



ProDSS

Multiparameter Water Quality Field Instrument

CATALOG



a xylem brand

ProDSS

"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

Digital Sampling System

Parameters:

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

The YSI ProDSS® - Digital Sampling System - is the ultimate water quality field instrument for sampling and profiling. With the ProDSS, we have answered our customer's demands to produce a truly **rugged**, **reliable**, and **smart** multiparameter handheld instrument.

With digital sensor technology and the ability to measure 19 different parameters, the ProDSS is ideal for nearly any application - surface water, groundwater, coastal waters, aquaculture, and wastewater. Featuring turbidity, optical dissolved oxygen, and depth sensors along with our durable, field-ready design, the ProDSS will provide accurate data in even the harshest applications. Choose the ProDSS, **when the environment demands it.**



Smart Sensors

The digital signal utilized by the ProDSS removes any potential interference that analog sensors are susceptible to like electrical noise, dirty sensor connection, and signal degradation over longer cable lengths. With the stronger digital signal, the ProDSS can be used with 100 meter cables. The sensors are auto-recognized, which eliminates the need to tell the handheld what sensors are connected, making setup easy and fast.

The ProDSS utilizes "smart" sensor technology which stores calibration data within the sensor. Sensors can be moved from instrument to instrument without having to recalibrate.

ProDSS Smart Sensors

- Dissolved oxygen with an optical sensor
- Turbidity
- pH and pH/ORP
- Conductivity and temperature
- Ammonium, nitrate, and chloride
- Optional GPS and depth
- Many calculated parameters



Single cable design with depth option (4 port cable)

Why Optical DO?



Compared to electrochemical sensors, optical sensors feature...

- Less maintenance
- No warm-up time
- More stable
- No stirring requirement
- Better accuracy specification



"I really think you're hitting a **home run** with this instrument" - *ProDSS User*



*For pH, pH/ORP, ammonium, nitrate, and chloride sensors

Rugged & Easy to Use

The ProDSS is a true field instrument. It was designed to withstand the harshest field conditions in nearly any application. In addition, the single cable design is easy to manage and makes multiparameter data collection convenient. User-replaceable cables and user-replaceable sensors* help prevent instrument down time and ensure an overall low cost of ownership.



Sensors

- Titanium sensor body*
- Smart sensors auto-recognized
- ODO sensor cap lasts 18-24 months; reduces maintenance requirements compared to membrane covered sensors; extended warranty sensor cap available for ODO/CT assemblies
- Replaceable sensor modules



The YSI MS (military spec), waterproof, bayonet-style keyed connectors are far superior to plastic connectors.

Handheld

- Easy-to-read color and backlit display can be used in any lighting condition
- Scratch resistant lens; 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
- Menu-driven operation for easy navigation and quick calibration; built-in Help feature



Cables

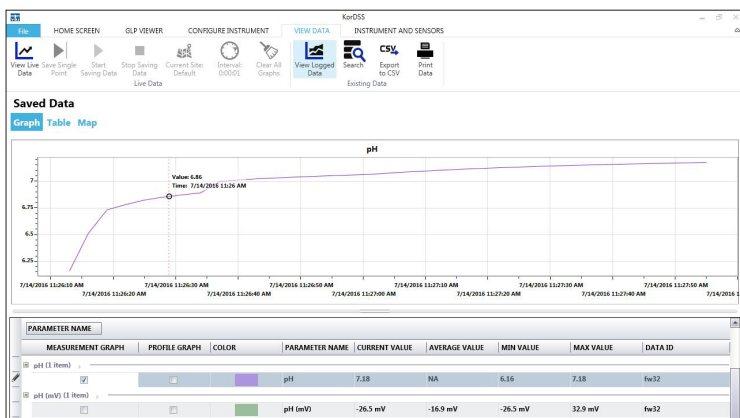
- Single cable design for sampling convenience
- Durable MS (Military Spec) locking bayonet-style cable connector ensures quick cable connection
- User-replaceable cables and sensors*
- Cable lengths up to 100 meters
- Sensor guard weights available when measuring in deep depths or strong currents
- 2 year warranty

**The ProDSS 4 port cable features universal sensor ports and user-replaceable titanium sensors. Other cable options are available, including assemblies that feature integral (i.e. built-in) sensors.*

Data Management

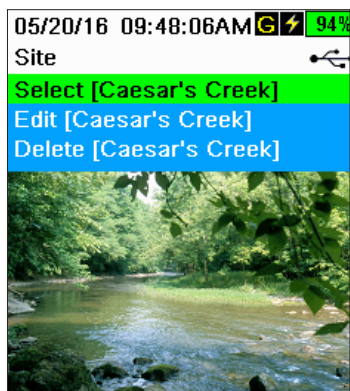
The ProDSS features a built-in micro USB On-The-Go port for PC connection and for backing up data directly to a USB stick. The ProDSS internal memory is extensive, allowing for over 100,000 data sets to be saved.

