

MODELS P25 AND P26 R.F. ADMITTANCE PROBES

- HIGH TEMPERATURE AND PRESSURE SERVICE -

TS P25

ADVANTAGES FOR LIQUIDS & INTERFACES

- OK for high temperature and pressure
- High inherent gain sensitivity
- Allows full scale calibration over a very small level change and narrow ranges
- Works with liquids carrying entrained solids
- Works to 500°F (260°C) at 650 PS1G (45 BAR)
- Works on liquids with low dielectric constant
- Insensitive to surface turbulence
- Built in ground reference improves sensitivity
- Produces linear output signal in irregular tank
- Allows calibration outside the vessel
- Strong, resists flowing currents, waves, vortices

APPLICATION

The P25 and P26 probes are intended for high temperature chemical processing and steam/slurry applications. They are also highly corrosion resistant. They are equipped with triple sealing for utmost safety and reliability. Each is equipped with a wrap around tubular ground reference. They have high inherent gain sensitivity which allows full scale range calibration over just a few inches of conductive liquid. The ground tube is relatively large and provides an open bore. It can be used when the liquid is highly turbulent or carries entrained solids. The open bore also allows fast speed of response and resists plugging. The tubular ground reference sheath produces a linear output signal when used in horizontal cylinders or other tanks with nonlinear sidewalls. The electronic module/probe combo can be calibrated outside the vessel for reasons of convenience or safety.

The P26 probe is exactly the same as the P25 except that it has vertical slots milled into the tubular ground reference. These slots are offset and overlapping so that the interface liquids are always free to flow in or out. This is a necessity when being used for interface service. The interface transition zone must not be kept away from the sensing rod by a solid tube wall.

SPECIFICATIONS

Working pressure @ 500°F (260°C): 650 PSIG (45 BAR).

Temperature: Higher, to 750°F (400°C), with lower pressure and remoted electronics module.

Materials: 316 S.S. and alumina ceramic are basic; other metals are optional.

Process connections: 2" MPT is minimum; (for pressures to 300 PSIG); 2" or larger flanged connections should be used for higher pressures and temperatures.

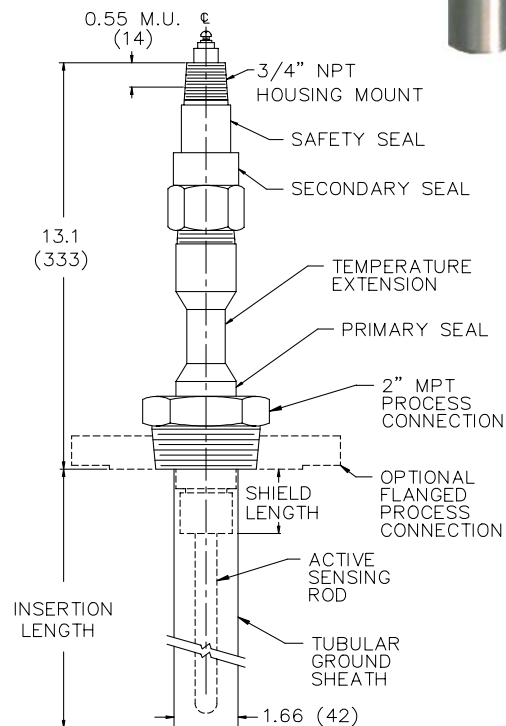
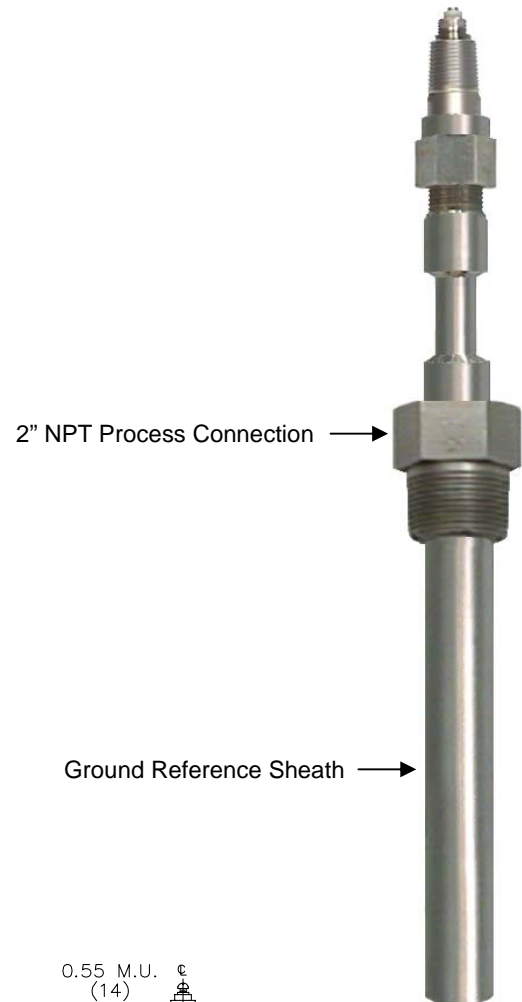
Ground sheath: Connected to the gland body; sensing probe centering guides are provided as needed.

Slotted ground sheath: Standard on model P26.

Electronic module: Compatible with all models.

