

MODEL P72 FLEXIBLE CABLE PROBE EQUIPPED WITH PARALLEL GROUND CABLE - FOR USE WITH LIQUIDS ONLY -

TS P72

ADVANTAGES

- Cable can be coiled for easy handling and shipment
- Easily installed in tall tanks
- Can be installed in indoor tanks with low headroom
- Can be used in horizontal cylindrical tanks and others without a flat single plane wall
- Corrosion resistant PTFE seals and jacket
- Suitable for high pressures and temperatures
- 316 S.S. or Hastelloy "C"® body

APPLICATION

The Model 72 is needed when a large tank has nonlinear tank walls such as does a horizontal cylinder or a sphere. It also is used where indoor tanks only have limited headspace above them. Most applications require the optional bottom weight to keep the cable taut.

The Model 72 is a Model 71 to which has been added a parallel ground reference cable. Many nonconductive liquids have low dielectric constant values. It is important that the rangeability tables be consulted and followed to insure adequate intrinsic gain of the probe. A parallel ground cable will usually solve rangeability problems in large tanks of low dielectric liquids. The Model P72 should generally be used when the level change is less than ten (10) feet, where the tank diameter is greater than eight (8) feet, or when the measured liquid has a low dielectric constant (less than 3.5 units). Low dielectric liquids include fuel oil, gasoline, benzene, and liquified petroleum gasses. The Model P72, with parallel ground cable, is required when the tank has a nonlinear ground reference wall, such as is found in a horizontal cylindrical tank or an LPG sphere. This probe is not suitable for service in powders or solids.

SPECIFICATIONS

Working Pressure: 1500 PSIG (100 BAR) at 100°F (40°C)

Working Temperature: -460 to +400°F (-273 to +200°C)

Temperature Extension: Required for less than -20°F (-30°C) or higher than 175°F (80°C)

Insertion Length: To 250 feet (75 M)

