



LEVEL SWITCHES

The level switches type IL 4 - IL 5 - IL 6 are instruments suitable for all the applications where a liquid control in tanks and autoclaves is required. The control is done by one or more switch groups intervening at the reaching of a preset level. The working simplicity and the good quality of the construction materials make these instruments very reliable in the level regulation for all industrial applications.

Other features besides the ones already mentioned are:

- possibility of head mounting, side mounting or with an external expansion jar;
- different construction materials depending on different kinds of fluids to be controlled.

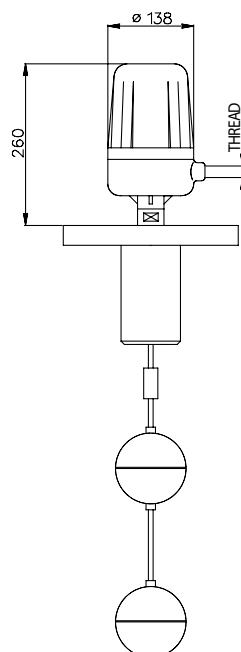


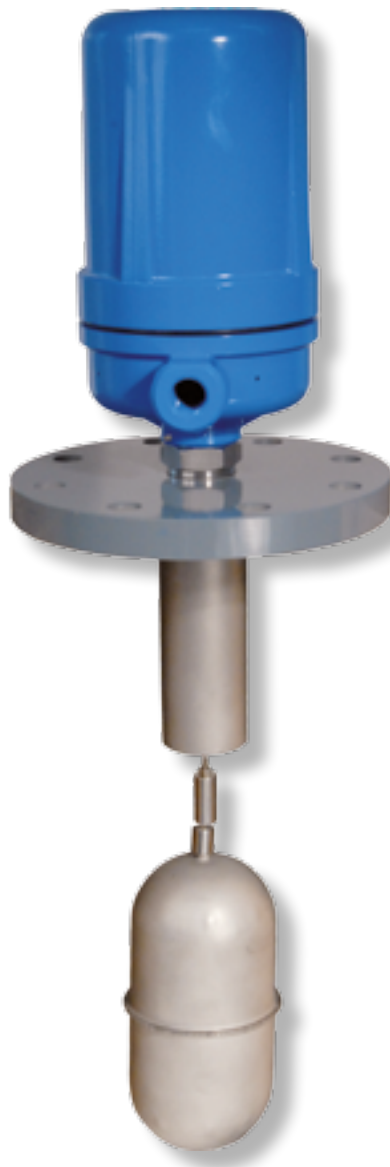
Level switches type IL 4

The level switches type IL 4 are hydrostatic thrust regulators for head mounting with one or two switch groups controlled by one, two or three displacers. They are suitable for all the applications where there are working pressures up to 64 bar, temperatures up to 250° C. and fluids with a minimum specific gravity of 0.7 Kg/dm³. Their working principle is based on the movement of the switch caused by a force resulting between the hydrostatic thrust of the floats, immersed in the liquid whose level must be controlled, and

the tension of a spring. This spring is precharged, when the tank is empty, by the weight of the floating elements, it discharges itself as the liquid submerges the displacers. In fact these displacers are heavier than the liquid they are immersed in, they transmit the hydrostatic thrust through the rope they are fixed on, discharging the spring on which they weigh when there is no liquid. The electric part is contained in an aluminium weather-proof case with IP 65 protection (standard type) or in a flameproof case following

the EN 50.018 (CEI 31.1) - EEx-d IIB T6 or EEx-d IIC T6 (request type) with threaded electric connection 1/2" UNI 6125 F. The level switches type IL 4 are supplied with switch groups on which only one SPDT contact is mounted. On request they can be supplied with two SPDT contacts in parallel. The IL 4 series is composed by the following models: IL 4/A - IL 4/B - IL 4/C.



