

# SIEMENS

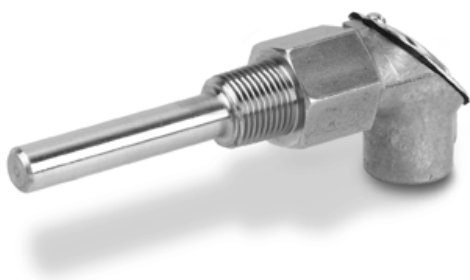
## Immersion Well Temperature Sensors

### Description

The Immersion Well Temperature Sensors monitor and transmit changes in temperature to the building control system. Specific devices within the range are compatible with whatever North American manufactured building automation system you may be installing. They thread into a well in a pipe and sense the medium temperature in the pipe. All sensors incorporate precision temperature sensing elements to accurately and reliably measure temperature.

### Features

- Variety of sensing elements
- Suitable for hot or chilled medium
- Responsive to temperature change
- Accurate and reliable indication of temperature
- Familiar installation requires no special tools



**Figure 1. Immersion Well Temperature Sensor.**

### Specifications

Temperature Range	Controller dependent
Output Signals	Changing resistance
Sensing Element Type	NTC Thermistor, Platinum RTD, or Nickel RTD
Accuracy	
NTC Thermistors, mid-range	$\pm 1.0^{\circ}\text{F}$ ( $\pm 0.5^{\circ}\text{C}$ )
Pt RTD and Ni RTD, mid-range	$\pm 0.75^{\circ}\text{F}$ ( $\pm 0.4^{\circ}\text{C}$ )
Installation	
Wiring	2-conductor: 18 to 22 AWG twisted pair (per code requirements)
Calibration Adjustments	NTC: None required RTD: Adjust for increased temperature offset (a constant) as required, related to added resistance of the field wiring
External Installation Threads	1/2-inch – 14 NPT
Conduit Connection Threads	1/2-inch – 14 NPSMI
Housing Material	Cast zinc
Immersion Well Material	300 Series Stainless Steel

## Immersion Well Temperature Sensor Product Numbers

Product Number	Description
QAE2012.005	Immersion Temperature Sensor, Metal Housing, Platinum 1000 Ohm, 385 Alpha, 2.5" Probe
QAE2012.010	Immersion Temperature Sensor, Metal Housing, Platinum 1000 Ohm, 385 Alpha, 4" Probe
QAE2012.015	Immersion Temperature Sensor, Metal Housing, Platinum 1000 Ohm, 385 Alpha, 6" Probe
QAE2020.005	Immersion Temperature Sensor, Metal Housing, Nickel 1000 Ohm, SIEMENS, 2.5" Probe
QAE2020.010	Immersion Temperature Sensor, Metal Housing, Nickel 1000 Ohm, SIEMENS, 4" Probe
QAE2020.015	Immersion Temperature Sensor, Metal Housing, Nickel 1000 Ohm, SIEMENS, 6" Probe
QAE2021.005	Immersion Temperature Sensor, Metal Housing, Nickel 1000 Ohm, JCI, 2.5" Probe
QAE2021.010	Immersion Temperature Sensor, Metal Housing, Nickel 1000 Ohm, JCI, 4" Probe
QAE2021.015	Immersion Temperature Sensor, Metal Housing, Nickel 1000 Ohm, JCI, 6" Probe
QAE2030.005	Immersion Temperature Sensor, Metal Housing, NTC 10K Ohm TYPE 2, 2.5" Probe
QAE2030.010	Immersion Temperature Sensor, Metal Housing, NTC 10K Ohm TYPE 2, 4" Probe
QAE2030.015	Immersion Temperature Sensor, Metal Housing, NTC 10K Ohm TYPE 2, 6" Probe
QAE2032.005	Immersion Temperature Sensor, Metal Housing, NTC 10K Ohm TYPE 3, 2.5" Probe
QAE2032.010	Immersion Temperature Sensor, Metal Housing, NTC 10K Ohm TYPE 3, 4" Probe
QAE2032.015	Immersion Temperature Sensor, Metal Housing, NTC 10K Ohm TYPE 3, 6" Probe

## Accessories Ordering Information

Description		Part Number
Immer -sion Wells	2.5 in. (64 mm)	AQE2000.005
	4 in. (100 mm)	AQE2000.010
	6 in. (153 mm)	AQE2000.015
Immersion Well Repair Kit	PT 1000 Ohm (385 $\alpha$ )	AQE2012
	Ni 1K Ohm, Siemens	AQE2020
	Ni 1000 Ohm, JCI	AQE2021
	NTC 10K Ohm Type II	AQE2030
	NTC 10K Ohm Type III	AQE2032

Repair kits have components to fill any of the three Immersion Wells offered.

Information in this document is based on specifications believed correct at the time of publication. The right is reserved to make changes as design improvements are introduced. Product or company names mentioned herein may be the trademarks of their respective owners.  
 © 2009 Siemens Building Technologies, Inc.

**Siemens Building Technologies, Inc.**  
 Industry Sector  
 1000 Deerfield Parkway  
 Buffalo Grove, IL 60089-4513

Your feedback is important to us. If you have  
 comments about this document, please send them to  
[SBT\\_technical.editor.us.sbt@siemens.com](mailto:SBT_technical.editor.us.sbt@siemens.com)

Document No. 149-919  
 Printed in the U.S.A.  
 Page 2 of 2