

GENERAL CHARACTERISTICS

Measure of the level and distance with ultrasonic technology, based on the principle of proportionality between the propagation time of the signal and the distance from the obstacle.

No contact between the sensor and the monitored product, both liquid and solid or granular.

The analog signal is proportional to the volume of the product. The absence of moving parts offers a system that does not require particular maintenance.



- **Measuring ranges from 30 ... 350 mm to 600 ... 8000 mm**
- Resolution 0,18 mm
- Repeatability $\pm 0,15\%$
- Programming via 2 push-buttons and visualization on 3 digit LED display.
- Additional Teach-in function.
- Measuring units programmable in mm, cm, or %
- Signal indication with 2 three-color LED.
- PNP output with short-circuit protection programmable NO or NC.
- 0 ÷ 10 V or 4-20mA analog output.
- Operating temperature range -25/+70°C.
- Degree of protection IP67

DATI TECNICI

Tab.1

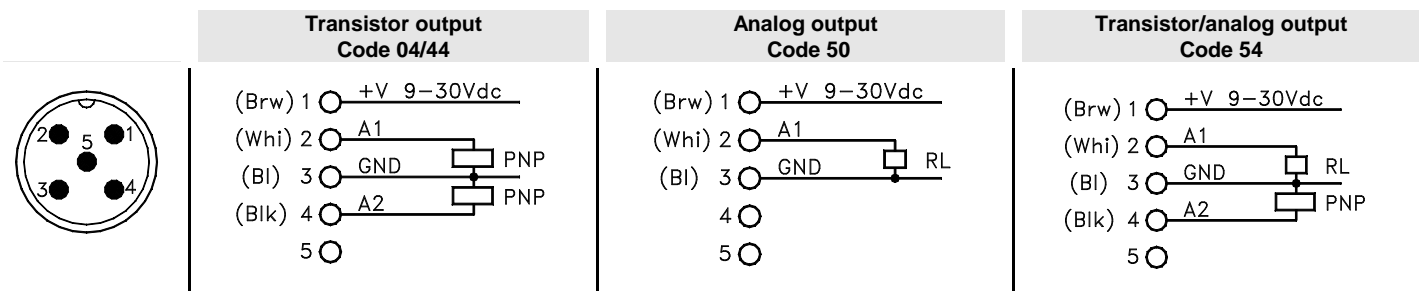
| Description | | Type – Code | | | | |
|------------------------------------|-----|-------------|------------|------------|------------|------------|
| | | VLS-01 | VLS-02 | VLS-03 | VLS-04 | VLS-05 |
| Minimum measuring value | mm. | 30 | 60 | 200 | 350 | 600 |
| Optimal measuring value | | 250 | 350 | 1300 | 3400 | 6000 |
| Maximum measuring value | | 350 | 600 | 2000 | 5000 | 8000 |
| Resolution | | 0,18 | 0,18 | 0,18 | 0,18 | 0,18 |
| Hysteresis – factory set | % | 2,5 | 5 | 20 | 50 | 100 |
| Accuracy – thermal drift | | 0,17/K | 0,17/K | 0,17/K | 0,17/K | 0,17/K |
| Repeatability | | $\pm 0,15$ | $\pm 0,15$ | $\pm 0,15$ | $\pm 0,15$ | $\pm 0,15$ |
| Frequency | kHz | 320 | 400 | 200 | 120 | 80 |
| Sampling frequency | Hz | 11 | 8 | 6 | 3 | 2 |
| Current consumption – without load | mA | ≤ 80 | ≤ 80 | ≤ 80 | ≤ 80 | ≤ 80 |
| Response time | ms | 50 | 70 | 110 | 180 | 240 |
| Stand-by time | | < 300 | < 300 | < 300 | < 300 | < 300 |