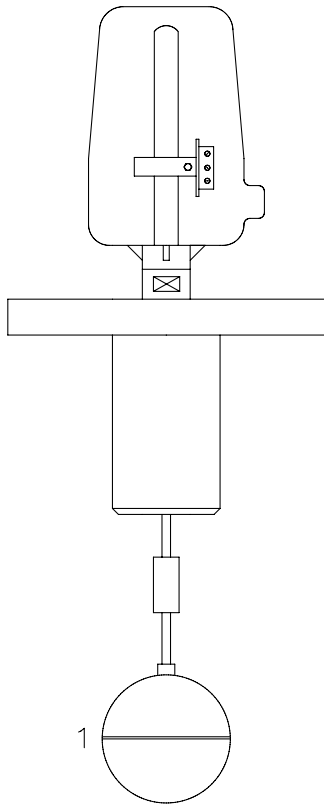


TYPE IL 4 FEATURES

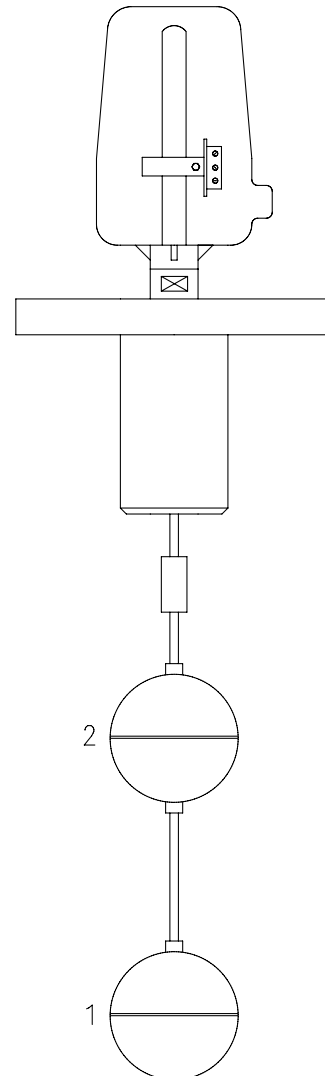
STANDARD FLANGES		DN
FLANGE ANSI B16.5 150 LB - 300LB	FLANGE UNI 2223 PN 10 - PN 25	
2" 1/2	DN65	Ø 60X100
3"	DN80	Ø 70X180
4"	DN100	Ø 90X180

BODY	Standard MAX. TEMPERATURE	MAX. TEMPERATURE with cooling fin
Carbon steel	120° C.	250° C.
S/S AISI 304	120° C.	250° C.
S/S AISI 316	120° C.	250° C.
P.V.C.	50° C.	N.P.
Polipropilene	100° C.	N.P.
P.T.F.E.	120° C.	200° C.
P.V.D.F.	120° C.	150° C.

IL 4A



IL 4B



COMPONENTS

1 DISPLACERS 1 SWITCH

Displacers supporting rope max. length: 10m.

FEATURES

50 mm. fixed differential adjustable on the whole rope length

INTERVENTION FEATURES

- It opens (or closes) for increasing level
- It closes (or opens) for decreasing level.

COMPONENTS

2 DISPLACERS 1 SWITCH

Displacers supporting rope max. length: 10m.

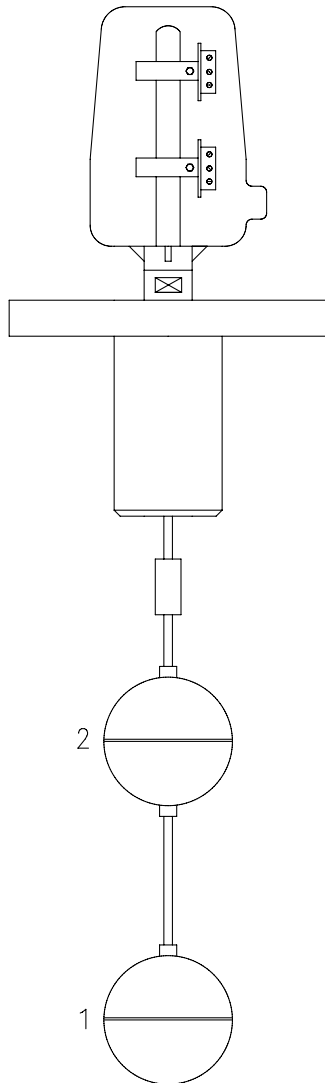
FEATURES

Differential adjustable between a 250 mm. min. value and a 9600 mm. max. value

INTERVENTION FEATURES

- It opens (or closes) for increasing level
- It closes (or opens) for decreasing level.

