



GENERAL CHARACTERISTICS

The principle of operation of these instruments is based on the drive of one or more magnetic reed contacts, placed inside of the measuring rod, by one or more floats. The only moving element is the float that moves, for buoyancy, along the measuring rod, this guarantees extreme robustness and a limited need for maintenance.

- **Brass – Spansil**
- Up to 6 switch points.
- Up to 6 m length.
- Maximum working pressure 20 bar.
- Operating ambient temperature -30/+55°C UR 90%.
- Standard working temperature up to 105°C. Executions up to 120°C on request.
- Minimum degree of protection IP65.
- Built-in temperature sensors, on request. PT – PTC – NTC – Thermostat.
- ATEX constructions (See Multipoint E – Multipoint I series)



FLOATS

Tab.1

B13 Ø13,5x30	B28 Ø20x28	B15 Ø25x15	B20 Ø30x20	B45 Ø30x45	B44 Ø44x50

Material	Spansil – Butadiene - Acrylonitrile Copolymer										
Specific gravity	0,59	0,4		0,45	0,4		0,35			0,45	
Contact type	3	3	7D	3	3	7D	3	4	7	4	7
Max N. of contacts	1	4	3	6	6		6	4	3	6	
Max. bar	10	20		20	20		20			20	
Max. °C - Class	L = 105°C										
On request	M = 120°C										

ELECTRICAL CONTACTS

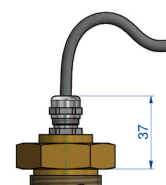
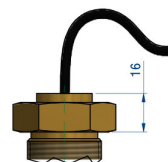
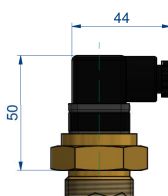
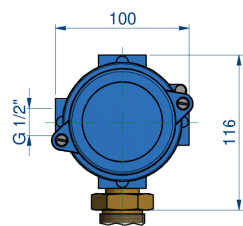
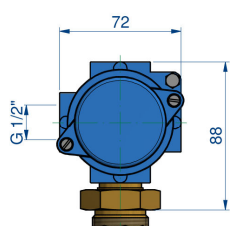
Tab.2

TYPE		POWER		VOLTAGE		CURRENT	
		VA	W	AC	DC	AC	DC
SPST	3	70	50	300	350	0,5	0,7
SPST	4	80	80	250	250	1,3	1,3
SPDT	7	60	60	230	230	1	1
SPDT	7D	20	20	150	150	0,5	0,5

ELECTRICAL OUTPUT

Tab.3

W1 IP65 Housing	W2 IP65 Housing	S1 – S2 DIN IP65 Plug	C1 – C2 – T1 Cable – Leads	P1 – P2 Cable-gland
Max. 5 terminals	Max. 18 terminals	S1 DIN43650 29x29 S2 DIN43650 15x15	C1 Cable L = 1,5m C2 Cable L = 3,0m T1 Leads L = 1,5m	P1 Brass IP68 P2 Polyamide IP67



PROCESS CONNECTIONS

Tab.4

Installation from inside C– P–T output				Float type	Installation from outside – available thread and flanges								
06 1/8"	08 1/4"	10 3/8"	15 1/2"		15 1/2"	20 3/4"	25 1"	32 1 1/4"	40 1 1/2"	50 2"	FOHX Flange	FOPX Flange	DN Flange
All type of floats All type of thread				B13	G-C-N	-	-	-	-	-	-	-	-
				B15	-	-	G-C-N	-	-	-	•	•	-
				B20	-	-	G	G-C-N	G-C-N	-	•	•	•
				B28	-	G-C-N	G-C-N	-	-	-	-	-	-
				B44	-	-	-	-	G	G-C-N	-	-	•
				B45	-	-	G	G-C-N	G-C-N	-	•	•	•

Male thread

G	C	N
Parallel UNI 228/1	Conical UNI 7/1	Conical NPT

Available materials

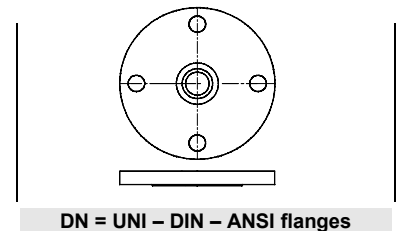
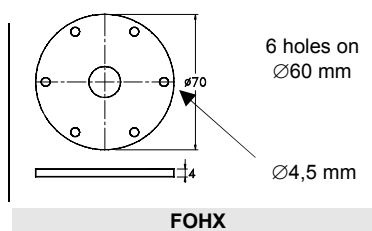
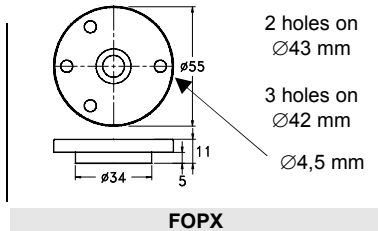
O	D	S
Brass	Anodized aluminium	AISI-316 On request

DN = Available materials

C	S
Steel	AISI-316 On request

FLANGES

Dimensions in mm.



