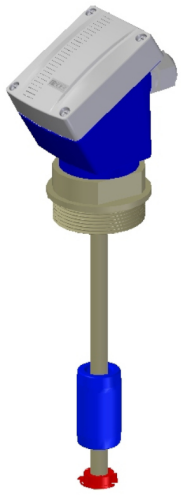
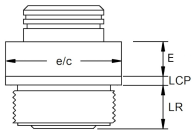
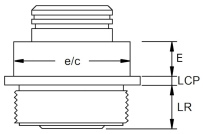
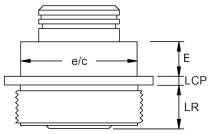
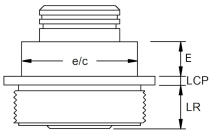
IMN TB PP PA

Magnetic level switch



General	
Operating principle	Magnetic level switches IMN are based on the action of reed contacts located inside the tube and are activated by a magnet housed inside the float, which moves due to the push of the liquid.
Application	· For the detection of a single level point in liquids. · Used in filling maneuvers, emptying, overfill alarm, etc.
Manufacturing	They are customized to suit the installation conditions.
Head	
Electrical connection	Connection housing. PBT. 64x95x110 mm
Protection	IP67
Temperature	-20 .. +80 ºC
Cable gland	Cable gland M20 x 1,5. PA. IP68. Cable: 6..12 mm.
Body	
Guide tube	Ø12 mm. PP (Polypropylene)
Length	90..3500 mm
Temperature	-40 .. +125 ºC
Mounting position	Vertical, ±15º

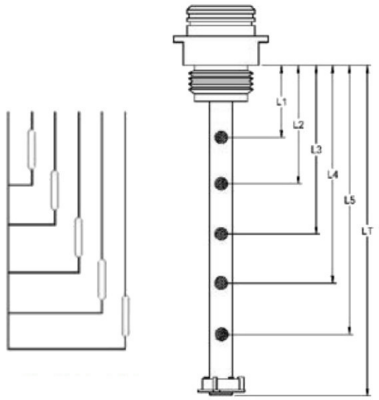
Process connection

Thread	1" G	1" 1/4G	1" 1/2G	2" G
Materiall	PP	PP	PP	PP
e/c (mm)	40	50	50	50
LR (mm)	19	19	19	19
LCP (mm)	15,5	15,5	15,5	15,5
				

Float	
Model	FCPA07M14
Material	PA (polyamide)
Dimensions	Ø29 x 50 mm
Pressure	3 kg/cm²
Density	e > 0,6 g/cm³
FS / FH (mm)	20/30 mm
	

Contacts	
Number of contacts	1 ..5
Class	NO: 120 VA/W - 250 VAC/DC-3A NC: 60 VA/W - 230 VAC/DC-1A NO/NC: 60 VA/W - 230 VAC/DC-1A
Distance between each other	>= 40 mm
Protection	
Standard	Normal execution, without internal filling. Applicable to the vast majority of applications.
Protected	Anti-condensation effect. In installations where there are large temperature differentials.
Encapsulated	

HOW TO DETERMINE THE SENSOR OPTIONS

	Determine the total length according to the characteristics of the tank and the liquid level you want to control. Depending on the maneuver you want to perform, determine the number, position and type of contacts. Use the table below to define these characteristics.
Electrical connection	If it is not expressly detailed, a common connection will be provided for all contacts and an active connection for each of them, according to the diagram below.
Additional floats	The sensor is equipped by default with a single float, the lower stop and, if required, the upper stop. As many additional floats can be requested as the number of contacts required.
Operating conditions	Remember to check that the pressure, temperature and density conditions of your installation match those offered by the chosen model. If you have any doubts regarding the behavior of the materials in contact with the liquid you want to control, consult the "Chemical resistance table" on our website.
	Apart from the possibilities that are detailed here, there are others such as other floats, different electrical connections, etc. To find out other connection options and combination of floats and contacts, consult our document "Connections for Magnetic Level Switches" that you will find in the "Utilities/Tables" link on our website.
Basic electrical connection	
	To define the type of contact (NO, NC, NANC) it must be understood without the presence of the float. For example, if you want a contact to open at the lower end of the sensor when the tank runs out of liquid. you must order a NC contact for that position.
Configuration table	

	mm	NO	NC	NONC	↑	↓	Stop
L1							
L2							
L3							
L4							
L5							
LT							

Use this document to define the sensor data and attach it when placing your order.

