

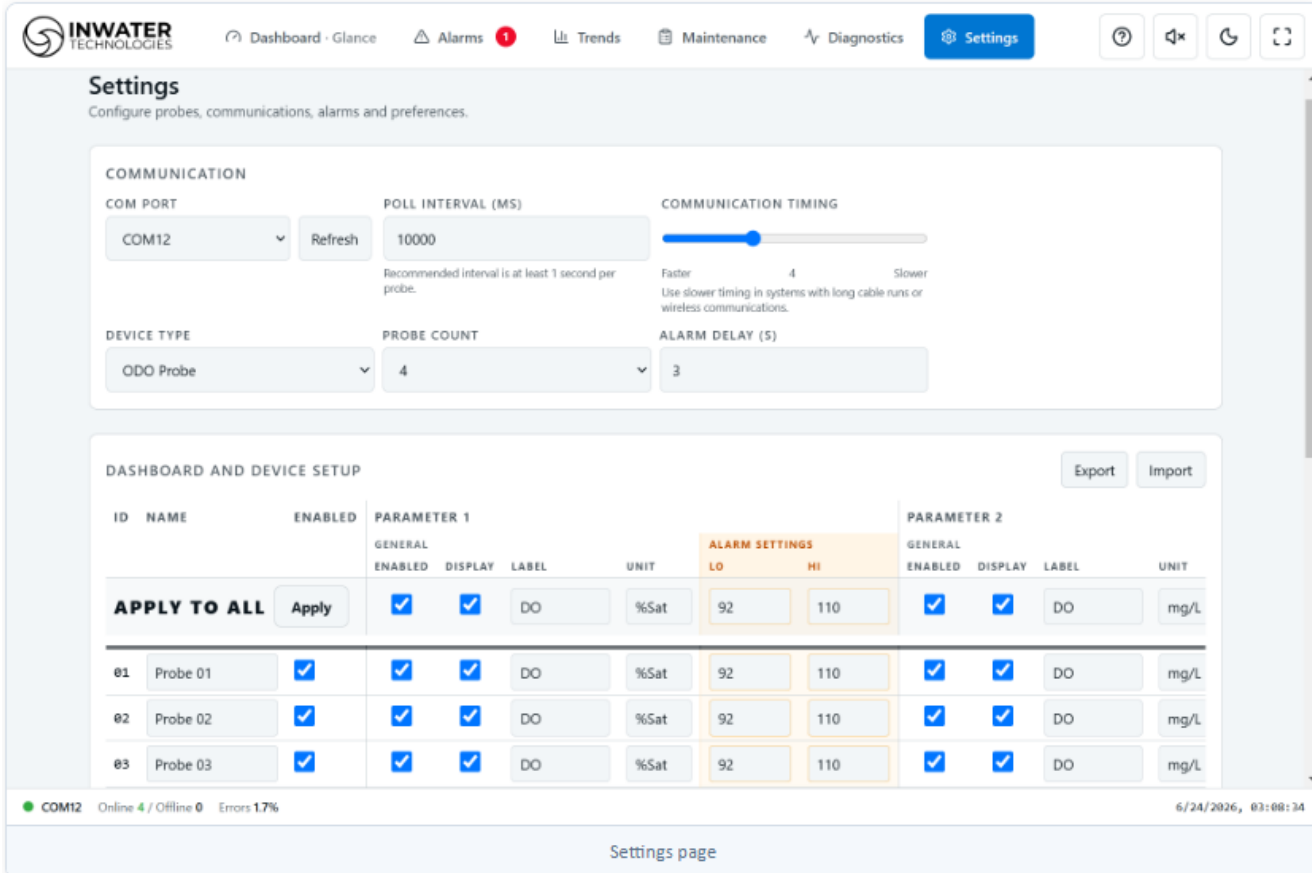
InWater SyncV3

Quick Start Guide

Version 3.0 · June 2026

1. Quick Setup

Open Settings from the navigation bar to configure communication and probe parameters before first use.



Settings
Configure probes, communications, alarms and preferences.

COMMUNICATION

COM PORT: COM12 POLL INTERVAL (MS): 10000 Recommended interval is at least 1 second per probe. COMMUNICATION TIMING: Faster 4 Slower Use slower timing in systems with long cable runs or wireless communications.