IL 4C



COMPONENTS

2 DISPLACERS 2 SWITCH

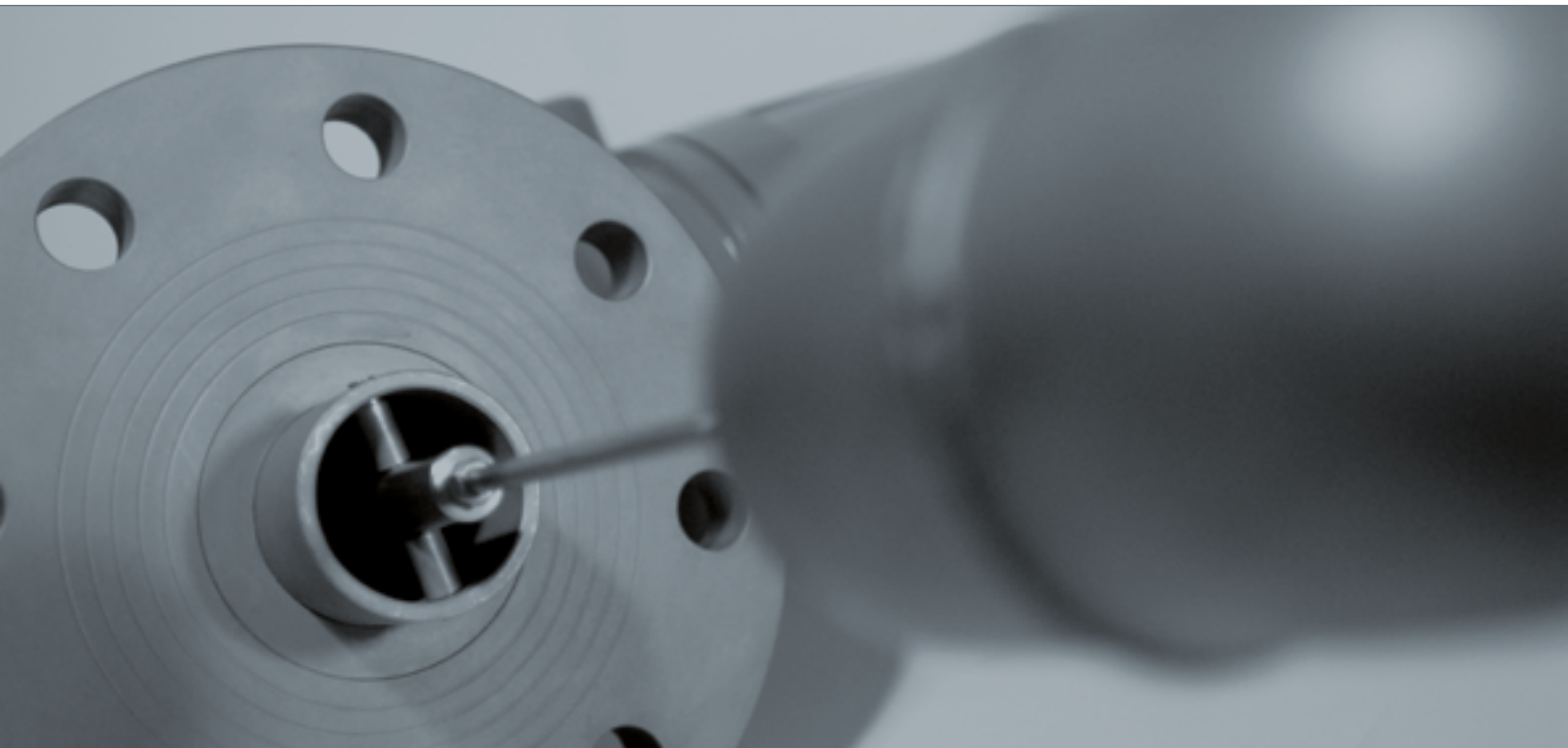
Displacers supporting rope max. length: 10m.

FEATURES

50 mm. fixed differential adjustable on the whole rope length

INTERVENTION FEATURES

- 2.- It opens (or closes) the upper switch for increasing level
- It closes (or opens) the upper switch for decreasing level
- 1.- It opens (or closes) the upper switch for increasing level
- It closes (or opens) the upper switch for decreasing level