WIRING

Tab.5

I	Independent	Separately wired contacts	1	NO	Contacts status in no level conditions
C	Common	Common wired contacts	2	NC	
S	Custom	Contacts wired on customer request	3	SPDT	

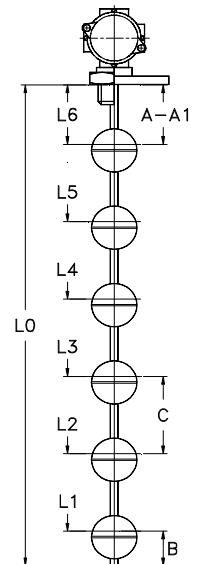
SWITCH POINTS

Tab.6

The switch points L1 ÷ L6 are measured from the stop of the fitting or flange connection.
General tolerances on switch points ± 3 mm.

	Minimum distance in mm.						
	B13	B15	B20	B28	B44	B45	
A	20	15	15	20	35	30	35
A1	35	30	30	35	55	45	50
B	25	20	20	25	40	35	40
C	---	35	40	45	75	65	75
Contact type	3	3	3	7D	3	7D	4 – 7
Max. N. of contacts	1	6	6	4	3	6	6

A Flanged connection
A1 Threaded connection



OPTION – Built-in temperature sensor

On request, it is possible to install a temperature sensor located at the bottom of the rod inside the instrument.

PT100 – PT1000	PTC	NTC	TRM (Thermostat)
EN 60751 – IEC 751	Resistance at 25°C $\leq 500 \Omega$	Resistance at 25°C 2-5-10-50-100-100 K Ω	40°C ÷ 120°C - 10°C step
Class B – (Class A on request)	Temperature 60°C ÷ 120°C	Precision $\pm 5\%$ / $\pm 3\%$ (on request)	Precision $\pm 5\%$ Differential 10°C $\pm 4^\circ\text{C}$

NOMENCLATURE

M2	B45	4	1300	O	25	G	O	W1	L	I22	L1+L6
•											
	•										
		•									
			•								
				•							
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Number of contacts S1 / M2÷M6

Tab.1 Float

Tab.2 Electrical contact

- Total length = L0 in mm. (See drawing)

Tab.4 Rod material

Tab.4 Process connection dimension

Tab.4 Process connection thread

Tab.4 Process connection material

Tab.3 Electrical output

Tab.1 Temperature class

Tab.5 Wiring and contact status

Tab.6 Switch points (mm)



Request form

External mounting				Internal mounting																																																																																			
W1 W2 Electrical housing IP 65 W1 max. 5 terminals 70mm W2 max. 18 terminals 100mm	S1 S2 Plug DIN 43650 29x29 or 15x15 Max 3 terminals	P1 P2 P1 Cable - gland IP68 P2 Cable - gland IP67 L cavo.....mm	C T Cable - Leads L.....mm	C Only external mounting Cable L.....mm																																																																																			
Liquid under control: Specific gravity: Maximum pressure: Maximum temperature:																																																																																							
Process connection: ☐ Threaded:..... ☐ Flanged:																																																																																							
Material: ☐ Brass ☐ AISI-316 ☐ PVC ☐ PP ☐ PVDF																																																																																							
Wirings: ☐ Independent contacts NO or NC (Max. 6 contacts)<table><tr><td> NO NC </td><td>11</td><td>L6</td><td>12</td></tr><tr><td> NO NC </td><td>9</td><td>L5</td><td>10</td></tr><tr><td> NO NC </td><td>7</td><td>L4</td><td>8</td></tr><tr><td> NO NC </td><td>5</td><td>L3</td><td>6</td></tr><tr><td> NO NC </td><td>3</td><td>L2</td><td>4</td></tr><tr><td> NO NC </td><td>1</td><td>L1</td><td>2</td></tr></table> ☐ Independent SPDT contacts (Max. 4 contacts)<table><tr><td>12</td><td>L4</td><td>11</td></tr><tr><td></td><td></td><td>10</td></tr><tr><td>9</td><td>L3</td><td>8</td></tr><tr><td></td><td></td><td>7</td></tr><tr><td>6</td><td>L2</td><td>5</td></tr><tr><td></td><td></td><td>4</td></tr><tr><td>3</td><td>L1</td><td>2</td></tr><tr><td></td><td></td><td>1</td></tr></table> ☐ Common wired NO or NC contacts (Max. 6 contacts)<table><tr><td> NO NC </td><td>7</td></tr><tr><td> NO NC </td><td>6</td></tr><tr><td> NO NC </td><td>5</td></tr><tr><td> NO NC </td><td>4</td></tr><tr><td> NO NC </td><td>3</td></tr><tr><td> NO NC </td><td>2</td></tr><tr><td> NO NC </td><td>1</td></tr></table> ☐ Common wired SPDT contacts (Max. 5 contacts)<table><tr><td>11</td></tr><tr><td>L5</td><td>10</td></tr><tr><td></td><td>9</td></tr><tr><td>L4</td><td>8</td></tr><tr><td></td><td>7</td></tr><tr><td>L3</td><td>6</td></tr><tr><td></td><td>5</td></tr><tr><td>L2</td><td>4</td></tr><tr><td></td><td>3</td></tr><tr><td>L1</td><td>2</td></tr><tr><td></td><td>1</td></tr></table>					NO NC	11	L6	12	NO NC	9	L5	10	NO NC	7	L4	8	NO NC	5	L3	6	NO NC	3	L2	4	NO NC	1	L1	2	12	L4	11			10	9	L3	8			7	6	L2	5			4	3	L1	2			1	NO NC	7	NO NC	6	NO NC	5	NO NC	4	NO NC	3	NO NC	2	NO NC	1	11	L5	10		9	L4	8		7	L3	6		5	L2	4		3	L1	2		1
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