

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.



- **PVC – PP – PVDF**
- Up to 6 switch points.
- Up to 5 m length depending on the used float.
- Working pressure up to 6 bars.
- Operating ambient temperature -30/+55°C UR 90%
- Standard working temperature up to 130°C.
- Minimum degree of protection IP65
- Built-in temperature sensors, on request.
PT – PTC – NTC – Thermostat.
- ATEX Executions (See Multipoint E – Multipoint I series)

FLOATS

Tab.1



| Material | PVDF | | | | | | PP - Polypropylene | | | | | | PVC | |
|--------------------|------------------|-----------|----------|-----------|----------|----------|--------------------|-----------|----------|----------|----------|----------|-----------------|----------|
| Specific gravity | 0,7 | | 0,65 | | 0,8 | | 0,5 | | 0,45 | | | | 0,7 | |
| Contact type | 3 | 7D | 3 | 7D | 4 | 7 | 3 | 7D | 4 | 7 | 4 | 7 | 4 | 7 |
| Max N. of contacts | 6 | 4 | 6 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 6 | 6 |
| Max. bar | 6 | | | | | | 3 | | | | | | 6 | |
| Max. °C - Class | N = 130°C | | | | | | D = 90°C | | | | | | B = 60°C | |

ELECTRICAL CONTACTS

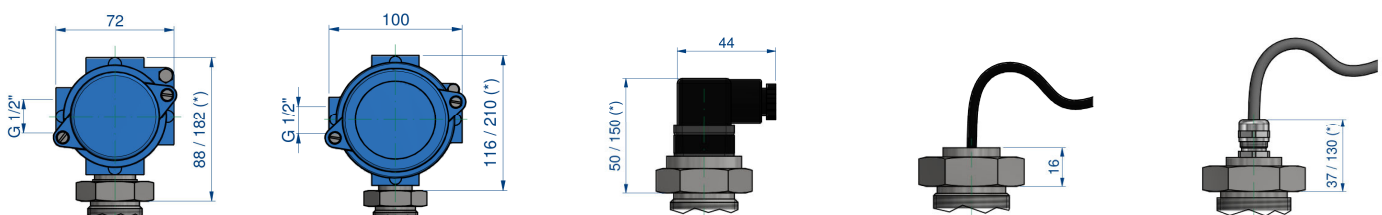
Tab.2

| 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 | W2 | S1 – S2 | C1 – C2 – T1 | P1 – P2 |
|------------------|-------------------|--|---|------------------------------------|
| IP65 Housing | IP65 Housing | DIN IP65 Plug | Cable – Leads | 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 | 08 | 10 | 15 | | 20 | 25 | 32 | 50 | F..HX | DN | |
| 1/8" | 1/4" | 3/8" | 1/2" | | 3/4" | 1" | 1 1/4" | 2" | Flange | Flange | |
| All type of floats All type of thread | | | | F20 | G-C-N | G-C-N | - | - | • | - | |
| | | | | F25 | - | G-C-N | G-C-N | - | • | • | |
| | | | | F49 | - | - | - | G-C-N | - | • | • |
| | | | | P20 | G-C-N | G-C-N | - | - | • | - | - |
| | | | | P49 | - | - | - | G-C-N | - | - | • |
| | | | | V49 | - | - | - | G-C-N | - | • | • |

Male thread

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

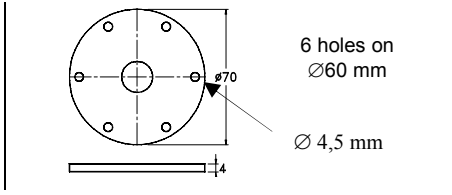
Available materials

| V | P | F | S |
|------------|----|------|----------|
| PVC | PP | PVDF | AISI-316 |
| On request | | | |

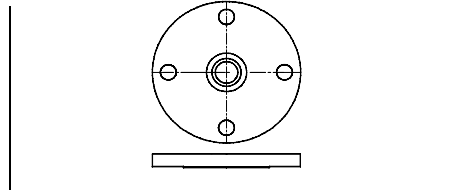
DN - Available materials

| V | S |
|------------|----------|
| PVC | AISI-316 |
| On request | |

FLANGES dimensions in mm.