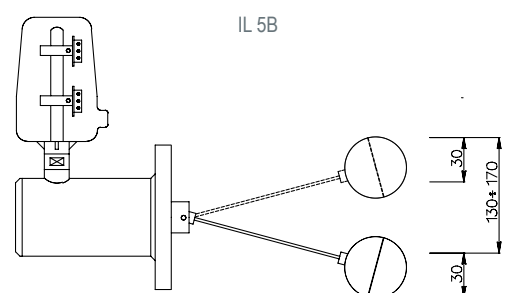
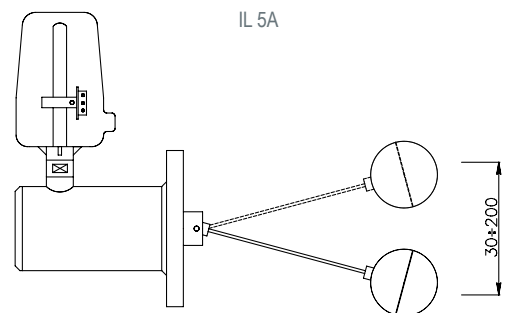
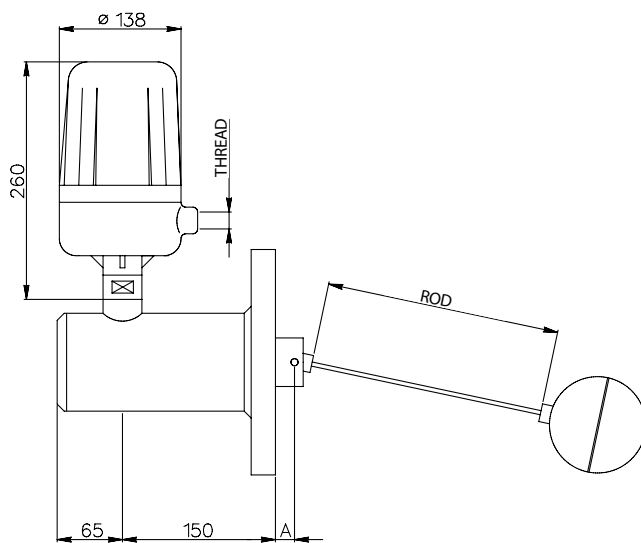


Level switches type IL 5

The level switches type IL 5 are float regulators for lateral mounting with one float and with one or two switch groups in exchange. They are suitable for the applications where there are working pressures up to 64 bar, temperatures up to 250° C. and fluids with a minimum specific gravity of 0.7 Kg/dm³. The working principle of level regulators type IL 5 is based on the magnetic connection

between the float whose rod is pivoted on a fulcrum, and the switch group in exchange. The electric part is contained in an aluminium weather-proof case with IP 65 protection (standard type) or in a flameproof case following the EN 50.018 (CEI 31.1) - EEx-d IIB T6 or EEx-d IIC T6 (request type) with threaded electric connection 1/2" UNI 6125 F.

The level switches are supplied with switch groups on which only one SPDT group is mounted. On request they can be supplied with two SPDT contacts in parallel. The IL 5 series is composed by the following models: IL 5/A - IL 5/B.



