

UVAS sc

UV Absorbance / %Transmittance Sensor



The Hach UVAS sc UV Absorbance / %Transmittance Sensor determines the Spectral Absorption Coefficient (SAC) at a wavelength of 254 nm. Measurements can be expressed in absorption units (m⁻¹), mE, AU, %T, %T/cm, mg/L, or ppm.

UV Absorbance / %Transmittance

DW

WW

IW

Features and Benefits

Continuous, Automatic Early Warning Systems

Use the Hach UVAS sc UV Absorbance/Transmittance Sensor to continuously protect plant treatment processes from high influent organic loads. Operators can use the continuous readings of UV absorbance or transmission to watch for sudden changes in organic load that would require alternate treatment procedures.

Control Activated Sludge Processes

Activated sludge processes require precise balancing of organic load, aeration, and nutrients. Continuous trending of the organics in the system with the UVAS sc sensor can help operators know how to balance other factors resulting in cost and time savings.

Self-cleaning Wiper System

With the UVAS sc sensor submerged in the sample stream, the detector windows are automatically cleaned by a built-in wiper that eliminates surface films or particles that can diminish accuracy.

Monitor Efficiency of UV Disinfection Process

UV light transmittance (UVT) is critical in the delivery of dose in a UV reactor. The delivered dose is determined by, among other things, the UVT of the source water, the intensity of the UV lamps, and the flow rate of the water source. UVT can be affected by many factors, from a simple change in the seasons to storm events.

Potential changes in UVT should be considered in a UV disinfection system for optimized dose delivery. Hach's UVAS sc is designed to provide continuous UVT measurement of pre-disinfected source water. Operational costs related to sampling for UVT may be reduced with continuous on-line measurement. Data can immediately be incorporated into the operation in real time.

Self Diagnostics and Easy Maintenance

Diagnostic routines built into the UVAS sc sensor reduce the need for extensive calibration and maintenance. Only semi-yearly inspection and replacement of the wiper and seals is needed.

DW = drinking water WW = wastewater municipal PW = pure water / power
IW = industrial water E = environmental C = collections FB = food and beverage



Be Right™

Specifications*

	UVAS sc Tank Sensors	UVAS sc Bypass Sensors
Measurement Technique	UV absorption measurement (2-beam technique), reagent-free	
Measurement Method	SAC 254 in accordance with DIN 38404 C3	
Measurement Path Length	1, 2, 5 and 50 mm	2, 5, and 50 mm
Measurement Range	Choice of: 0.01 to 60 m ⁻¹ at 50 mm 0.1 to 600 m ⁻¹ at 5 mm 0 to 1500 m ⁻¹ at 2 mm 2 to 3000 m ⁻¹ at 1 mm	Choice of: 0.01 to 60 m ⁻¹ at 50 mm 0.1 to 600 m ⁻¹ at 5 mm 0 to 1500 m ⁻¹ at 2 mm
Compensation	550 nm	
Measurement Interval (>= min)	= 1 minute	
Sample Temperature	2 to 40 °C (35.6 to 104 °F)	
Sample pH	4.5 to 9 pH	
Probe Pressure Limit at Inlet	0.5 bar (7.25 psi) maximum	n/a
Sample Flow Rate	n/a	0.5 L/hour minimum
Sample Connection	n/a	4 mm ID/6 mm OD hose
Cable Length	10 to 120 m (32.8 to 393.7 ft.)	
Control Function	PID, time control, 2-point controller (with sc100)	
Inspection Interval	6 months	
User Maintenance	1 h / month, typical	
Dimensions	70 x 333 mm (2.75 x 13.11 in.) approximate	
Weight	3.6 kg (7.9 lb.) approximate	

*Specifications subject to change without notice.

NOTE

The UVAS sc probes cannot be used in sea water.

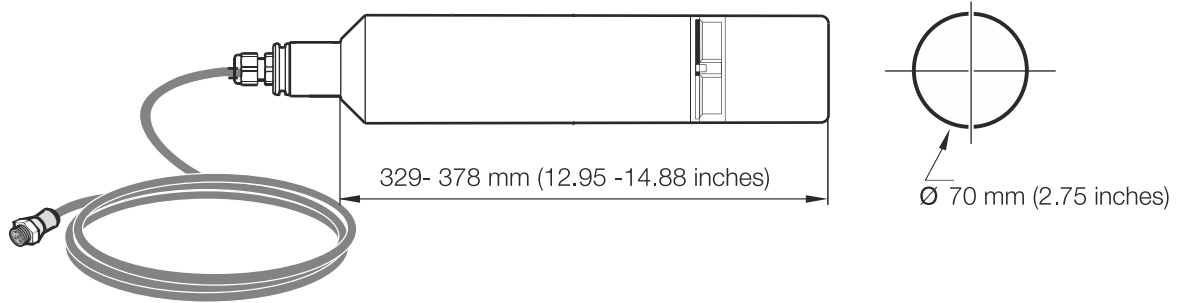
Engineering Specifications

1. The UV absorbance/transmittance sensor shall be a continuous-reading sensor that utilizes a 2-beam ultra-violet absorption technology with a 1, 2, 5, or 50 mm path length.
2. The measurement range shall be 0 to 3000 absorption units (m⁻¹), depending on model and path length.
3. The measurement interval shall be user-selectable.
4. The sensor shall provide reagent-free operation without the requirements of sample conditioning.
5. The sensor shall be self-cleaning via a wiper and retain a life-long factory calibration.
6. The sensor shall be warranted for one full year against defects in material and workmanship.
7. The sensor shall be the UVAS sc tank or bypass sensor for UV absorbance/transmittance measurement, manufactured by Hach Company.

