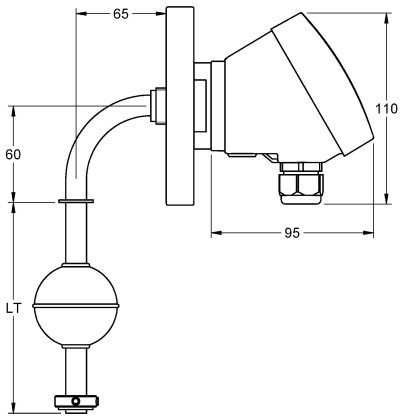
DISIBEINT

# IMN DBA INOX

**LEVEL MAGNETIC SWITCH**




## General

| | |
|---|---|
| Opearting principle | The IMN level magnetic sensors are based on the action of a reed switch located inside the tube, which is activated by a magnet housed inside the float and moves due to the thrust of the liquid. |
| Application | · For the detection of one or more points in liquid level.<br>· Used in maneuvers for filling, emptying, overflow alarm, etc. |
| Manufacturing | Are customized to suit the installation conditions. |

## Housing

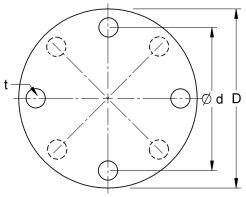
| | |
|---|---|
| Electrical connection | Connection housing. PBT. 64x95x110 mm |
| Protection | IP67 |
| Temperature ($T_a$) | -20..+80 ºC |
| Cable gland | M20 x 1,5 mm. PA. IP68 |
| Ø Electric hose | 6..12 mm |

## Body

| | |
|---|---|
| Guied tube and stops | SS AISI316 (1.4401). Ø12 mm |
| Length | 90..3500 mm |
| Temperatura | -40..+125 ºC |
| Mounting position | Bent in 90º elbow |

## Process connection

| Flange | DN25 | DN32 | DN40 | DN50 | DN100 |
|---|---|---|---|---|---|
| Material | SS AISI316 (1.4401) | | | | |
| n x t (mm) | 4x14 | 4x18 | | | 8x18 |
| Ø d (mm) | 85 | 100 | 110 | 125 | 180 |
| D (mm) | 115 | 140 | 150 | 165 | 220 |
| Thickness (LCP) (mm) | 18 | | | | 20 |




## Floats

| Model | FCI602M13 | FEI601M13 |
|---|---|---|
| Material | SS AISI316L (1.4404) | |
| Dimension (mm) | Ø 44x63 | Ø 52x52 |
| Pressure (kg/cm²) | 15 | 30 |
| Density (g/cm³) | e > 0,75 | e > 0,76 |
| FS / FH (mm) | 15,8 / 47,2 | 12,5 / 39,5 |
| |  |  |

## Contacts

| | |
|---|---|
| Nr of contacts | 1..3 |
| Class | NO: 120 WVA / 250 VAC-3A<br>NC-NO/NC: 60 WVA / 230 VAC-1A |
| Distance between them | > 40 mm |

## Protection

| | |
|---|---|
| Insulated | Filled with epoxy resin |

## How to determine the sensor settings

Determine the total length according to the characteristics of the shell and the liquid level to be controlled.

According to the maneuver you wish to perform, determine the amount, location and type of contacts.
Use the table below to define these characteristics.

Contacts: To set the type of contact (NO, NC, NONC) should be without the presence of the float. For example, if you want the lower end of the sensor contact opens when the tank runs out of fluid, seek an NC contact for the position.

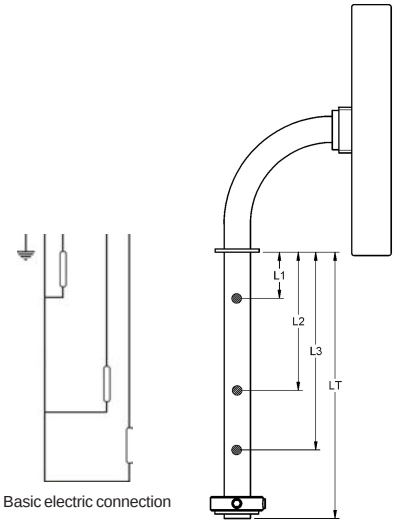
Direction of action ( ): Set the direction of action of the float (the filling or emptying) allows more precise adjustment of the position of the contacts to the point of desired performance.

Electrical connection: If not otherwise specified explicitly, provide a common connection to all the contacts and an active connection for each of them, according to the diagram below.

Additional floats: The sensor comes equipped by default with a single float, the lower stop and if required, the upper stop. Can request as many additional floats as many contacts as necessary.

