TOC SENSOR

(OL) SERIES

**REAL
TOC**
OL SERIES

REALTECH
realtechwater.com

FEATURES & BENEFITS

- Affordable real-time TOC monitoring
- Multiple wavelength sensor uses UV LED technology for superior measurement performance
- Wastewater to high purity measurement ranges
- Bypass style sensor with multiple flow cell selections to meet application demands
- Operator friendly, low maintenance UV LED design
- Reagent free optical measurements
- Simple to install and operate

REAL-TIME MONITORING SOLUTION

TOC Sensor
Real Tech's bypass TOC sensor provides affordable real-time measurement of organic matter in water or wastewater. Designed to meet the needs of many monitoring applications, the OL series offers multiple flow cell designs and sensor path length selections to meet the desired measurement range.

Controllers and Accessories
Our innovative modular product platform ensures our clients gain the real-time water quality monitoring system that meets their specific demands and budget. With multiple controller and accessory options available such as automatic chemical cleaning systems that lower maintenance while improving system performance, Real Tech provides a total solution for all of your unique water quality needs.

Liquid Ai® Compatible
Our Liquid Ai® data services complement our real-time water quality monitoring systems. Calibration Health Monitoring ensures accuracy and reliability are maintained so our clients can have the utmost confidence in their results, while our Remote Monitoring platform enables access to data anywhere, anytime.

MEASUREMENT PRINCIPLE

Real Tech's TOC sensor provides superior measurement performance across multiple wavelengths of light using UV LEDs. Many compounds absorb light in the UV-VIS spectrum including organic compounds. The sensor measures organics in a multi-dimensional way that results in improved correlations to aggregate organic water quality parameters, such as TOC and DOC. This allows the sensor to be able to detect changes in the composition of organics independently of their concentration. Real Tech's innovative TOC sensor is advancing water and wastewater management.

**MUNICIPAL DRINKING WATER
MUNICIPAL WASTEWATER
INDUSTRIAL PROCESS WATER
INDUSTRIAL WASTEWATER**

REALTECH
INC.

TOC SENSOR SPECIFICATIONS

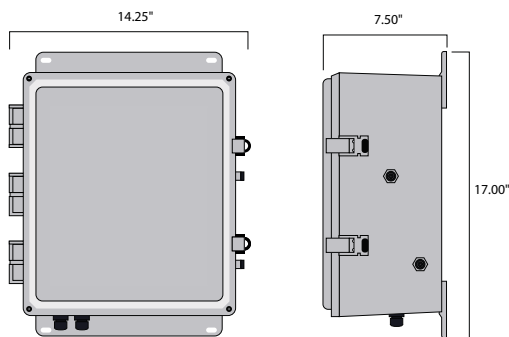| CHARACTERISTIC	TECHNICAL DATA		
Model Series	1000 series	2000 series	4000 series
Path Length	0.5, 1, 2, 4, 10 mm	1, 2, 4, 8 mm	25, 50, 100, 150 mm
Parameters	TOC, DOC		
Range	Depends on model selected. Refer to range.		
Units	mg/L, ppm		
Sampling Time	30 seconds		
Calibration	Factory calibrated. Field adjustment of calibration is possible.		
Cleaning	In-situ chemical cleaning makes cleaning quick and easy. Automatic chemical cleaning is optional.		
Self-Diagnostics	Detection and diagnosis of internal system fault		
Alarms	Dry contact terminals allow for operator configurable alarms for: high and low set points, low lamp output, leaks, system fault, etc.		
Humidity Control	Humidity sensor with large plug-in regenerating desiccant system		
Wavelength	Multiple wavelengths		
Light Source	UV LED		
Flow Rate	500-1000 mL/min	300-1000 mL/min	
Pressure Rating	85 PSI maximum	20 PSI maximum	
Fluid Connections	3/8" OD tube push-in fittings	1/4" OD tube push-in fittings	
Wetted Materials	Kynar, FEP, Quartz, SS316L, Viton	Kynar, Polyethylene, Quartz, SS 316L, Viton	
Electrical/Comm.	From controller		
Ambient Temp.	0 to 45°C (32 to 113°F)		
Water Temp.	0 to 90°C (32 to 194°F) at 21°C (69.8°F) Ambient temperature		
Enclosure	NEMA 4X, wall mountable		
Weight	22 lb	24 lb	
Dimensions	17"H x 14.25"W x 7.5"D	15.82"H x 13.82"W x 9.00"D	
Warranty	2-year limited warranty (Extended care packages available)		

