

# MULTI-WAVE SENSOR

WATER QUALITY  
MONITORING  
SOLUTIONS

SL SERIES



## FEATURES & BENEFITS

- Affordable real-time water quality 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
- Multiple parameter configuration available
- Parameters include BOD, COD, TOC, DOC, UV254, UVT, TSS, colour, algae, permanganate, chromium VI, O<sub>3</sub>, THM, HAA

## REAL-TIME MONITORING SOLUTION

### Multi-Wave Sensor

Real Tech's bypass Multi-Wave sensor provides affordable real-time measurement of organic matter and other compounds in water or wastewater. Designed to meet the needs of many monitoring application, the SL 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 allows a system to be configured around the ideal sensor with controller options and various accessory products, including automatic chemical cleaning systems that lower maintenance while improving system performance and dilution systems that extend the measurement range for highly concentrated wastewaters. We can truly meet the physical demands of any installation, wastewater or high purity, to ensure reliable, continuous operation.

### 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 Multi-Wave sensor provides superior measurement performance across multiple wavelengths of light using UV LEDs. Many compounds absorb light in the UV-VIS spectrum, and how much the compounds absorb is directly proportional to their concentration. Compounds that may interfere with measurement are compensated for using additional reference wavelengths. Real Tech's innovative Multi-Wave sensor is advancing water and wastewater management.

MUNICIPAL DRINKING WATER  
MUNICIPAL WASTEWATER  
INDUSTRIAL PROCESS WATER  
INDUSTRIAL WASTEWATER

**REALTECH**  
INC.



# MULTI-WAVE 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	Customized to application. BOD, COD, TOC, DOC, UV254, UVT, TSS, colour, algae, permanganate, chromium VI, O <sub>3</sub> , THM, HAA		
Range	Depends on model selected. Refer to range chart.		
Units	Parameter specific (mg/L, cm <sup>-1</sup> , % or PCU)		
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		
Wavelengths	Multiple UV and VIS wavelengths. Application-dependent		
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)		

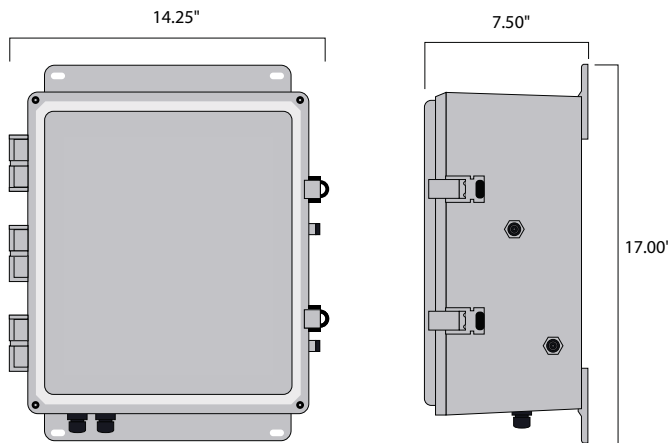
\* Technical Specifications are subject to change without notice.

\* Water temperature range based on material compatibility only. Contact Real Tech to verify application.

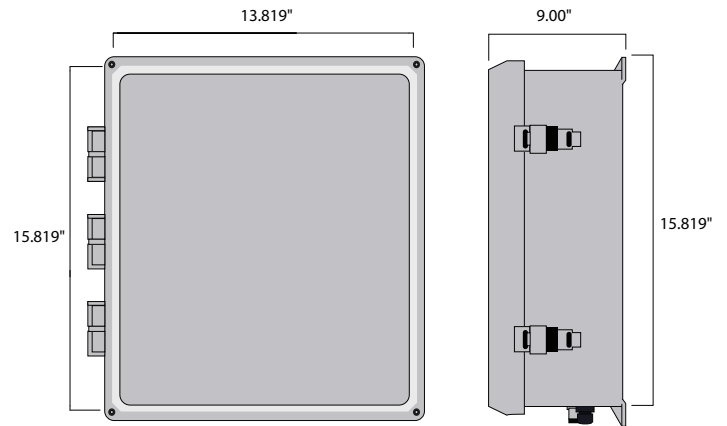
## DIMENSIONS

The multi-wave 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 multi-wave 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.

MODEL#	PATH LENGTH	BOD (mg/L)	COD (mg/L)	TOC/DOC (mg/L)	UV254 (cm <sup>-1</sup> )	UVT (%)	COLOUR (PCU)
SL1005	0.5 mm	0 - 6000	0 - 14,000	0 - 3500	0 - 40	0 - 100	0 - 20,000
SL1010	1 mm	0 - 3000	0 - 7000	0 - 1750	0 - 20	0 - 100	0 - 10,000
SL1020	2 mm	0 - 1500	0 - 3500	0 - 875	0 - 10	0 - 100	0 - 5000
SL1040	4 mm	0 - 750	0 - 1750	0 - 440	0 - 5	0 - 100	0 - 2500
SL1100	10 mm	0 - 300	0 - 700	0 - 175	0 - 2	1 - 100	0 - 1000
SL2010	1 mm	0 - 3000	0 - 7000	0 - 1750	0 - 20	0 - 100	0 - 10,000
SL2020	2 mm	0 - 1500	0 - 3500	0 - 875	0 - 10	0 - 100	0 - 5000
SL2040	4 mm	0 - 750	0 - 1750	0 - 440	0 - 5	0 - 100	0 - 2500
SL2080	8 mm	0 - 375	0 - 875	0 - 220	0 - 2.5	1 - 100	0 - 1250
SL4025	25 mm	0 - 120	0 - 280	0 - 70	0 - 0.8	16 - 100	0 - 400
SL4050	50 mm	0 - 60	0 - 140	0 - 35	0 - 0.4	40 - 100	0 - 200
SL4100	100 mm	0 - 30	0 - 70	0 - 17.5	0 - 0.2	63 - 100	0 - 100
SL4150	150 mm	0 - 20	0 - 45	0 - 12	0 - 0.13	74 - 100	0 - 65

\* Stated ranges are approximate, dependent on industry, site and application - contact Real Tech to confirm model selection.

\* Range for TSS, permanganate, chromium VI, O<sub>3</sub>, THM and HAA is site specific, contact Real Tech for details.

## 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)	For high solids sample water, automatic chemical cleaning and pumping system for up to 25' vertical lift or 100' horizontal in pressurized installation (no air compressor)
S-229036	Pump Clean Pro System (non-pressurized)	For high solids sample water, automatic chemical cleaning and pumping system for up to 25' vertical lift or 100' horizontal in non-pressurized/ open channel installation (no air compressor)
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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