Conditions of work: Check that the conditions of pressure, temperature and density of your system match those offered by the model chosen. If you have questions regarding the behavior of materials in contact with the liquid you want to control, see chemical resistance chart on our website.

Apart from the possibilities listed here, there are others such as other floats, various electrical connections, etc..
For other connectivity options and combination of floats and contacts, see our document “Connections for Switches Magnetic Level” you will find on the “Utilities / Tables” our website.



Basic electric connection

| | mm | NO | NC | NONC | ↑ | ↓ | Stop |
|---|---|---|---|---|---|---|---|
| L1 | | | | | | | |
| L2 | | | | | | | |
| L3 | | | | | | | |
| LT | | | | | | | |

Use this document to define the data of sensor and attach it at the time of ordering.
Specify in mm. total length of the sensor.

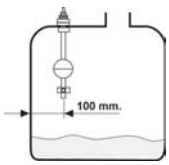
Specify in mm. the position of each of the contacts used in your application.

Place an “X” the type and direction of action of each contact.
In the composition table references check boxes next to the selected features.

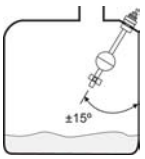
| REFERENCE | PROCESS | FLOAT | TOTAL LENGTH | Nº CONTACTS | Nº FLOATS |
|---|---|---|---|---|---|
| IMN DBA INOX | ☐ **P34** DN 25<br>☐ **P35** DN 32<br>☐ **P36** DN 40<br>☐ **P37** DN 50<br>☐ **P39** DN 100 | ☐ **F14** FCI602M13<br>☐ **F25** FEI601M13 | **L** 90..3500 mm | ☐ **C1** 1 contact<br>☐ **C2** 2 contacts<br>☐ **C3** 3 contacts | ☐ **N1** 1 float<br>☐ **N2** 2 floats |

To compose a reference, select an option from each of the columns. Example: **IMN DBA INOX P36 F14 L500 C1 N1**

### Advice installation

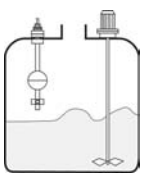


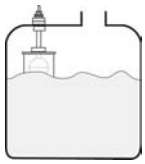
If the tank is metal walls, the probe will separate from them at least 100 mm.

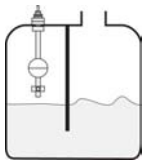


The maximum slope should be ±15º

### Installation in areas with turbulences


Place the sensor as far as possible from areas of turbulence.


Still pipe. Protects the race of the float of the turbulence.


Separating wall or discouragement.


PSIA, DSIA relay: Differential control of max. and min. by timing.

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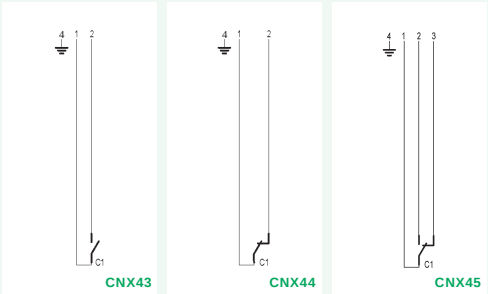
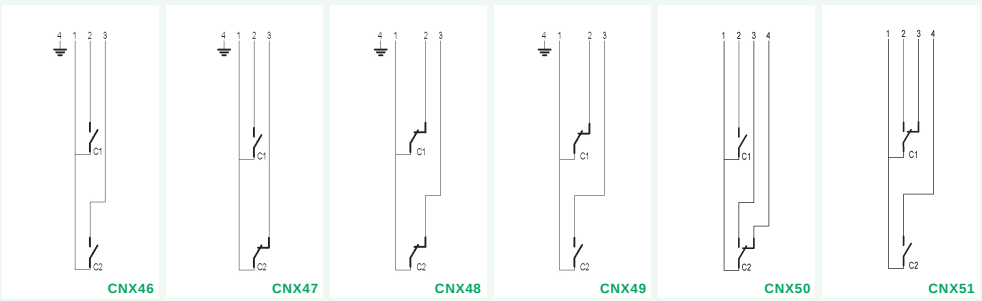
## ELECTRICAL CONNECTION EXAMPLES