* Technical Specifications are subject to change without notice.
* Water temperature range based on material compatibility only. Contact Real Tech to verify application.
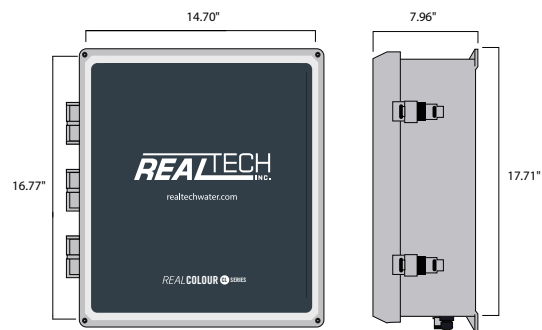
DIMENSIONS

The TOC sensor is a bypass cabinet instrument installed directly on a wall, railing or system backboard. Sample is supplied to the sensor from either a pressurized source or from an open-channel using an accessory pumping system.

DIMENSIONS FOR 1000 & 2000 SERIES MODELS

DIMENSIONS FOR 4000 SERIES MODELS

SENSOR SELECTION

MODEL SERIES	DESCRIPTION
1000	Ideal for closed loop, high pressure or high solids wastewater monitoring applications
2000	Ideal for general water monitoring applications
4000	Ideal for high purity water monitoring applications

SENSOR MODELS & RANGE

Includes TOC sensor, flow cell, calibration bottle and dehumidifier. Controller and accessories sold separately.

Measurement ranges are estimations based on previous field data, and may vary based on plant specific details. Full measurement range may be greater than the ranges stated in the table below, although accuracy may be significantly reduced outside these stated ranges.

Please contact Real Tech for your application specific demands.

MUNICIPAL

MODEL#	PATH LENGTH	TOC/DOC (mg/L)
OL1005	0.5 mm	0 - 3500
OL1010	1 mm	0 - 1750
OL1020	2 mm	0 - 875
OL1040	4 mm	0 - 440
OL1100	10 mm	0 - 175
OL2010	1 mm	0 - 1750
OL2020	2 mm	0 - 875
OL2040	4 mm	0 - 440
OL2080	8 mm	0 - 220
OL4025	25 mm	0 - 70
OL4050	50 mm	0 - 35
OL4100	100 mm	0 - 18
OL4150	150 mm	0 - 12

DAIRY

MODEL#	PATH LENGTH	TOC/DOC (mg/L)
OL1005	0.5 mm	0 - 12,500
OL1010	1 mm	0 - 6250
OL1020	2 mm	0 - 3125
OL1040	4 mm	0 - 1560
OL1100	10 mm	0 - 625
OL2010	1 mm	0 - 6250
OL2020	2 mm	0 - 3125
OL2040	4 mm	0 - 1560
OL2080	8 mm	0 - 780

BEVERAGE

MODEL#	PATH LENGTH	TOC/DOC (mg/L)
OL1005	0.5 mm	0 - 12,000
OL1010	1 mm	0 - 6000
OL1020	2 mm	0 - 3000
OL1040	4 mm	0 - 1500
OL1100	10 mm	0 - 600
OL2010	1 mm	0 - 6000
OL2020	2 mm	0 - 3000
OL2040	4 mm	0 - 1500
OL2080	8 mm	0 - 750

