# Professional Plus

The YSI Professional Plus is not a refinement. It came straight out of the imagination of our customers... and the ingenuity of a multi-disciplined team dedicated to making the ideal solution come to life. Our focus never wavered because listening to our customers is a continuous process, and the heart and soul of our commitment.

Designed to be tough and smart in the lab or field. And extremely versatile. The Pro Plus accommodates any combination of YSI Pro Series cables, sensors, and accessories. Want to measure DO in the field? Maybe pH/DO/Nitrate? Or perhaps you need it to be a lab instrument that measures BODs? Whatever you need...the Pro Plus is your choice.

**YSI Pro Plus.** The ultimate handheld sampling instrument.

## Tougher. Smarter. More Versatile.
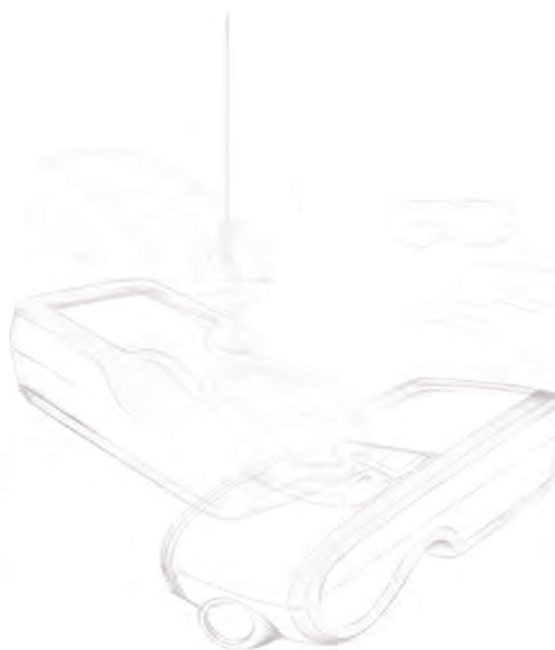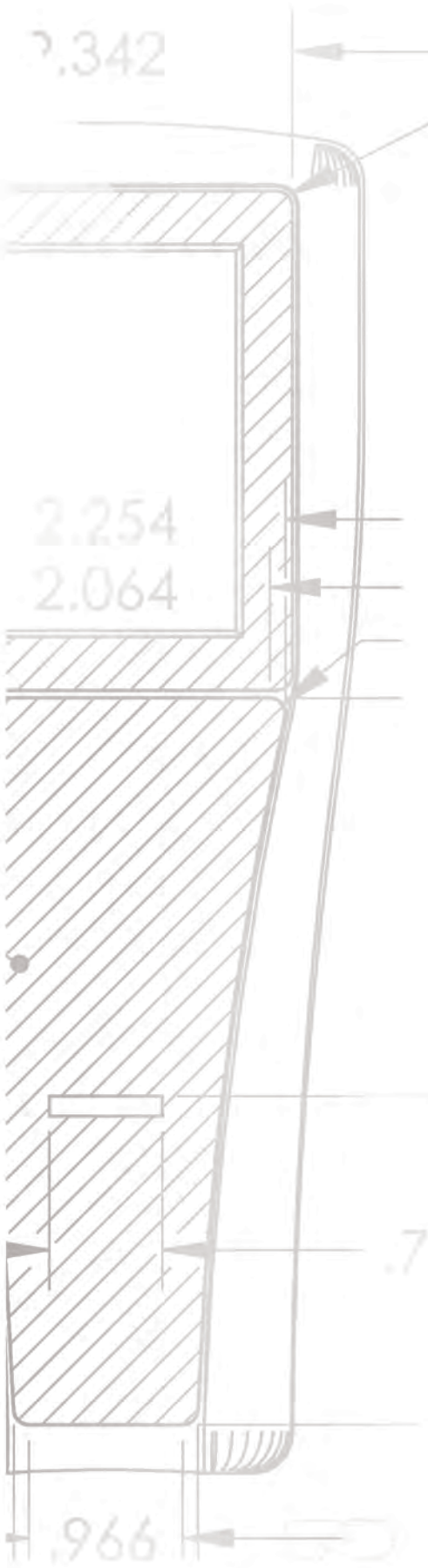
only**YSI**