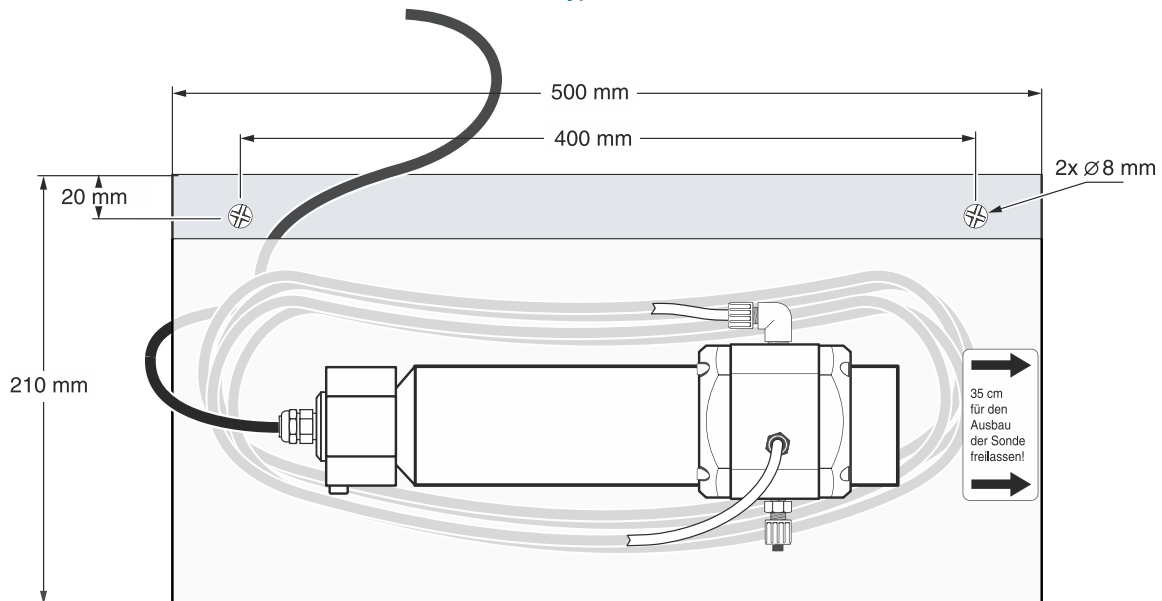
Dimensions

Hach UVAS sc UV Absorbance / %Transmittance Sensors can be installed using a fixed-point installation kit as shown in the bottom illustration. The bypass panel below can be used for non-immersion applications. With the cable supplied, the sensor can be used in a sample stream within 10 meters (32.8 feet) of the controller.

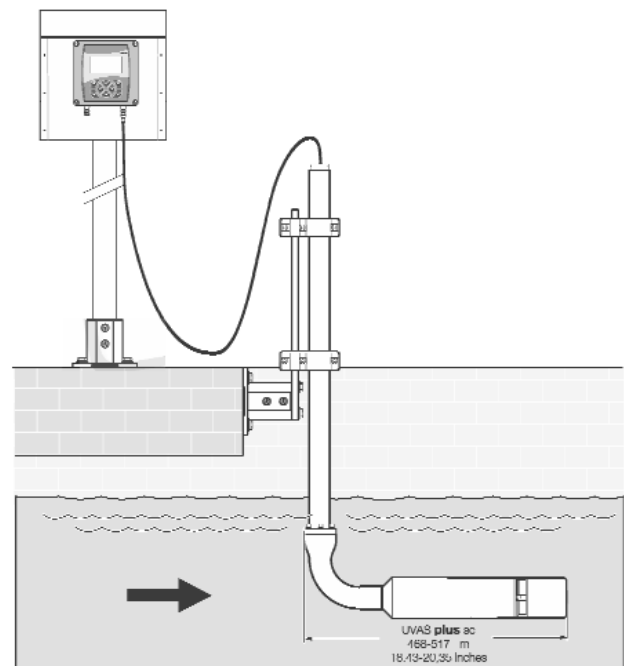
UVAS sc tank sensor



UVAS sc bypass sensor



Installation for mounting the Hach UVAS sc UV Absorbance / %Transmittance Sensor for immersion in open tanks.



Ordering Information

The following sensors include the Hach sc100 Multi-parameter Controller (see literature #2463 for complete details)

69450-00	1 mm UVAS sc sensor
69451-00	2 mm UVAS sc sensor
69452-00	5 mm UVAS sc sensor
69453-00	50 mm UVAS sc sensor

UVAS sc sensor only

LXV418.99.10002	1 mm UVAS sc sensor only
LXV418.99.20002	2 mm UVAS sc sensor only
LXV418.99.50002	5 mm UVAS sc sensor only
LXV418.99.90002	50 mm UVAS sc sensor only

Bypass panel

LZX868	Bypass Panel for 50 mm sensor
LZX867	Bypass Panel for 5 mm sensor
LZX869	Bypass Panel for 2 mm sensor

Mounting hardware

LZX414.00.10000	Mounting Hardware with 90 degree adapter
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To complete your Absorbance / %Transmittance measurement system, choose from these Hach controllers...

Model sc100 Controller

(see Lit. #2463)

The Model sc100 Controller receives data from one or two sensors. Its "plug and play", mix-and-match operation lets it fit into any facility or workflow. Digital communication with any Hach digital sensor or probe is simple and reliable.



Model sc1000 Controller

(see Lit. #2403)

Get the same great features as the sc100 Controller above—"plug and play", all digital operation and communication—but with the Hach sc1000 Controller, up to eight Hach sensors can be used with one controller in any combination. The sc1000 Controller is also expandable and upgradeable to easily adapt to you needs.



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In the interest of improving and updating its equipment, Hach Company reserves the right to alter specifications to equipment at any time.

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Keep it pure.

Make it simple.

Be right.

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