

Foxboro® EP307B Series

Electrodeless Conductivity



Model EP307B Series Description

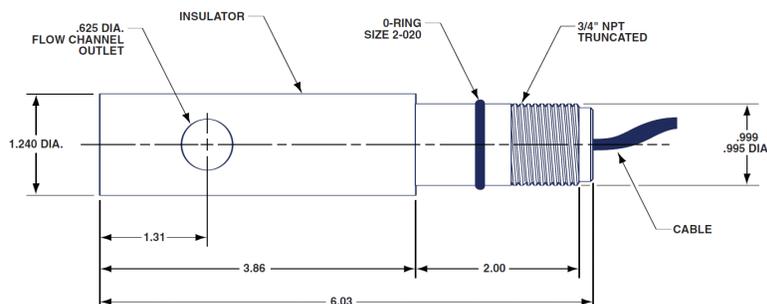
The EP307B Series thermoplastic sensors are designed to provide a completely nonmetallic sensor material for many of the most aggressive electrodeless conductivity applications. Commonly encountered applications of this type include those where high purity or sensitivity to metals in the process is a concern — for example, high-purity sulfuric acid, hydrofluoric acid, and other aggressive solutions where standard sensor materials simply will not survive.

The ability to select from a list of wetted materials (e.g., housing and O-ring) permits the EP307B Series sensors to be tailored to the specific application at hand. A variety of sensor materials ensures process compatibility with no metallic wetted parts. Thermoplastic sensor bodies include PFA, PCTFE, glass-filled PEEK and others. O-ring choices include Chemraz, Kalrez, Viton and EPDM.

Optional bushing and flange mounting equipment is available as specials in many of the sensor materials listed.

Features / Benefits

- An all-thermoplastic sensor provides a completely non-metallic body material
- Selectable thermoplastic materials
- Selectable wetted O-ring materials
- Nonfouling
- Wide range
- Reliable design
- Integral temperature element



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Specifications

| | |
|--|--|
| Conductivity Range: | Minimum full scale 1000 microsiemens; maximum full scale 2000 millisiemens |
| Temperature Range: | 0°–175°C (ranges from 350°F to 140°F at varying pressures linearly de-rated — material- specific) |
| Pressure Limit: | 150 psi (material-specific, linear de-rating, see above) |
| Process-Wetted Material: | Selectable all-thermoplastic sensor body and O-ring materials, including thermoplastics — PFA, PCTFE, PEEK, etc.; and O-ring — Chemraz, Viton, Kalrez, or EPDM (EPDM = 300°F max.) |
| Cable: | 20 foot integral (std.) of either Teflon or PVC (longer lengths optional) |
| Temperature Compensation Element: | Selectable as either 100Ω or 1000Ω RTD, or 100 K thermistor |
| Cell Factor: | 2.49 cm ⁻¹ |
| Analyzer/Transmitter Compatibility: | Function with the 876EC intelligent transmitter, 875EC intelligent analyzer, or 873EC analyzer |

Ordering Information

Construct your model code by selecting the materials most appropriate for your electrodeless conductivity application, with the right code number or letter for each choice. Here, the first part of the code would be EP307, plus B for Sensor Style (B = Barrel geometry). Then select a choice from 1–4 for O-Ring; from G–R for Housing Material; from 1–4 for Temperature Element; from T or P for Cable Type; from 1–9 for Cable Length; from S or P for Cable Termination; and 1 for Additional Insertion (1 = Standard insertion length).

Example — EP307B1P1T2S1.

| | | | | |
|---|----------------------------|---|-------------------------|-------------------|
| O-ring | Temperature Element | Cable Termination | Housing Material | Cable Type |
| 1 ChemRaz | 1 100Ω RTD | S Spade lug terminals | T PFA | T Teflon |
| 2 Viton | 3 1000Ω RTD | P Stripped & tinned leads | P PVDF | P PVC |
| 3 Kalrez | 4 100 K thermistor | | R PEEK, glass-filled | |
| 4 EPR | | | | |
| Cable Length | | Additional Insertion | | |
| 1 10 feet, integral cable | | 1 Standard insertion length | | |
| 2 20 feet, integral cable (std. length) | | • Extended length available — contact Foxboro | | |
| 3 Nonstandard length, specify | | | | |
| 9 99 feet (max. recommended length) | | | | |