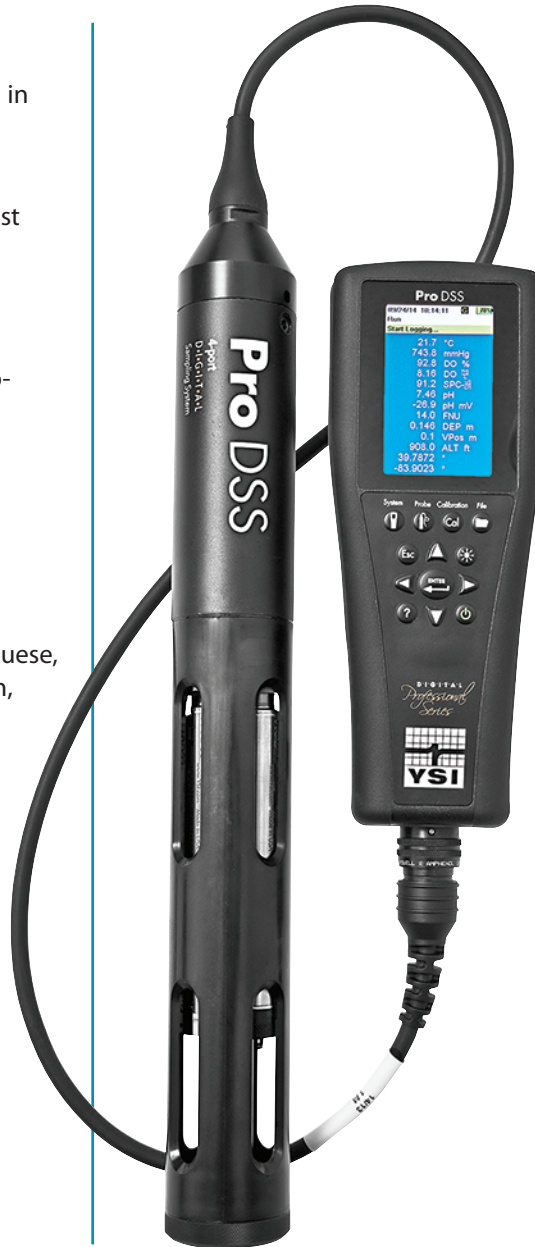


YSI ProDSS Multiparameter Sampling Instrument

The YSI ProDSS is a rugged single or multiparameter water quality instrument designed for use in applications that include surface water, groundwater, coastal, and agriculture. The ProDSS features optional user-replaceable digital smart sensors that are automatically recognized when connected to the instrument. The optional GPS function, a broad range of sensors, and varying cable options allow for complete customization of the ProDSS.

FEATURES

- Backlit Color Display and keypad can be seen in varying light conditions
- Long-Life rechargeable lithium-ion battery
- Large Memory, >100,000 data sets with site list and data ID tag
- USB on-the-go connectors for PC connection and recharging
- KorDSS data management software with geo-mapping (GPS optional)
- User-replaceable cables and sensors
- Rugged, IP-67 rated waterproof case
- Military-spec cable connectors
- Titanium sensor bodies
- Multiple Languages; English, Spanish, Portuguese, French, German, Italian, Japanese, Norwegian, Chinese, Korean, and Thai
- 3-year handheld instrument warranty
- 2-year cable assembly and sensor warranty
- 1-year pH and ORP sensor warranty
- 6-month ammonium, nitrate, and chloride sensor warranty



SENSOR OPTIONS

- Optical Dissolved Oxygen (ODO) & Temperature
- Optical Dissolved Oxygen (ODO) & Conductivity
- Turbidity
- Conductivity & Temperature
- pH
- pH/ORP
- Nitrate
- Chloride
- Total Algae (Fresh Water)
- Total Algae (Salt Water)
- Depth
- GPS

