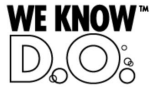




a xylem brand



a xylem brand



Operating manual

VIS C/Set

1725 Brannum Lane
Yellow Springs, Ohio 45387 USA
+1 937-767-7241
800-765-4974 (US)
FAX (937) 767-1058
Email: environmental@ysi.com
Internet: www.ysi.com

Cleaning set for UV/VIS sensors

1 Scope of delivery of the VIS C/Set

- 20 flocked cleaning cards
- 1000 ml Edisonite solution
- 1000 ml isopropanol for analysis
- Operating manual

2 Sensor cleaning

2.1 Additional accessories

- Water for analysis
- If there are lime deposits: hydrochloric acid 5 % for analysis
- Surface disinfectant as necessary



CAUTION

Possible hazards when dealing with corrosive or inflammable liquids. Follow the application instructions and the safety data-sheets of the chemicals manufacturers. If required, wear personal protective equipment (protective goggles, protective gloves, protective clothing).

2.2 General steps to be taken

Depending on the application site and the level of contamination of the sensor as well as the coming job, the cleaning procedure includes the following parts:

- Every cleaning procedure starts with a basic cleaning. It removes tough grime such as incrustation of fouling matter, algae and biological deposits. If the sensor surface might be contaminated with pathogenic germs it should also be disinfected.
- Cleaning of the measuring gap: Remove any lime deposits.
- Cleaning of the measuring gap: Remove any grease deposits.

Example 1 A heavily contaminated sensor from the inlet of a waste water treatment plant, which is to be checked with standard solutions, should run through all cleaning steps properly.

Example 2 If the sensor from example 1 should be cleaned on site during a routine visual inspection and should then continue measuring, a basic cleaning may possibly be sufficient.

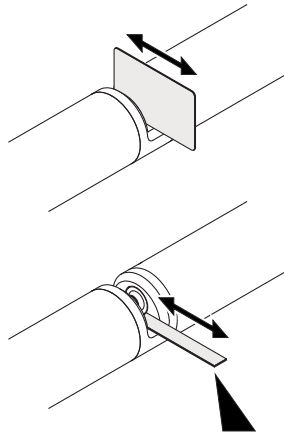


The quoted examples and the following descriptions are intended to give a general guideline. Due to the sensor's wide range of application, the type and level of contamination can considerably vary. Therefore, the cleaning procedure has to be individually composed. If necessary, individual cleaning steps have to be changed or repeated several times until the result meets the requirements.

2.3 Basic cleaning

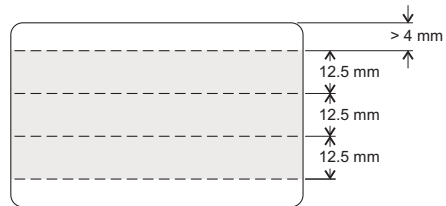
Steps of the basic cleaning

1	Take the sensor out of the test sample and remove any solid matter deposits and incrustation of fouling matter manually with a brush or sponge.
2	Wash the sensor down with warm tapwater (30 - 60 °). <u>Note:</u> Do not use any pressure washer or steam blaster.
3	If the sensor might be contaminated with pathogenic germs it should be disinfected with a surface disinfectant. This also applies to the cable and mounting parts. <u>Note:</u> Follow the instruction manual of the disinfectant (reaction time!).
4	Clean the sensor with Edisonite solution. When doing so, clean the area of the measuring gap and the compressed air channels very thoroughly. The compressed air channels can be cleaned with the aid of pipe cleaners or disposable syringes. Soak the flocked cleaning cards with Edisonite solution and use them to clean the measuring gap as shown in the following figure. Cut suitable strips off the cleaning card to clean the bottom of the measuring gap. Then rinse the sensor with running warm tapwater and finally with a lot of deionized water.

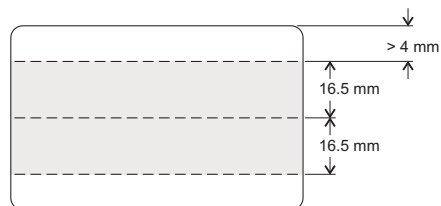


Cut strips off the cleaning card:

Measuring gap
1 mm:



Measuring gap
5 mm:



2.4 Cleaning the measuring gap

To remove lime or grease deposits, use the flocked cleaning cards together with the following detergents:

Contamination	Cleaning agents
Lime deposits	Hydrochloric acid 5 % for analysis
Grease deposits	Mixture of isopropanol and water (approx. 70 % isopropanol), made of 7 volume parts isopropanol for analysis and 3 volume parts deionized water

Proceeding

- Start by removing any lime deposits.
- Soak a flocked cleaning card with the relevant detergent and use it to clean the measuring windows according to step 4 in section 2.3 BASIC CLEANING. If necessary, leave the cleaning card in the measuring gap for a few minutes so the detergent can take effect.
- Thoroughly rinse the measuring gap and the surrounding areas moistened with detergent with deionized water.
- Protect the cleaned sensor against new contamination.