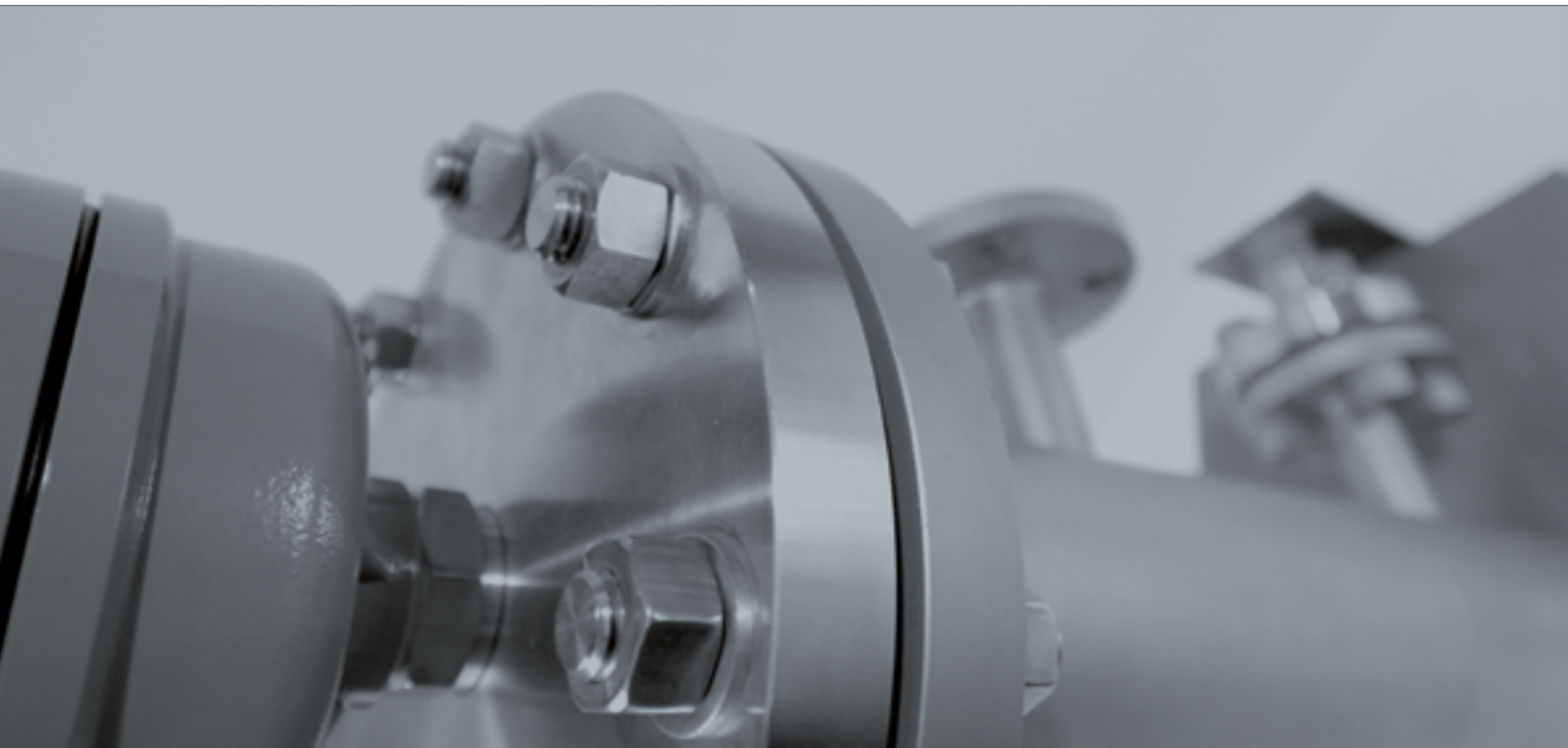


ROD	DIFFERENTIAL
100	30
150	80
200	100
250	120
300	140

TYPE	SWITCH
IL 5A	1
IL 5B	2

TYPE IL 5 FEATURES		
STANDARD FLANGES		FLOAT
FLANGE ANSI B16.5 150 LB - 300LB	FLANGE UNI 2223 PN 10 - PN 25	
3"	DN80	Ø 70x180
4"	DN100	Ø 90x180
5"	DN125	Ø 90x180

BODY	Standard MAX. TEMPERATURE	MAX. TEMPERATURE with cooling fin
Carbon steel	120° C.	250° C.
S/S AISI 304	120° C.	250° C.
S/S AISI 316	120° C.	250° C.

