sensibility :	Ajustable 1..100 KΩ (see the table)
Rod coating :	Models with reference NREPI are supplied with a protective coating in PE or PTFE for a good detection of level points according to the device.

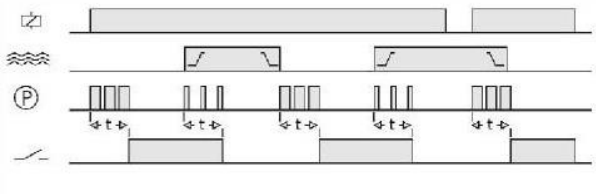
Materials and dimensions :	PBT. 64 x 95 x 110 mm
Housing protection :	IP67
Temperature :	-20...+50°C
Cable gland:	M20 x 1,5 (IP68)
Type :	Relay SPDT 6A/250VAC
Reaction time :	At the start : 800 ms Upon detection of liquid : 500 ms
Time delay :	Ajustable from 0…9 secondes. Configurable at the detection or without detection

Values of sensibility

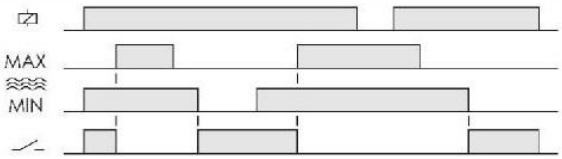
Sensib.	At the detection (kohm)	Without detection (kohm)
0	1	2
1	6	12
2	12	24
3	17	34
4	23	46
5	28	56
6	34	68
7	39	78
8	45	90
9	50	100

REFERENCE	PROCESS CONNECTION	VOLTAGE	ROD
NCPR Level sensor	**TB** Thread connection **I** SS-316 **P06** 1″	**024** 24VAC **048** 48VAC **110** 110..125 VAC **230** 220..240 VAC **901** 15..70 VAC/DC **902** 60..240 VAC/DC	**1E** 1 Rod **2E** 2 Rods **1000** 1000 mm **L** **F** PTFE
NCPRI Level sensor (Rod coating with Polyolefine)			

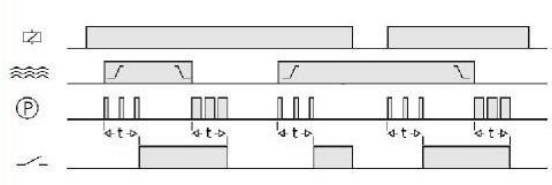
Operating diagram



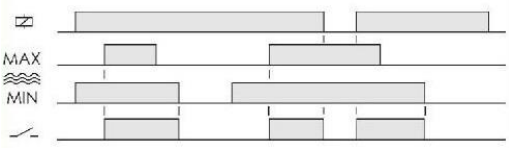
Simulation: Control of the maximum level. or filling
Relay Contacts: NC
Timing type: upon detection and non-detection
Time: Any values greater than 0



Simulation: Control for filling
Relay Contacts: NC

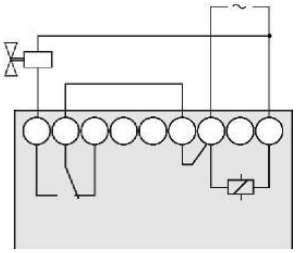


Simulation: Control of the minimum level or emptying
Relay Contacts: NO
Timing type: upon detection and non-detection
Time: Any values greater than 0

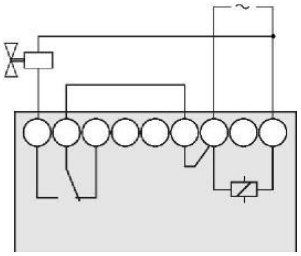


Simulation: Control for emptying
Relay Contacts: NO

Level conductive electrode with integrated amplifier NCPR



KNPA

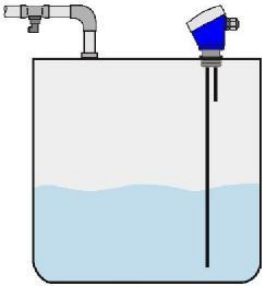


KNCA

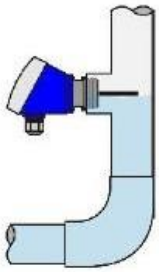
Control of the maximum level or filling control using a sensor with one rod and the KNPA controller.