Specify the total length of the sensor in mm.

Specify in mm the position of each of the contacts that you will use in your application.

Mark with an "X" the type and sense of action of each contact.

In the case of using additional floats, mark with an "X" between which contacts the separator stops should be located.

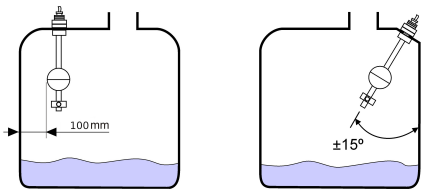
COMPOSITION OF THE REFERENCE

IMN TB PP PA V ☐ P ☐ F ☐ L ☐ C ☐ N ☐

Version	Standard	1
	Protected	2
	Encapsulated	3
Process	1" G	06
	1" 1/4 G	07
	1"1/2 G	08
	2" G	10
Float	FCPA07M14	55
Total length	100..3500 mm	
Nº contacts	1 contact	1
	2 contacts	2
	3 contacts	3
	4 contacts	4
	5 contacts	5
Floats nr.	1 float	1
	2 floats	2
	3 floats	3

Example IMN TB PP PA V1 P08 F55 L1000 C3 N2

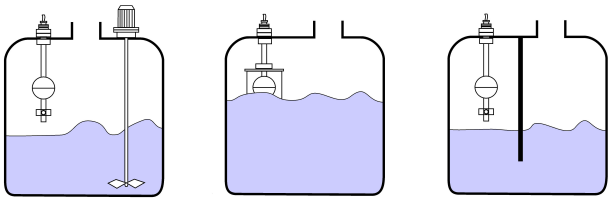
Installation tips



If the tank has metal walls, the sensor must be separated from these at least 100m.

The maximum tilt should be ±15°.

Installation in areas with turbulence



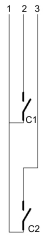
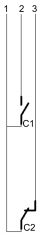
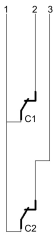
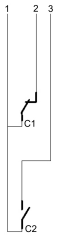
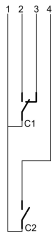
Locate the sensor as far as possible from areas with turbulence.

Stilling tube. Protects the float race from turbulence.

Separating or deterrent wall.

Relay PSIA, DSIA:
Differential level control max. and min by timing.

WIRING DIAGRAMS FOR MAGNETIC SWITCHES

1 Contact	CNX1	CNX2	CNX3			
						
2 Contacts	**CNX4**	**CNX5**	**CNX6**	**CNX7**	**CNX8**	**CNX9**
						
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	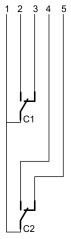	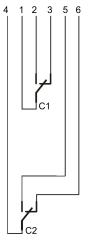				
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	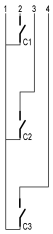	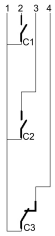	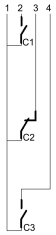	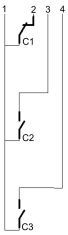	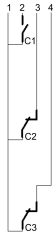	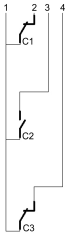
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	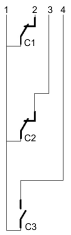	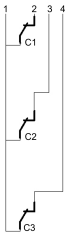	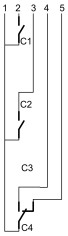	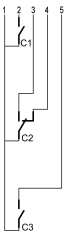	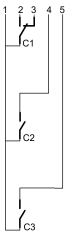	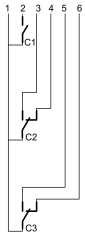

