



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at wvOASIS.gov. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at WVPurchasing.gov with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header @ 2

List View

- General Information**
- Contact
- Default Values
- Discount
- Document Information
- Clarification Request

Procurement Folder: 1303558
 Procurement Type: Central Purchase Order
 Vendor ID: 000000174281
 Legal Name: FONDRIEST ENVIRONMENTAL INC
 Alias/DBA:
 Total Bid: \$27,476.25
 Response Date: 11/07/2023
 Response Time: 16:23
 Responded By User ID: LizFondriest
 First Name: Liz
 Last Name: Fondriest
 Email: Liz@fondriest.com
 Phone: 937-426-2151

SO Doc Code: CRFQ
 SO Dept: 0313
 SO Doc ID: DEP2400000020
 Published Date: 11/6/23
 Close Date: 11/14/23
 Close Time: 13:30
 Status: Closed
 Solicitation Description: Water Quality Meters, YSI ProDSS, or equal
 Total of Header Attachments: 2
 Total of All Attachments: 2

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Item 3.1.1 Multiparameter Water Meter	5.00000	EA	1670.250000	8351.25

Comm Code	Manufacturer	Specification	Model #
41112504			

Commodity Line Comments: 626870-1 ProDSS multi-parameter water quality meter without GPS (cable/sensor sold separately)

Extended Description:

Multiparameter Water Meter, YSI ProDSS, or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Item 3.1.2 Sonde Guard	5.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
41111965			

Commodity Line Comments: Included with line item 3.

Extended Description:

Sonde guard to protect probes and guard weight to minimize drift/movement of unit in water column

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Item 3.1.3 Approx 4 meter, four port cable assembly	5.00000	EA	1814.750000	9073.75

Comm Code	Manufacturer	Specification	Model #
41111965			

Commodity Line Comments: 626909-4 ProDSS 4-port cable assembly, 4m

Extended Description:

Item 3.1.3 Approx 4 meter, four port cable assembly

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Item 3.1.4 pH Sensor	5.00000	EA	420.750000	2103.75

Comm Code	Manufacturer	Specification	Model #
41111965			

Commodity Line Comments: 626903 ProDSS pH sensor

Extended Description:

Item 3.1.4 pH Sensor

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	Item 3.1.5 Temperature/Conductivity Sensors or equal	5.00000	EA	654.500000	3272.50

Comm Code	Manufacturer	Specification	Model #
41111965			

Commodity Line Comments: 626902 ProDSS conductivity & temperature sensor

Extended Description:

Item 3.1.5 Temperature/Conductivity Sensors or equal

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	Item 3.1.6 Optical DO Sensor	5.00000	EA	935.000000	4675.00

Comm Code	Manufacturer	Specification	Model #
41111965			

Commodity Line Comments: 626900 ProDSS optical dissolved oxygen sensor

Extended Description:

Item 3.1.6 Optical DO Sensor

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	Item 3.1.7 Shipping	1.00000	EA	0.000000	0.00

Comm Code	Manufacturer	Specification	Model #
41111965			

Commodity Line Comments: Free UPS Ground shipping.

Extended Description:

Shipping cost for all items

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ DEP24*20

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

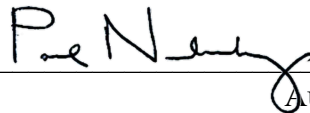
(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/>] Addendum No. 1 | <input type="checkbox"/>] Addendum No. 6 |
| <input type="checkbox"/>] Addendum No. 2 | <input type="checkbox"/>] Addendum No. 7 |
| <input type="checkbox"/>] Addendum No. 3 | <input type="checkbox"/>] Addendum No. 8 |
| <input type="checkbox"/>] Addendum No. 4 | <input type="checkbox"/>] Addendum No. 9 |
| <input type="checkbox"/>] Addendum No. 5 | <input type="checkbox"/>] Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Fondriest Environmental, Inc.