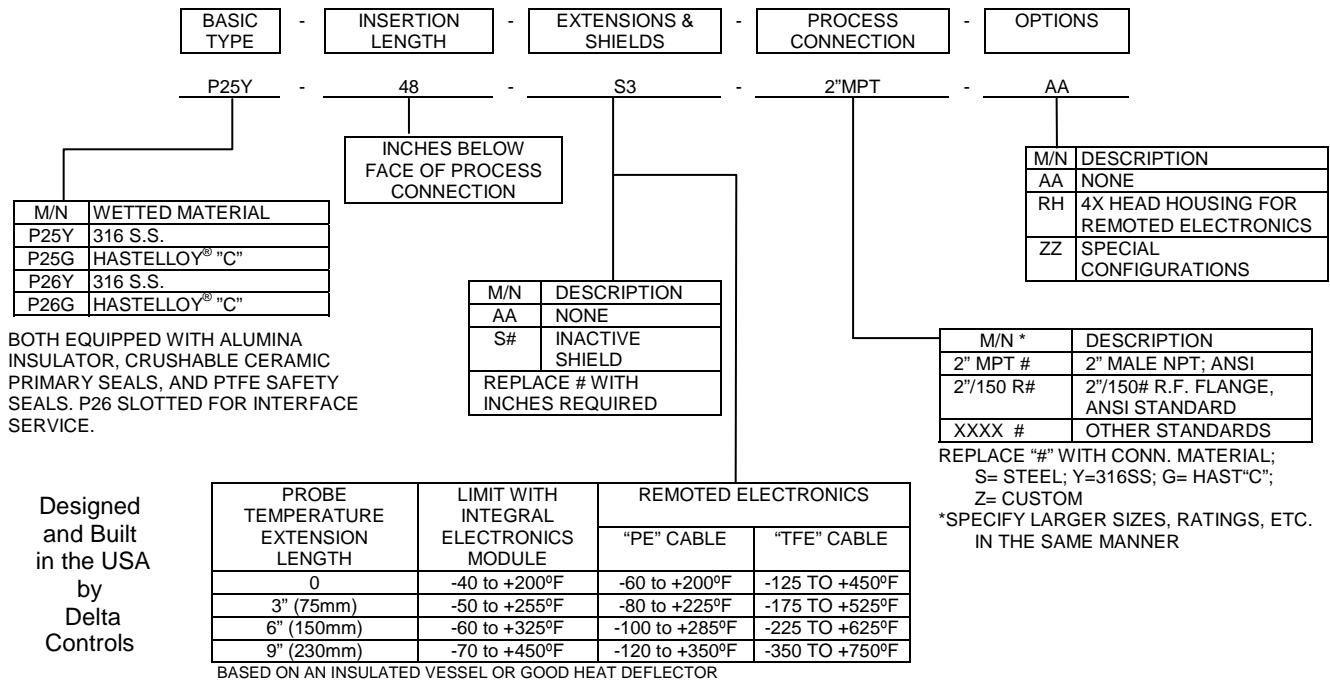
Maximum insertion: 10 feet (3 meters).

Bottom support bracket: May be required when insertion is over 60 inches (1.5 meters) and the liquid is turbulent.



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MODEL NUMBERING SYSTEM



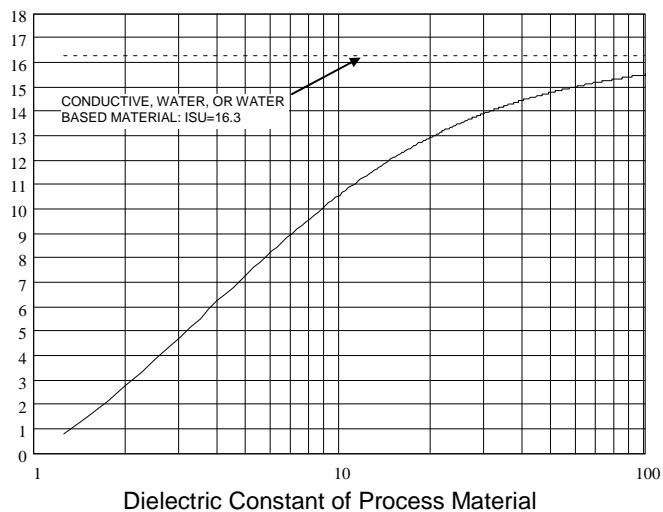
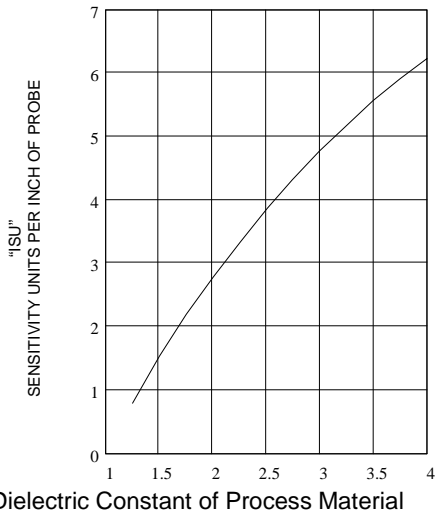
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ESTIMATING PROBE PERFORMANCE

Step # 1 Determine "BSU"; total sensing unit equivalents when no material is covering the sensing probe

- (A) Basic "SU" due to seal/body = 290
 - (B) Inches sensing probe insertion x 4.3 = _____
 - (C) Inches inactive shield x 20.5 = _____
 - (D) Inches cable for remoted module x 4.5 = _____
- "BSU" TOTAL = _____

Step # 2 Determine "ISU"; quantity of sensing unit change due to a 1.0 inch change in the amount of process material covering the sensing probe. "ISU" = Read from graph below.



STEP # 3 Insert "BSU" and "ISU" (determined above) into the formulas shown in Application Note # PROB-198; "FORMULAS FOR MODELING AND PERFORMANCE TESTING". Verify that the selected probe and electronics module will meet the requirements of the application and provide the expected results.



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