

PART 1 GENERAL

1.1 Section includes

- A. System that continuously measures conductivity in aqueous solutions.
- B. Includes the capability to remotely monitor sensors on any browser-enabled device and present diagnostics on the overall health of the measurements (on Predictive Diagnostics-enabled sensors), as well as upcoming and required maintenance - reducing user risk and downtime.

1.2 Measurement Procedures

- 1. The tip of the probe comprises two coils that are completely insulated from the surrounding medium. An AC voltage is applied to the primary coil and generates an electrical current in the liquid. The secondary coil determines the current produced by the ion movements and calculates the conductivity of the liquid from the current.

1.3 Alternates

- A. Probes or sensors that do not communicate with Hach controllers will not be acceptable.

1.4 System Description

- A. Performance Requirements
 - 1. Measurement range:
 - a. Conductivity: 250 μ S/cm – 2.5 S/cm
 - b. Temperature: -5 to 50 °C (23 to 122 °F)

1.5 Certifications

- A. CE (incl. RoHS)

1.6 Environmental Requirements

- A. Operational Criteria
 - 1. Operating temperature: -20 to 50 °C (-4 to 122 °F)
 - 2. Max. immersion depth / pressure for the sensor: 20 m / 2 bar (29 psi)
 - 3. Flow rate: 13 ft./s (4 m/s), maximum

1.7 Warranty

- A. The system is warranted for 2 years from date of shipment against defects in materials or workmanship.

1.8 Maintenance Service

- A. Scheduled maintenance:
 - 1. Clean to maintain measurement accuracy. Schedule (days, weeks, etc.) is affected by characteristics of the process solution and should be determined by operating experience.

PART 2 PRODUCTS

2.1 Manufacturer

- A. Hach Company, Loveland, CO
 - 1. Hach 3798 Digital Inductive Conductivity Sensor

2.2 Manufactured Unit

- A. The Hach 3798 Digital Inductive Conductivity Sensor consists of:
 - 1. Submersible probe
 - 2. Integral cable

2.3 Equipment

- A. The probe works with Hach digital controllers only.
- B. The probe communicates with the controller digitally via MODBUS® connection.
- C. The probe is water resistant.
- D. The probe material is:
 - 1. Stainless steel metal housing
 - 2. Polyurethane
 - 3. PEEK®
 - 4. PPS
- E. Mounting styles [select one]:
 - 1. Convertible style:
 - a. Pole mounting directly immersed into the media
 - b. Chain mounting directly immersed into the media

2.4 Components

- A. Standard equipment:
 - 1. Probe
 - 2. Integral cable
 - 3. Manual
- B. Dimensions: 43 × 370 mm
- C. Weight: < 1 kg

2.5 Accessories

- A. Plug in extension cables to extend the distance between the sensor and cable up to 50 meters (164 ft.)
- B. Mounting hardware
- C. Reference solutions

PART 3 EXECUTION

3.1 Preparation

- A. The system must be mounted to a Hach mounting assembly directly in the solution to be measured.

3.2 Installation

- A. Contractor will install the analyzer in strict accordance with the manufacturer's instructions and recommendation.
- B. Manufacturer's representative will include a half-day of start-up service by a factory-trained technician, if requested.
 - 1. Contractor will schedule a date and time for start-up.
 - 2. Contractor will require the following people to be present during the start-up procedure.
 - a. General contractor
 - b. Electrical contractor
 - c. Hach Company factory trained representative
 - d. Owner's personnel
 - e. Engineer

3.3 Manufacturer's Service and Start-Up

- A. Contractor will include the manufacturer's services to perform start-up on instrument to include basic operational training and certification of performance of the instrument.
- B. Contractor will include a manufacturer's Service Agreement that covers all the manufacturer's recommended preventative maintenance, regularly scheduled calibration and any necessary repairs beginning from the time of equipment startup through to end user acceptance / plant turnover and the first 12 months of end-user operation post turnover.
- C. Items A and B are to be performed by manufacturer's factory-trained service personnel. Field service and factory repair by personnel not employed by the manufacturer is not allowed.
- D. Use of manufacturer's service parts and reagents is required. Third-party parts and reagents are not approved for use.

END OF SECTION