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SPECIFICATIONS

GENERAL SPECIFICATIONS

Size	Instrument: 8.3 cm width x 21.6 cm length x 5.6 cm depth (3.27 in. x 8.5 in. x 2.21 in.) 4 port bulkhead with sensor guard, no depth: 42.82 cm (16.86 in.) length and 4.75 cm (1.87 in.) outer diameter 4 port bulkhead with sensor guard, with depth: 45.36 cm (17.86 in.) length and 4.75 cm (1.87 in.) outer diameter ODO/CT assembly with sensor guard: 26.14 cm (10.29 in.) length and 2.46 cm (0.97 in.) outer diameter	Display	Color, LCD graphic display; 3.9 cm width x 6.5 cm height
Handheld Weight with Batteries	567 grams (1.25 lbs.)	Cables	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
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 cable; can accept any ProDSS sensor
Instrument Operating Temp.	0 to 50°C (32 to 122°F)	Warranty	3-year instrument; 2-year bulkhead, cable assembly, and sensors; 1-year pH and pH/ORP sensor modules, ODO sensor caps, and Li-ion battery pack; 6-months ammonium, nitrate, and chloride sensor modules
Instrument Storage Temp.	0 to 45°C (32 to 113°F) with battery installed; 0 to 60°C (32 to 140°F) without battery installed	Memory	> 100,000 data sets
USB Port	Built-in micro USB On-The-Go port for PC connection, recharging/powering the ProDSS and connecting directly to a USB stick	Logging Modes	Single point or continuous with autostable feature
		GLP Compliance	Yes; 400 detailed GLP records can be stored and are available to view, download, and print.
		Languages	English, Spanish, German, French, Italian, Norwegian, Portuguese, Japanese, Chinese (Simplified & Traditional), Korean, Thai
		Certifications	CE; RoHS; IP-67; WEEE; FCC; UN Part III, Section 38.3, Test methods for lithium-ion batteries (Class 9)
		GPS	Optional internal GPS; coordinates are stored with measurement data and site lists
		Sites and Data ID	100 user-defined sites and 100 user-defined data ID tags; site pictures can be sent to the handheld via KorDSS

SENSOR AND CABLE

Sensor/Parameter	Range	Accuracy	Resolution	Units
Temperature	-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	0 to 14 pH units	±0.2 pH units	0.01 pH units	pH, pH mV
ORP	-1999 to 1999 mV	±20 mV	0.1 mV	mV
Dissolved Oxygen	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	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*	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*	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)*	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*	0 to 2 Mohms	±0.1% Full Scale	0.001, 0.01, 0.1 ohms	ohm-cm, kohm-cm, Mohm-cm
Seawater Density*	0.0 to 50.0 sigma, sigma T	-	0.1 sigma or sigma T	Sigma, Sigma T
Turbidity	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
TAL-Chlorophyll TAL-Phycocyanin TAL-Phycocerythrin	0 to 100 RFU or 0 to 400 µg/L chl 0 to 100 RFU or 0 to 400 µg/L PC 0 to 100 RFU or 0 to 400 µg/L PE	Linearity: r ² ≥ 0.999 for Rhodamine WT across full range	0.01 RFU or 0.01 µg/L	RFU or µg/L
Total Suspended Solids (TSS)*	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**	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*	0 to 200 mg/L NH ₃ -N	-	0.01 mg/L	NH ₃ -N mg/L
Chloride**	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**	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	0 to 328 feet (0 to 100 m)	±0.013 ft. (±0.004 m) for 1, 4, and 10 m cable ±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