DEVICE TYPE: ODO Probe PROBE COUNT: 4 ALARM DELAY (S): 3

DASHBOARD AND DEVICE SETUP

ID	NAME	ENABLED	PARAMETER 1				ALARM SETTINGS		PARAMETER 2			
			ENABLED	DISPLAY	LABEL	UNIT	LO	HI	ENABLED	DISPLAY	LABEL	UNIT
APPLY TO ALL Apply			☒	☒	DO	%Sat	92	110	☒	☒	DO	mg/L
01	Probe 01	☒	☒	☒	DO	%Sat	92	110	☒	☒	DO	mg/L
02	Probe 02	☒	☒	☒	DO	%Sat	92	110	☒	☒	DO	mg/L
03	Probe 03	☒	☒	☒	DO	%Sat	92	110	☒	☒	DO	mg/L

COM12 Online 4 / Offline 0 Errors 1.7% 6/24/2026, 03:08:34

Settings page

Communication settings:

- **COM Port** — Select the serial port the hardware is connected to. Click Refresh to re-scan if the port does not appear.
- **Device Type** — Select RIU for RIUs or ODO Probe for InWater Optical DO sensors.
- **Probe Count** — Number of devices connected (1–12). Devices with IDs above this value are excluded from polling.
- **Poll Interval (ms)** — Time between successive device polls. Allow at least 1 second per device — e.g. 6 probes → 6000 ms. For ODO Probes use 10000 ms minimum.
- **Communication Timing** — Slider from 1 (fastest) to 10 (slowest). 1 is typical - increase for long cable runs, wireless links, or intermittent timeout errors.
- **Alarm Delay (s)** — A threshold must be breached continuously for this duration before an alarm is raised. Prevents nuisance alarms from momentary spikes.

Dashboard and Device Setup

The table in the centre of the Settings page configures every probe and its three measurement parameters.

DASHBOARD AND DEVICE SETUP

Export

Import

ID	NAME	ENABLED	PARAMETER 1					ALARM SETTINGS		PARAMETER 2			
			GENERAL				UNIT	LO	HI	GENERAL			
			ENABLED	DISPLAY	LABEL	UNIT				ENABLED	DISPLAY	LABEL	UNIT
APPLY TO ALL		Apply	☒	☒	DO	%Sat	92	110	☒	☒	DO	mg/L	
01	Probe 01	☒	☒	☒	DO	%Sat	92	110	☒	☒	DO	mg/L	
02	Probe 02	☒	☒	☒	DO	%Sat	92	110	☒	☒	DO	mg/L	

Probe columns:

- **ID** — MODBUS slave address (read-only).
- **Name** — Friendly label shown on the dashboard. Press **Enter** to jump to the next row.
- **Enabled** — Uncheck to exclude a probe from polling and alarming entirely.

Parameter columns (repeated for each of the 3 parameters):

- **Enabled** — Include this parameter in polling and alarm evaluation.
- **Display** — Show this parameter on the dashboard (can log/alarm without displaying).
- **Label** — Parameter name shown in the UI (e.g. *DO*, *Temperature*).
- **Unit** — Unit string shown alongside the value (e.g. *%Sat*, *mg/L*, *°C*).
- **Lo / Hi** — Alarm setpoints. Values outside this range trigger a low or high alarm.

Apply to All

The bold **Apply to All** row at the top of the table lets you configure shared parameters once and push them to every probe in a single click.

1. Edit the Label, Unit, Lo, and Hi values in the **Apply to All** row for the parameter column(s) you want to standardise.
2. Click **Apply** to overwrite that configuration on all probes simultaneously.

This is the fastest way to set up a system where all probes measure the same parameters with the same alarm setpoints.

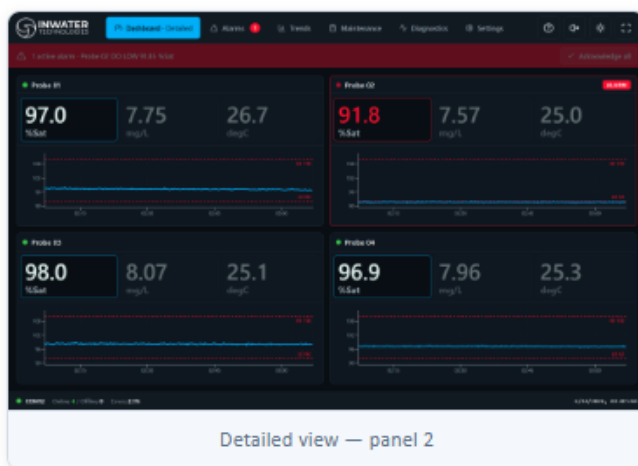
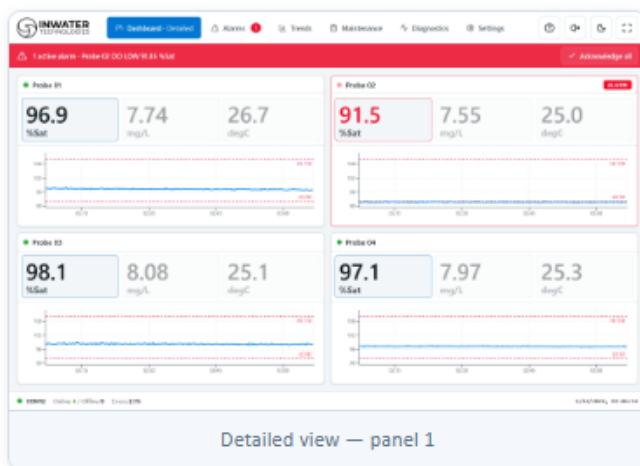
💡 Use **Export** to save your settings to a JSON file and **Import** to restore them on another machine or after reinstalling.

