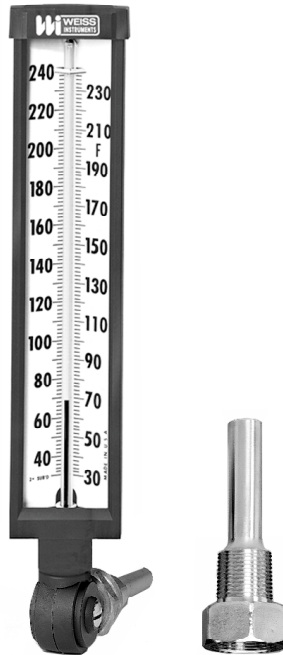




# INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS

## 9" VARI-ANGLE® LIQUID IN GLASS THERMOMETER - 9VU



### **Warning:**

All liquid-in-glass thermometers should be selected considering the media and the ambient operating conditions. Improper application can be detrimental to the thermometer, cause failure and possibly personal injury or property damage. Consult ANSI B40.8 for guidance in selection and use of liquid-in-glass thermometers.

### **Temperature Ranges**

Standard Fahrenheit and Celsius ranges have been established to encompass all normal temperature measurement requirements. A liquid-in-glass thermometer can be used at an operating temperature anywhere throughout its dial range. Provision should be made for extreme temperature conditions.

### **Thermowells**

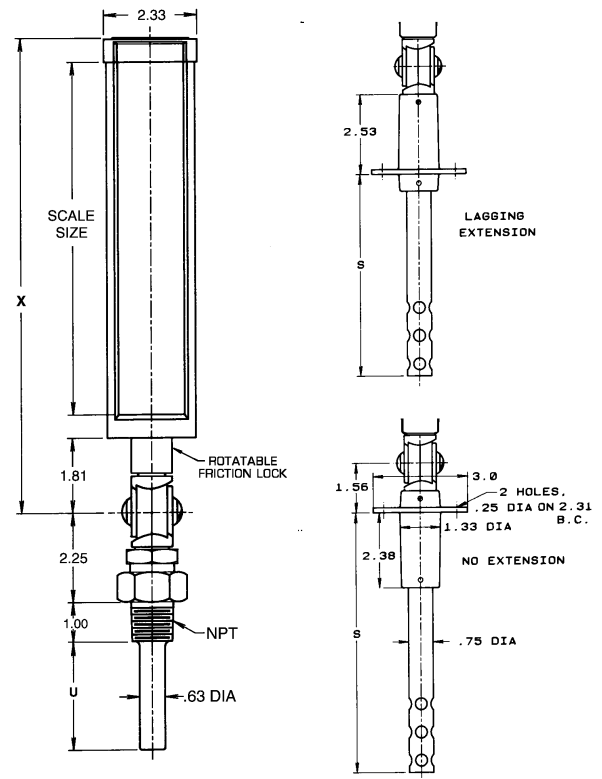
Thermowells must be used in conjunction with these liquid-in-glass thermometers. Additionally, use of a thermowell permits instrument interchange or calibration check without disturbing or closing down the process.

# INSTALLATION / ADJUSTMENT INSTRUCTIONS

1. Install thermowell, flange or union to apparatus.
2. Preset Case Position Angle.
  - a) Loosen angle adjusting screw 1-1½ turns.
  - b) Carefully rotate case/joint to correct position angle.
  - c) Tighten angle adjusting screw.

**CAUTION:** Do not overtighten screw. Do not exceed 1/4 turn past snug-tight.

3. Assemble thermometer into thermowell, flange or union. Set case position to best viewing angle. Tighten 1¼ hex brass locknut.
4. A hand rotatable friction lock with the angle adjusting screw work independently to provide a full 360° positioning of thermometer in both directions. Turn case for best viewing angle.



## INSTRUCTIONS FOR REUNITING SEPARATED LIQUID IN COLUMNS

A slight separation can usually be reunited by heating the bulb *slowly in a soft flame* until the separated liquid and the main column run into the safety chamber at the top of the thermometer bore. A slight tap will then reunite the liquid. Care should be taken to keep the column vertical while the bulb cools.

**CAUTION:** Never completely fill the expansion chamber with liquid, as internal pressure will cause breakage. Care should be taken not to heat the thermometer bulb too fast. Remember, it takes awhile for the heat of the flame to transfer thru the metal bulb chamber to the thermometer tube bulb. Therefore, heat a little, remove from flame and observe the rise of the separated column, when the rise has stopped gently heat the metal bulb chamber again, repeat the observations until both the separated column and main column partially fill the safety chamber at the top of the tube.

Recheck the thermometer by immersing into a bath of known temperature.

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