

X2 Data Logger – Connecting Sensors

The NexSens X2 Environmental Data Logger is compatible with many industry standard sensors. Many of these sensors are covered in this guide.

If you do not see a specific sensor, contact the NexSens Technical Support team.



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Connectorization

For compatibility, sensors must have UW connectors. There are 3 options:

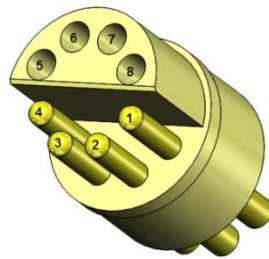
- Factory installed UW connectors
- UW Plug and Flying Lead cable
- UW Field Wireable Plug

Recommendation: Invest in factory connectorization of all sensors for a long-term, robust and waterproof connection

Signal	UW-8P	Color	UW-FWP	UW-FWP
RS-232 Tx	1	Orange	RS-232 Tx	J ¹
Ground	2	Black	Ground	J ²
RS-232 Rx	3	Yellow	RS-232 Rx	J ³
5V	4	White	5V	J ⁴
12V	5	Red	12V	J ⁵
SDI-12	6	Brown	SDI-12	J ⁶
RS-485 B	7	Blue	RS-485 B	J ⁷
RS-485 A	8	Green	RS-485 A	J ⁸



UW to Flying Lead Cable



UW-8P



UW Field Wireable Plug



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Three sensor tiers

The X2 scans for attached sensors on every power cycle if none have previously been found.

When first configuring a system, all sensors should be connected before applying power.

Tier 1 Sensors

Sensors automatically detected; no setup

Tier 2 Sensors

Sensors automatically detected; require limited setup

Tier 3 Sensors

Custom user script creation available for interfacing to a wide array of sensors

Note: If a sensor is added to or removed from the logger after the initial autodetect, a **detect** procedure can be manually triggered from either WQData LIVE or the embedded web interface.

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Tier 1 Sensor	Tier 2 Sensor
Airmar 110/150/200WX [Weather Station] RS-232 (4800 8N1)	In-Situ Aquatroll Sonde [Multi-Parameter Water Quality Probe] RS-485 Modbus (19200 8N1)
APG PT500 [Level Sensor] RS-485 Modbus (9600 8N1)	YSI 6-Series or EXO Sonde [Multi-Parameter Water Quality Probe] SDI-12 (1200 7E1)
APG MNU [Ultrasonic Level Sensor]	WetLabs WQM [Multi-Parameter Water Quality Probe] RS-232 (19200 8N1)
INW PT12 [Level Sensor] SDI-12 (1200 7E1)	Lufft WS-Series [Weather Station] RS-485 Modbus (19200 8N1)
NexSens T-Node FR [Temperature String] RS-485 Modbus (19200 8N1)	Vaisala WXT530 Series [Weather Station] SDI-12 (1200 7E1)
Stevens Hydraprobe II [Soil Moisture Sensor] SDI-12 (1200 7E1)	NexSens mV Adapter [Analog to Digital Converter] RS-485 Modbus (19200 8N1)
YSI ODO [Dissolved Oxygen Sensor] RS-485 GSI (115200 8N1)	Nortek Aquadopp [Current Meter] RS-232 (115200 8N1)
In-Situ RDO PRO-X [Optical Dissolved Oxygen Sensor] RS485 Modbus or SDI-12	FloWav PSA-AV [Area Velocity Flow Sensor] RS-485 Modbus (9600 8N1)
Garmin [GPS 19x HVS High Sensitivity Receiver] NMEA 0183	Sequoia LISST-ABS [Acoustic Backscatter Sensor] SDI-12
Vaisala GMP 251 [Carbon Dioxide Probe] RS-485 (19200 8N1)	AML Micro-X [single sensor probe] RS-232 (38400 8N1)
Airmar EchoRange SS510 [Smart Sonar Depth Sensor] NMEA 0183 (4800)	Seabird Scientific SUNA V2 (Submersible Ultraviolet Nitrate Analyzer) RS232 (57600), SDI-12