

# MODEL P71 FLEXIBLE CABLE PROBE - FOR USE WITH CONDUCTIVE LIQUIDS -

TS P71

## ADVANTAGES

- Cable can be coiled for easy handling and shipment
- Easily installed in tall tanks
- Can be installed in indoor tanks with low headroom
- PTFE insulation allows operation in conductive or nonconductive liquids at high temperatures
- Corrosion resistant PTFE seals and jacket
- Suitable for high pressures and temperatures
- Available in 316 S.S. or Hastelloy "C" ®

## APPLICATION

The Series 70 probe cable is jacketed with PTFE insulating material and the bottom cable fitting is electrically isolated from the cable. The probe should normally be located near and not more than  $\frac{1}{4}$  of the vessel diameter away from the vessel centerline. The Model 71 is primarily intended for liquid and interface measurement service; however, there are some applications that require its attributes; these include damp wood chips and pulpstock chests.

The cable is provided with a bolt thread for direct attachment to the bottom of the tank. It may also be equipped with a lower weight to keep it straight. The cable must be vertical and taut after installation. A simple bottom weight is the preferred method in calm, still storage tanks. A pipe stilling well should be used in conjunction with the weight when the liquid is agitated or where strong flowing currents are present.

Fastening the lower cable termination to the bottom of an agitated tank is required when a stilling well cannot be installed or in applications where the stilling well may plug with deposits. This method has a significant disadvantage because the tank must be drained for either installation or removal of the cable probe.

## 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)

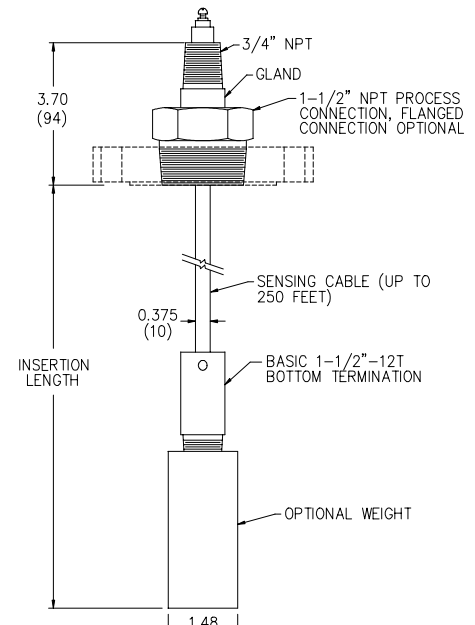
**Process Connection:** MPT basic, flanged (any type) is optional

