

SATRON VO turbidity and solids content analyzer is suitable for the measurement of different liquids. Savings can be obtained by using SATRON VO analyzer in process industries, e.g. the use of clean water can be minimized, the time used for the cleaning (CIP) will be shortened, the use of the end product (in dairy applications: milk) and the use of cleaning materials needed in the process can be optimized. The transmitter communicates digitally using the HART® protocol.



TECHNICAL SPECIFICATIONS

Measuring range and span

See Selection Chart.

Zero and Span adjustment

Zero elevation: Calibrated span is freely selectable on the specified range depending from the desired option. This can be made by using keyboard (display option) or HART®275/375 communicator.

Damping

- Time constant is continuously adjustable 0.01 to 60 s.

Repeatability

- 0.01% from maximum span.

Temperature limits

Ambient: -30 to +80 °C
Process: -30 to + 100 °C
Shipping and storage: -40 to +80 °C.

Output 3-wire (3W), 4-20 mA

Supply voltage and permissible load

24 VDC, -10 %, + 15 %

Humidity limits 0-100 % RH

EMC directive 2004/108/EC

- EN 61326-1:2005

CONSTRUCTION

Materials:

Sensing element ¹⁾: AISI316L, Duplex (EN. 1.4462), Hast. C276/C22, or Titanium Gr2.

Surface quality: Polished Ra <0,8µm

Lens: quartz glass, Safir glass or PC plastic

Coupling ¹⁾: AISI316L, Duplex (EN 1.4462), Hast.C276 or Titanium Gr2

Other sensing element materials: AISI316, SIS 2343.

Pressure class:

- PN20

- Test pressure -1 to 30 bar

Housing with PLUG connector, code

H & E

Housing: AISI303, Housing: Viton® and NBR. TEST jacks: MS358Sn/PVDF, protected with silicone rubber shield.

PLUG connector: PA6-GF30 jacket, Silicone rubber seal, AISI316 retaining screw.

¹⁾ Parts in contact with process medium

Housing with display, codes N and P:

Housing: AISI303/316, Seals: Nitrile-rubber and Viton®, Nameplates: Polyester

Connection hose between sensing element and housing

Code L :
PUR signal cable

Calibration

For customer-specified range with minimum damping. (If range is not specified, transmitter is calibrated for maximum range.)

Electrical connections

Housing with PLUG connector, code H

Connector type DIN 43650 model AF; Pg9 gland for cable; wire gross-section 0.5 to 1.5 mm².

Housing with display, code N:

Connector type DIN 43650 model AF; Pg9 gland for cable; wire gross-section 0.5 to 1.5 mm².

Housing with display, code P:

M12 plug connector

I/O-connections

bout1-3

Relay, grounding contact

Maximum voltage 35 V

Maximum current 50 mA

Maximum leakage current 10 µA

bin1-3

NC (no connection) OFF

0...2 V ON

Minimum values for switch in use

Voltage 16 V

Current 4 mA

Leakage current 1 mA

Current output1

Range 3.5...23 mA

Maximum load 600 Ω

Factory setting 4...20 mA

Current output2

Internal power supply

Current output 2 has same ground as binary IO

Maximum load 400 Ω

Range 3.5...23 mA

Factory setting 4...20 mA

External power supply

Current output 2 is galvanically isolated

Maximum supply voltage 35 VDC

Range 3.5...23

mA

Factory setting 4...20 mA

Maximum load, See picture below

Maximum isolation voltage 100 VDC

Process connections

With G1 connecting thread

Protection class: IP67

Weight

Housing with PLUG connector, (H and E): 0.7 kg

Housing with display, (N and P): 1.3 kg

Remote Housing (L): 2.5 kg