2. Dashboard

Detailed View

The default dashboard shows one card per probe. Each card contains:

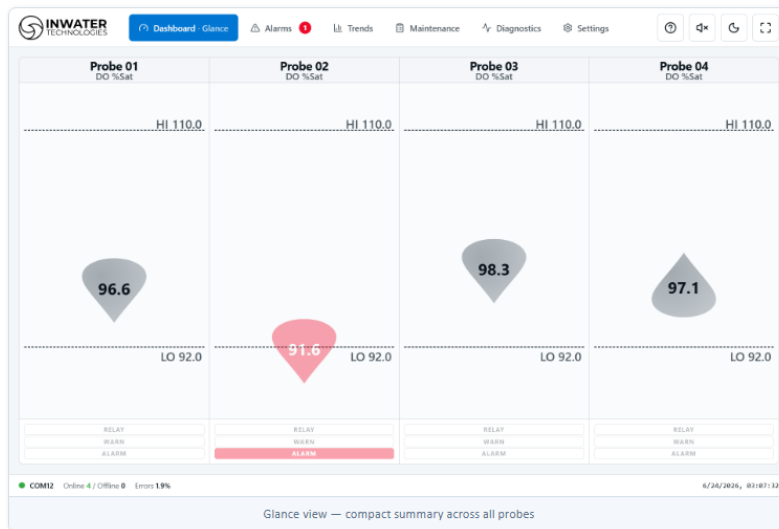
- **Current readings** for each enabled parameter. Values shown in **red** are in alarm; **amber** values are within the warning band (within 5% of a setpoint).
- **Relay indicator** — a badge showing whether the relay output is currently active.
- **1-hour rolling trend** chart with dashed alarm-setpoint reference lines, updating in real time.
- **State indicator** — if a probe has not responded for more than 3 polling cycles, all values are masked with dashes (—) to prevent stale readings being mistaken for live data.



Glance View

Click the **blue Dashboard** button (top left of the dashboard) to switch to a compact summary. Each probe is shown as a single row with its current values and status — useful for monitoring a large number of probes at once.

Click **Dashboard** again to return to the card view.



3. Trends

Navigate to **Trends** to view historical data for any probe or parameter combination.



Graph Settings

- **Probe selector** — Choose a single probe or All probes to compare across the system.
- **Parameter selector** — Choose a single parameter, All parameters (multi-line chart), or a parameter type when comparing probes.
- **Trend window** — Time span shown on the chart: 15 min, 1 h, 6 h, 24 h, 7 days, 30 days, or all historical data.
- **CSV interval** — Row spacing for exported files: 1 min, 5 min, 15 min, 30 min, or 1 hour.
- **Export Trend to CSV** — Exports the currently visible trend data at the selected CSV interval.
- **Export Trend Image** — Saves the currently displayed trend as a PNG image.
- **Export All Data** — Exports the full historical database for all probes at the selected CSV interval.
- **Reset Zoom** — Restores the Y-axis to the auto-scaled default after a manual zoom.

Zooming

Mouse wheel over the chart to zoom the Y-axis in or out.

Pinch gesture on touch screens to zoom.

Annotations / Events

Type a label in the Event label field and click Add Event (or press Enter) to place a time-stamped marker on the chart. Annotations appear as vertical dashed lines; click a line to reveal the label. Use Clear all to remove all annotations.

4. Alarms

TIME	PROBE	TYPE	DATASET	VALUE	THRESHOLD	STATE
6/24/2026, 03:04:08	Probe 02	LO	DO	91.85 %Sat	92.00	ACTIVE
6/24/2026, 03:01:58	Probe 02	LO	DO	91.50 %Sat	92.00	resolved

Alarm types

TYPE	CAUSE
HI	A parameter value exceeded its High setpoint for longer than the configured alarm delay.
LO	A parameter value fell below its Low setpoint for longer than the configured alarm delay.
COMMS	A probe has not responded successfully for 3 or more consecutive polling cycles.

Acknowledging Alarms

- Click **Acknowledge** on an individual alarm to silence the audible tone for that event.
- Click **Ack All** to acknowledge all active alarms at once.

