Blue-White®

Quick Start Guide

APH2O

Chlorine (Free or Total)/ Turbidity Analyzer Panel

Congratulations on your purchase on a APH2O multi-parameter online water analyzer!
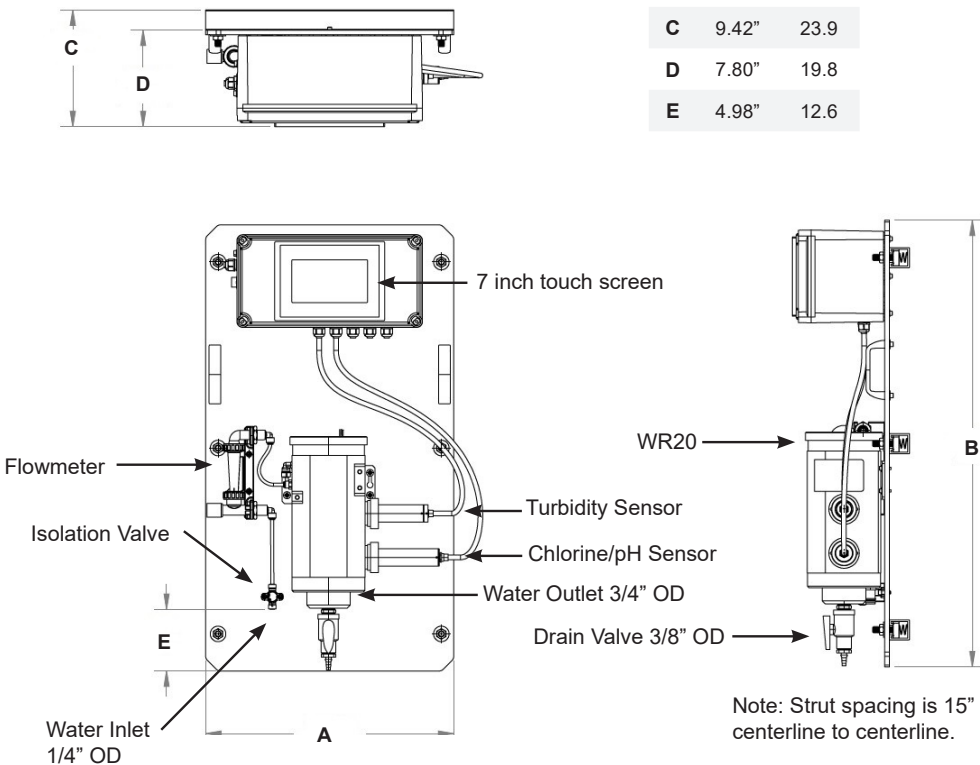
The APH2O Analyzer Panel is specifically designed as a 'Turn-Key' monitoring solution for clean water applications including drinking water networks, secondary water supply and decorative/swimming water applications.

The APH2O series offers highly accurate, real-time measurement, display and data-logging of Ultra-Low Turbidity, Chlorine (Free or Total), pH and Temperature utilizing proprietary smart sensor technology, coupled with a touch screen display and data logging terminal. APH2O is compliant with EPA 334.0 / ISO 7393 / EPA 180.1 standards.

Reference the below dimensional drawings for installation.

APH2O Panel Dimensions

Dim	Inch	cm
A	20.00"	50.8
B	36.00"	91.4
C	9.42"	23.9
D	7.80"	19.8
E	4.98"	12.6

7 inch touch screen

Flowmeter

Isolation Valve

WR20

Turbidity Sensor

Chlorine/pH Sensor

Water Outlet 3/4" OD

Drain Valve 3/8" OD

Water Inlet 1/4" OD

Note: Strut spacing is 15" centerline to centerline.

IMPORTANT
Safety instructions

⚠️ **CAUTION**   Follow these instructions before installing your analyzer to avoid failure. Read this guide and Instruction Manual before using.

⚠️ **CAUTION**   The APH2O is designed to be installed and operated by qualified personnel only. Please note that warranty coverage does not include damage due to misuse or improper installation.