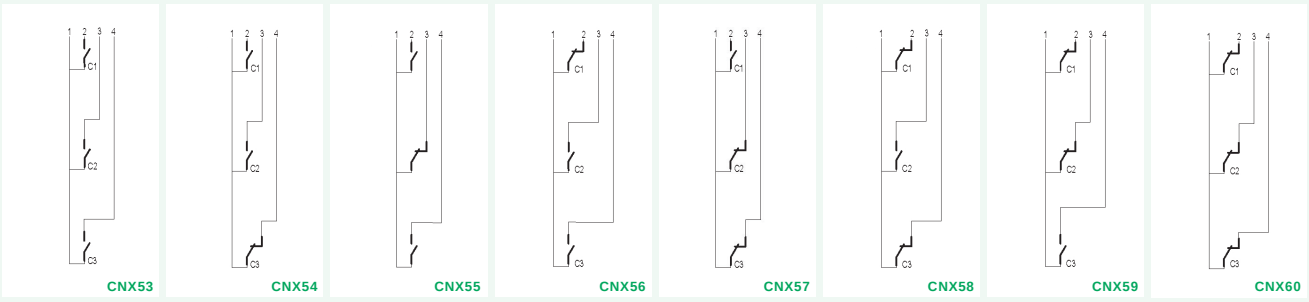
### 1 CONTACT




### 2 CONTACTS



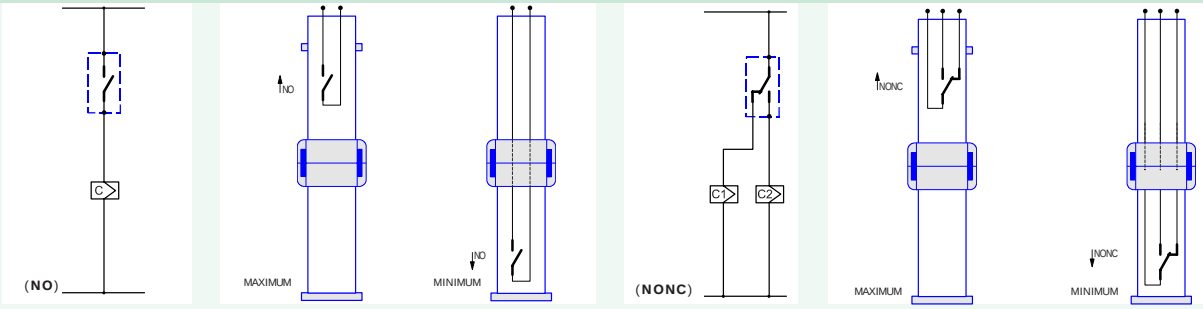

### 3 CONTACTS




## EXAMPLES TO APPLICATION

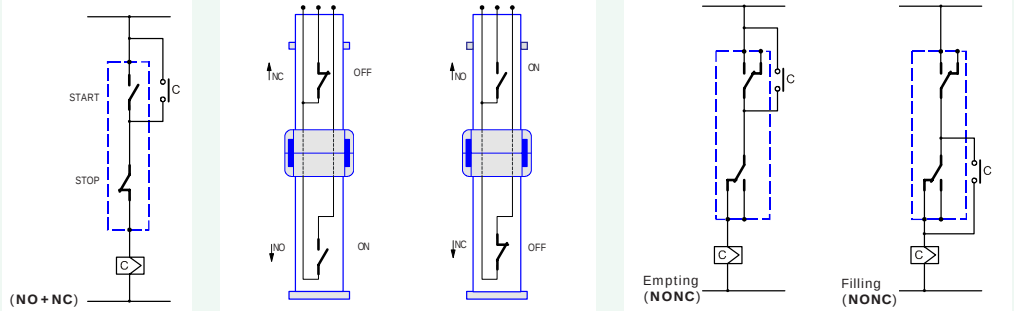
### 1 CONTACT

#### CONTROL TO ONE MAXIMUM OR MINIMUM LEVEL



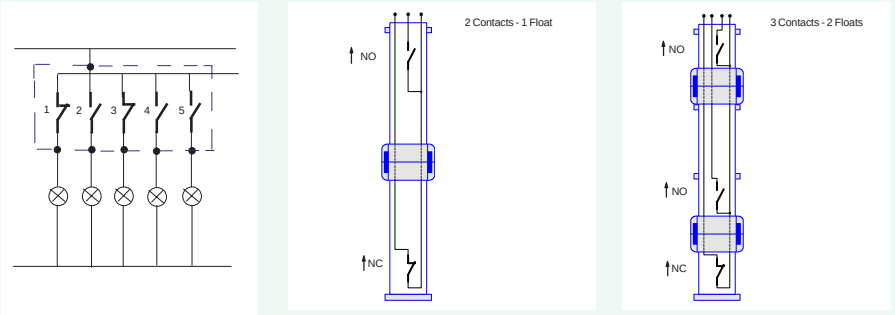

### 2 CONTACTS

#### START-STOP WITH INTERLOCKING




### 3 CONTACTS

#### START-STOP EMPTING + ALARM TO MINIMUM LEVEL





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