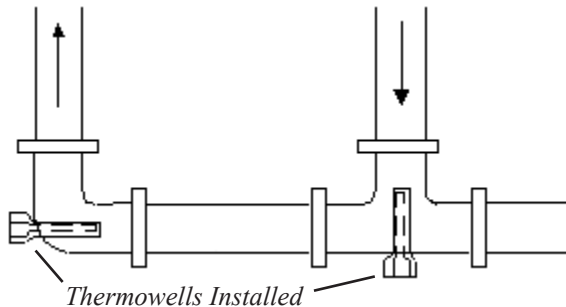


# Installation Guide

## Mounting and Wiring

Immersion type probes are designed to measure the temperature inside pipes carrying liquid or steam. They are installed in a brass (for noncorrosive liquids) or 304 stainless-steel (for corrosive liquids) thermowell.

Mount the thermowell horizontally or with the open end facing down, to allow any condensation to drain. Position the thermowell to prevent contact with the inside of the pipe.



1. Install the pipe fittings required, by local code, for a thermowell into the dry/drained pipe. If the system is pressured, use a hot tap.
2. Install the thermowell. (See the Accessories section.)
3. Fill the well with thermal compound to ensure complete conductivity from well to probe.  
*Note: The probe can slide within its collar on the case as it is inserted into the thermowell.*
4. Remove the screws holding the cover to the case and remove the cover.
5. Insert the probe into the well and tighten the threaded connection on the case.
6. From inside the case, push the probe as far as it will go into the well.
7. Feed the thermistor wire leads through the conduit or hole opening.  
*Note: The two-wire sensor is polarity insensitive.*
8. Connect the thermistor wires to the cable with butt-splices or soldering (wire nuts are not recommended).
9. Reinstall the cover and screws.

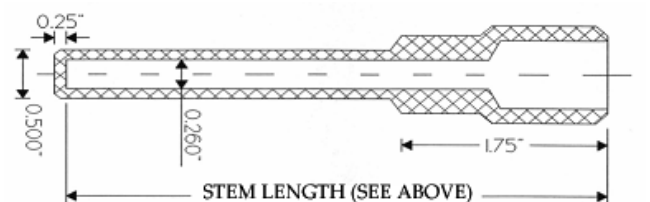


## Accessories

The following thermowells are available for the STE-1421 and STE-1422:

|          |                             |
|----------|-----------------------------|
| HMO-4533 | 4" brass well               |
| HMO-4534 | 4" 304 stainless-steel well |
| HMO-4543 | 6" brass well               |
| HMO-4544 | 6" 304 stainless-steel well |

*Note: NPT Thread Size = 1/2"*



# Controller Configuration

Note: Controller configuration instructions are given for both WinControl and BACstage. See the relevant software section.

## WinControl

1. In the WinControl software main menu, select *Control > Inputs*.
2. Click *Edit*.
3. Type in a name in the *Description* field (up to 20 characters) and/or *Label* field (up to 8 characters).  
*Note: No two labels or descriptions in a controller can be identical.*
4. Click *Units* (which opens the Configure Inputs screen).
5. Select *Type: Analog* if it is not the default.
6. Select *Deg F (or C) KMC10K Type III*.
7. Optionally, adjust the *Calibration* value.
8. Optionally, change *Format* from 0 to the desired number of temperature decimal places.
9. Optionally, change the *Average* to the desired number of thermistor readings averaged before displaying the result.
10. Click *OK*.
11. Click *End Edit*.
12. Click *OK*.

## BACstage

1. In the BACstage software main menu, select *Objects > Inputs*.
2. Click *Edit*.
3. Type in a name in the *Description* field (up to 32 characters) and/or *Label* field (up to 16 characters).  
*Note: No two labels or descriptions in a controller can be identical.*
4. Select *Object Type: Analog* if it is not the default.
5. Select *Device Type: KMC10K Type III*.
6. Select *Units: °F or °C*.
7. Click *End Edit*.
8. Click *Yes* for "Send Update Notification Now?"
9. In the BACstage software main menu, select *Device > Device Tables > KMC10K Type III Table*.
10. Click *Edit*.
11. Click *Defaults* (values will fill in).
12. Click *End Edit*.
13. Click *Yes* for "Send Update Notification Now?"
14. Click *OK*.

## Specifications

|                           |   |
|---------------------------|---|
| <b>Standard Lengths</b>   | 4" (STE-1421), 6" (STE-1422)              |
| <b>Sensor</b>             | Type III, 10K ohm @ 77° F (25° C)         |
| <b>Accuracy</b>           | ± 0.36° F (± 0.20° C)                     |
| <b>Temperature Limits</b> | -4° to 221° F (-20° to 105° C)            |
| <b>Wiring</b>             | 22 AWG wire leads                         |
| <b>Case</b>               | Black plastic standard;<br>metal optional |

## Maintenance

No routine maintenance is required. Each component is designed for dependable, long-term reliability and performance. Careful installation will also ensure long-term reliability and performance.

**KMC Controls, Inc.**  
19476 Industrial Drive  
New Paris, IN 46553  
574.831.5250  
www.kmccontrols.com  
info@kmccontrols.com