Company



Authorized Signature

11/7/2023

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

Revised 6/8/2012



ProDSS

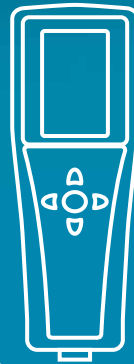
MULTIPARAMETER WATER QUALITY FIELD INSTRUMENT

ProDSS

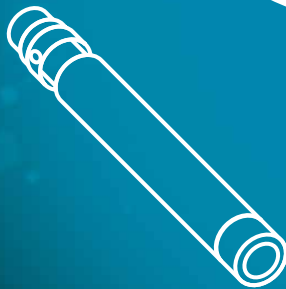
D • I • G • I • T • A • L Sampling System

Customize your **Professional Digital Sampling System** to meet the demands of your water quality monitoring application.

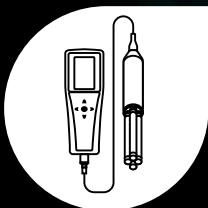
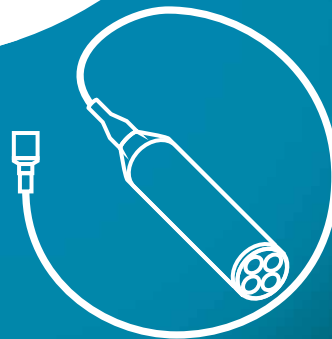
RUGGED



SMART



RELIABLE



With **21 parameter options** and several cable configurations to choose from, the **ProDSS** is ideal for field or lab use in nearly any application: surface water, groundwater, coastal waters, aquaculture, and wastewater.

ProDSS Features

"For spot sampling and profiling this is an excellent multiparameter instrument. The size and functionality knocks it out of the park...now I see the ProDSS as the standard for spot sampling."

ProDSS User



YSI.com/ProDSS



Rugged Handheld

The ProDSS Handheld can withstand the harshest field conditions and handling, with maximum versatility and functionality.



- Easy-to-read color and backlit display can be used in any lighting condition
- Scratch-resistant screen is viewable with polarized glasses
- Long-life rechargeable lithium-ion battery ensures reliability in the field and minimizes waste
- Waterproof (IP-67) rubber over-molded casing
- Simple interface and a dedicated "Help" Button
- Ergonomic design for optimal handling and portability
- Optional GPS for geo-referencing data
- 3-year warranty

"I like the LCD display because of its **ease of use** in low and high light areas... the **increased memory size and speed** are also very nice for logging data."

ProDSS User





Smart Sensors

The 4-Port ProDSS cable uses digital Smart Sensors for fast, easy setup and storage, and highest quality data.



- Universal smart Ports allow any configuration of sensors
- Traceable calibrations stored in sensor – recalibration not required if moved to another port or another instrument
- Sensors are auto-recognized upon installation
- Replaceable sensor modules and ODO cap reduces maintenance and cost of operation
- Highly-ruggedized, welded titanium sensor body
- 2-year warranty

Water Quality Parameters:

Dissolved Oxygen (Optical)	Depth
Turbidity	GPS Coordinates
pH	Ammonium
ORP/Redox	Ammonia
Conductivity	Chloride
Specific Conductance	Nitrate
Salinity	Temperature
Total Dissolved Solids (TDS)	Barometric Pressure
Resistivity	Total Algae
Seawater Density	Chlorophyll
Total Suspended Solids (TSS)	

