

BOD/COD SENSOR

BL SERIES



FEATURES & BENEFITS

- Affordable real-time BOD/COD monitoring
- Multiple wavelength sensor uses UV LED technology for superior measurement performance
- 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

MUNICIPAL DRINKING WATER
MUNICIPAL WASTEWATER
INDUSTRIAL PROCESS WATER
INDUSTRIAL WASTEWATER

WATER QUALITY
MONITORING
SOLUTIONS

REAL-TIME MONITORING SOLUTION

BOD/COD Sensor

Real Tech's bypass BOD/COD sensor provides affordable real-time measurement of organic matter in water or wastewater. Designed to meet the needs of many monitoring applications, the BL 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 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 BOD/COD 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 organics water quality parameters, such as BOD, COD and TOC. This also allows the sensor to be able to detect changes in the composition of organics independently of their concentration. Real Tech's innovative BOD/COD sensor is advancing wastewater management.

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BOD/COD SENSOR SPECIFICATIONS

| CHARACTERISTIC | TECHNICAL DATA | |
|-------------------|---|---|
| Model Series | 1000 series | 2000 series |
| Path Length | 0.5, 1, 2, 4, 10 mm | 1, 2, 4, 8 mm |
| Parameters | BOD, COD, TOC | |
| Range | Depends on model selected. Refer to range chart. | |
| Units | mg/L | |
| 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 | |
| Dimensions | 17"H x 14.25"W x 7.5"D | |
| Warranty | 2-year limited warranty (Extended care packages available) | |

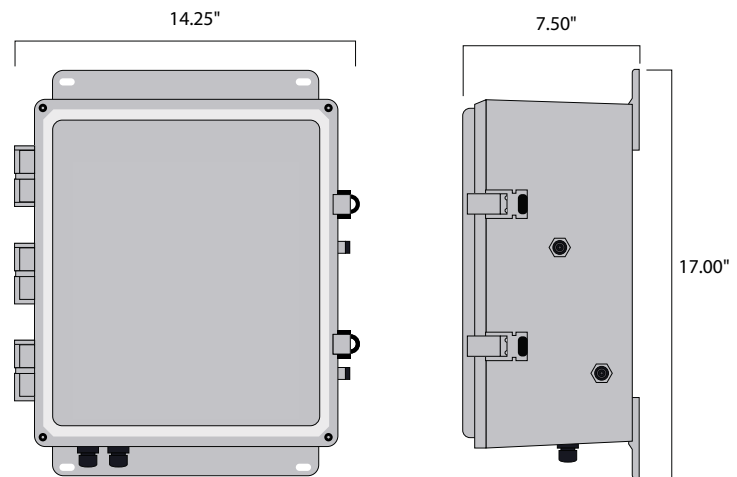
* Technical Specifications are subject to change without notice.

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

DIMENSIONS

The BOD/COD 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



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 |

SENSOR MODELS & RANGE

Includes BOD/COD sensor, flow cell, calibration bottle and dehumidifier. Controller and accessories sold separately. Measurement range can be extended using Real Tech's Dilution system.

MUNICIPAL

| MODEL# | PATH LENGTH | BOD (mg/L) | COD (mg/L) | TOC (mg/L) |
|--------|-------------|------------|------------|------------|
| BL1005 | 0.5 mm | 0 - 1500 | 0 - 3000 | 0 - 800 |
| BL1010 | 1 mm | 0 - 750 | 0 - 1500 | 0 - 400 |
| BL1020 | 2 mm | 0 - 375 | 0 - 750 | 0 - 200 |
| BL1040 | 4 mm | 0 - 190 | 0 - 375 | 0 - 100 |
| BL1100 | 10 mm | 0 - 75 | 0 - 150 | 0 - 40 |
| BL2010 | 1 mm | 0 - 750 | 0 - 1500 | 0 - 400 |
| BL2020 | 2 mm | 0 - 375 | 0 - 750 | 0 - 200 |
| BL2040 | 4 mm | 0 - 190 | 0 - 375 | 0 - 100 |
| BL2080 | 8 mm | 0 - 95 | 0 - 187 | 0 - 50 |

DAIRY

| MODEL# | PATH LENGTH | BOD (mg/L) | COD (mg/L) | TOC (mg/L) |
|--------|-------------|------------|------------|------------|
| BL1005 | 0.5 mm | 0 - 5000 | 0 - 10,000 | 0 - 2500 |
| BL1010 | 1 mm | 0 - 2500 | 0 - 5000 | 0 - 1250 |
| BL1020 | 2 mm | 0 - 1250 | 0 - 2500 | 0 - 625 |
| BL1040 | 4 mm | 0 - 625 | 0 - 1250 | 0 - 300 |
| BL1100 | 10 mm | 0 - 250 | 0 - 500 | 0 - 125 |
| BL2010 | 1 mm | 0 - 2500 | 0 - 5000 | 0 - 1250 |
| BL2020 | 2 mm | 0 - 1250 | 0 - 2500 | 0 - 625 |
| BL2040 | 4 mm | 0 - 625 | 0 - 1250 | 0 - 300 |
| BL2080 | 8 mm | 0 - 312 | 0 - 625 | 0 - 150 |