Process Connection: MPT basic, flanged (any type) is optional

Electronics Module: Compatible with all models

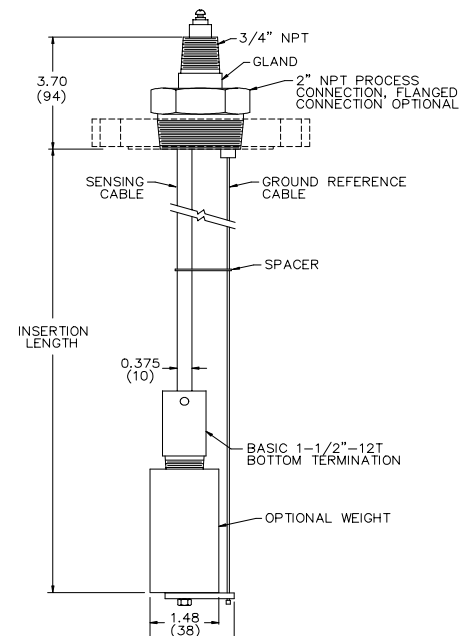
Wall Mount Support Bracket: Optional

Lower Fitting: 1½-12T bolt

Lower Weight: Optional

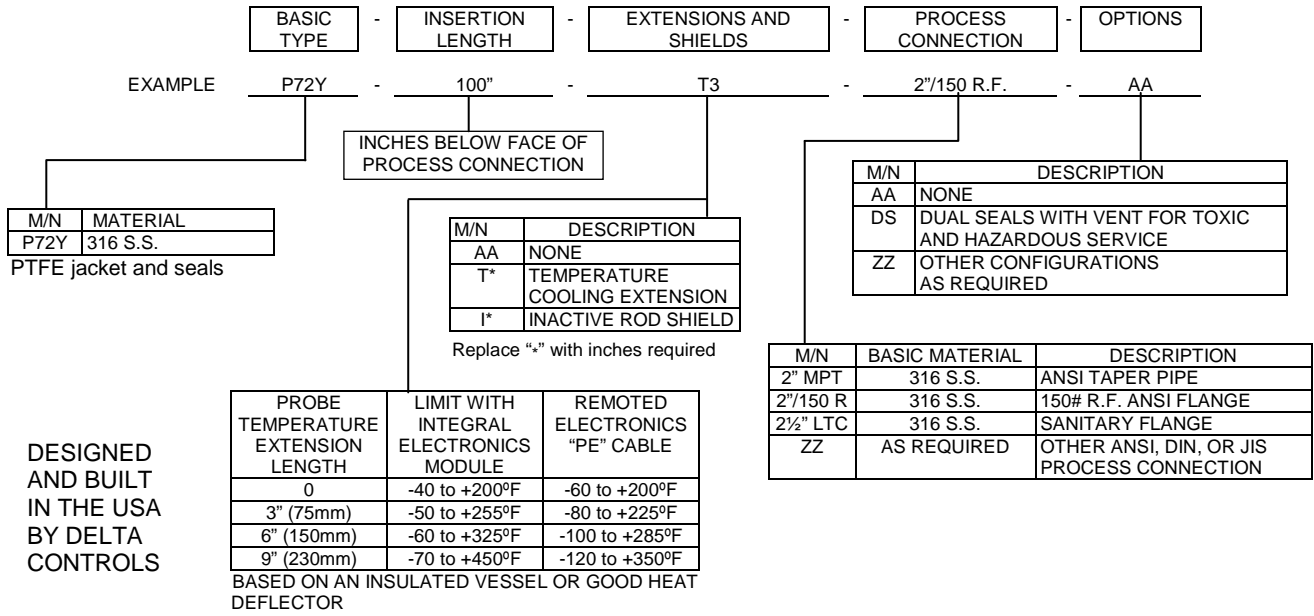


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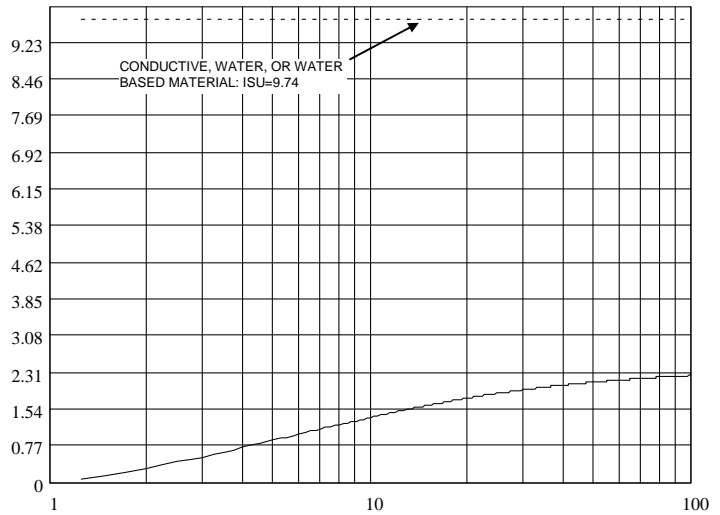
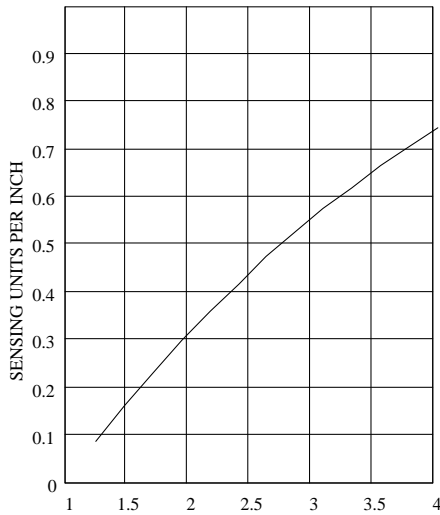


DETERMINING PROBE PERFORMANCE

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

- A. Basic SU due to body and lower termination = 242
 - B. Inches sensing probe insertion x 1.6 = _____
 - C. Inches inactive shield x 31.0 = _____
 - D. Inches temperature extension x 31.0 = _____
 - E. 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



Dielectric Constant of Process Material

Dielectric Constant of Process Material

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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