In-Line EC/Temperature/pH Monitoring Assembly

The ECS-4 is designed to measure electrical conductivity, temperature, and optional pH in pressurized lines. Typical applications include horticulture, aquaculture, and aquaponics.

The EC sensor is integral to the design and features a large wetted area.

Applications

The Argus ECS-4 is used for sampling water EC, temperature and pH in pressurized lines. It can also be installed for atmospheric (non-pressurized) discharge. The unit incorporates an integral EC sensor and a wet-well temperature sensor, with a mount for an optional pressure pH probe (Argus SEN-PH/SP200) capable of continuous sampling in a pressurized environment.

It is typically installed in parallel to a water supply line from which it obtains its sample flow. Flow through the unit is created using a small pressure differential between the inlet and outlet ends such as that created at a piping elbow or one induced using a flow restricting valve (see over for details).

It is used with the NUT-SYS-AB150 and NUT-SYS-RM Nutrient units.

Alternatives

SEN-ECTIN-1.4 – previous version. Same general specifications as the SEN-ECTIN-1.5 but uses a different pH probe (SEN-PH2) that cannot be interchanged with the SEN-PH/SP200 fittings on the SEN-ECTIN-1.5.

SEN-ECT1 – For non-pressurized and dilute tank sampling applications, use the Argus SEN-ECT1 probe assembly. Other EC and pH transmitters with current outputs can also be connected to the Argus System.

Features

- **Convenience** – Temperature, pH, and EC sensors are mounted in a single location.
- **Optional pH Probe** – Argus supplies a thread mount pH probe, Argus SEN-PH/SP200, designed for use in pressurized environments (up to 80 psi).
- **Stable EC Sensor** – Two ground electrodes act as shields to reduce noise and isolate the EC electrode signal. This produces highly accurate sensor readings. The high probe constant greatly reduces (and in most cases, eliminates) measurement errors caused by contamination.
- **Ease of Installation** – Can be mounted anywhere in the sampled line across a naturally occurring or induced pressure drop (see the installation guide)

Specifications

Dimensions	31 5/8” x 3.5” (length x height)
EC Probe	**Constant:** 15 **Range:** 0.20 to 20.0mS Optimal Range: 05 to 15mS **Repeatability:** > 1% of reading over optimal range (0.01mS) **Accuracy** (with calibration): +/- 0.02mS over optimal range.
Temperature Probe	Argus **SEN-TN2DW/C** accuracy +0.2°C over the range 0°C to 70°C (refer to the **SEN-TN2DW/C** data sheet for details)
pH Probe (provided separately)	**SEN-PH/SP200** (refer to the SEN-PH/SP200 data sheet for details) **Maximum Pressure:** 75 PSI (must be protected from water hammer) **Maximum Flow:** 3ft/second
Cable Length	5 meters (16 feet) (EC and Temperature)
Maximum Pressure	75 PSI with SEN-PH/SP200 installed, 250 PSI for EC and Temp measurement only.
Construction Materials	Schedule 80 PVC pipe and stainless steel ¼” PVC union ball valves (150 PSI rating)
Inlet/Outlet	¼” barbed inlet and outlet fittings connected to 2-foot sections of included braided hose.

Wiring Details

Typical Wiring Configuration

For installation, refer to the custom wiring diagrams supplied with each part.

Additional Information

For more information, please contact Argus.

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