BEVERAGE

| MODEL# | PATH LENGTH | BOD (mg/L) | COD (mg/L) | TOC (mg/L) |
|--------|-------------|------------|------------|------------|
| BL1005 | 0.5 mm | 0 - 8000 | 0 - 24,000 | 0 - 6000 |
| BL1010 | 1 mm | 0 - 4000 | 0 - 12,000 | 0 - 3000 |
| BL1020 | 2 mm | 0 - 2000 | 0 - 6000 | 0 - 1500 |
| BL1040 | 4 mm | 0 - 1000 | 0 - 3000 | 0 - 750 |
| BL1100 | 10 mm | 0 - 400 | 0 - 1200 | 0 - 300 |
| BL2010 | 1 mm | 0 - 4000 | 0 - 12,000 | 0 - 3000 |
| BL2020 | 2 mm | 0 - 2000 | 0 - 6000 | 0 - 1500 |
| BL2040 | 4 mm | 0 - 1000 | 0 - 3000 | 0 - 750 |
| BL2080 | 8 mm | 0 - 500 | 0 - 1500 | 0 - 375 |

BREWERY

| MODEL# | PATH LENGTH | BOD (mg/L) | COD (mg/L) | TOC (mg/L) |
|--------|-------------|------------|------------|------------|
| BL1005 | 0.5 mm | 0 - 8000 | 0 - 24,000 | 0 - 6000 |
| BL1010 | 1 mm | 0 - 4000 | 0 - 12,000 | 0 - 3000 |
| BL1020 | 2 mm | 0 - 2000 | 0 - 6000 | 0 - 1500 |
| BL1040 | 4 mm | 0 - 1000 | 0 - 3000 | 0 - 750 |
| BL1100 | 10 mm | 0 - 400 | 0 - 1200 | 0 - 300 |
| BL2010 | 1 mm | 0 - 4000 | 0 - 12,000 | 0 - 3000 |
| BL2020 | 2 mm | 0 - 2000 | 0 - 6000 | 0 - 1500 |
| BL2040 | 4 mm | 0 - 1000 | 0 - 3000 | 0 - 750 |
| BL2080 | 8 mm | 0 - 500 | 0 - 1500 | 0 - 375 |

MEAT PROCESSING

| MODEL# | PATH LENGTH | BOD (mg/L) | COD (mg/L) | TOC (mg/L) |
|--------|-------------|------------|------------|------------|
| BL1005 | 0.5 mm | 0 - 6000 | 0 - 10,000 | 0 - 2500 |
| BL1010 | 1 mm | 0 - 3000 | 0 - 5000 | 0 - 1250 |
| BL1020 | 2 mm | 0 - 1500 | 0 - 2500 | 0 - 625 |
| BL1040 | 4 mm | 0 - 750 | 0 - 1250 | 0 - 300 |
| BL1100 | 10 mm | 0 - 300 | 0 - 500 | 0 - 125 |
| BL2010 | 1 mm | 0 - 3000 | 0 - 5000 | 0 - 1250 |
| BL2020 | 2 mm | 0 - 1500 | 0 - 2500 | 0 - 625 |
| BL2040 | 4 mm | 0 - 750 | 0 - 1250 | 0 - 300 |
| BL2080 | 8 mm | 0 - 375 | 0 - 625 | 0 - 150 |

PULP & PAPER

| MODEL# | PATH LENGTH | BOD (mg/L) | COD (mg/L) | TOC (mg/L) |
|--------|-------------|------------|------------|------------|
| BL1005 | 0.5 mm | 0 - 700 | 0 - 2000 | 0 - 500 |
| BL1010 | 1 mm | 0 - 350 | 0 - 1000 | 0 - 250 |
| BL1020 | 2 mm | 0 - 175 | 0 - 500 | 0 - 125 |
| BL1040 | 4 mm | 0 - 90 | 0 - 250 | 0 - 60 |
| BL1100 | 10 mm | 0 - 35 | 0 - 100 | 0 - 25 |
| BL2010 | 1 mm | 0 - 350 | 0 - 1000 | 0 - 250 |
| BL2020 | 2 mm | 0 - 175 | 0 - 500 | 0 - 125 |
| BL2040 | 4 mm | 0 - 90 | 0 - 250 | 0 - 60 |
| BL2080 | 8 mm | 0 - 45 | 0 - 125 | 0 - 30 |

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

* TSS measurement output possible, contact Real Tech to confirm.

CONTROLLERS

| PRODUCT # | NAME | DESCRIPTION |
|-----------|---------------------|---|
| S-169000 | Real Controller | Wall mounted controller with 4-line x 20-character back lit LCD display for sensors |
| S-11TPC | Real Controller Pro | Wall mounted controller with touch panel PC interface (PC inside cabinet model) |
| S-11TPCD | Real Controller Pro | Wall mounted controller with touch panel PC interface (PC external on door model) |

ACCESSORIES

| PRODUCT # | NAME | DESCRIPTION |
|------------|---|---|
| UVT-078130 | Real Clean System I | Automatic chemical cleaning system for use with 2000 series models |
| UVT-079121 | Pump Clean System I | Self-priming pump and automatic chemical cleaning for use with 2000 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 |
| S-228125 | Dual Feed Pro | Dual feed option for heavy wastewater |

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