Sensor/Parameter	Sensor Type/Measurement Method	Calibration	Maximum Depth	Warranty
Temperature	Thermistor, installed on conductivity sensor	Not available	100 m	2 years for conductivity/temperature sensor
pH	Combination glass bulb electrode, Ag/AgCl reference electrode with gelled electrolyte	1, 2, or 3 point	100 m	2 years for pH and pH/ORP sensors, 1 year for pH and pH/ORP sensor modules
ORP	Platinum button with Ag/AgCl reference	1 point	100 m	2 years for pH/ORP sensor 1 year for pH/ORP sensor module
Dissolved Oxygen	Optical luminescence - lifetime method	1 or 2 point	100 m	2 years for optical DO sensor, 1 year for optical DO sensor cap
Barometer	-	1 point	-	3 years, integrated into ProDSS handheld
Conductivity	Four nickel electrode cell	1 point	100 m	2 years for conductivity/temperature sensor
Specific Conductance*	Calculated from conductivity and temperature	1 point	-	-
Salinity*	Calculated from conductivity and temperature	1 point	-	-
Total Dissolved Solids (TDS)*	Calculated from specific conductance and a user selectable TDS multiplier (0.30 to 1.00; default 0.65)	-	-	-
Resistivity*	Calculated from conductivity and temperature	-	-	-
Seawater Density*	Sigma is calculated from salinity, temperature, and pressure (depth) Sigma T is calculated from salinity and temperature	-	-	-
Turbidity	Nephelometric - Optical, 90° scatter	1, 2, or 3 point	-	2 years for turbidity sensor
Total Algae	-	-	100 m (ProDSS), 250 m (EXO)	2 years
Total Suspended Solids (TSS)*	User correlated from turbidity field measurements and lab TSS measurements from grab samples	-	-	-
Ammonium**	Ion selective electrode	1, 2, or 3 point	20 m	2 years for ammonium sensor, 6 months for ammonium sensor module
Ammonia*	Calculated from ammonium, temperature, salinity, and pH	-	-	-
Chloride**	Ion selective electrode	1, 2, or 3 point	20 m	2 years for chloride sensor, 6 months for chloride sensor module
Nitrate**	Ion selective electrode	1, 2, or 3 point	20 m	2 years for nitrate sensor, 6 months for nitrate sensor module
Depth	Pressure transducer	1 point	-	2 years, integrated into cable assembly

*Derived/calculated parameter **ISEs for freshwater only; 20 meter maximum depth

YSI ProDSS Multiparameter Sampling Instrument

ORDER SELECTION 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.

	YSI Part No.	Geotech Part No.
Handheld without GPS	626870-1	72103410
Handheld with GPS	626870-2	72103411

STEP 2 – ORDER CABLE ASSEMBLY

There are two types of cables available - those with integral (built-in) sensors and those without.

Cables with Integral Sensors - ODO/CT, ODO/T, and OBOD

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 ODO/CT cables that are 4, 10, 20, 30, and 50 meters. ODO/T 4, 10, 20, and 30 meter cables include a cable management kit. A sensor cap comes pre-installed on optical DO sensors.

ODO/CT cable with integral optical DO, conductivity, and temperature sensors

Length	YSI Part No.	Geotech Part No.	Length	YSI Part No.	Geotech Part No.
1 m	627150-1	12103571	30 m	627150-30	12103575
4 m	627150-4	12103572	50 m	627150-50	12103577
10 m	627150-10	12103573	100 m	627150-100	12103582
20 m	627150-20	12103574			

ODO/T cable with integral optical DO and temperature sensors

Length	YSI Part No.	Geotech Part No.	Length	YSI Part No.	Geotech Part No.
1 m	627200-1	12103592	30 m	627200-30	12103596
4 m	627200-4	12103593	50 m	627200-50	12103597
10 m	627200-10	12103594	100 m	627200-100	12103598
20 m	627200-20	12103595			

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

YSI Part No.	Geotech Part No.
626400	12103497

ProOBOD BOD probe/cable assembly, lab probe; International version with power supply.

YSI Part No.	Geotech Part No.
626401	12103498

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.