**Electronics Module:** Compatible with all models

**Wall Mount Support Bracket:** Optional

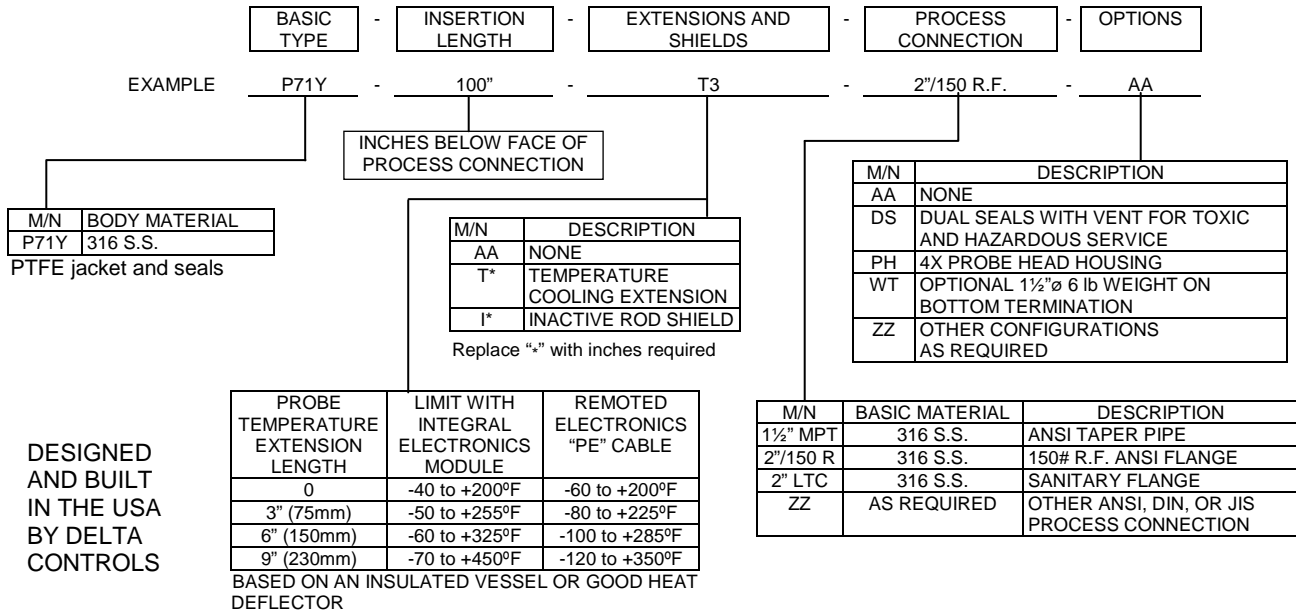


## OUTLINE DIMENSIONS



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## MODEL NUMBERING SYSTEM

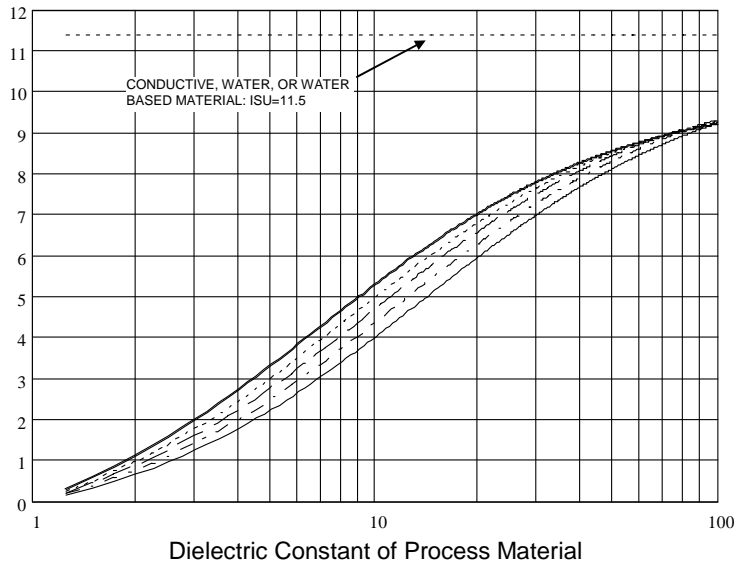
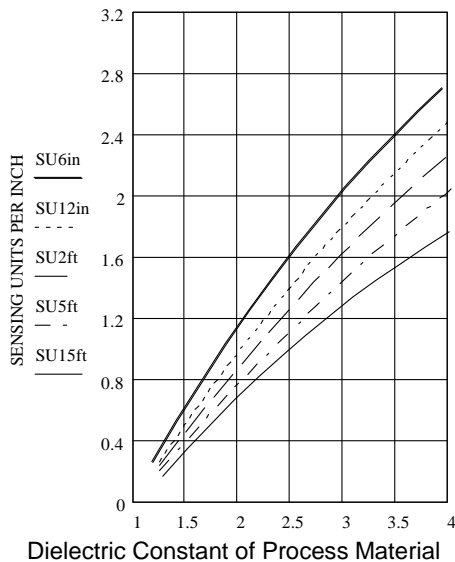


## DETERMINING PROBE PERFORMANCE

**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 1.7                =    \_\_\_\_\_
  - 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



**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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