⚠️ **CAUTION**   Always wear eye protection when using chemicals.

🕐 **PRESSURE**   Do not exceed maximum pressure. High pressure and temperature will damage the system.

PRE-INSTALLATION
Before you begin

In the Box

- APH2O Analyzer Panel
- Pre-Mounted Struts
- Pre-mounted Flow Meter
- Turbidity Sensor
- Chlorine Sensor
- 1/4" tubing OD
- 3/8" tubing OD
- 3/4" tubing ID
- Concrete Anchors
- Electrical Schematics
- Quick Start Guide

Tools Needed

- Phillips Screwdriver
- Adjustable wrench

Planning

Ensure location of Analyzer complies with existing codes and regulations. Location of mounting must be strong enough to support weight of Analyzer and water. Analyzer and mounts are not designed to support any other structures, piping, or equipment.

Wiring

To access the wiring terminal, open the enclosure by loosening the four screws with the screwdriver. The Analyzer must be powered by 100~240VAC 50/60Hz. Communication wiring should be 20-24 AWG(American Wire Gauge) shielded cable.

Plumbing

Incoming water supply and drainage piping should be planned before installing the Analyzer. Additional components may be required to connect to the provided tubing.

Need more information. Please contact customer service with questions.
customerservice@blue-white.com   714-893-8529

Scan QR code to download full Instruction Manual.

Installation Requirements

Power Supply: 100~240VAC 50/60Hz

Water Supply: Inlet water pressure should be from 7.25 – 30 psi (0.05-0.2MPa) with an inlet feedwater line diameter of ¼-inch O.D. Tubing. The APH2O is provided with an inlet Rotameter and flow regulating valve for sample water inlet flow control and limited pressure regulation. The range of inlet flow for the WR20 should be consistently maintained between 600 and 1,000 mL per minute.

Inlet Water: Connect the ¼-inch inlet water tubing to the quick adapter provided. Consistent flow of 600-1,000mL is required.

Drainage: The WR20 outlet tube (3/4" ID Tubing) located on the bottom of the WR20, as well as the WR20 weir overflow (3/8-inch O.D. Tubing) located on the top of the WR20, should both be connected to a discharge drain via gravity flow.

Weir Overflow: Connect the ⅜-inch weir overflow tubing to the quick adapter provided.

Outlet Line: Connect 3/4" ID tubing to the outlet drain. This is the sample water outlet flow. **This line must be diverted to drain.**

Wall Mount Space: The APH20 analyzer panel size is roughly 20" H x 36" W x 10" D in dimension. Please accommodate sufficient space for mounting. The panel is equipped with pre-installed rear unistrut for simple wall mounting.

Wall Mount Weight: Approximately 45 lbs (20kg). Please use appropriate mounting hardware.

Wiring

The APH2O analyzer has universal AC power supply equipment allowing users simply to plug the power supply into a 100~240V AC 50/60Hz power outlet for normal operation.

The process of electrical connection to contact the 220V single-phase power supply, should be operated by personnel with an electrician's license. Failure to operate according to the electrical code of practice may result in electric shock injury or even death. **Note: When in doubt regarding your electrical installation, contact a licensed electrician.**

INSTALLATION
Step-By-Step

1 Measure

Use the provided drawing dimensions to determine best mounting location of panel.
Measure wall and locate mounting holes. Panels should be mounted at an elevation to allow for easy access to control unit.
Wall Mount Weight: 45 lbs

2 Install Strut

Use the provided strut and hardware to mount the panel.
Strut to be mounted securely to wall using appropriate hardware.
Strut spacing is on 15" centerline.
If using provided anchor bolts, drill holes in concrete and clean thoroughly. Located strut and mount with appropriate tools.
Check to make sure strut is secure and level.

3 Mount Panel

Mounting panel will requires 2 or 3 persons.
Mount panel to strut using provided hardware.
Be sure panel is level before securing.
Check spacing and panel before connecting electrical and piping.

4 Connect Electrical and Tubing

Use provided electrical diagram to connect power and communication wiring.
Consult with electrical profession before performing any electrical work.

