

# Source Water Monitoring Panel

- Continuously monitor the quality of your incoming Source Water
- Anticipate changes to the treatment process that are needed to react to storms, algal blooms, industrial discharge, chemical spills, reservoir stratification/destratification, construction activity, sewage spills and other natural or man-made occurrences
- Improve process control—make necessary changes to your chemical quantities before the water enters your plant
- Improve your response time to changes in your incoming water
- Improve taste and odor problems
- Test up to six different parameters in one common trough, saving space and effort
- One controller for all sensors
- Can upgrade system with TOC analyzer or auto-sampler



Source Water Monitoring

DW

WW

E

Source waters can be vulnerable to an accidental or intentional contaminant events. Monitoring an input water source can provide useful information to the Drinking Water Plants that process incoming water. Plants can shut their intake down should their Source Water Panel parameters change significantly.

## Features and Benefits

- Single sample inlet
- Single sample drain
- Single power supply
- Easy to install—hint: ensure you have a representative sample
- MODBUS 485 protocol for easy digital communications
- Easy to clean—simply unscrew top and wipe out or flush sample trough

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



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Reservoirs and other source water sites are easy to access—instances have occurred all over the world where diesel fuel or other contaminant spilled in to the drinking water supply for a community, shutting down their drinking water supply.

### Recent Examples of Source Water Contamination

| Incident   | Source of Contamination | Country     |
|--|-------------------------|-------------|
| Contaminated river shut water supply down for 4 days; schools shut down                            | chemical blast          | China       |
| Strychnine found in Reservoir, shut down reservoir   | unknown                 | Denmark     |
| 7500 gallons of diesel spilled in river  | tanker truck crashed    | USA         |
| 15000 liters of diesel in river, direct source of valleys' entire drinking water                   | tanker truck crashed    | Afghanistan |
| diesel oil in River  | unknown                 | USA         |
| 13000 liters of diesel into river shutting down drinking water plant                               | auto workshop           | New Zealand |
| Alum overflow from DWP—Alum delivery professionals overfilled Alum tank and excess went into river | drinking water plant    | USA         |

### Parameters Used to Monitor Source Water

| Parameter                            | Product to Measure     | Rational  |
|--------------------------------------|------------------------|---|
| <b>Organics</b>                      | UVAS sc probe, 2mm     | Useful for season changes and accidental spills of organic nature   |
| <b>Ammonium</b>                      | NH4D                   | May indicate presence of pesticides or other biological degradation of organic matter   |
| <b>pH</b>                            | pH sensor, Ryton       | Acid/base relationships within water  |
| <b>Conductivity</b>                  | Conductivity Inductive | May indicate presence of ionic species; measures the total ionic concentration in water   |
| <b>ORP</b>                           | ORP Sensor             | May indicate sudden changes for oxidative or reducing species introduced into the water   |
| <b>Turbidity, High Range</b>         | SOLITAX™ t-line        | May indicate some chemical compounds or increased bacterial levels (can measure suspended solids as well if proper Prod. No. ordered) |
| <b>Dissolved Oxygen, Luminescent</b> | LDO                    | Sudden change may indicate toxic conditions that effect algal respiration or increased levels of bacteria using up the oxygen         |
| <b>Level</b>                         | Level                  | Useful with SWP trough  |
| <b>Nitrate</b>                       | NITRATAX™ plus sc 5 mm | Nutrient level within water; agricultural runoff  |



## Specifications\*

### Source Water Panel

#### Dimensions

31" x 29"

#### Inlet Dimension

3/8 FNPT supplied with 1/2 OD tubing quick connect fitting

#### Drain (Outlet) Dimension

3/4 FNPT supplied with 3/4 barb fitting

#### Flow Required

Up to 4,000 mL/minute

#### Minimum Flow Requirement

900 mL/minute

#### Sample Pressure

20 – 80psig

#### Power

90-240 Vac for use worldwide

#### Certifications

UL/CSA/CE Compliant

#### Mounting

Wall or rack

#### Weight

65 lbs

#### Data Logging

about 28 days; first in, first out

*Probes hold accuracy specifications.*

### sc1000™ Controller

The Source water panel that comes with a pre-determined pre-configured sc1000 controller that offers exactly what is needed to make the sc1000 work well in this application. 1 Relay; 485 ModBus outputs; 2 Analog inputs; 6 sensor input

#### Ambient Conditions

Operation: -20 to 55°C (-4 to 131°F);

0 to 95% relative humidity, non-condensing

Storage: -20 to 70°C (-4 to 158°F);

0 to 95% relative humidity, non-condensing

#### Power Requirements

100 to 230 Vac, 50/60 Hz

Power: 75 W

Optional: 24 Vdc

#### Display

1/4 VGA graphical backlit TFT color touch screen

Resolution: 320 x 240 pixels

#### Relays

Up to four SPDT, user-configurable contacts rated 100 to

230 Vac, 5 Amp resistive maximum, per probe module.

Additional relays are available via digital network connection.