To help organize your data, 100 sites and 100 Data IDs (i.e. data tags) can be saved with measurement data. The optional GPS sensor allows for sampling site coordinates to be saved to measurement files, ensuring data is collected at the right location. The internal memory also saves up to 400 detailed GLP (i.e. calibration) records for data integrity.



KorDSS Software

KorDSS software, a powerful PC data management program for the ProDSS, is included with each instrument.



KorDSS can send site images to the handheld.



KorDSS

- Easy-to-use software to manage all your data
- Upgrade software and instrument firmware automatically
- View saved data on a graph or table
- Add a site image to the ProDSS handheld
- Export data to Microsoft Excel®
- Instrument configurations can be sent to one or multiple instruments
- Conduct real-time studies
- View GLP data and quickly change important sensor settings

"That is the quickest that 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 KorDSS*

Versatile

With 19 parameter options and several cable configurations to choose from, the ProDSS is ideal for nearly any application - surface water, groundwater, coastal waters, aquaculture, and wastewater (field or lab). It is easy to customize a ProDSS system to meet your sampling needs.

Handheld

- Available with or without built-in GPS

Cables

ProDSS 4 Port Cable

- Features universal sensor ports - connect any combination of ProDSS smart sensors
- Available with or without a depth sensor
- Cable lengths up to 100 meters



The ProDSS 4 port cable features universal sensor ports. Each sensor port can accept any ProDSS sensor.

ProODO Probe and Cable Assembly

- Integral (i.e. built-in) optical DO sensor provides a DO only instrument
- Cable lengths up to 100 meters

ProOBOD Probe and Cable Assembly

- Optical BOD probe for the lab with 2 meters of cable
- Probe body tapered to fit into a standard 300 mL BOD bottle; international version also available
- Self-stirring; extremely quiet operation
- Guarded sensor cap protects the sensor



ProDSS ODO/CT Probe and Cable Assembly

- Integral (i.e. built-in) optical DO and conductivity sensors
- Automatically compensate DO for salinity; perfect for environments where salinity varies
- Rugged optical DO sensor cap with a 2-year warranty is pre-installed on new assemblies
- Fits in a 1 inch well
- Cable lengths up to 100 meters



ProOBOD



The ProDSS ODO/CT features integral optical DO and conductivity sensors.

"The meter, cable and sensors are sturdy, well protected for field work, well designed, and professional." - *ProDSS User*



ProDSS 4 port cable assembly

Specifications

ProDSS 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 and temperature compensation for US and NIST buffers
Cable Lengths	ProDSS 4 port, ProDSS ODO/CT, and ProODO field cables available in 1, 4, 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100-meters; ProDSS 4 port cables feature an optional depth sensor ProOBOD cable assemblies are also compatible for BOD determination
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; KorDSS software for automatic or manual instrument firmware updates
Data Management	KorDSS 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 GLP files
Dimensions	Handheld is 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	Color, LCD graphic display; 3.9 cm width x 6.5 cm height
DO Sensors	Optical luminescent DO sensor; self-stirring optical BOD sensor for the lab
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 (32 to 122 °F)
Password Protection	Calibration menu can be password protected to prevent unauthorized sensor calibration
Power	Rechargeable lithium-ion battery pack provides ~48 hours with the handheld only and ~20 hours with the handheld, 4 port cable and 4 smart sensors; battery recharge time is ~9 hours with the AC power adapter The instrument can also be powered via AC or external power pack through the USB port
Sensor Ports	4 universal sensor ports on each 4 port cable can accept any ProDSS sensor; ProDSS ODO/CT, ProODO, and ProOBOD assemblies feature integral (i.e. built-in) sensors
Storage Temperature	0 to 45 °C (32 to 113 °F) with battery installed; 0 to 60 °C (32 to 140 °F) 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 instrument; 2-year bulkhead, cable assembly, and sensors; 2-year on ODO Extended Warranty Sensor caps for ODO/CT; 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 (even with the battery cover off); floats
Weight with Batteries (handheld)	567 grams (1.25 lbs)

ProDSS System Specifications (Instrument, Sensor, and Cable)