Rugged, durable field cable with a 2-year warranty standard

only**YSI**

Backlit display AND keypad for use in true low-light conditions

only**YSI**

The file system allows for a 100 folder and site list structure to store and easily manage 5,000 data sets

only**YSI**

Adjustable right- or left-handed hand strap

only**YSI**

Detailed on-screen Help function

only**YSI**

Case is rubber over-molded to provide extra protection and prevent slipping; also allows for flat non-slip design on a table top and provides an IP-67 rating with or without the battery cover; 1-meter drop rated from all angles

only**YSI**

MS (military-spec) connectors – rugged, waterproof, keyed, bayonet style quarter-turn lock

only**YSI**

Multiple user-replaceable sensor options and a choice of galvanic or polarographic DO sensors

only**YSI**

This symbol refers to a feature or benefit only YSI offers on a handheld instrument.

Professional *Plus*

Log One Sample

21.14 °C

740.30 mmHG

7.20 DO

11.27 pH

Calibration successful!

*m*CERTS

# Tougher

Do your job with confidence even in the harshest field conditions. The drop-tested Pro Plus was designed tough with military-spec connectors, a two-year warranty on all cables, weighted sensor guards, and a rubber over-molded case with three-year warranty. Its interchangeable sensors and extra-durable cables nearly eliminate down time. And its low overall cost of ownership means you're making a worthwhile investment for years to come.

The Pro Plus uses the rugged, IP67, Military Spec (MS) 1/4 turn lock, bayonet-style connector.

**Quatro Cable**
The multiparameter Quatro cable allows the measurement of temperature, conductivity, salinity, dissolved oxygen and any two ISEs -pH, ORP, ammonium, nitrate or chloride.

## How Tough is TOUGH?

**What a Come-back**
A YSI customer accidentally dropped his Pro Plus off a 40-foot bridge into the river below. A week later, he and his team came back. Using a long pole to scrape the river bottom, they found the cable and then the meter. They were amazed to find that – after a week submerged in a muddy river bed – their Pro Plus still worked.

**Not All is Lost**
A YSI wastewater customer knocked a Pro Plus into an aeration basin. Seemingly lost for good, he reluctantly moved on. One year later, the tank was drained to complete minor maintenance. And there lay the meter. After a bit of cleaning, they turned it on. Not only did it work, but it's still being used today.

onlyYSI Easy-to-install cable weights;
can be daisy-chained for additional weight

onlyYSI Rubber, over-molded IP-67
waterproof case (even without battery cover)

3-year instrument warranty

onlyYSI 2-year cable warranty

onlyYSI Rugged cables, sensors, and military-spec
connectors

onlyYSI Drop-tested 1 meter at all angles

Scratch-resistant lens; viewable with polarized
glasses

Instrument floats

Weighted, user-replaceable multi-sensor design

This Pro Plus was dragged nearly half a mile down a gravel road off the back of an ATV. They dusted it off and turned it on.

## Cable Options Field
(order ISE and DO sensors separately)

### Single Parameter Options
**60510 – ISE** (pH, ORP, pH/ORP, ammonium, chloride, nitrate)*
**60520 – DO** (galvanic, polargraphic)**
**60530 – Conductivity/Salinity** (sensor included)