#### Outputs

Up to 12 analog 0/4-20 mA, maximum impedance 500 Ohms per probe module.

Additional analog outputs are available via digital network connection.

Optional digital communications via MODBUS® (RS-485) or PROFIBUS DP.

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Up to 12 analog 0-20 mA, maximum impedance 500 Ohms per probe module.

Additional inputs are available via digital network connection.

#### Control

PID, high/low phasing, setpoint, deadband, overfeed timer, off delay, and on delay

#### Alarms

Low alarm point, low alarm point deadband, high alarm point, high alarm point deadband, off delay, and on delay

#### Communication (Optional)

MODBUS® (RS-485): Advanced communications/networking with PLC or SCADA system directly from analyzer.

PROFIBUS DP

GSM cellular module (FCC approval pending.)

Ethernet service port (standard)

#### Memory Backup

All user settings are retained indefinitely in memory (non-volatile) (EEPROM)

#### Mounting Configurations

Surface, panel, and pipe (horizontal and vertical)

#### Enclosure

IP65; ABS (display module) and metal (probe module) enclosure with corrosion-resistant finish

#### Dimensions

Probe module with attached display module:

315 x 250 x 142 mm (12.4 x 9.8 x 5.6 in.)

#### Weight

Approximately 6.5 kg (14.3 lbs.) depending on configuration

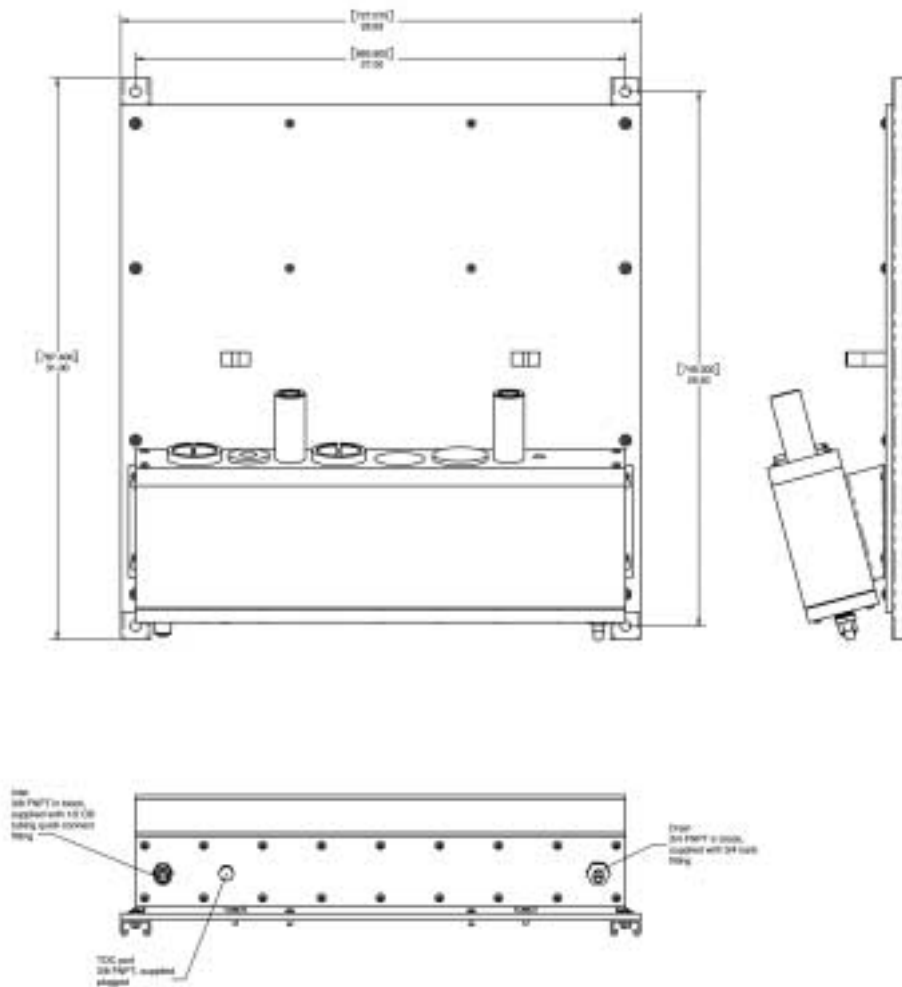
#### Certifications

cTUVus to UL 61010A-1 and CSA C22.2 No. 1010.1

TUV-GS to EN 61010-1

CE per 73/23/EEC and 89/336/EEC

## Dimensions



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*Keep it pure.*

*Make it simple.*

*Be right.*

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## Ordering Information

Contact your local sales representative for ordering.

*Hach Homeland Security Technologies focuses on the development of innovative and breakthrough technologies that can be used to detect contamination events, terrorist activity, and improve general operational control in both water and air.*

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