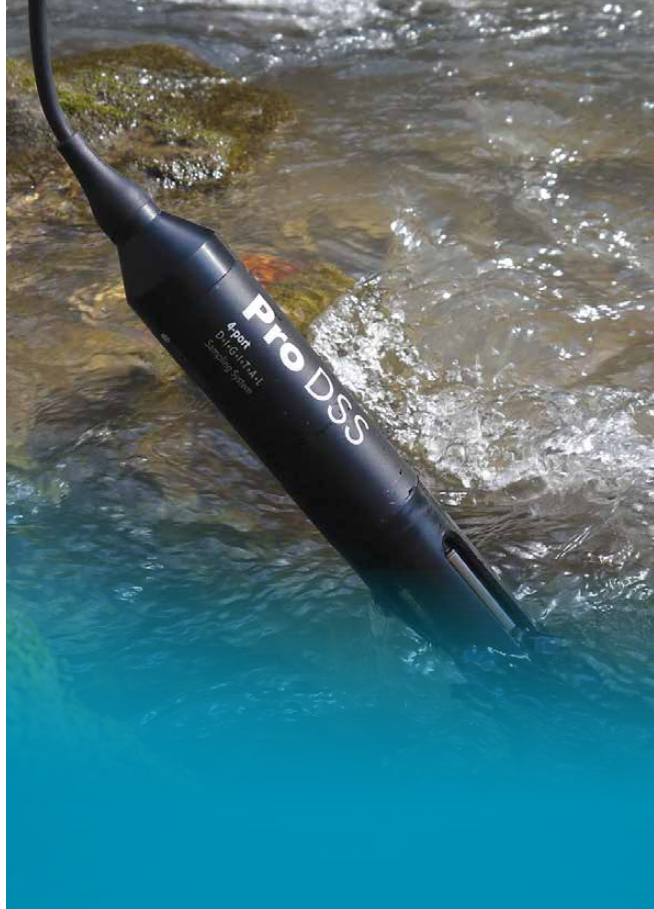




Reliable Cables

Not just a power cord! ProDSS cables minimize electrical noise and signal degradation over any cable length.

- Single-line design for easy handling in the field
- MS (Military Spec) locking connector for secure connection
- Cable lengths up to 100 meters
- Sensor guard weights for vertical profiling and stability
- 2-year warranty



Multiparameter 4-Port Cable Assembly

- Universal smart ports
- Optional depth sensor



ODO/T and ODO/CT Probe and Cable Assemblies

- Temperature and ODO in one sensor
- Optional built-in conductivity
- Less than 1-inch diameter
- Rugged ODO sensor cap with 2-year warranty



ProSwap 1-Port Cable Assembly

- Universal smart port
- Built-in temperature sensor
- Optional depth sensor
- Just over 1-inch diameter



ProOBOD Probe and Cable Assembly

- Tapered probe for BOD bottles
- Quiet, self-stirring
- Guarded sensor cap



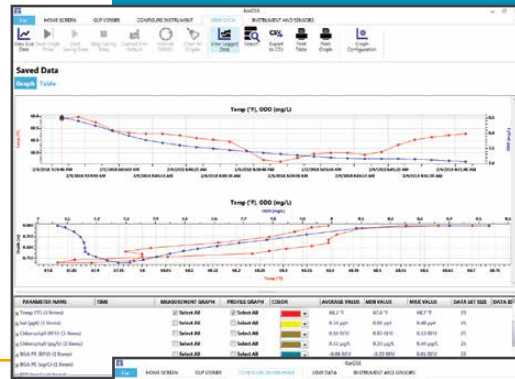
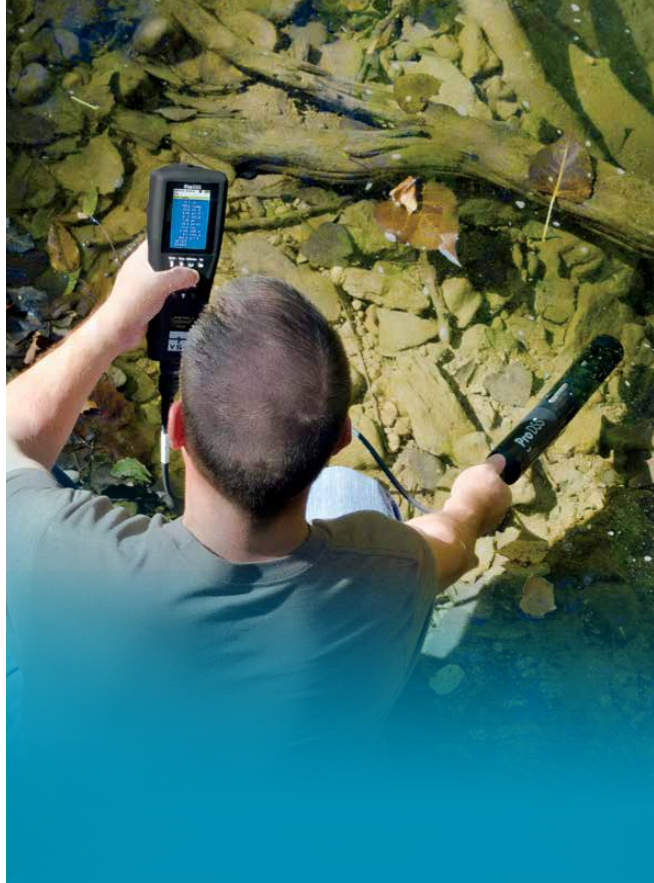