5 Power Up System

Check all electrical connections before powering on system.
Check piping connections for leaks.
System is activated by pressing Power button on side of control panel.

Start-Up and Operation

After the system is powered on (using the power button, located on the left side of the TS10), a "Blue-White" introduction screen will appear and then immediately proceed to Real Time Monitoring screen.

The system does not require "User Login" to view real time monitoring of the system. "User Login" is only necessary when changing parameter settings or performing calibrations. To access this now, press the 🏠 icon and refer to Instruction Manual for more instructions regarding login and user management. Default password is "888888".

NOTE: The FCL Sensor has a 5 minute "Initialization period" before readings begin.
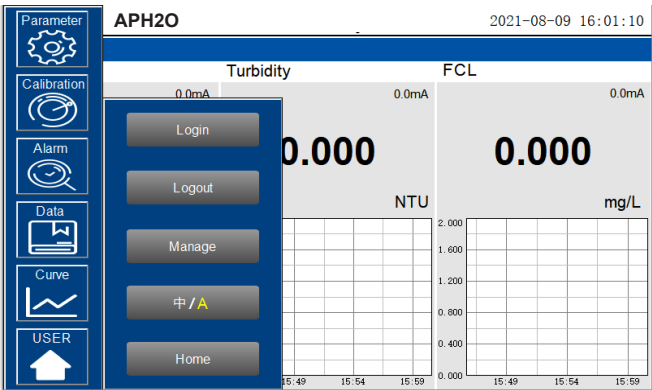
Real Time Monitoring

Upon start-up, the main interface screen will appear showing real-time monitoring of the system. The data detected by the Blue-White sensors will be displayed in real-time. For further programming instructions and a functional overview of each section, please refer to complete Instruction Manual.
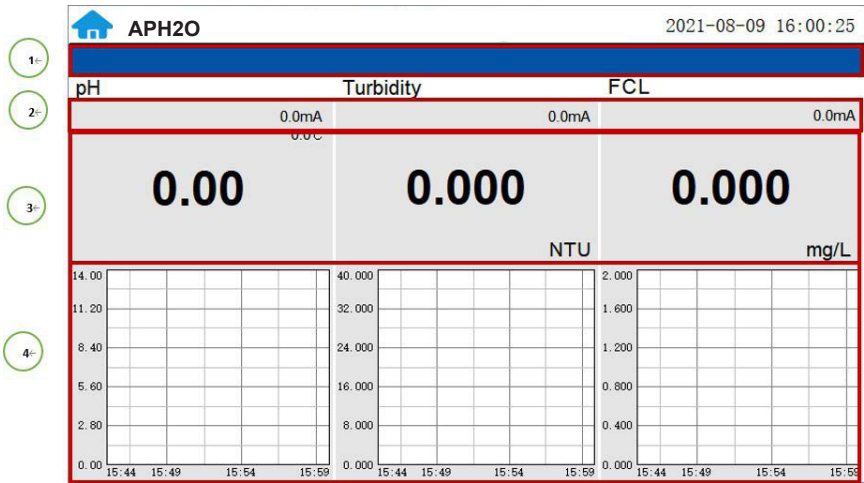
Engineering Specifications

