

DUAL-WAVE SENSOR

ML SERIES



FEATURES & BENEFITS

- Affordable real-time organics monitoring solution
- Dual wavelength sensor (254 nm and 550 nm)
- Wastewater to high purity measurement ranges
- Operator friendly, low maintenance design
- Quick and simple optical measurements
- Reagent free operation
- Multiple parameter configuration available
- Parameters include TOC, DOC, UV254, UVT, TSS, colour

MUNICIPAL DRINKING WATER
MUNICIPAL WASTEWATER
INDUSTRIAL PROCESS WATER
INDUSTRIAL WASTEWATER

WATER QUALITY
MONITORING
SOLUTIONS

REAL-TIME MONITORING SOLUTION

ML Series Dual-Wave Sensor

Real Tech's ML series bypass sensor provides affordable real-time measurement of organic matter in water or wastewater. Designed to meet the needs of many monitoring applications, the series offers multiple sensor path length selections for 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.

Real-time Actionable Data

With the right sensor and hardware configuration, we then build a custom calibration to monitor the aggregate organics parameter(s) or compounds of interest in real-time, accurately and reliably.

MEASUREMENT PRINCIPLE

The ML sensor utilizes light at 254 and 550 nm wavelengths. Many organic compounds, specifically aromatic organics, absorb light at 254 nm while interfering compounds are compensated for at 550 nm. Benefiting from Real Tech's innovative Ortho-Beam and Split-Sense Pro technologies, lamp drift and fluctuations are compensated for, providing an accurate and stable output overtime. ML series sensor parameters include TOC, DOC, UV254, UVT, TSS and colour.



REALTECH
INC.



DUAL-WAVE SENSOR

ML SERIES

SPECIFICATIONS

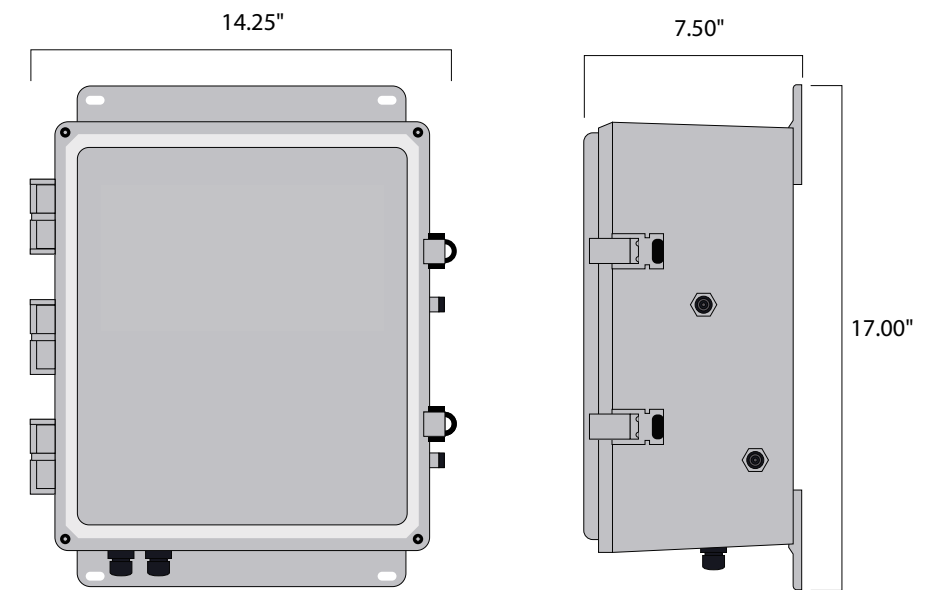
| CHARACTERISTIC | TECHNICAL DATA | | | | | | | | | |
|-------------------|----------------|---|--------|--------|---------------|---------------------------|--------|-----------------|--------|--------|
| | MODEL | ML2010 | ML2020 | ML2040 | ML2100 | ML3000 | ML4050 | ML4100 | ML4150 | ML4250 |
| Path Length | 1 mm | 2 mm | 4 mm | 10 mm | 10 mm x 20 mm | 50 mm | 100 mm | 150 mm | 250 mm | |
| Technology | | Split-Sense Pro | | | Ortho -Beam | | | Split-Sense Pro | | |
| Parameters | | TOC, DOC, UV254, UVT, TSS colour | | | | | | | | |
| Range | | Depends on model selected. Refer to range chart on next page. | | | | | | | | |
| Units | | Parameter specific (mg/L, cm ⁻¹ , % or PCU) | | | | | | | | |
| Sampling Time | | 10 seconds | | | | | | | | |
| Calibration | | Zero to DI water. Factory parameter calibration allows field adjustment as required. | | | | | | | | |
| 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, leak detected, system fault, etc. | | | | | | | | |
| Humidity Control | | Humidity sensor with large plug-in regenerating desiccant system | | | | | | | | |
| Wavelength | | 253.7 nm and 550 nm | | | | | | | | |
| Light Source | | Low-pressure mercury UV lamp and LED | | | | | | | | |
| Lamp Life | | 2 years (mercury UV lamp) | | | | | | | | |
| Enclosure | | NEMA 4, wall mountable | | | | | | | | |
| Flow Rate | | 300-1000 mL/min | | | | | | | | |
| Pressure Rating | | 20 PSI | | | | | | | | |
| Fluid Connections | | 1/4" OD tube push-in fittings | | | | | | | | |
| Electrical/Comm. | | From controller | | | | | | | | |
| Storage Temp. | | -20 to 60°C (-4 to 140°F) | | | | | | | | |
| Operating Temp. | | 0 to 45°C (32 to 113°F) | | | | | | | | |
| Weight | | 22 lb | | | | 24 lb | | | | |
| Dimensions | | 17"H x 14.25"W x 7.5"D | | | | 17.75"H x 15.5"W x 6.75"D | | | | |
| Warranty | | 2-year limited warranty (Extended care packages available) | | | | | | | | |
| Sensor Upgrades | | High Temp. Upgrade I, High Temp. Upgrade II | | | | | | | | |

*Technical Specifications are subject to change without notice.