Powerful Data Management



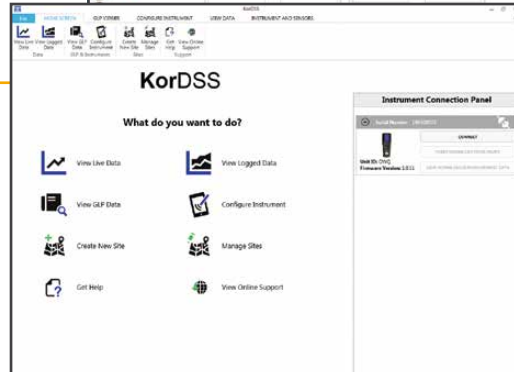
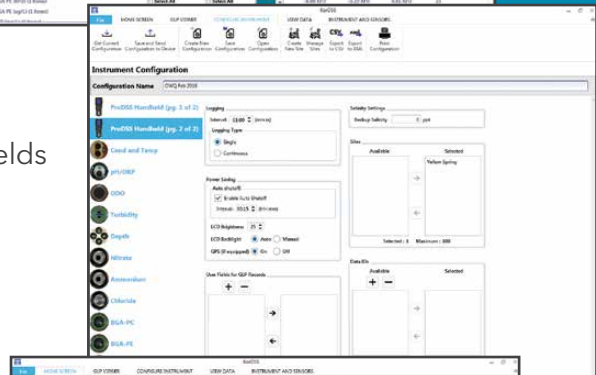
ProDSS Handheld

- Store over 100,000 data sets, up to 100 sites, and 100 data tags to the Handheld
- Store up to 400 calibration records
- On-The-Go Micro USB lets you retrieve data anytime with a USB stick



Kor Software

- Powerful Kor Software is included with all systems
- Transfer instrument configurations to multiple Handhelds
- Transport data directly from handheld or USB
- Conduct real-time studies
- Enhance data with site images



"This is the **quickest I've ever collected data** and looked at it in a meaningful fashion without spending a lot of time downloading and formatting."

ProDSS User on Kor Software

ProDSS General Specifications

Auto Stable	User-defined auto-stable function holds stable readings on display when criteria is met
Buffer Recognition	Auto buffer recognition and temperature compensation for US and NIST buffers
Cable Connector	MS (military spec) waterproof with bayonet lock
Calibration Points	1, 2, or 3 point for pH, Turbidity, Ammonium, Nitrate, and Chloride; 1 or 2 point for DO; 1 point for ORP, Barometer, Conductivity, Specific Conductance, Salinity, and Depth
Certifications	CE; RoHS; IP-67; WEEE; FCC; UN Part III, Section 38.3, Test methods for lithium-ion batteries (Class 9)
Connectivity	Built-in micro USB; Cable for PC connection and cable for connection to USB memory stick are included
Data Management	Kor desktop software included; 100 user-defined Data ID tags and 100 Sites with GPS coordinates
Data Memory	>100000 data sets (data, date, time, user-defined info); 100 files
Dimensions	Handheld is 8.3 x 21.6 x 5.6 cm
Display	Color, LCD graphic display; 3.9 x 6.5 cm
GLP Compliance	Yes; 400 detailed GLP records can be stored and are available to view, download and print
GPS	Optional internal GPS; coordinates are stored with measurement data and site lists
Languages	English, Spanish, German, French, Italian, Norwegian, Portuguese, Japanese, Chinese (Simplified & Traditional), Korean, Thai
Logging Modes	Single Point or Continuous
Operating Temperature	0 to 50° C
Password Protection	Calibration menu can be password protected to prevent unauthorized sensor calibration
Battery	Rechargeable lithium-ion battery pack provides ~20 hours with the handheld, 4 port cable and 4 smart sensors; battery recharge time is ~9 hours with the AC power adapter
Storage Temperature	0 to 45° C with battery installed; 0 to 60° C without battery installed
Recalibration Prompt	Provides reminder to recalibrate a ProDSS sensor after user-defined number of days
User ID	Optional user ID for data security
USB Port	Built-in micro USB On-The-Go port for PC connection, recharging/powering the ProDSS and connecting directly to a USB stick
Warranty	3-year; 2-year bulkhead, cable assembly, sensors; and ODO Extended Warranty cap; 1-year pH and pH/ORP sensor modules, ODO sensor caps, and Li-ion battery pack; 6-months ammonium, nitrate, and chloride sensor modules
Waterproof	IP-67; floats
Weight with Batteries (Handheld)	567 grams (1.25 lbs)



