

## GENERAL FEATURES

**Magnetostrictive** continuous level transmitters base their operation on the physical principle called Wiedemann effect and allow a continuous and precise measurement of liquid levels. The electronic unit sends a pulse to a waveguide contained in the measuring rod; the magnetic float intercepts the pulse generating an echo that is detected by the same electronic unit.

The elapsing time between the emission of the pulse and its recognition is directly proportional to the position of the float, and then to the value of the level to be measured.

### • PVC – PP – PVDF

- 1 analog output, current or voltage.
- 2 analog outputs, current and voltage.
- 2 factory programmable PNP digital outputs.
- RS485 serial output, Valco protocol.
- Programming via dedicated handheld computer VSP.130, on request.
- Up to 2, 9 m length.
- Working pressure up to 6 bar depending on the used float.
- Operating ambient temperature -30 / +70 °C, RH 90%.
- Working temperature up to 130 °C
- Minimum degree of protection IP67.



See MULTISIGNAL

## TECHNICAL DATA

Tab.1

|                          |                                                    |
|--------------------------|----------------------------------------------------|
| Power supply             | 18 ÷ 30 Vcc                                        |
| Power consumption        | < 100 mA                                           |
| Signal output resolution | < 1 mm                                             |
| Accuracy                 | ≤ 1 mm                                             |
| Room temperature         | -30 / +70°C                                        |
| Process temperature      | See floats - tab. 2                                |
| Measuring length L0      | 2, 9 m - max.<br>2, 8 m - max. - 130°C application |
| Electrical connection    | <b>S5</b> Conec M12 x 1, 8 poles                   |
| Protection class         | IP67                                               |

|                                         |                                                              |          |               |
|-----------------------------------------|--------------------------------------------------------------|----------|---------------|
| Analog output                           | Current                                                      | • 4-20mA | <b>420</b>    |
|                                         | Voltage                                                      | 0-5V     | <b>005</b>    |
|                                         |                                                              | 0-10V    | <b>010</b>    |
|                                         |                                                              | 0,5-4,5V | <b>545</b>    |
| Communication output                    | Current / Voltage                                            |          | 4-20mA/0-10V  |
|                                         |                                                              |          | <b>420/10</b> |
| Communication output                    | RS485 - Valco protocol                                       |          | <b>RS485</b>  |
| N.2 Digital output factory programmable | 2 x PNP - not protected maximum load 100mA                   |          | <b>2PNP</b>   |
| Programming of instrument               | Via dedicated handheld computer VSP.130 available on request |          |               |

- Standard, others signal output and indicated option on request

## FLOATS

Tab.2

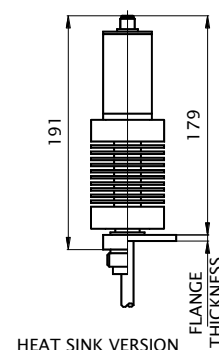
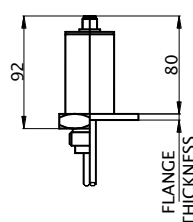


|                                 |                  |                    |                 |
|---------------------------------|------------------|--------------------|-----------------|
| <b>Material</b>                 | PVDF             | PP - Polypropylene | PVC             |
| <b>Specific gravity</b>         | 0,8              | 0,45               | 0,7             |
| <b>Max. pressure – Bar</b>      | 6                | 3                  | 6               |
| <b>Max. temperature – Class</b> | <b>N</b> = 130°C | <b>D</b> = 90°C    | <b>B</b> = 60°C |

## ELECTRICAL OUTPUT

Tab.3

|           |          |       |                |                   |
|-----------|----------|-------|----------------|-------------------|
| <b>S5</b> | <b>B</b> | 60°C  | Standard       | Anodized aluminum |
|           | <b>D</b> | 90°C  |                |                   |
|           | <b>N</b> | 130°C | With heat sink |                   |



## PROCESS CONNECTIONS

Tab.4

| Type of float | Mounting from outside |                |                |                 |
|---------------|-----------------------|----------------|----------------|-----------------|
|               | 50<br>2"              | DN65<br>Flange | DN80<br>Flange | DN100<br>Flange |
| F49           | G-C-N                 | •              | •              | •               |
| P49           | G-C-N                 | •              | •              | •               |
| V49           | G-C-N                 | •              | •              | •               |