(*) programmable from 1 digit to maximum measuring value

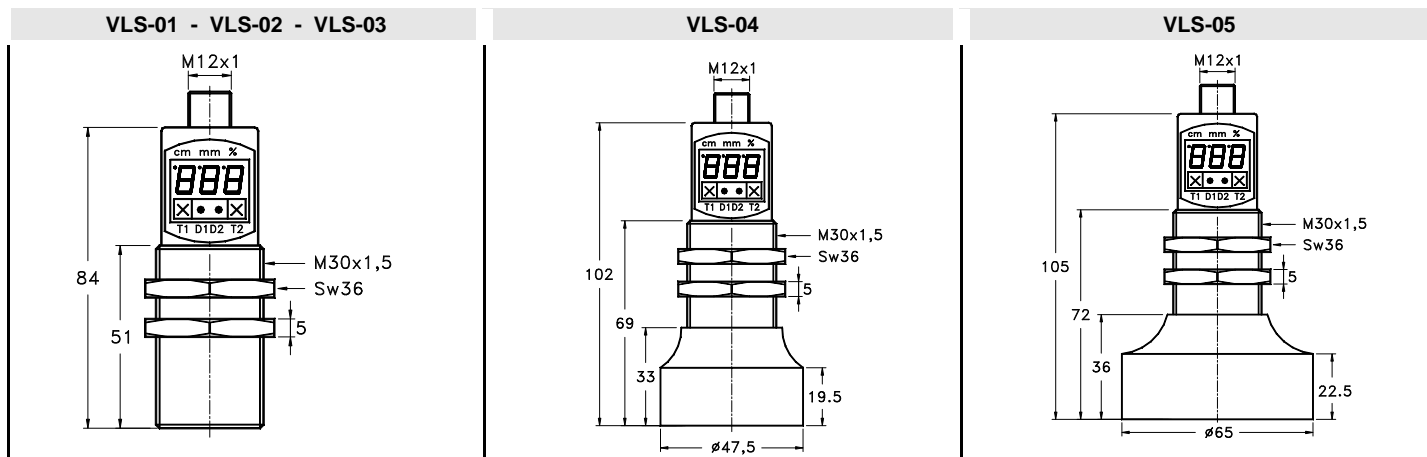
| | Code | Data | |
|-----------------------|------|-----------------------------------|---------------------------|
| Power supply | - | 9 ÷ 30 Vdc $\pm 10\%$ | |
| Output | 04 | 1 PNP | max. 200 mA |
| | 44 | 2 PNP | max. 2x200 mA |
| | 54 | 1 PNP | 4 ÷ 20 mA 0 ÷ 10 VDC |
| | 50 | - | 4 ÷ 20 mA 0 ÷ 10 VDC |
| Housing – materials | 00 | M 30x1,5 - Nickel plated brass | - Plastic |
| | VA | M 30x1,5 - Stainless steel 1.4571 | - Plastic |
| Electrical connection | - | M 12 x 1 - 5 poles | |
| Degree of protection | IP67 | IP67 | |

WIRING

Tab.2



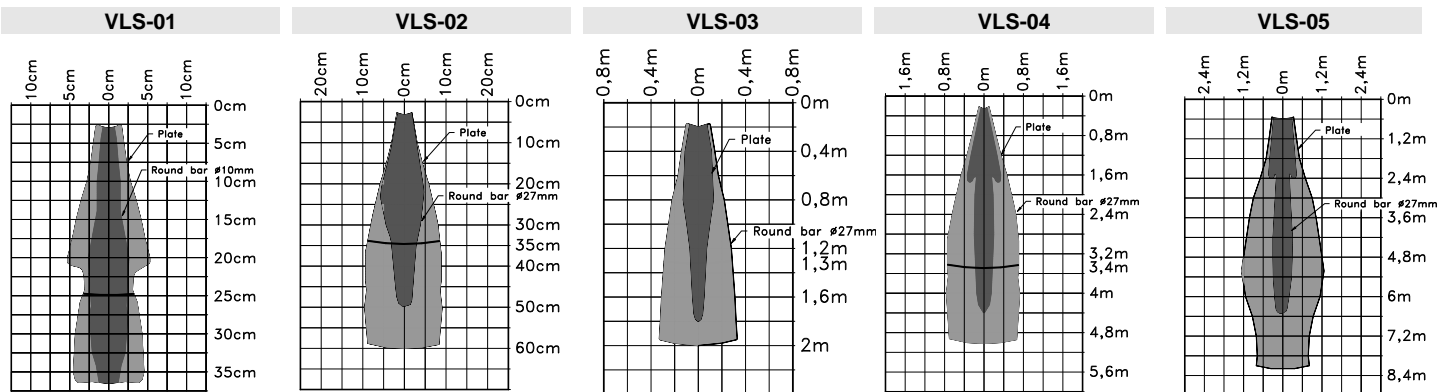
DIMENSIONS mm.



FIELD OF DETECTION

Detection Range: The dark area is determined with a bar of round section (diameter of 10 and 27 mm).

The lighter area is determined by a foil of 500 x 500 mm inserted laterally in the beam of the emitted signal. The indicated detection area is defined as the area of operation of the sensor, it is not possible to estimate the accuracy of the system outside of this area.



NOMENCLATURE

| VLS | 05 | 54 | 00 | IP67 |
|-----|----|----|----|------|
| • | • | • | • | • |

| SK | M5 | E | 02 | 00 | Cable 2m. with M12x1 plug – Nickel plated brass | Accessory - option |
|----|----|---|----|----|---|--------------------|
| SK | M5 | E | 05 | 00 | Cable 5m. with M12x1 plug – Nickel plated brass | Accessory - option |
| SK | M5 | E | 02 | VA | Cable 2m. with M12x1 plug – Stainless steel | Accessory - option |
| SK | M5 | E | 05 | VA | Cable 5m. with M12x1 plug – Stainless steel | Accessory - option |