“The meter, cable, and sensors are sturdy, **well protected for field work, well designed, and professional.**”

ProDSS User

ProDSS Sensor Specifications

Sensor / Parameter	Range	Resolution	Accuracy
Temperature	-5 to 70 °C (23 to 158°F) Temperature compensation range for DO mg/L measurement: -5 to 50 °C	0.1 °C or 0.1°F	±0.2 °C
pH	0 to 14 pH units	0.01 pH units	±0.2 pH units
ORP	-1999 to 1999 mV	0.1 mV	±20 mV
Dissolved Oxygen	0 to 500%, 0 to 50 mg/L	0.01 mg/L and 0.1%, or 0.1 mg/L and 1% (user selectable)	0 to 200%: ±1% of reading or 1% saturation, whichever is greater 200 to 500%: ±8% of reading 0 to 20 mg/L: ±0.1 mg/L or 1% of reading, whichever is greater 20 to 50 mg/L: ±8% of reading
Barometer	375 to 825 mmHg	0.1mmHg	±1.5 mmHg from 0 to 50 °C
Conductivity	0 to 200 mS/cm	0.001, 0.01 or 0.1 mS/cm (range dependent)	0 to 100 mS/cm: ±0.5% of reading or 0.001 mS/cm, whichever is greater 100 to 200 mS/cm: ±1.0% of reading
Specific Conductance*	0 to 200 mS/cm	0.001, 0.01, 0.1 mS/cm	0 to 100 mS/cm: ±0.5% of reading or 0.001 mS/cm, whichever is greater 100 to 200 mS/cm: ±1.0% of reading. User selectable reference temperature (15 to 25 °C; default 25 °C) and compensation coefficient (0 to 4%/°C; default 1.91%)
Salinity*	0 to 70 ppt	0.01 ppt	±1.0% of reading or ±0.1 ppt, whichever is greater
Total Dissolved Solids (TDS)*	0 to 100 g/L	0.001, 0.01, 0.1 g/L	Calculated from specific conductance and a user-selectable TDS multiplier (0.30 to 1.00; default 0.65)
Resistivity*	0 to 2 Mohms	0.001, 0.01, 0.1 ohms	±0.1% Full Scale
Seawater Density*	0.0 to 50.0 sigma, sigma T	0.1 sigma or sigma T	-
Turbidity	0 to 4000 FNU	0.1 FNU	0 to 999 FNU: 0.3 FNU or ±2% of reading, whichever is greater 1000 to 4000 FNU: ±5% of reading
TAL-Chlorophyll	0 to 100 RFU or 0 to 400 µg/L chl	0.01 RFU or 0.01 µg/L	Linearity: $r^2 \geq 0.999$ for Rhodamine WT across full range
TAL-Phycocyanin	0 to 100 RFU or 0 to 400 µg/L PC		
TAL-Phycoerythrin	0 to 100 RFU or 0 to 400 µg/L PE		
Ammonium**	0 to 200 mg/L NH ₄ -N	0.01 mg/L	±10% of reading or 2 mg/L, whichever is greater
Ammonia*	0 to 200 mg/L NH ₄ -N	0.01 mg/L	±10% of reading or 2 mg/L, whichever is greater
Chloride**	0 to 18000 mg/L Cl	0.01 mg/L	±15% of reading or 5 mg/L, whichever is greater
Nitrate**	0 to 200 mg/L NO ₃ -N	0.01 mg/L	±10% of reading or 2 mg/L, whichever is greater
Depth	0 to 100 m (0 to 328 feet)	0.001 m or 0.001 ft	±0.004 m for 1, 4, and 10 m cables ±0.04 m for cables 20 m and longer

*Derived/calculated parameter

**ISEs for freshwater only; 17-meter maximum depth



Ordering Guide

Step 1: Select Handheld

All handhelds include a rechargeable lithium-ion battery, hand strap, USB cable, universal AC charger, data export cable, Quick Start Guide, and USB memory stick containing Kor Software and digital copy of the User Manual.