### Single Parameter Options with Conductivity
(included)
**6051030 – ISE/Conductivity**
**6052030 – DO/Conductivity**

### Dual Parameter Options
**6051010 – ISE/ISE**
**6051020 – ISE/DO**

### Multiparameter Options
**Quatro – ISE/ISE, DO/Conductivity**

\* Choice of ISE; pH, ORP, pH/ORP (not recommended on the 6051010 or Quatro cables)
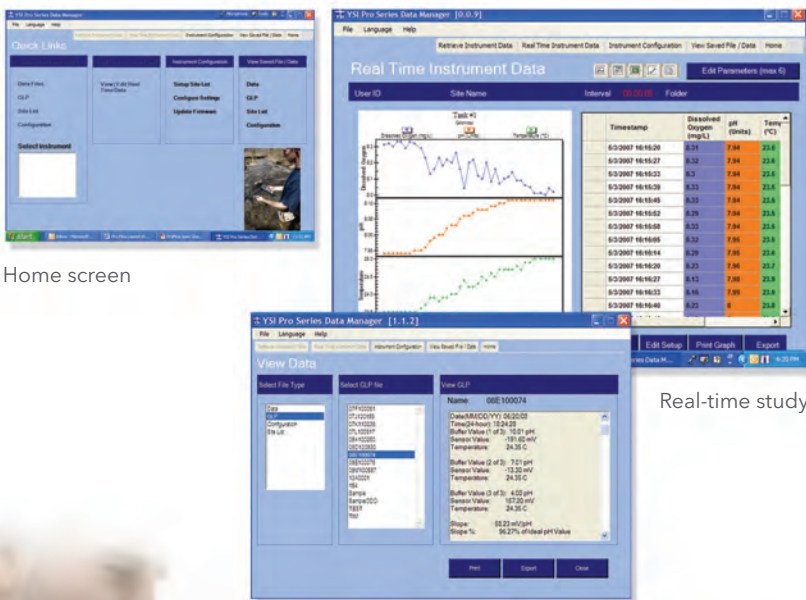Choice of ISE; Ammonium, Nitrate, or Chloride for fresh water only

\*\* Choice of DO; Galvanic, Polarographic
Choice of cable lengths: 1, 4, 10, 20, 30 meters all (up to 100 meters on 60520 only)

Field

3

# Smarter

The technology-smart YSI Pro Plus has all the built-in support you'll need for the lab or field. It provides multiple languages, detailed GLP data, on-screen Help to eliminate the need for a bulky manual, sensor diagnostics, up to six-point auto-buffer recognition, re-cal prompts, user-defined auto-stable function, and security passwords for extra protection. And much more.



Home screen



Real-time study



GLP file data

## FREE
### Data Manager Software

- Easy-to-use software to manage all your data studies
- View, print and export graphical and tabular data
- View and print GLP data
- Quickly configure one or multiple instruments
- Conduct real-time studies

The Lab Dock easily allows your field meter to be used in the lab with the ProBOD probe.



4

| | |
|---|---|
| | 5000 data set memory |
| onlyYSI | Free, Data Manager desktop software and ProComm II saddle |
| | Interval or single-event logging |
| onlyYSI | 100 folder & site list data structure |
| | Password protection |
| | Detailed GLP data |
| | USB connection also powers the instrument |
| onlyYSI | 6-point cal with auto-buffer recognition |
| | User-adjustable auto-stable with prompts |
| onlyYSI | User-upgradeable software via waterproof USB port |
| | Recalibration prompts |
| onlyYSI | Search function filters user-defined data information |



**The Pro Plus shown with the 605107 lab-grade pH sensor and the 605170 lab stand.**



## Cable Options Laboratory



All field cables can also be used in the lab and are ideal to use with the 063507 tripod.

### Lab Grade ISE
**605107 – pH**
**605108 – ORP**
**605109 – pH/ORP**
Choice of cable lengths: 1 and 4 meters



### Self-Stirring BOD
**605780 BOD**
2-meter cable



**BOD Analyst Pro software automates BOD testing.**

2.21"
5.6 cm

**1**

3.25"
8.3 cm

8.50"
21.6 cm

Front View

# More
# Versatile

**1** Pro Plus Instrument
**2** Single Port Conductivity Only
**3** Single Port Cable
**4** Single Port Cable with Conductivity
**5** Dual Port Cable
**6** Quatro Multiparameter Cable
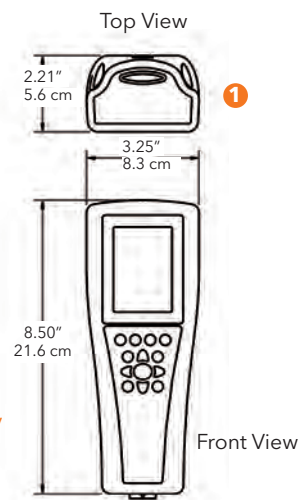
## Professional Plus Instrument General Specifications