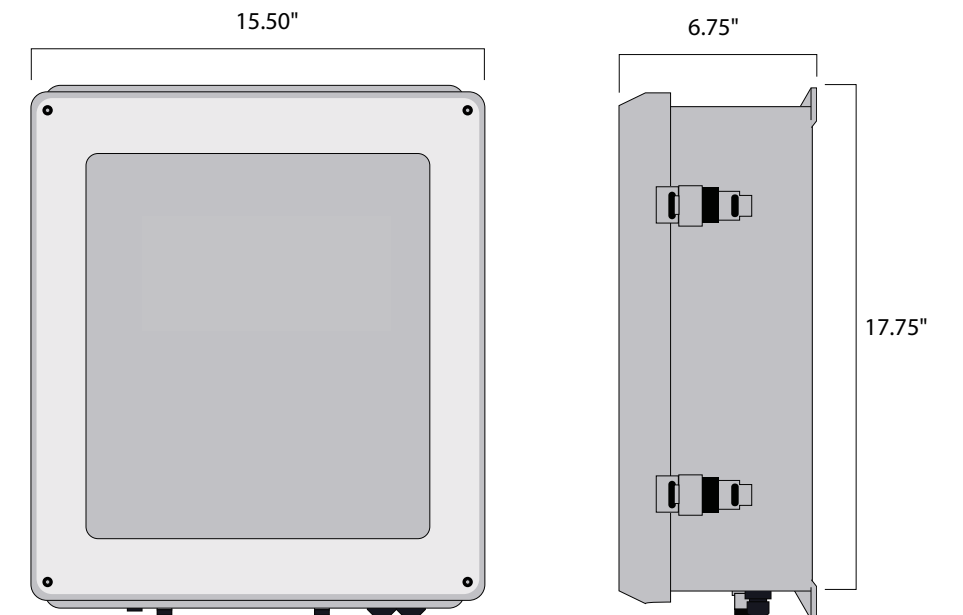
DIMENSIONS

ML series sensors are bypass cabinet instruments 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 ML2000 SERIES AND ML3000 MODELS



DIMENSIONS FOR ML4000 SERIES MODELS



MODELS & RANGE

ML series models include dual-wave sensor, flow cell, calibration bottle and dehumidifier. Controller and accessories sold separately.

| MODEL# | PATH LENGTH | UV254 (cm ⁻¹) | UVT (%) | TOC (mg/L) | DOC (mg/L) | COLOUR (PCU) |
|--------|-------------|---------------------------|----------|------------|------------|--------------|
| ML2010 | 1 mm | 0 - 20 | 0 - 100 | 0 - 1200 | 0 - 800 | 0 - 6000 |
| ML2020 | 2 mm | 0 - 10 | 0 - 100 | 0 - 600 | 0 - 400 | 0 - 3000 |
| ML2040 | 4 mm | 0 - 5 | 0 - 100 | 0 - 300 | 0 - 200 | 0 - 1500 |
| ML2100 | 10 mm | 0 - 2 | 1 - 100 | 0 - 120 | 0 - 80 | 0 - 600 |
| ML3000 | 10 x 20 mm | 0 - 1 | 10 - 100 | 0 - 60 | 0 - 40 | 0 - 300 |
| ML4050 | 50 mm | 0 - 0.4 | 40 - 100 | 0 - 24 | 0 - 16 | 0 - 120 |
| ML4100 | 100 mm | 0 - 0.2 | 63 - 100 | 0 - 12 | 0 - 8 | 0 - 60 |
| ML4150 | 150 mm | 0 - 0.13 | 74 - 100 | 0 - 8 | 0 - 5.3 | 0 - 40 |
| ML4250 | 250 mm | 0 - 0.08 | 83 - 100 | 0 - 4.8 | 0 - 3.2 | 0 - 24 |

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

* Range for TSS is site specific, contact Real Tech for details

* Approximation of colour measurement based on UV254

* Higher maximum range possible with use of Dilution System option

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 and 3000 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 and 3000 series models |
| UVT-129122 | Pump Clean System II | Self-priming pump and automatic chemical cleaning for use with 4000 series models |
| S-159124 | Air Purge Clean System I | Automatic chemical cleaning, air purge and pump (vertical lift less than 8 ft and pumping distance less than 25ft) |
| S-179125 | Air Purge Clean System II | Automatic chemical cleaning, air purge and booster pump (vertical lift exceeds 8ft or pumping distance exceeds 25 ft) |
| S-179126 | Air Purge Clean System III | Automatic chemical cleaning and air purge. Client supplies pump or water is pressurized |
| S-169092 | Dilution System I | Dilution system, automatic chemical cleaning, air purge and pump (vertical lift less than 8 ft and pumping distance less than 25ft) |
| S-179093 | Dilution System II | Dilution system, automatic chemical cleaning, air purge and booster pump (vertical lift exceeds 8ft or pumping distance exceeds 25 ft) |
| S-179094 | Dilution System III | Dilution system, automatic chemical cleaning and air purge. Client supplies pump or water is pressurized |
| S-1789121 | Dual Feed II | Dual feed option includes Digital I/O module for use with controllers |

Real Tech Inc.

1150 Champlain Court,
Whitby, Ontario L1N 6K9 Canada
TF: 1.877.779.2888 T: 1.905.665.6888
info@realtechwater.com



REALTECH
INC.