- 626870-1**: ProDSS Handheld
- 626870-2**: ProDSS Handheld with GPS



- Key Features:**
- Color display
 - 100,000+ data set memory
 - Data export to USB flash drive
 - Rechargeable battery
 - Kor Software

ProDSS Handheld

Step 2: Select Cable Assembly

ProDSS 4-Port Cable Assemblies

Connect any combination of four smart sensors at a time for multiparameter sampling.

- 626909**: ProDSS 4-port cable; **1, 4, 10, 20, 30, 40, 50, 60, 70, 80, 90,** or **100** meter length
- 626910**: ProDSS 4-port cable with shallow depth sensor; **1, 4,** or **10** meter length
- 626911**: ProDSS 4-port cable with medium depth sensor; **20, 30, 40, 50, 60, 70, 80, 90,** or **100** meter length

ProSwap 1-Port Cable Assemblies

Connect a single smart sensor to focus on any parameter of choice. Features built-in temperature sensor.

- 626750**: ProSwap 1-port cable; **1, 4, 10, 20, 30, 50,** or **100** meter length
- 626760**: ProSwap 1-port cable with shallow depth sensor; **1, 4,** or **10** meter length
- 626770**: ProSwap 1-port cable with medium depth sensor; **20, 30, 50,** or **100** meter length

Integrated Probe and Cable Assemblies

Simplify instrument setup with integrated probe and cable assemblies. Available in a variety of parameter-specific options.

- 627150**: ODO/CT cable with integral optical dissolved oxygen (with pre-installed sensor cap), conductivity, and temperature sensors; **1, 4, 10, 20, 30, 50,** or **100** meter length
- 627200**: ODO/T cable with integral optical dissolved oxygen (with pre-installed sensor cap) and temperature sensors; **1, 4, 10, 20, 30, 50,** or **100** meter length
- 626400**: ProOBOD self-stirring optical BOD probe/cable assembly, lab probe; 115 V; **3** meter length
- 626401**: ProOBOD self-stirring optical BOD probe/cable assembly, lab probe; 230 V; **3** meter length



4-Port



1-Port



ODO/T



OBOD

Step 3: Select ProDSS Smart Sensor(s) for 4-Port or 1-Port Cables

A conductivity/temperature sensor must be installed in a ProDSS 4-Port cable for temperature compensation.

- | | |
|--|--|
| <input type="checkbox"/> 626900 : ODO with pre-installed sensor cap | <input type="checkbox"/> 626905 : Nitrate with pre-installed sensor module |
| <input type="checkbox"/> 626901 : Turbidity | <input type="checkbox"/> 626906 : Ammonium with pre-installed sensor module |
| <input type="checkbox"/> 626902 : Conductivity and temperature | <input type="checkbox"/> 626907 : Chloride with pre-installed sensor module |
| <input type="checkbox"/> 626903 : pH with pre-installed sensor module | <input type="checkbox"/> 626210 : Total algae, PC (chlorophyll + phycocyanin) |
| <input type="checkbox"/> 626904 : pH/ORP with pre-installed sensor module | <input type="checkbox"/> 626211 : Total algae, PE (chlorophyll + phycoerythrin) |



Optical Dissolved Oxygen Sensor



Turbidity Sensor



Conductivity/Temperature Sensor

Protect Your Investment: Add a ProDSS Factory Service Plan

Service Plans optimize the performance and lifetime of your ProDSS meter, 4-port cable, and sensors by cover annual maintenance and replacement parts. Plans offered for 1 to 3 years (U.S. Only).



