

# ProSwap Logger

SINGLE-PORT TEMPERATURE/DEPTH SONDE





# ProSwap Logger

ProSwap Logger is a single-port monitoring sonde based on proven YSI technology. With flexible sensor and deployment options, ProSwap Logger is a perfect solution for those looking to expand their water quality monitoring at an affordable price.



#### **Proven Data Quality**

Industry-leading smart sensor technology with on-board monitoring for improved calibration and performance



ProSwap Logger

#### **Swappable Sensors**

Customize your system with user-replaceable water quality sensors alongside built-in temperature and depth



#### **Autonomous Logging**

Elevate your data collection with continuous monitoring and unattended deployments



#### **Ultimate Durability**

Titanium housing and waterproof connections guarantee operation well into the future



#### **User-Friendly Interface**

Simplify fieldwork with quick setup, direct system integration, and intuitive data management

## Monitoring Made Simple.

ProSwap Logger features a universal port for a wide variety of real-time monitoring applications. Combine any digital smart sensor with the built-in temperature and depth sensors for more comprehensive measurements in a slim profiling package. Build a dedicated system for conductivity, dissolved oxygen, pH, turbidity, or algae monitoring applications with unique customization options.

**ProSwap Logger Specifications** 

ProSwap Logger Specifications				
Material	Titanium			
Internal Logging Memory Capacity	512 MB, >100,000 data sets (includes date, time, site, parameters)			
Software	Kor Software			
Communications				
Sonde	YSIP, SDI-12, Modbus*			
Adapters	USB, Flying-Lead			
Power				
External				
Powering	5.4 - 16 V			
Charging	9 - 16 V			
Internal	Rechargeable Li-Ion battery			
Temperature				
Operating	-5 to 50°C (23 to 122°F)			
Storage	-20 to 50°C (-4 to 122°F)			
Depth Rating	0 to 100 m (0 to 328')			
Battery Life	≥ 90 days at 15 min log interval			
Sampling Rate	1 per second (fastest) to 1 per day (slowest)			
Sonde Dimensions				
Diameter	2.65 cm (1.05")			
Length (with guard)				
Without battery	49.70 cm (19.57")			
With battery	57.35 cm (22.58")			
Sonde Weight**				
With battery	0.57 kg (1.25 lbs)			
Without battery	0.45 kg (0.99 lbs)			
Warranty	2 years			

\*Modbus output configurable with post-launch update.

\*\*Total weight will depend on cable length.

Integrated cable

**Battery compartment** 

**Internal memory** 

**Built-in depth sensor** 

Monitor surface water or groundwater level in wells as small as 2 inches.

**Built-in temperature sensor** 

**User-replaceable ProDSS Sensor** 

Add a conductivity sensor for a powerful, low-cost CTD sonde.





### Continuous Unattended Logging

Ideal for short- and long-term deployments, the on-board memory is capable of holding over 100,000 data sets. With ProSwap Logger, you can view trends in water level and quality over extended periods of time for a true representation of the ecosystem.

## Flexible Deployment

ProSwap Logger is a powerful instrument in a small package. Suspend in groundwater wells, deployment pipes, and other tight or shallow spaces. A variety of power and deployment options are available to fit the needs of your system.

### Reliable Connection

An integral cable allows for easy topside communication and data download without removing the sonde from its deployment location. A twist-lock connector provides quick and reliable communication via a dedicated handheld or Kor Software.

With convenient options for calibration, deployment setup, and data collection, ProSwap Logger makes it easier than ever to effectively expand your smart watershed.

#### **Extreme Flexibility**

ProSwap Logger is extremely flexible with customizable power options, swappable sensors, and simple integration into existing field systems.



## Critical Components



#### **Connector Cap**

Protection for top-side cable connector (included with PSL)

#### Use

Autonomous deployments (PSL with internal battery)



#### **ProSwap Handheld**

Quick and easy mobile interface with color display

Rugged, ergonomic design

Also compatible with ProDSS handheld!



#### **Power Pack**

Dedicated external power with 6 AA batteries for months of logging

#### Use

Autonomous deployments (PSL without internal battery)



#### Flying Lead Adapter

Simplifies connection to any monitoring system

#### Use

Output SDI-12 or Modbus\* Supply external power



#### **USB Adapter**

Direct connection to a PC running Kor Software
Provides charging via USB port or AC adapter



#### **Kor Software**

Familiar interface for instrument and data management

\*Modbus output configurable with post-launch update.