| | |
|---|---|
| **Auto Stable** | User-defined auto-stable function holds stable readings on display when criteria is met |
| **Barometer** | Built-in barometer |
| **Buffer Recognition** | Auto buffer recognition for US and NIST buffers |
| **Certifications** | RoHS, CE, WEEE, C-Tick, VCCI, FCC, IP-67, 1-meter drop test, Assembled in USA |
| **Connectivity** | USB 2.0; ProComm II communications saddle and USB cable included; user-upgradeable software via USB and website |
| **Connector** | MS (military spec) waterproof with bayonet lock |
| **Data Management** | Data Manager desktop software included; 100 user-defined folders and site names |
| **Data Memory** | 5,000 data sets (data, date, time, user-defined info); 100 GLP files |
| **Dimensions** | 8.3 cm width x 21.6 cm length x 5.6 cm depth (3.25 in x 8.5 in x 2.21 in) |
| **Display** | Graphic display with detailed Help; backlit display AND keypad |
| **DO Membrane Response Times (T95; 100%-0) and Flow Dependence** | 1.25 mil PE = 8 seconds and 6 in/sec flow<br>2.0 mil PE = 17 seconds and 3 in/sec flow<br>1 mil Teflon® = 18 seconds and 12 in/sec flow |
| **DO Sensors** | Polarographic or galvanic field sensors; self-stirring polarographic BOD sensor for the lab |
| **Field Cables** | Standard lengths of 1, 4, 10, 20, or 30 meters - up to 100 meters on DO only cables; all 4-meter and longer cables include a cable management kit |
| **Flow Cell** | Single, dual and multiparameter Quatro cable all flow cell compatible |
| **GLP Compliance** | Yes; detailed GLP information is stored and is available to view, download or print |
| **Lab Cables** | BOD sensor includes 2-meter cable; 1 or 4 meters on lab pH, ORP and pH/ORP cables |
| **Languages** | English, Spanish, German, French, Italian, Norwegian, Portuguese, Japanese, Chinese (Simplified & Traditional) |
| **Logging Modes** | Single or Continuous |
| **Operating Temperature** | -10 to 60°C |
| **Power** | 2 alkaline C-cells provide 80 continuous hours at ambient temperature without backlight; ProComm II saddle provides USB power or optional wall power, cigarette lighter, and universal cell phone charger options |
| **Storage Temperature** | -20 to 70°C |
| **User ID** | Optional user ID for data security |
| **Warranty** | 3-year instrument; 2-year field cables |
| **Waterproof** | IP-67 (even with the battery cover off); floats |
| **Weight with Batteries** | 475 grams (1.05 lbs) |

**2** 1 Port/Conductivity Only — 5.31" 13.48 — Ø.97" 2.5 cm

**3** 1 Port — 5.76" 14.6 cm — Ø.97" 2.5 cm

**4** 1 Port/Conductivity — 6.91" 17.6 cm — Ø.97" 2.5 cm

**5** 2 Port — 6.91" 17.6 cm — Ø1.63" 4.1 cm

**6** Quatro — 7.34" 18.6 cm — Ø1.85" 4.7 cm
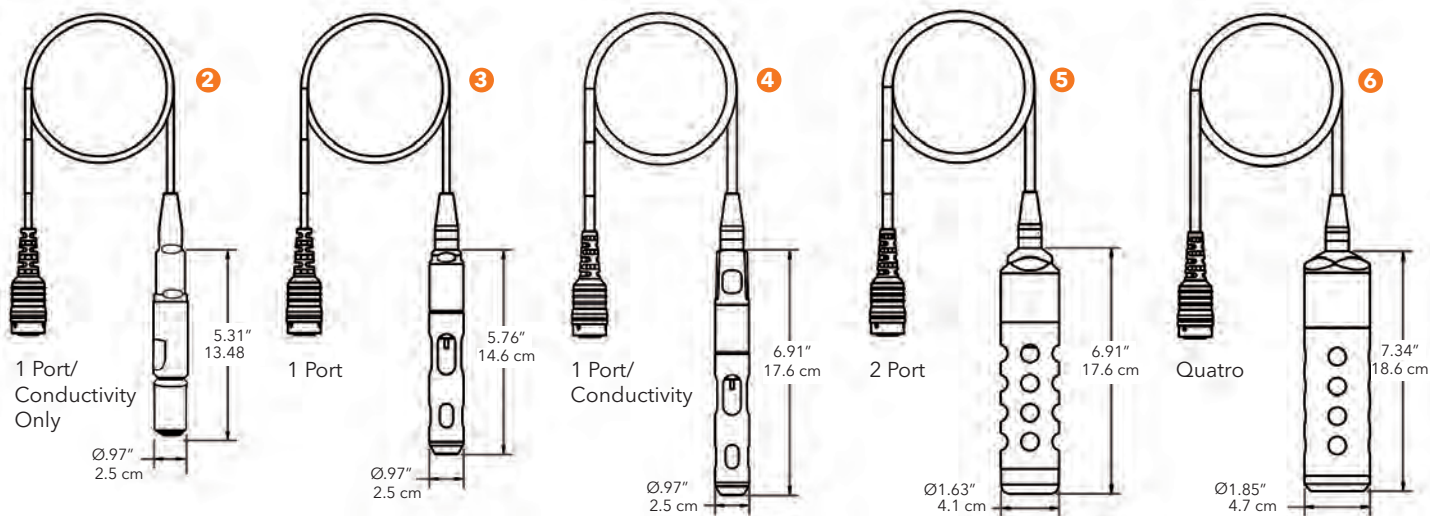
## System Specifications (Cable and Sensors)