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	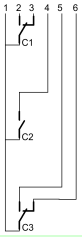	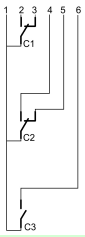	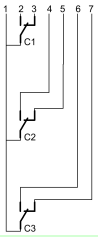			
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	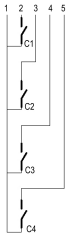	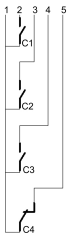	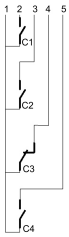	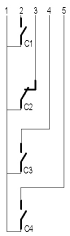	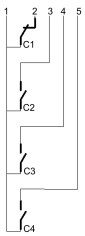	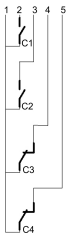
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	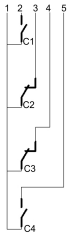	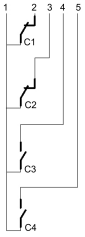	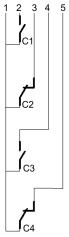	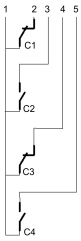	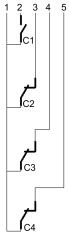	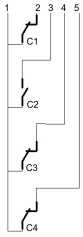
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	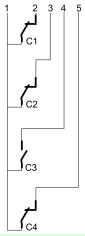	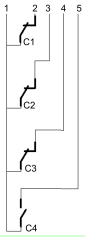	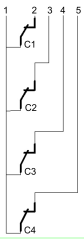	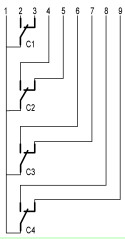		
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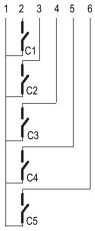
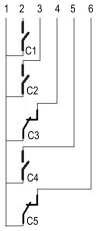
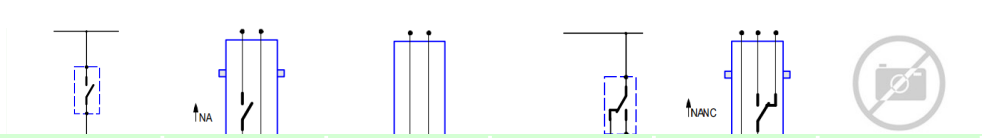
						