Alarms are automatically resolved when the condition returns to normal, or probe communication restored.

Alarm History

Resolved alarms remain in the list with a *Resolved* badge for reference. Use **Clear Resolved** to remove all resolved entries.

5. Control

⚠ This page is only available when **Device Type** is set to **RIU** in Settings.

INWATER TECHNOLOGIES Dashboard - Detailed Alarms 1 Trends Diagnostics Maintenance Control Settings

RIU Control

Read, modify, then write control parameters for each RIU. Only the Low and High set points are editable. The remaining parameters are shown for diagnostic purposes and can be modified directly on the RIUs from the Control menu.

Read from RIU Write to RIU

DEVICE ID	LOW SET POINT	HIGH SET POINT	DELAY ON	DELAY OFF	CONTROL TYPE	ACTION	CONTROL CHANNEL (Diagnostic)
01	2	3	3s	—	Control	Low	7
02	2	3	3s	—	Control	Low	7
03	2	4	3s	—	Control	Low	7
04	2	3	3s	—	Control	Low	7
05	2	3	3s	—	Control	Low	7
06	2	3	3s	—	Control	Low	7
07	2	3	3s	—	Control	Low	7
08	2	3	3s	—	Control	Low	7
09	2	3	3s	—	Control	Low	7
10	2	3	3s	—	Control	Low	7
11	0	0	—	—	—	—	—

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RIU Control page

Workflow

1. Click **Read from RIU**— the app polls all configured RIUs and populates the table with their current values.
2. Edit the **Low Set Point** and **High Set Point** fields for any devices that need adjustment.
3. Press **Enter** to move to the same field on the next device row.
4. Click **Write to RIU**— the app writes the updated setpoints back to each device.

Table Columns

COLUMN	EDITABLE	DESCRIPTION
Device ID	—	MODBUS slave address
Low Set Point	✓	Relay turns on when the monitored value falls below this level
High Set Point	✓	Relay turns on when the monitored value exceeds this level
Delay On	—	Time before relay engages (read from device)
Delay Off	—	Time before relay disengages (read from device)
Control Type	—	Control logic type (read from device)
Action	—	Relay action mode (read from device)
Control Channel	—	Diagnostics: which input channel the RIU monitors

Rows for device IDs above the configured **Probe Count** are dimmed and not written to.

6. Maintenance Log

Navigate to **Maintenance** to keep a time-stamped record of service and maintenance events.

INWATER TECHNOLOGIES Dashboard - Glance Alarms Trends **Maintenance** Diagnostics Settings

Maintenance Log
Record service and maintenance events for each device.

DEVICE: Probe 01 DESCRIPTION: Describe the maintenance event... **Add Entry**

2 entries **Clear All**

EVENT TIMESTAMP	DEVICE	DESCRIPTION
6/24/2026, 03:08:15	Probe 01	Sensor cap replaced
6/24/2026, 03:08:01	General	Probes cleaned

Adding an Entry

1. Select the **Device** the work relates to, or leave it as **General** for system-wide notes.
2. Type a description of the work performed in the **Description** field.
3. Press **Enter** or click **Add Entry**.

Entries are saved with the current timestamp and persist across application restarts.

Managing the Log

- Click the **delete** icon on any row to remove a single entry.
- Click **Clear All** (top right) to delete all entries — a confirmation prompt is shown before data is removed.

7. Diagnostics

Navigate to **Diagnostics** for a real-time view of communication health and per-probe state.

ID	NAME	STATUS	LAST UPDATE	FAILURES	LAST VALUES
01	Probe 01	OK	03:08:18	0	DO=97.0 · DO=7.76 · Temperature=26.7
02	Probe 02	ALARM	03:08:19	0	DO=91.4 · DO=7.54 · Temperature=25.0
03	Probe 03	OK	03:08:20	0	DO=98.0 · DO=8.07 · Temperature=25.1
04	Probe 04	OK	03:08:21	0	DO=97.0 · DO=7.97 · Temperature=25.3

Communication Summary — Three tiles at the top show the current **Mode** (HARDWARE / SIMULATOR), the active **Port**, and whether the port is **Open**.

Per-Probe Table

COLUMN	DESCRIPTION
Status	OK, WARN, ALARM, or OFFLINE
Last Update	Timestamp of the most recent successful poll
Failures	Count of consecutive failed polls
Last Values	Most recently received raw values for all three parameters

COM Monitor

Click **Com Monitor** to open a live MODBUS frame log showing every raw request and response byte on the serial bus. Useful for diagnosing timing issues, CRC errors, or unexpected device responses.

- Use **Pause / Resume** to freeze the log for inspection without closing the monitor.
- The log retains the most recent 1,200 frames.