FVHX - FPHX - FFHX - FSHX



DN = UNI - DIN - ANSI Flanges

WIRING Tab.5

| I | Independent | Separately wired contacts | 1 | NO |
|---|-------------|------------------------------------|---|------|
| C | Common | Common wired contacts | 2 | NC |
| S | Custom | Contacts wired on customer request | 3 | SPDT |

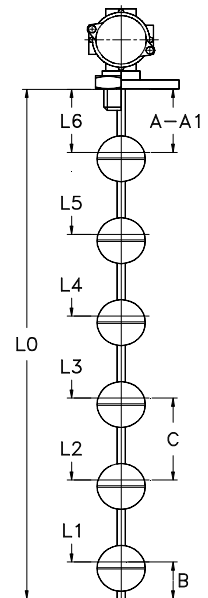
Contacts status
in no level conditions

A Flanged connection
A1 Threaded connection

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. | | | | | | | | | | | |
|---------------------|-------------------------|----|-----|----|-----|----|-----|----|-----|----|-----|----|
| | F20 | | F25 | | F49 | | P20 | | P49 | | V49 | |
| A | 20 | 20 | 20 | 20 | 40 | 40 | 20 | 20 | 40 | 40 | 40 | 40 |
| A1 | 35 | 35 | 35 | 35 | 60 | 60 | 35 | 35 | 60 | 60 | 60 | 60 |
| B | 25 | 25 | 25 | 25 | 40 | 40 | 25 | 25 | 40 | 40 | 40 | 40 |
| C | 50 | 50 | 50 | 50 | 80 | 80 | 50 | 50 | 80 | 80 | 80 | 80 |
| Contact type | 3 | 7D | 3 | 7D | 4 | 7 | 3 | 7D | 4 | 7 | 4 | 7 |
| Max. N. of contacts | 6 | 4 | 6 | 4 | 6 | 4 | 6 | 4 | 6 | 4 | 6 | 4 |



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 ≤ 500 Ω | Resistance at 25°C 2-5-10-50-100 KΩ | 40°C ÷ 120°C - 10°C step |
| Class B – (Class A on request) | Temperature 60°C ÷ 120°C | Precision ± 5% / ± 3% (on request) | Precision ± 5% Differential 10°C ± 4°C |

NOMENCLATURE

| M2 | V49 | 4 | 1300 | V | 50 | G | V | W1 | B | I22 | L1+L6 | |
|----|-----|---|------|---|----|---|---|----|---|-----|-------|--|
| • | | | | | | | | | | | | 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) |



MULTIPOINT VF



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

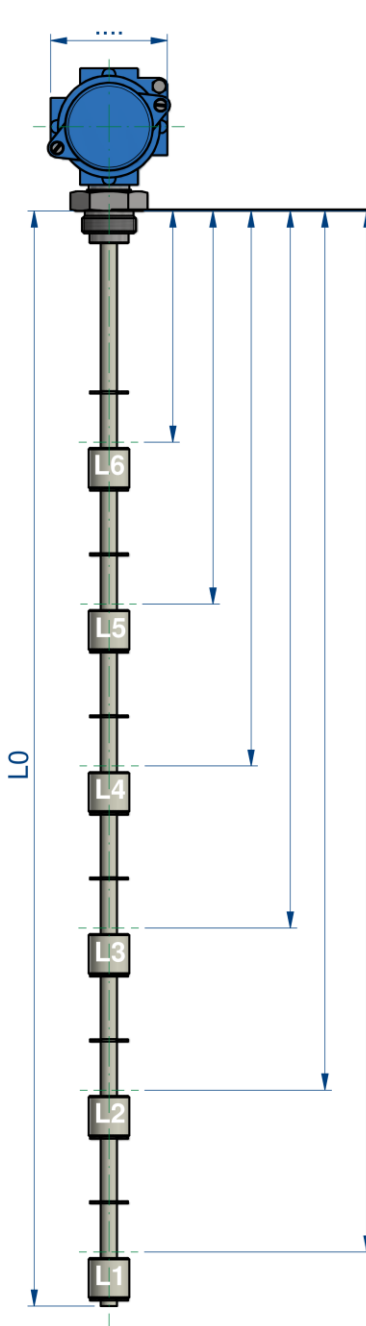
P1 Cable-gland IP68
P2 Cable-gland IP67
L cable.....mm

C T

Cable or Leads
L.....mm

C

Only internal mounting
Cable L.....mm



Total length L0 (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)

Independent SPDT contacts (Max. 4 contacts)

Common wired NO or NC (Max. 6 contacts)

Common wired SPDT contacts (Max. 5 contacts)