No depth sensor integrated

Length	YSI Part No.	Geotech Part No.	Length	YSI Part No.	Geotech Part No.
1 m	626909-1	12103517	50 m	626909-50	12103523
4 m	626909-4	12103518	60 m	626909-60	12103524
10 m	626909-10	12103519	70 m	626909-70	12103525
20 m	626909-20	12103520	80 m	626909-80	12103526
30 m	626909-30	12103521	90 m	626909-90	12103527
40 m	626909-40	12103522	100 m	626909-100	12103528

Depth sensor integrated

Length	YSI Part No.	Geotech Part No.	Length	YSI Part No.	Geotech Part No.
1 m	626910-1	12103529	50 m	626911-50	12103535
4 m	626910-4	12103530	60 m	626911-60	12103536
10 m	626910-10	12103531	70 m	626911-70	12103537
20 m	626911-20	12103532	80 m	626911-80	12103538
30 m	626911-30	12103533	90 m	626911-90	12103539
40 m	626911-40	12103534	100 m	626911-100	12103540



ProDSS with ODO/CT probe and cable assembly



ProDSS attached to Tripod and Flow Cell for groundwater applications

YSI ProDSS Multiparameter Sampling Instrument

ORDER SELECTION GUIDE CONTINUED

STEP 3 – ORDER SMART SENSOR(S) FOR 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.

Smart Sensor	YSI Part No.	Geotech Part No.
Optical Dissolved Oxygen (ODO):	626900	12103541
Turbidity:	626901	12103543
Conductivity and Temperature:	626902	12103542
pH Sensor with module:	626903	12103544
pH/ORP Sensor with module:	626904	12103545
Nitrate Sensor with module:	626905	12103547
Ammonium Sensor with module:	626906	12103546
Chloride Sensor with module:	626907	12103548
Total Algae Sensor, PC (Fresh Water):	626210	12103590
Total Algae Sensor, PE (Salt Water):	626211	12103591

STEP 4 – ORDER STANDARDS

	YSI Part No.	Geotech Part No.
Conductivity Standard, 1413US (pint):	–	12101014
Conductivity Standard, 8974US (pint):	–	12101029
4.01 pH Buffer (pint):	–	12101017
7.00 pH Buffer (pint):	–	12101018
10.00 pH Buffer (pint):	–	12101019
Buffer Pack (4 one pint bottles) pH 4, pH 7, pH 10, 1413US:	–	12101063
ORP Buffer (250 mL):	–	12105020
DO, 0%, Solution (pint):	–	12102017
Zobell Standard for ORP (mV) calibration, 125 mL:	061320	12103009
Turbidity Standard, 0 FNU (1 gallon):	608000	12103085
Turbidity Standard, 12.4 FNU (1 gallon):	607200	12103053
Turbidity Standard, 124 FNU (1 gallon):	607300	12103089
Turbidity Standard, 1010 FNU (1 gallon):	607400	12103227
Confidence Solution®: <i>To verify pH, ORP and conductivity data (not for calibration)</i>	005580	12103045
1 mg/L Ammonium Standard (500 mL):	003841	12103472
10 mg/L Ammonium Standard (500 mL):	003842	12103473
100 mg/L Ammonium Standard (500 mL):	003843	12103474
1 mg/L Nitrate Standard (500 mL):	003885	12103475
10 mg/L Nitrate Standard (500 mL):	003886	12103476
100 mg/L Nitrate Standard (500 mL):	003887	12103477

STEP 5 – ORDER ACCESSORIES

	YSI Part No.	Geotech Part No.
Large, Hard-sided Carrying Case: <i>(ProDSS 4 port and ODO/CT cables 10, 20, and 30 meters in length)</i>	626946	12103555
Large, Soft-sided Carrying Case:	603075	12103459
Small, Hard-sided Carrying Case: <i>(ProDSS 4 port and ODO/CT cables 1 and 4 meters in length, flow cell)</i>	626945	12103556
Flow Cell: <i>For ProDSS 4-port cables</i>	599080	12103554
Flow Cell Mounting Spike:	603056	12103456
Tripod:	063507	12103463
Shoulder Strap:	603070	12103471
USB Car Charger:	626942	12103558
Small External USB Portable Battery Pack:	626943	not needed
Large External USB Portable Battery Pack:	626944	not needed
1 lb. Weight*:	626918	12103557
4.9 oz. Weight:	605978	12103468

*Included with all ProDSS 4 port cables that are 10 meters and longer



4-Port Bulkhead with four user replaceable sensors



Titanium smart sensors can easily be replaced in the field

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