Sensor/ Parameter	Sensor Type/ Measurement Method	Range	Accuracy	Resolution	Units
Temperature	Thermistor, installed on conductivity sensor	-5 to 70 °C (temperature compensation range for DO mg/L measurement: -5 to 50 °C)	±0.2 °C	0.1 °C or 0.1 °F (user selectable)	°C, °F, K
pH	Combination glass bulb electrode, Ag/AgCl reference electrode with gelled electrolyte	0 to 14 pH units	±0.2 pH units	0.01 pH units	pH, pH mV
ORP	Platinum button with Ag/AgCl reference	-1999 to 1999 mV	±20 mV	0.1 mV	mV
Dissolved Oxygen	Optical luminescence - lifetime method	0 to 500%, 0 to 50 mg/L	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	0.01 mg/L and 0.1%, or 0.1 mg/L and 1% (user selectable)	% saturation, % saturation local, mg/L, ppm
Barometer	-	375 to 825 mmHg	±1.5 mmHg from 0 to 50 °C	0.1 mmHg	mmHg, inHg, mbar, psi, kPa, atm
Conductivity	Four nickel electrode cell	0 to 200 mS/cm	0 - 100 mS/cm: ±0.5% of reading or .001 mS/cm, whichever is greater 100 - 200 mS/cm: ±1.0% of reading	0.001, 0.01 or 0.1 µS/cm (range dependent)	µS/cm, mS/cm
Specific Conductance*	Calculated from conductivity and temperature	0 to 200 mS/cm	0 - 100 mS/cm: ±0.5% of reading or .001 mS/cm, whichever is greater 100 - 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%)	0.001, 0.01, 0.1 mS/cm	µS/cm or mS/cm
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 or PSU
Total Dissolved Solids (TDS)*	Calculated from specific conductance and a user-selectable TDS multiplier (0.30 to 1.00; default 0.65)	0 to 100 g/L	Calculated from specific conductance and a user-selectable TDS multiplier (0.30 to 1.00; default 0.65)	0.001, 0.01, 0.1 g/L	mg/L, g/L, kg/L
Resistivity*	Calculated from conductivity and temperature	0 to 2 Mohms	±0.1% Full Scale	0.001, 0.01, 0.1 ohms	ohm-cm, kohm-cm, Mohm-cm
Seawater Density*	Sigma is calculated from salinity, temperature, and pressure (depth) Sigma T is calculated from salinity and temperature	0.0 to 50.0 sigma, sigma T	-	0.1 sigma or sigma T	Sigma, Sigma T
Turbidity	Nephelometric - Optical, 90° scatter Meets ISO 7027	0 to 4000 FNU	0 to 999 FNU: 0.3 FNU or ±2% of reading, whichever is greater 1000 to 4000 FNU: ±5% of reading	0.1 FNU	FNU, NTU
Total Suspended Solids (TSS)*	User correlated from turbidity field measurements and lab TSS measurements from grab samples	0 to 30000 mg/L	User correlated from turbidity field measurements and lab TSS measurements from grab samples	0.01, 0.1 mg/L	mg/L
Ammonium**	Ion selective electrode	0 to 200 mg/L NH ₄ -N	±10% of reading or 2 mg/L, whichever is greater	0.01 mg/L	NH ₄ -N mg/L, NH ₄ -N mV
Ammonia*	Calculated from ammonium, temperature, salinity, and pH	0 to 200 mg/L NH ₃ -N	-	0.01 mg/L	NH ₃ -N mg/L
Chloride**	Ion selective electrode	0 to 18000 mg/L Cl	±15% of reading or 5 mg/L, whichever is greater	0.01 mg/L	Cl mg/L, Cl mV
Nitrate**	Ion selective electrode	0 to 200 mg/L NO ₃ -N	±10% of reading or 2 mg/L, whichever is greater	0.01 mg/L	NO ₃ -N mg/L, NO ₃ -N mV
Depth	Pressure transducer	0 to 328 feet (0 to 100 m)	±0.013 ft (±0.004 m) for 1, 4, and 10 m cables ±0.13 ft (±0.04 m) for cables 20 m and longer	0.001 m or 0.01 ft	m, ft

*Derived/calculated parameter

**ISEs for freshwater only; 20-meter maximum depth

Ordering Guide

Step 1: Order Instrument

All instruments include a rechargeable lithium-ion battery (pre-installed), hand strap, USB cable for charging the ProDSS battery and for connection to a PC, universal AC charger, cable for connection to a USB memory stick, ProDSS quick start guide, and USB memory stick containing KorDSS software and digital copy of the user manual.

☐ **626870-1**: Handheld with no GPS

☐ **626870-2**: Handheld with GPS

Step 2: Order Cable Assembly

There are two types of cables available for use with the ProDSS - those with integral (i.e. built-in) sensors and those without.

Cables without Integral Sensors - ProDSS 4 Port

These cables do not include any integral sensors, although an optional built-in depth sensor is available. With the exception of depth, all sensors are user-replaceable. All cables include 4 universal sensor ports and a maintenance kit (3 port plugs, tube of o-ring lubricant, brush for conductivity probe, syringe for depth sensor, and sensor installation/removal tool). A 1 lb. weight is included with all cables 10 meters and longer while 10, 20, and 30 meter cables include a cable management kit.