Conductivity Standard



Turbidity Standard



pH Buffer



Smart, Hard-Sided Carrying Case



Tripod

Step 4: Select Standards

- 065270**: Conductivity standard, 1000 umhos/cm (quart)
 - 065272**: Conductivity standard, 10000 umhos/cm (quart)
 - 065274**: Conductivity standard, 100000 umhos/cm (quart)
 - 060907**: Conductivity calibrator, 1000 umhos/cm (8 ea, pint)
 - 060906**: Conductivity calibrator, 1413 umhos/cm (8 ea, pint)
 - 060911**: Conductivity calibrator, 10000 umhos/cm (8 ea, pint)
 - 060660**: Conductivity calibrator, 50000 umhos/cm (8 ea, pint)
 - 608000**: Turbidity standard, 0 FNU (1 gallon)
 - 607200**: Turbidity standard, 12.4 FNU (1 gallon)
 - 607300**: Turbidity standard, 124 FNU (1 gallon)
 - 607400**: Turbidity standard, 1010 FNU (1 gallon)
 - 603824**: 2 pints each of 4, 7, and 10 pH buffers
 - 003841**: 1 mg/L ammonium standard (500 mL)
 - 003842**: 10 mg/L ammonium standard (500 mL)
 - 003843**: 100 mg/L ammonium standard (500 mL)
 - 003885**: 1 mg/L nitrate standard (500 mL)
 - 003886**: 10 mg/L nitrate standard (500 mL)
 - 003887**: 100 mg/L nitrate standard (500 mL)
 - 061320**: Zobell standard for ORP (mV) calibration, 125 mL
 - 061321**: Zobell standard for ORP (mV) calibration, 250 mL
 - 061322**: Zobell standard for ORP (mV) calibration, 500 mL
 - 005580**: Confidence Solution® (Conductivity, pH, & ORP)*
- *This solution is only for verification, not calibration.

Step 5: Select Accessories

- 626946**: Large, hard-sided carrying case (Fits 10, 20, and 30 meter cables)
- 603075**: Large, soft-sided carrying case
- 626945**: Small, hard-sided carrying case (Fits 1 and 4 meter cables plus a flow cell)
- 599080**: Flow cell for ProDSS 4-port cables
- 603076**: Flow cell for ODO/CT cables (requires single port adapter; 603078)
- 603078**: Adapter required for ODO/CT flow cell (603076)
- 603056**: Flow cell mounting spike
- 063507**: Tripod
- 063517**: Ultra clamp
- 603070**: Shoulder strap
- 603069**: Belt clip
- 626918**: 1 lb weight - stackable on guard (A 1 lb. weight is included with ProDSS 4-port cables 10 m and longer)
- 605978**: 4.9 oz weight - stackable on guard
- 626942**: USB car charger
- 626943**: Small external USB portable battery pack
- 626944**: Large external USB portable battery pack

Replacement Parts

- 626846**: Rechargeable Lithium-ion battery pack
- 626969**: USB flash drive with user manuals and Kor Software
- 626991**: USB cable for charging and PC connection
- 626992**: Cable for connection to USB stick
- 626736**: Cable maintenance kit for ProSwap 1-port cables
- 626990**: Cable maintenance kit for ProDSS 4-port cables
- 626740**: Sensor guard kit for ProSwap 1-port cables
- 626919**: Sensor guard kit for ProDSS 4-port cables
- 626755**: Storage cup for ProSwap 1-port cables
- 599786**: Calibration/storage cup for ProDSS 4-port cables
- 627195**: Calibration cup for ODO/CT cables
- 603062**: Cable management kit
- 626940**: AC charger (USA). Includes power supply and USB cable (626991)
- 626941**: AC charger (International). Includes power supply, USB cable and outlet adapters
- 626890**: ODO Sensor cap for ProDSS optical dissolved oxygen sensor (626900)
- 627180**: ODO Sensor cap for ODO/CT and ODO/T assemblies
- 626482**: ODO Sensor cap for ProOBOD assemblies (626400 or 626401)
- 626963**: ProDSS pH sensor module (for 626903 sensor)
- 626964**: ProDSS pH/ORP sensor module (for 626904 sensor)
- 626965**: ProDSS Nitrate sensor module (for 626905 sensor)
- 626966**: ProDSS Ammonium sensor module (for 626906 sensor)
- 626967**: ProDSS Chloride sensor module (for 626907 sensor)

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. 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 with a strong focus on developing comprehensive, sustainable solutions.

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



ProDSS
D•I•G•I•T•A•L Sampling System

xylem
Environmental Solutions

YSI, a Xylem brand
1725 Brannum Lane
Yellow Springs, OH 45387

- +1.937.767.7241
- info@ysi.com
- YSI.com

© 2022 Xylem, Inc. W86-03 0422



YSI.com/ProDSS