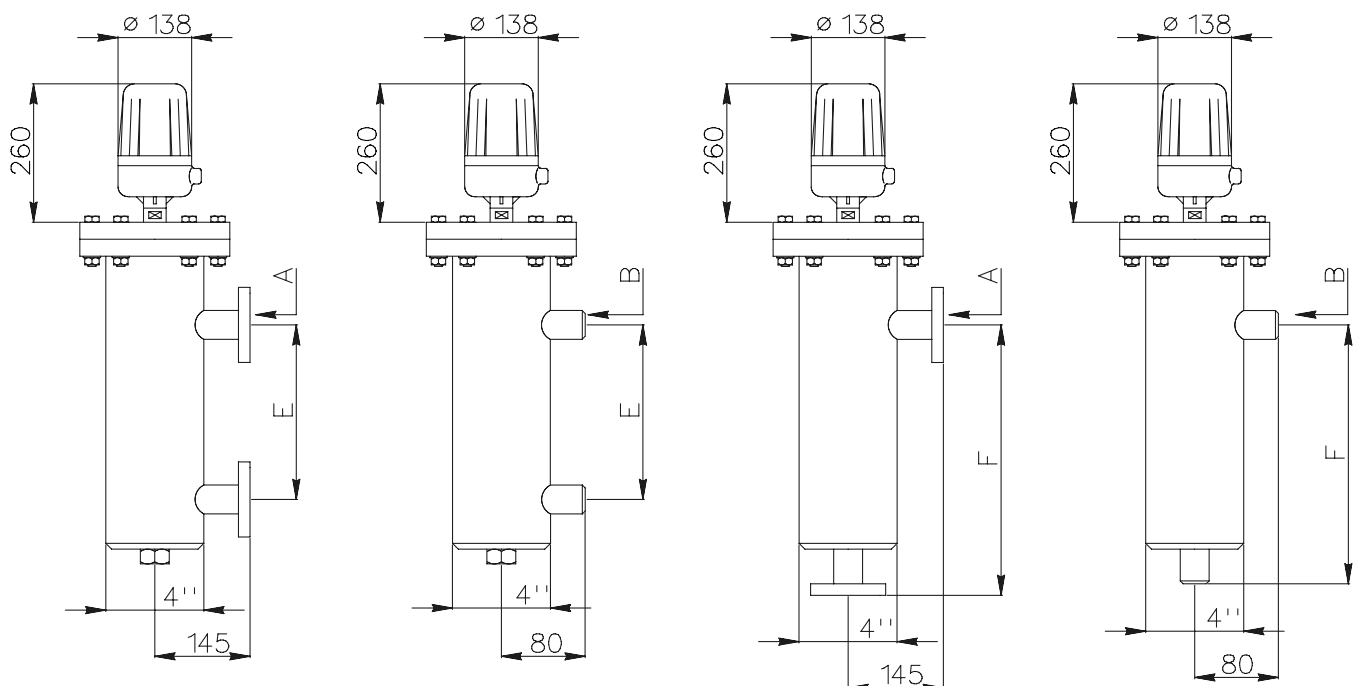


Level switches type IL 6

The level switches type IL 6 are hydrostatic thrust regulators for external lateral mounting with inspectionable body and with one or two switch groups controlled by one or two floats. They are suitable for the applications where there are working pressures up to 64 bar, temperatures up to 250° C. and fluids with a minimum specific gravity of 0.7 Kg/dm³. They have working features similar to the ones of the switches type IL 4. The

electric part is contained in an aluminium case with IP 65 electric protection (standard type) or in a flameproof case following the EN 50.018 (CEI 31.1) - EEx-d IIB T6 or EEx-d IIC T6 (request type) with threaded electric connection 1/2" UNI 6125 F. The level switches type IL 6 are supplied with switch groups on which only one SPDT contact is mounted. On request they can be supplied with two contacts in parallel.

The process connections can be threaded or flanged with side-side or bottom-side construction. The connection sizes and distances of the standard models. Different distances and sizes can be made on request. The IL 6 series is composed by the following models: IL 6/A - IL 6/B - IL 6/C.



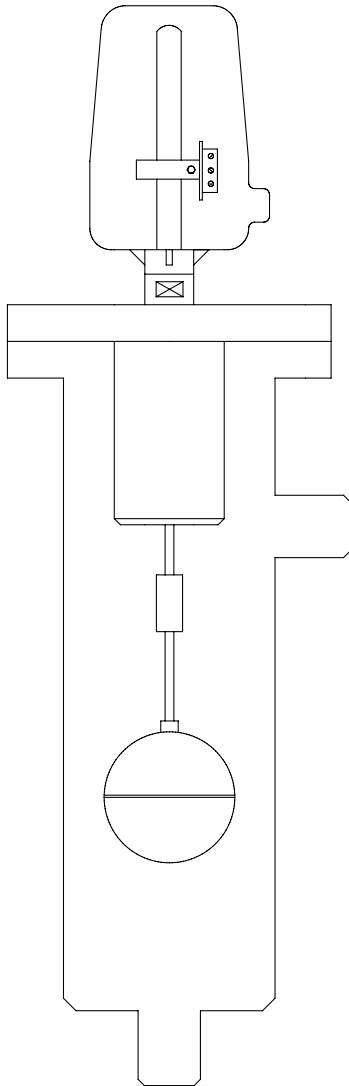


STANDARD CONNECTIONS			
FLANGE A		THREAD B	
1" ANSI B16.5 150 LB	DN25 PN16 UNI 2223	1" NPT F.	G 1" F.