☐ **626909**: ProDSS 4 port cable without depth sensor; **1, 4, 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100** meter cable.

☐ **626910**: ProDSS 4 port cable with depth sensor; **1, 4, or 10** meter cable.

☐ **626911**: ProDSS 4 port cable with depth sensor; **20, 30, 40, 50, 60, 70, 80, 90, or 100** meter cable.

Cables with Integral Sensors - ProDSS ODO/CT, ProODO, and ProOBOD

These cables feature integral (i.e. built-in) sensors. These sensors are non-replaceable and there is no depth option. A cable management kit is included with ProDSS ODO/CT cables that are 4, 10, 20, 30, 40, and 50 meters. ProODO 4, 10, 20, and 30 meter cables include a cable management kit. A sensor cap comes pre-installed on optical DO sensors.

☐ **627150**: ProDSS ODO/CT cable with integral optical DO, conductivity, and temperature sensors; **1, 4, 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100** meter cable.

☐ **626250**: ProODO cable with integral optical DO and temperature sensors; **1, 4, 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100** meter cable.

☐ **626400**: ProOBOD BOD probe/cable assembly, lab probe; U.S./Japanese version with power supply.

☐ **626401**: ProOBOD BOD probe/cable assembly, lab probe; International version with power supply.

Step 3: Order ProDSS Smart Sensor(s) for ProDSS 4 Port Cables

ProDSS 4 port cables do not have integral sensors, so ProDSS smart sensors must be used with these cables. Any combination of 4 ProDSS smart sensors can be used at a time. If a depth sensor is integrated into the cable assembly, it will not use one of the ports.

A conductivity/temperature sensor must be installed in a sensor port for accurate temperature compensation and measurement of all parameters except turbidity and TSS.

☐ **626900**: Optical dissolved oxygen (ODO) with pre-installed sensor cap

☐ **626901**: Turbidity

☐ **626902**: Conductivity and temperature

☐ **626903**: pH sensor with pre-installed sensor module

☐ **626904**: pH/ORP sensor with pre-installed sensor module

☐ **626905**: Nitrate sensor with pre-installed sensor module

☐ **626906**: Ammonium sensor with pre-installed sensor module

☐ **626907**: Chloride sensor with pre-installed sensor module



603824



005580



061320



003841



607300

Step 4: Order Standards

- ☐ **065270**: Conductivity standard, 1000 umhos/cm (quart)
- ☐ **065272**: Conductivity standard, 10000 umhos/cm (quart)
- ☐ **065274**: Conductivity standard, 100000 umhos/cm (quart)
- ☐ **603824**: 2 pints each of 4, 7, and 10 pH buffers
- ☐ **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
- ☐ **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)
- ☐ **005580**: Confidence Solution® to verify pH, ORP and conductivity data (not for calibration)
- ☐ **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)

Step 5: Order Accessories

- ☐ **626946**: Large, hard-sided carrying case (Fits ProDSS 4 port and ODO/CT cables 10, 20, and 30 meters in length, cable management kit, handheld, and accessories)
- ☐ **603075**: Large, soft-sided carrying case
- ☐ **626945**: Small, hard-sided carrying case (Fits ProDSS 4 port and ODO/CT cables 1 and 4 meters in length, handheld, flow cell, and accessories)
- ☐ **599080**: Flow cell for ProDSS 4 port cables
- ☐ **603076**: Flow cell for ProDSS ODO/CT cables (requires single port adapter; 603078)
- ☐ **603078**: Adapter required for ProDSS 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 meters 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



626945



626918



605978



063507



599080

Replacement Parts

- **626846:** Rechargeable Lithium-ion battery pack
- **626969:** USB flash drive with user manuals and KorDSS
- **626991:** USB cable for charging and PC connection
- **626992:** Cable for connection to USB stick
- **626990:** Cable maintenance kit for ProDSS 4 port cables
- **626919:** Sensor guard kit for ProDSS 4 port cables
- **599786:** Calibration/storage cup for ProDSS 4 port cables
- **627195:** Calibration cup for ProDSS 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)
- **627160:** ODO Sensor cap for ProDSS ODO/CT assemblies (627150)
- **627180:** ODO Extended Warranty Sensor cap for ProDSS ODO/CT assemblies (627150); features 2 year warranty; comes pre-installed on new ODO/CT assemblies
- **626320:** ODO Sensor cap for ProODO assemblies (626250)
- **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 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 xyleminc.com



a xylem brand

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

visit ysi.com/ProDSS



We ProDSS, ProODO, ProOBOD, are registered trademarks of Xylem Inc. or one of its subsidiaries.

YouTube, Facebook, LinkedIn, and Twitter are registered trademarks.