BREWERY

MODEL#	PATH LENGTH	TOC/DOC (mg/L)
OL1005	0.5 mm	0 - 12,000
OL1010	1 mm	0 - 6000
OL1020	2 mm	0 - 3000
OL1040	4 mm	0 - 1500
OL1100	10 mm	0 - 600
OL2010	1 mm	0 - 6000
OL2020	2 mm	0 - 3000
OL2040	4 mm	0 - 1500
OL2080	8 mm	0 - 750

MEAT PROCESSING

MODEL#	PATH LENGTH	TOC/DOC (mg/L)
OL1005	0.5 mm	0 - 5000
OL1010	1 mm	0 - 2500
OL1020	2 mm	0 - 1250
OL1040	4 mm	0 - 600
OL1100	10 mm	0 - 250
OL2010	1 mm	0 - 2500
OL2020	2 mm	0 - 1250
OL2040	4 mm	0 - 625
OL2080	8 mm	0 - 310

PULP & PAPER

MODEL#	PATH LENGTH	TOC/DOC (mg/L)
OL1005	0.5 mm	0 - 1000
OL1010	1 mm	0 - 500
OL1020	2 mm	0 - 250
OL1040	4 mm	0 - 125
OL1100	10 mm	0 - 50
OL2010	1 mm	0 - 500
OL2020	2 mm	0 - 250
OL2040	4 mm	0 - 125
OL2080	8 mm	0 - 60

* Stated ranges are approximate, dependent on industry, site and application - contact Real Tech to confirm model selection.
* Higher maximum range possible with use of Dilution System option.

CONTROLLERS

Controllers include proprietary inputs for Real Tech sensors and accessories.

PRODUCT #	NAME	DESCRIPTION
S--229005	Real Controller Lite	Wall mounted controller with 4-line x 20-character back lit LCD display. Includes modbus RTU (RS485)
S-169000	Real Controller	Wall mounted controller with 4-line x 20-character back lit LCD display. Includes modbus RTU (RS485), 1 channel of 4-20 mA out and digital I/O module
S-11TPC	Real Controller Pro	Wall mounted controller with 12.1" colour LCD touch panel PC interface (PC inside cabinet model). Includes Modbus TCP
S-11TPCD	Real Controller Pro	Wall mounted controller with 12.1" colour LCD touch panel PC interface (PC external on door model). Includes Modbus TCP

ACCESSORIES

PRODUCT #	NAME	DESCRIPTION
UVT-078130	Real Clean System I	Automatic chemical cleaning system for use with 2000 series models
UVT-118010	Real Clean System II	Automatic chemical cleaning system for use with 4000 series models
UVT-079121	Pump Clean System I	Self-priming pump and automatic chemical cleaning for use with 2000 series models
UVT-129122	Pump Clean System II	Self-priming pump and automatic chemical cleaning for use with 4000 series models
S-229035	Pump Clean Pro System (pressurized)	Automatic chemical cleaning and pumping system for up to 25' vertical lift or 100' horizontal in pressurized installation for use with 1000 series models
S-229036	Pump Clean Pro System (non-pressurized)	Automatic chemical cleaning and pumping system for up to 25' vertical lift or 100' horizontal in non-pressurized/ open channel installation for use with 1000 series models
S-178121	Dual Feed II	Dual feed option includes Digital I/O module for use with controllers

BACKBOARDS & ASSEMBLY

Pre-wired and plumbed solution assembled and mounted on backboard with or without stand.

PRODUCT #	DESCRIPTION
S-169033	46" x 46" Industrial grade black plastic mounting backboard and assembly
S-179034	24" x 60" Industrial grade black plastic mounting backboard and assembly
S-179036	46" x 46" Industrial grade black plastic mounting backboard with stand and assembly
S-179035	24" x 60" Industrial grade black plastic mounting backboard with stand and assembly

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