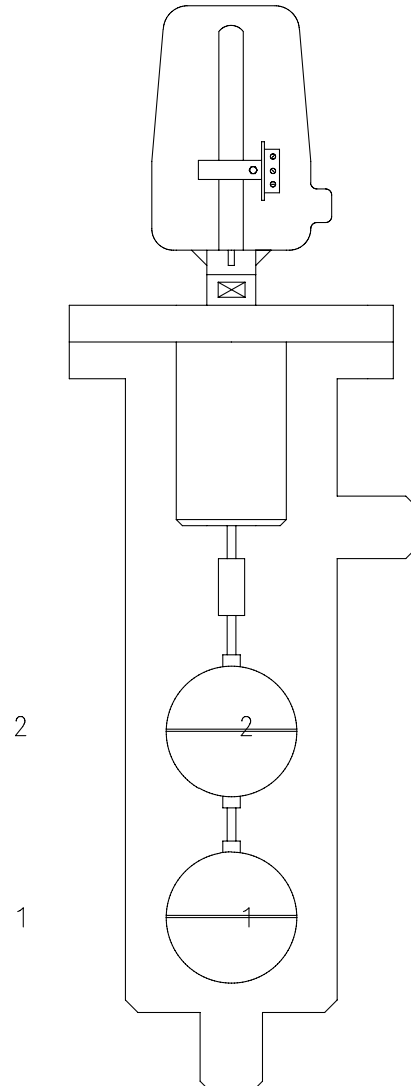
STANDARD INTERAXLE			
IL 6A		IL 6B - IL 6C	
E	178	E	400
F	330	F	552

BODY	Standard MAX. TEMPERATURE	MAX. TEMPERATURE with cooling fin
Carbon Steel	120° C.	250° C.
S/S AISI 304	120° C.	250° C.
S/S AISI 316	120° C.	250° C.

IL 6A



IL 6B



COMPONENTS

1 DISPLACERS 1 SWITCH

Maximum distance between connection centre: 1500 mm.

FEATURES

50 mm. fixed differential adjustable on the whole rope length

INTERVENTION FEATURES

- It opens (or closes) for increasing level
- It closes (or opens) for decreasing level

COMPONENTS

2 DISPLACERS 1 SWITCH

Maximum distance between connection centre: 1500 mm.

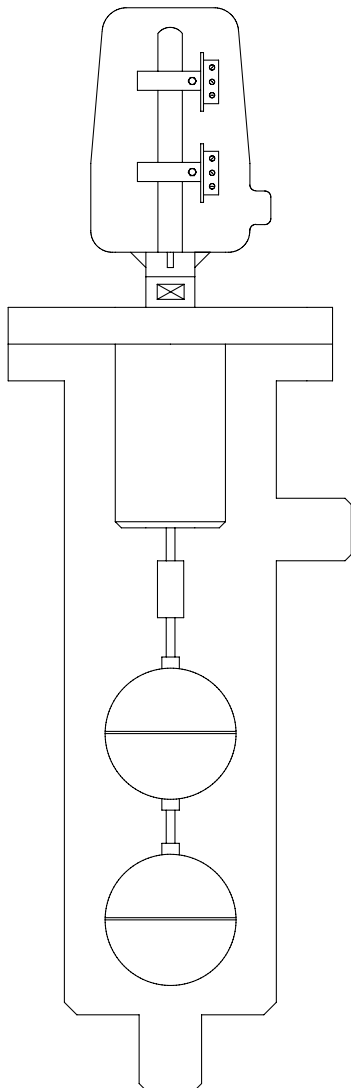
FEATURES

Differential adjustable between a 250 mm. min. value and a 1200 mm. max. value

INTERVENTION FEATURES

- 2. - It opens (or closes) for increasing level
- 1. - It closes (or opens) for decreasing level

IL 6C



COMPONENTS

2 DISPLACERS 2 SWITCH

Maximum distance between connection centre: 1500 mm.

FEATURES

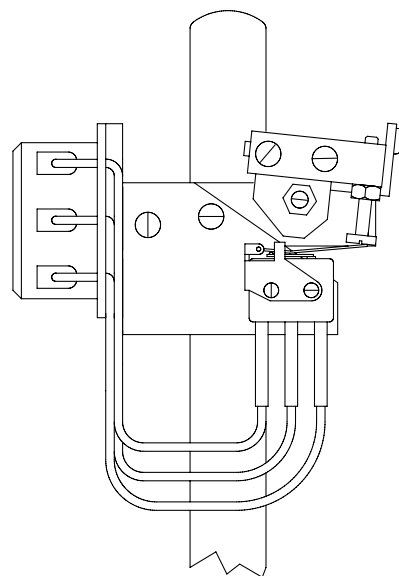
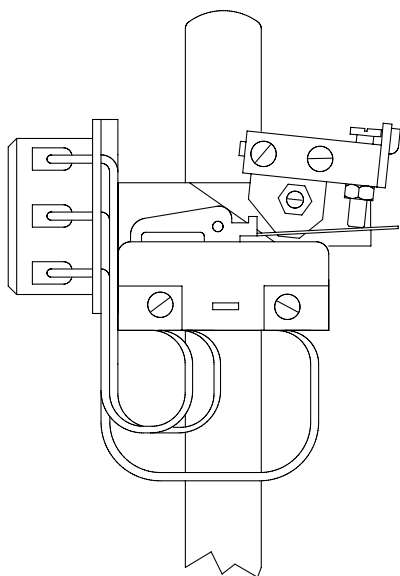
50 mm. fixed differential adjustable on the whole rope length