| | Sensor Type | Range | Accuracy | Resolution | Units | Calibration |
|---|---|---|---|---|---|---|
| **Dissolved Oxygen (%)** (temp comp range -5 to 45℃) | Polarographic or Galvanic | 0 to 500% | 0 to 200% (± 2% of reading or 2% air saturation, whichever is greater) 200% – 500% (± 6% of reading) | 1% or 0.1% air saturation (user selectable) | % | 1 or 2-points with zero |
| **Dissolved Oxygen (mg/L)** (temp comp range -5 to 45℃) | Polarographic or Galvanic | 0 to 50 mg/L | 0 to 20 mg/L (±2% of the reading or 0.2 mg/L, whichever is greater) 20 to 50 mg/L (±6% of the reading) | 0.1 or 0.01 mg/L (user selectable); 0.1% air saturation | mg/L, ppm | 1 or 2-points with zero |
| **Temperature** (Field rugged cables) | | --5 to 70℃ | ±0.2℃ (±0.3℃ cables over 45-meters) | | 0.1℃ | ℃, ℉, K |
| **Temperature** (Lab-grade)* | | 0 to 40℃ | ±0.35℃ | 0.1℃ | ℃, ℉, K | |
| **Conductivity**** | Four electrode cell | 0 to 200 mS/cm (auto range) | ±0.5% of reading or 0.001 mS/cm, whichever is greater (1-, 4-m cable) ±1% of reading or 0.001 mS/cm, whichever is greater (20-m cable) | 0.001 mS (0 to 500 mS); 0.01 mS (0.501 to 50.00 mS); 0.1 mS (50.01 to 200 mS) | µS, mS | 1 point |
| **Salinity** | Calculated from conductivity and temperature | 0 to 70 ppt | ±1.0% of reading or 0.1 ppt, whichever is greater | 0.01 ppt | ppt, PSU | 1 point |
| **pH** | Glass Combination Electrode | 0 to 14 units | ±0.2 units | 0.01 units | mV, pH units | 1, 2, 3, 4, 5, or 6 point (user selectable); US, NIST or Custom Buffers |
| **ORP** | Platinum button | --1999 to +1999 mV | ±20 mV in redox standards | 0.1 mV | mV | 1 point |
| **Ammonium**** (ammonia with pH sensor) | Ion Selective Electrode | 0 to 200 mg/L-N, 0 to 30℃ | ±10% of reading or 2 mg/L-N, whichever is greater | 0.01 mg/L | mg/L-N, mV | 1, 2, or 3 point (user selectable) |
| **Nitrate**** | Ion Selective Electrode | 0 to 200 mg/L-N, 0 to 30℃ | ±10% of reading or 2 mg/L-N, whichever is greater | 0.01 mg/L | mg/L-N, mV | 1, 2, or 3 point (user selectable) |
| **Chloride**** | Ion Selective Electrode | 0 to 1000 mg/L, 0 to 40℃ | ±15% of reading or 5 mg/L, whichever is greater | 0.01 mg/L | mg/L-Cl-, mV | 1, 2, or 3 point (user selectable) |
| **Total Dissolved Solids (TDS)** | Calculated from conductivity and temperature | 0 to 100 g/L TDS constant range 0.30 to 1.00 (0.64 default) | | 0.001, 0.01, 0.1g/L | kg/L, g/L | |
| **Barometer** | Piezoresistive | 375 to 825 mmHg | ±1.5 mmHg from 0 to 50℃ | 0.1 mmHg | mmHg, inHg, mbar, psi, kPa, ATM | 1 point |