### Digital Smart Sensors

ProSwap Logger is compatible with any individual ProDSS Digital Smart Sensor for fast, easy setup and high quality data. Each sensor features a welded titanium body, auto-recognition, and local storage of calibration for quick swapping. Trusted by water monitoring professionals, these sensors provide accurate data with advanced technology and proven performance!

	Froswap Logger	1 -1 -1 -1	ProSwap Logger with Conductivity Temperature Sensor combinatio	
Sensor Specifications				
Sensor / Parameter	Range	Resolution	Accuracy	
Temperature (DSS Sensor)	-5 to 70 °C (23 to 158°F)	0.1 °C or 0.1°F	±0.2 °C	
Temperature (ProSwap Logger)	-5 to 50 °C (23 to 122°F)	0.1 °C or 0.1 °F	±0.15 °C	
рН	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%	0 to 200%: $\pm 1\%$ of reading or 1% saturation, whichever is greater 200 to 500%: $\pm 8\%$ of reading 0 to 20 mg/L: $\pm 0.1$ mg/L or 1% of reading, whichever is greater 20 to 50 mg/L: $\pm 8\%$ of reading	
Conductivity	0 to 200 mS/cm	0.001, 0.01 or 0.1 mS/cm (range dependent)	0 - 100 mS/cm: $\pm 0.5\%$ of reading or .001 mS/cm, whichever is greater 100 - 200 mS/cm: $\pm 1.0\%$ of reading	
Specific Conductance*	0 to 200 mS/cm	0.001, 0.01, 0.1 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%)	
Salinity*	0 to 70 ppt	0.01 ppt	$\pm 1.0\%$ of reading or $\pm 0.1$ 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 $\pm 2\%$ of reading, whichever is greater 1000 to 4000 FNU: $\pm 5\%$ of reading	
TAL-Chlorophyll	0 to 100 RFU or 0 to 400 μg/L chl	0.01 RFU or 0.01 μg/L	Linearity: $r^2 \ge 0.999$ 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 <sub>4</sub> -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	
Vented Level	0 to 10 m (0 to 32.8 feet)	0.001 m or 0.001 ft	0.003 m (±0.01 ft)	

### System Configurator

A few simple choices will make it easy to customize ProSwap Logger to perfectly fit your application.

#### **Step 1: Power**

ProSwap Logger is designed to fit your application. Options are available with or without an internal rechargeable lithium-ion battery.

☐ No Battery (external power required)

☐ Internal Battery

#### Step 2: Depth

All instruments include an integral depth sensor. Options are available for different depth ranges and options for venting.

☐ Shallow Vented (1 m, 4 m, 10 m cables)

☐ Shallow Non-Vented (1 m, 4 m, 10 m cables)

☐ Medium Non-Vented (20 m, 30 m, 50 m, 100 m cables)

#### **Step 3: Smart Sensor**

An individual ProDSS sensor can be added along with the built-in temperature and depth sensors.

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

□ **626901**: Turbidity sensor (requires Extended Guard Kit [626740])

☐ **626902**: Conductivity and temperature sensor

☐ **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

□ **626210**: Total algae sensor, PC (requires Extended Guard Kit [626740])

□ **626211**: Total algae sensor, PE (requires Extended Guard Kit [626740])

#### **Step 4: Accessories**

There are many ways to use the ProSwap Logger; see which options are best for you.

☐ **610175**: Top Side Power Pack for ProSwap Logger, includes 6x AA batteries

☐ 610195: Flying Lead Adapter for ProSwap Logger

□ **006108**: Desiccant Cartridge Kit, includes 2x desiccant cartridges

□ **627195**: Graduated Cylinder for Calibration, 250mL

 $\square$  626740: ProSwap Logger Extended Guard Kit (for use with optical sensors)

☐ **696162**: Soft-Sided Carrying Case

☐ **626700-1**: ProSwap Handheld, No GPS

☐ **626700-2**: ProSwap Handheld with GPS





Optical Dissolved Oxygen Sensor

**Turbidity Sensor** 

Conductivity/Temperature Sensor

#### **Streamline Profiling**

Combine ProSwap Logger's built-in temperature and depth with any smart sensor for streamlined profiling







ProSwap Handheld

Top Side Power Pack

### 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









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