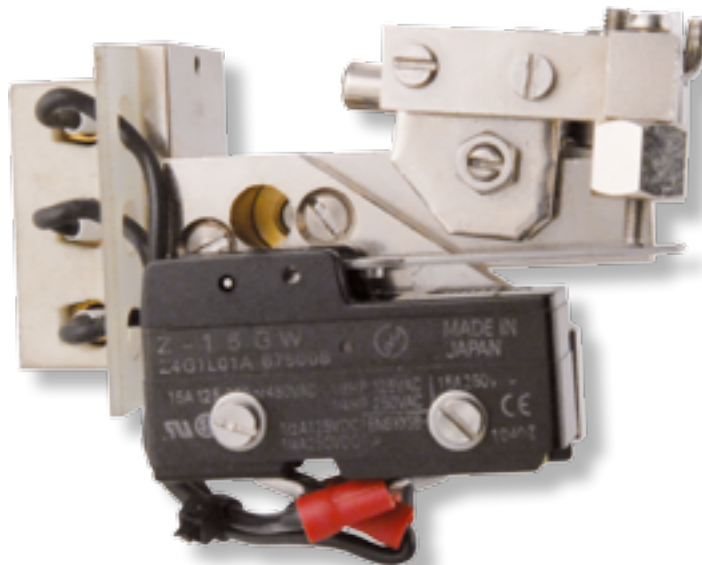
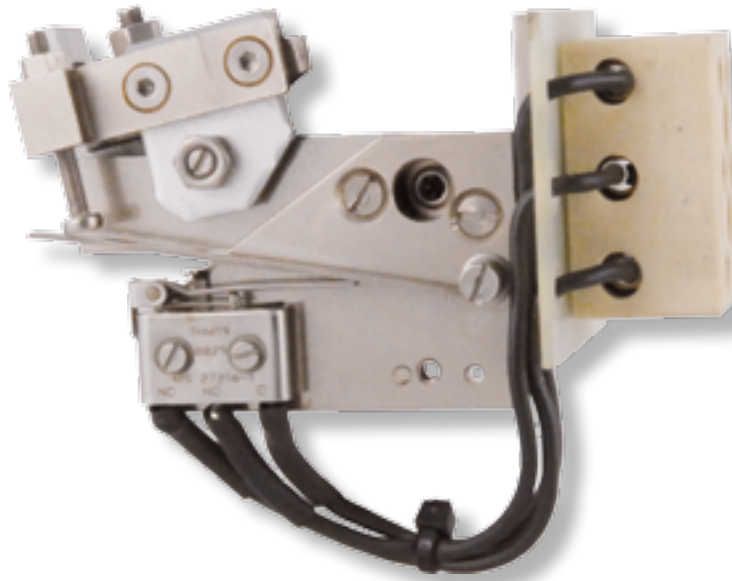
INTERVENTION FEATURES

- 2.- It opens (or closes) the upper switch for increasing level
 - It closes (or opens) the upper switch for decreasing level
- 1.- It opens (or closes) the lower switch for increasing level
 - It closes (or opens) the lower switch for decreasing level



Electrical switch groups and accessories





ELECTRICAL SWITCH GROUPS				
TYPE	V	A	Hz	FOR TYPE
Dry microswitch	500	5	50 - 60	All types
Microswitch sealed in inert gas	115	3	50 - 400	All types
Weatherproof sealed microswitch for circuits with intrinsic safety	250	5	50 - 60	All types
Weatherproof sealed microswitch	500	5	50 - 60	All types

ACCESSORIES	
Cooling fin to extend the working temperature max. value up to 250° C.	IL 4 - IL 5 - IL 6
Sealing bellows for the protection of the magnetic gear group	IL 4 made of plastic material
Flameproof electric case EN 50.018 (CEI 31.1) EEx-d IIB T6 or EEx-d IIC T6	IL 4 - IL 5 - IL 6