

# Hydrolab MS5

Water  
Quality Sonde

## Sensor Interface Manual



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## Overview

The Hydrolab MiniSonde 5 is a portable water quality instrument that can be used for long-term monitoring or profiling applications. The MS5 has four sensor ports that can include any of the following sensors:

- Dissolved oxygen (Hach LDO or polarographic)
- Blue-green algae (fresh water or marine)
- Turbidity (self-cleaning or 4-beam)
- TDG (total dissolved gas)
- Rhodamine WT
- Chlorophyll a
- Temperature
- Conductivity
- Ammonia
- Chloride
- Nitrate
- Depth
- ORP
- pH



**Figure 1:** Hydrolab MS5 water quality sonde

## Installation

The MS5 sonde is designed to fit in 2 inch or larger deployment pipes. The unit can also easily be mooring deployed under NexSens data buoys.

The initial setup of the sonde and sensors is minimal because the integral water quality sensors are hardwired into the data logger electronics. Additionally, no internal batteries are required because the MS5 draws power from the iSIC data logger.

## Connecting to an iSIC Data Logger

To wire the multi-probe into the iSIC, route the cable and wires through a gland fitting installed in the enclosure, and then unplug the green terminal strip from the data logger before securing individual wires according to the wiring diagram below. Avoid clamping on wire insulation.

### **NOTE**

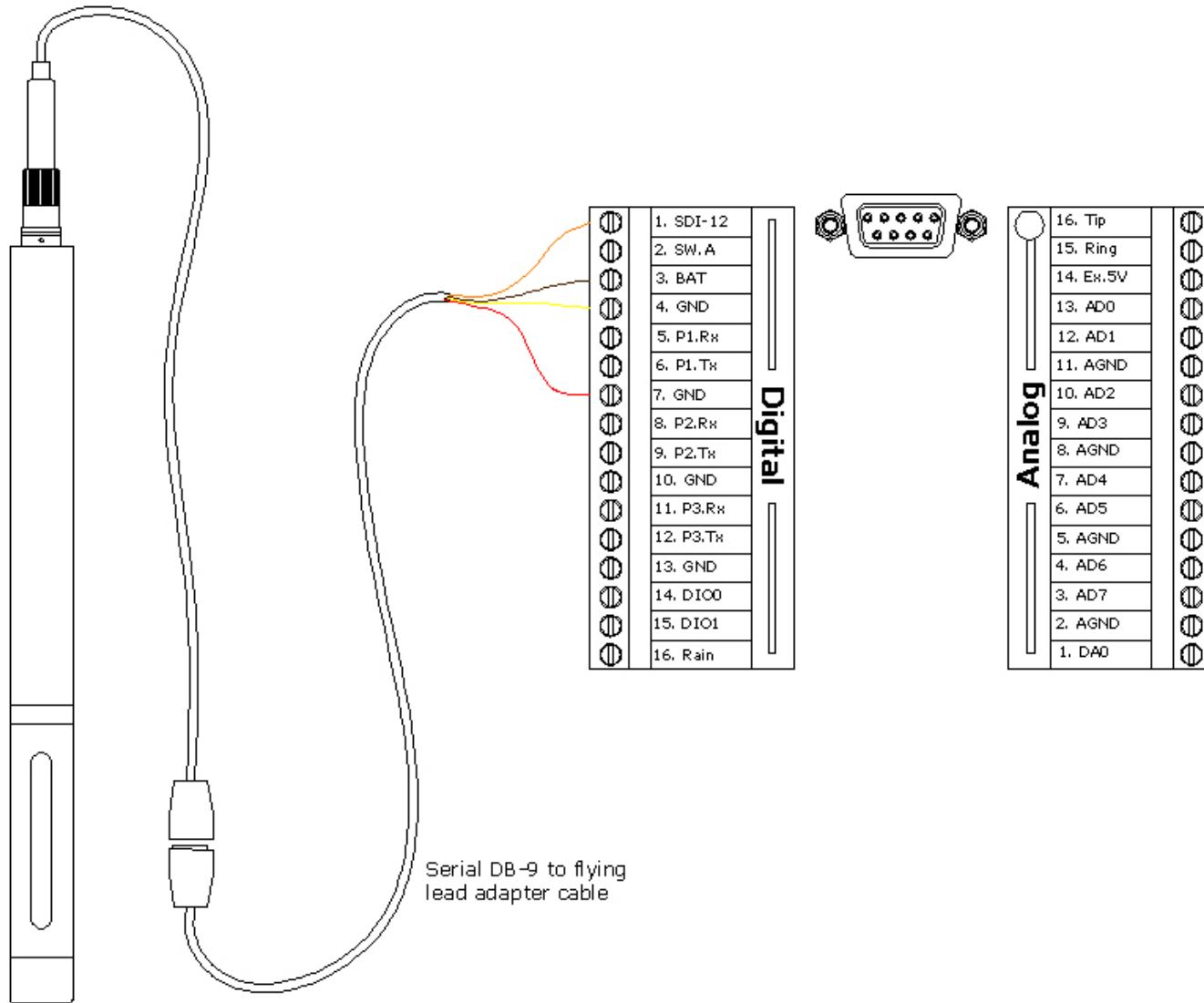
**A Hydrolab serial DB-9 to flying lead adapter cable is required for wiring MS5 sondes directly to the iSIC data logger.**



**Figure 2:** Unplug the green terminal strip from the data logger before wiring the sensor

For connecting two sondes to the same data logger, use the same pins on the iSIC terminal strip. However, attaching more than two instruments to the same terminals may be cumbersome. Consider a junction box for signal splitting if this is the case.

**CONNECTING TO AN ISIC DATA LOGGER**



**Figure 3:** Physical wiring of a Hydrolab MS5 sonde to an iSIC data logger

**Table 1:** Table for wiring a Hydrolab MS5 sonde to an iSIC data logger

<b>Digital</b>		<b>Analog</b>	
<b>1. SDI-12</b>	Orange (SDI-12 Data)	<b>16. Tip</b>	-
<b>2. SW.A</b>	-	<b>15. Ring</b>	-
<b>3. BAT</b>	Brown (+12 VDC)	<b>14. Ex.5V</b>	-
<b>4. GND</b>	Yellow (SDI-12 Return)	<b>13. AD0</b>	-
<b>5. P1.Rx</b>	-	<b>12. AD1</b>	-
<b>6. P1.Tx</b>	-	<b>11. AGND</b>	-
<b>7. GND</b>	Red (Ground)	<b>10. AD2</b>	-
<b>8. P2.Rx</b>	-	<b>9. AD3</b>	-
<b>9. P2.Tx</b>	-	<b>8. AGND</b>	-
<b>10. GND</b>	-	<b>7. AD4</b>	-
<b>11. P3.Rx</b>	-	<b>6. AD5</b>	-
<b>12. P3.Tx</b>	-	<b>5. AGND</b>	-
<b>13. GND</b>	-	<b>4. AD6</b>	-
<b>14. DIO0</b>	-	<b>3. AD7</b>	-
<b>15. DIO1</b>	-	<b>2. AGND</b>	-
<b>16. Rain</b>	-	<b>1. DA0</b>	-

## Computer Interface

iChart software is used to set up the iSIC data logger, as well as to acquire and process data. Launch the software and select **File | New Project**. Follow the Setup Device Wizard to create a project file. Additional information is available in the iChart manual.



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