APPLICATION EXAMPLES

1 Contact



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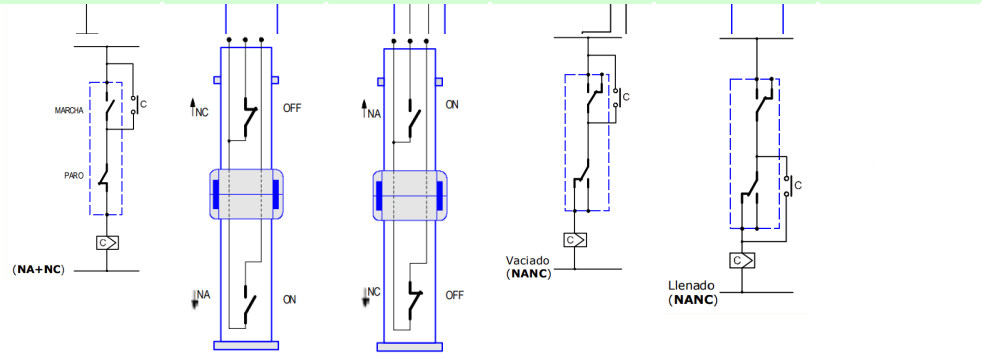
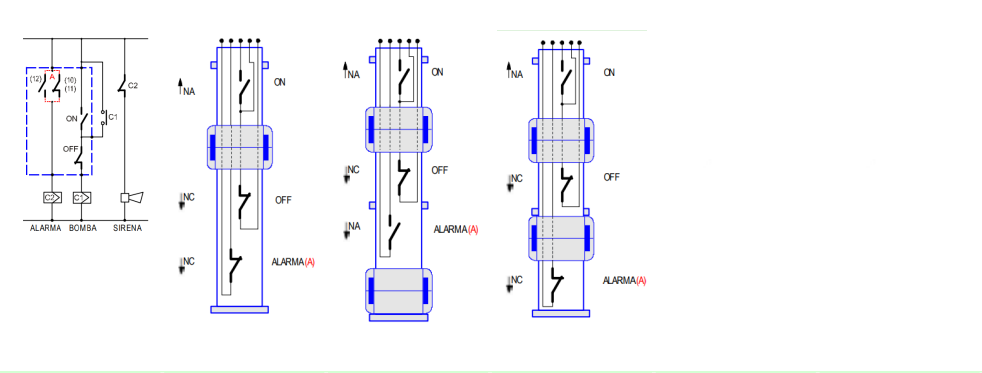
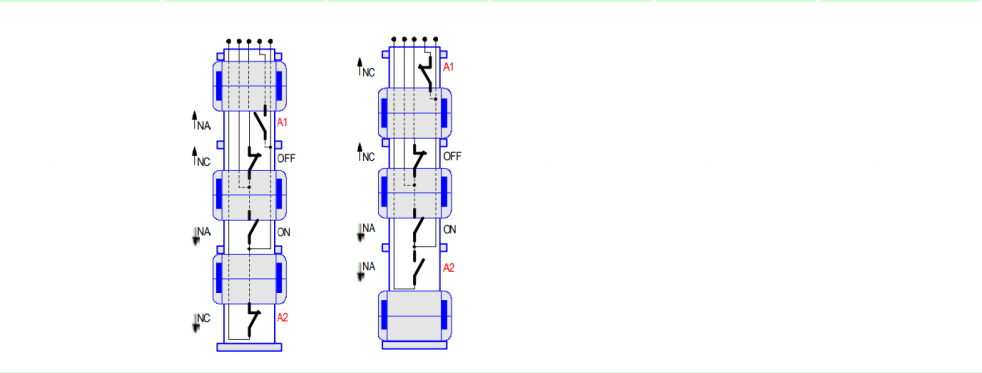
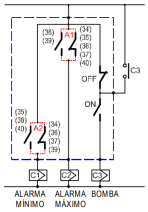


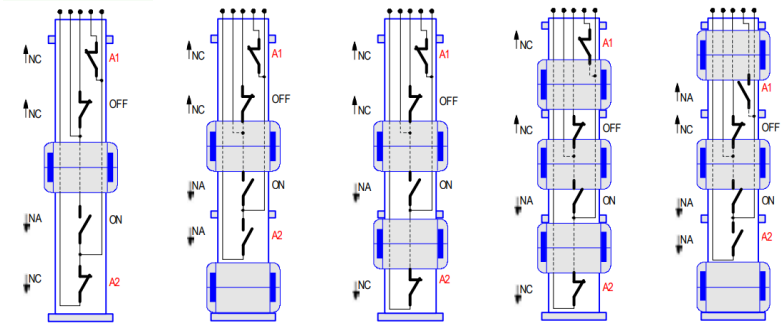
3 Contacts



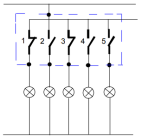


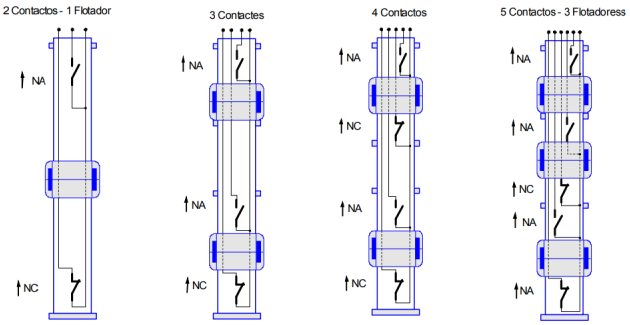
4 Contacts





5 Contacts





Bistable contacts