Filling control using a sensor with two rods and the KNCA controller.

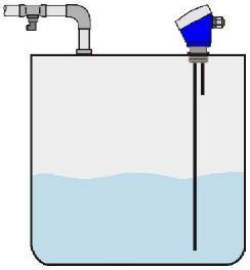
Mounting examples



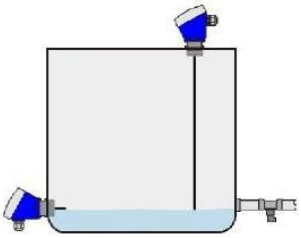
Detection of maxi. level



Detection of liquids inside the pipes



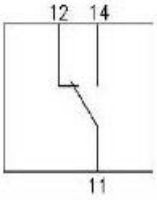
Detection of maxi. and mini level



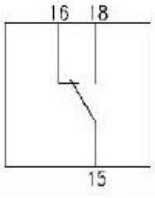
Detection of mini. level

Output relay

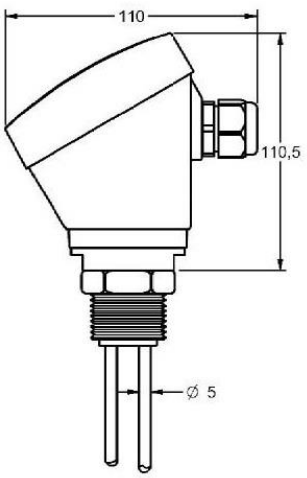
KNCA



KNPA



Dimensions



Construction and environmental data

Resistive load : CA 6 A / 250 V
CC 0,2 A / 200 V
6 A / 24 V
Inductive load: CA 3 A / 250 V
CC 3 A / 24 V
Mechanical life : > 30 x 10^6 operations
Max. mech. operations : 72.000 operations / hour
Electrical lifetime full load : 350 operations / hour
Contact material: AgNi 0.15
Maximum voltage: 400 VAC
Operating voltage: 400 VAC
Voltage between relays: 1000 VAC
Voltage between contacts: 1000 VAC
Voltage coil/contact: 4000 VAC
Distance coil/contact: 8 mm
Isolation resistance: > 10^4 MΩ

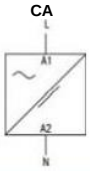
	KNCA / KNPA
Voltage phase-neutral:	300 V
Overvoltage category:	I I I
Impulse voltage:	4 kV
Pollution degree:	2

Level conductive electrode with integrated amplifier NCPR

Protection degree:	IP 20
Storage temperature:	-50°C +85°C
Operating temperature:	-20°C +50°C
Humidity :	30…85% HR
Housing :	Cycoloy – Light grey
LED lights :	Lexan – Transparent
Buttons, terminals and blade :	Technyl – Dark blue
Terminal :	Brass

Norms : Designed and manufactured under CEE norms
Electromagnetic Compatibility 2004/108/CEE.
Low Voltage Directive 2006/95/CEE
Plastics : UL 91 V0

KNCA/KNPA



CA

CA/CC

Voltage supply

	CA	CA/CC
Galvanic isolation:	Yes	Yes
Frequency :	50 / 60 Hz	-
Operating margins:	+/-10%…-15%	-
Positive :	-	Terminal A1
Protected polarity :	-	Yes

NR.SEP/P

NR.SEP/T

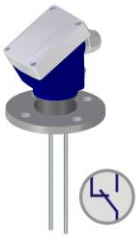
Properties

Application :	Rods separator	
Material :	PVC	PTFE
Color :	Red	White
Rod diameter :	5 mm	

Others corresponding probes

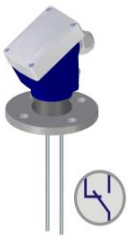
NCPR DB INOX

- With 1 Rod, only one detection point
- With 2 Rods, detection of maxi. and mini
- Process connection by flange DIN



- With 2 Rods, only one detection point
- With 3 Rods, detection of maxi. and mini level
- Model TB, process connection by thread
- Model DB, process connection by flange DIN

NCVR TB INOX



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