Item	APH2O
Turbidity Wavelength	Warm White
Light Source	LED
Turbidity Dual Range	0.001 – 10 / 10 - 40.00 NTU
Turbidity Accuracy	+/- 0.005 NTU or 2% <10NTU
Turbidity Repeatability	+/- 0.001 NTU or 0.5% <10NTU
Chlorine Method	Bare Gold - Electrochemical Method
Chlorine Range	0.01 – 5.00 ppm, 0.01 - 10.00 (Free or Total)
pH Method	Electrochemical Method
pH Range	0.01 – 14.00 pH
Measurement Accuracy	0.001 NTU or ± 1% Full Scale +/- 0.01 ppm or 1% Full Scale w/pH compensation to 9.0 +/- 0.01 pH
Minimum Resolution	0.001 NTU 0.01 ppm 0.01 pH
Response time	4s after immersion - Turbidity T95≤60s – Free Chlorine T95≤5s - pH
Compliance	EPA-180.1/334.0
Measurement Interval	Continuous Measurement
Display	7-inch LCD Color Industrial Capacitive Touch Screen
Storage Capacity	Built-In 4GB of Ram for Storing up to 1-Million Data/Event Records
Power Requirement	96-260VAC / 50-60 Hz; 10A Fuse; 200 W
Output	3 x 4-20 mA (NTU, Cl, and pH) / RS-485 Modbus - RTU / Modbus TCP
Input	3 x 4-20 mA / RS-485 Modbus - RTU (from sensor)
USB	1 x USB host, for data downloading and screen upgrade
Internet	RJ-45 socket, Modbus-TCP
Panel Operational Temperature	40 – 113°F (4-45 °C)
Storage Temperature	Instrument: -4 – 131°F (-20 – 55°C) / Sensors 32 – 122°F (0 – 50°C)
Sample Water Temperature	40 – 104°F (4-40°C)
Sample Water Pressure	2 – 30 psi (0.05 – 0.2MPa) - (or as needed to provide required flow rate)
WR20 Sample Water Flow Rate	9.5 - 15.5 GPH (600-1,000mL /Minute)
WR20 Line Size	1/4" Inlet / 3/8" Overflow / 3/4" Outlet / 1/2" Drain
Rating	IP-65 Panel-Display / IP-67 Sensors
Regulation	CE / RoHS
Relative Humidity	20% - 90% (No Condensation)
Altitude	<6,561 feet (<2,000 Meter)
Dimensions (HxWxD)	Panel 36 H x 20 W x 9.42 D inches
Approximate Product Weight	45 lbs
Shipping Dimensions	42" x 26" x 16" (1067H x 661W x 407D mm)

WARRANTY
Information

LIMITED WARRANTY

Your Blue-White product is a quality product and is warranted for a specific time from the date of purchase (proof of purchase is required). The product will be repaired or replaced at our discretion. Failure must have occurred due to a defect in material or workmanship and not as a result of the operation of the product other than in normal operation as defined in the product manual. Warranty status is determined by the product's serial label and the sales invoice or receipt. The serial label must be on the product and legible. The warranty status of the product will be verified by Blue-White or a factory-authorized service center.

APH20 is warranted for 13 months from the date of purchase. Sensors are warranted for 6 months.

WHAT IS NOT COVERED

- Freight to the factory, or service center.
- Products that have been tampered with, or in pieces.
- Damage resulting from misuse, carelessness such as chemical spills on the enclosure, abuse, lack of maintenance, or alteration which is out of our control.
- Damage by faulty wiring, power surges, or acts of nature.
- Damage that occurs as a result of: meter misalignment, improper installation, over tightening, use of non-recommended chemicals, use of non-recommended adhesives or pipe dopes, excessive heat or pressure, or allowing the unit to support the weight of related piping.

BLUE-WHITE does not assume responsibility for any loss, damage, or expense directly or indirectly related to or arising out of the use of its products. Failure must have occurred due to a defect in material or workmanship and not as a result of the operation of the product other than in normal operation as defined in the manual. Warranty status is determined by the product's serial label and the sales invoice or receipt. The serial label must be on the product and legible. The warranty status will be verified by Blue-White or a factory-authorized service center.

PROCEDURE FOR IN-WARRANTY REPAIR

Warranty service must be performed by the factory or an authorized service center. Contact the factory or local repair center to obtain a RMA (Return Material Authorization) number. Decontaminate, dry, and carefully pack the product to be repaired. Please enclose a brief description of the problem and proof of purchase. Prepay all shipping and insurance costs. COD shipments will not be accepted. Damage caused by improper packaging is the responsibility of the sender. When In-Warranty repair is completed, the factory pays for return shipping to the dealer or customer.

ISO 9001:2015 CERTIFIED

MADE IN THE USA

Have Questions?
Contact us

+1 (714) 893-8529
customerservice@blue-white.com

blue-white.com/contact-us