### Male thread

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

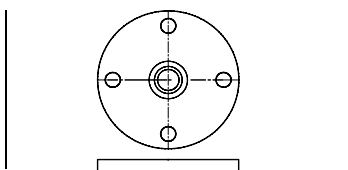
### Available materials

| F    | P  | V   |
|------|----|-----|
| PVDF | PP | PVC |

### DN = Available materials

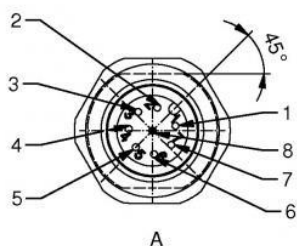
| V   | S                      |
|-----|------------------------|
| PVC | AISI-316<br>on request |

## FLANGES Dimensions in mm.

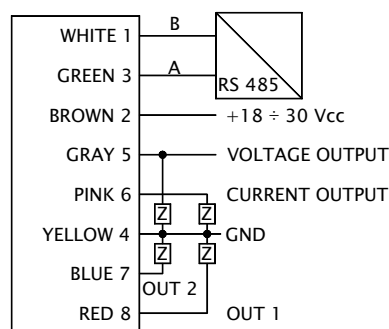


DN = UNI – DIN – ANSI Flanges

## WIRING



| PIN | SIGNAL                  |
|-----|-------------------------|
| 1   | RS485 - line B          |
| 2   | Power supply +V         |
| 3   | RS485 - line A          |
| 4   | Ground                  |
| 5   | Analog output - voltage |
| 6   | Analog output - current |
| 7   | Digital output - PNP2   |
| 8   | Digital output - PNP1   |



## DIMENSIONS

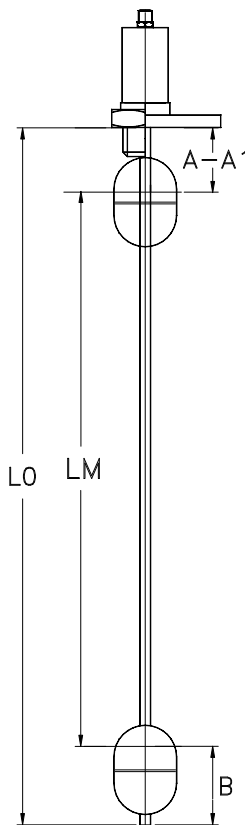
mm.

Tab.5

The dimension L0 - LM is measured from the stop of the fitting (A1) or flange (A) connection. Tolerance on dimension L0 - LM  $\pm 3$  mm.

|    | F49 | P49 | V49 |
|----|-----|-----|-----|
| A  | 60  | 60  | 60  |
| A1 | 50  | 50  | 50  |
| B  | 70  | 70  | 70  |

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



## NOMENCLATURE

| LCM | V49 | 1300 / 1400 | V | - V | 50 | G | V | 420 | S5 | B |
|-----|-----|-------------|---|-----|----|---|---|-----|----|---|
| •   |     |             |   |     |    |   |   |     |    |   |
|     | •   |             |   |     |    |   |   |     |    |   |
|     |     | •           |   |     |    |   |   |     |    |   |
|     |     |             | • |     |    |   |   |     |    |   |
|     |     |             |   | •   |    |   |   |     |    |   |
|     |     |             |   |     | •  |   |   |     |    |   |
|     |     |             |   |     |    | • |   |     |    |   |
|     |     |             |   |     |    |   | • |     |    |   |
|     |     |             |   |     |    |   |   | •   |    |   |
|     |     |             |   |     |    |   |   |     | •  |   |
|     |     |             |   |     |    |   |   |     |    | • |

|         |                                            |
|---------|--------------------------------------------|
| Type    |                                            |
| Tab.2   | Float                                      |
| Tab.5   | Measuring length LM / Total length L0 (mm) |
| Tab.2-4 | Rod material                               |
| Tab.5   | Damping tube (option)                      |
| Tab.3   | Process connection dimension               |
| Tab.4   | Process connection thread                  |
| Tab.4   | Process connection material                |
| Tab.1   | Analog output and options required         |
| Tab.3   | Electrical output.                         |
| Tab.2-3 | Temperature class                          |

## CABLE- PLUG

Connection cable 2m. with connector M12x1

Accessory on request