## Instrument Only Specifications (at Ambient Temperature)

| | | Range | Accuracy | Resolution | Units | |
|---|---|---|---|---|---|---|
| **pH** | | -2.60 to 16.60 | ±0.1 mV (0.01 pH units) | 0.1 mV (0.01 pH units) | | |
| **ORP** | | -1999 to +1999 mV | ±0.5 mV | 0.1 mV | | |
| **Conductivity** | | 0.0 to 200 mS/cm each range | ±0.1% FS ±1 digit for uS/cm to 0.1 mS/cm (range dependent) | 0.0001 mS/cm or 0.1 | | |
| **Dissolved Oxygen** | | 0.00 to 90 mg/L; 0 to 550% | ±0.2% FS (550% air saturation) ±1 digit (with 1.25 PE membrane at 10℃) | 0.01 mg/L; 0.1% air saturation | | |
| **Temperature** | | -10 to 100.00℃ | ±0.2% FS ±1 digit | 0.1℃ | ℃, ℉, K | |

*Lab-grade cables include 605107, -108, -109, 605177, -178, -179    ** Derived parameters can include resistivity, salinity, specific conductance, and total dissolved solids

***ISE sensors for freshwater only; 17-meter maximum depth

# Order Guide

## Step 1: Order Instrument

☐ **Instrument 6050000** includes Data Manager software, the ProComm II communications saddle, and USB cable

## Step 2: Order Cable(s)

All cables include temperature; cables over 1 meter include cable management kit; cables with conductivity include sensor (no need to order conductivity sensor)

☐ **60510**: **1, 4, 10, 20** or **30** meter: ISE[1]/temp

☐ **60520**: **1, 4, 10, 20, 30** or up to**100** meters[2]: DO/temp

☐ **60530**: **1, 4, 10, 20** or **30** meter: conductivity/temp

☐ **6051010**: **1, 4, 10, 20** or **30** meter: ISE/ISE/temp

☐ **6051020**: **1, 4, 10, 20** or **30** meter: ISE/DO/temp

☐ **6051030**: **1, 4, 10, 20** or **30** meter: ISE/conductivity/temp

☐ **6052030**: **1, 4, 10, 20** or **30** meter: DO/conductivity/temp

☐ **605790**: **1, 4, 10, 20** or **30** meter: ISE/ISE/DO/conductivity/temp

☐ **605107**: 1-meter single junction pH sensor & cable

☐ **605177**: 4-meter single junction pH sensor & cable

☐ **605108**: 1-meter single junction ORP sensor & cable

☐ **605178**: 4-meter single junction ORP sensor & cable

☐ **605109**: 1-meter single junction pH/ORP sensor & cable

☐ **605179**: 4-meter single junction pH/ORP sensor & cable

## Step 3: Order Sensor(s)

☐ **605202**: Galvanic DO

☐ **605203**: Polarographic DO

☐ **605780**: Self-stirring BOD (2-meter cable included)

☐ **605101**: pH (ISE)

☐ **605102**: ORP (ISE)

☐ **605103**: pH/ORP combination (ISE)[3]

☐ **605104**: Ammonium (ISE)

☐ **605105**: Chloride (ISE)

☐ **605106**: Nitrate (ISE)

☐ **605323**: Amplified pH Sensor (ISE)

☐ **605324**: Amplified pH/ORP Sensor (ISE)

1 ISEs include pH, ORP, Ammonium, Nitrate, Chloride
2 Special order cables in 10-meter increments up to 100 meter available
3 Not recommended on 6051010 or 605790 cables. Only pH would appear.

**60510, 20** or **30**

**6051030** or **2030**

**6051010** or **1020**

**605790 Quatro**

**605202** or **203**

**605780**

**605101, 102** or **103**

**605104, 105** or **106**

**No tools are required to install the sensors.**

## Step 4: Order Solutions

- **3167**: 1,000 µs/cm conductivity solution (8 pints)
- **3168**: 10,000 µs/cm conductivity solution (8 pints)
- **3169**: 50,000 µs/cm conductivity solution (8 pints)
- **3682**: Zobell, ORP solution (125 mL)
- **3824**: pH 4, 7, 10 buffers (2 pints each)
- **3841**: 1 mg/L ammonium solution (500 mL)
- **3842**: 10 mg/L ammonium solution (500 mL)
- **3843**: 100 mg/L ammonium solution (500 mL)
- **3885**: 1 mg/L nitrate solution (500 mL)
- **3886**: 10 mg/L nitrate solution (500 mL)
- **3887**: 100 mg/L nitrate solution (500 mL)
- **5580**: Confidence Solution® to verify pH, ORP and conductivity data (not for cal)

## Step 5: Order Accessories

- **603059**: Flow Cell, Standard, 203 mL
- **603077**: Flow Cell Kit, 1- or 2-Port Sensor (includes 603059 & 603078)
- **606850**: Quatro Cable Flow Cell
- **603078**: Flow Cell Adapter, Single Port (used with 603059)
- **603056**: Flow Cell Mounting Spike
- **603075**: Carrying Case, Soft-Sided
- **603074**: Carrying Case, Hard-Sided
- **603162**: Carrying Case, Small, Soft-Sided
- **603069**: Belt Clip
- **063517**: Ultra Clamp
- **063507**: Tripod
- **603062**: Cable Management Kit
- **605978**: Weight, Sensor/Cable, 4.9 oz.
- **063019**: Weight, Sensor/Cable, 24 oz., 3"
- **063020**: Weight, Sensor/Cable, 51 oz., 6"
- **603070**: Shoulder Strap
- **626444**: Lab Dock, Holds Meter and BOD probe
- **605170**: Electrode Lab Stand

Please visit YSI.com/accessories for more information

**Visit ysi.com/proplus to view the ordering guide for the Pro Plus.**

## What can Xylem do for you?

We're 12,500 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories, and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

For more information on how Xylem can help you, go to www.xyleminc.com

## xylem
Let's Solve Water

## Application Notes

A557 Silver Streak Bass (Aquaculture)

A567 ORP in Wastewater (Wastewater)

A570 Busseron Creek Watershed (Surface Water)

A572 Miami Conservancy District (Surface Water/Groundwater)

A583 Monitoring a Forest Invader (Surface Water)

A585 Ammonia in Aquaculture Ponds (Aquaculture)

A590 Kamchatka Peninsula Salmon (Surface Water/Aquaculture)

A597 Chronic Nitrate Exposure to Trout (Aquaculture)

A602 Oregon DEQ Nitrate (Groundwater)

visit ysi.com/applications

**Connect with YSI:**

Facebook
**facebook.com/myYSI**

Twitter
**twitter.com/ysiinc**

Scoop.it
**scoop.it/water-quality**

LinkedIn
**linkedin.com/company/ysi**

YouTube
**youtube.com/ysiinc**

Tumblr
**myysi.tumblr.com**

Pinterest
**pinterest.com/myYSI**

Scan this QR Code with your smart phone to watch an ordering guide video for the Pro Plus

YSI
1700/1725 Brannum Lane
Yellow Springs, Ohio 45387
+1 937.767.7241
800.765.4974 (US)
environmental@ysi.com
www.YSI.com

a **xylem** brand

**FSC**
**Mixed Sources**
Product group from well-managed forests, controlled sources and recycled wood or fiber
Cert no. SW-COC-000897
www.fsc.org
© 1996 Forest Stewardship Council

mCERTS
THE ENVIRONMENT AGENCY'S
MONITORING CERTIFICATION SCHEME

**ECO** CALCULATIONS REPORT
YSI, Inc. saved the following resources by selecting U2:XG paper with 30% post-consumer recovered fiber.

| trees | energy | greenhouse gas | waste water | solid waste |
|---|---|---|---|---|
| 2 | .7 million BTUs | 570 lbs CO2 | 829 gal | 53 lbs |

U2:XG is FSC-certified, contains 30% post consumer recovered fiber, and is manufactured with electricity in the form of renewable energy.
U2:XG is manufactured by Appleton Coated  www.appletoncoated.com