

ACCUTHERM Preset & Adjustable Single & Multistage Temperature Sensors

Description:

PSG ACCUTHERM sensors are precision accurate, hermetically sealed, temp. sensors for ACCUSTAT® Energy Controls. ACCUTHERM are manufactured in preset, adjustable and multistage versions. Advantages of the ACCUTHERM sensor are: high accuracy; fast response; no temp. drift. Unlike bimetal sensors, ACCUTHERM sensors have no fatigue factor, are generally unaffected by vibration and will operate in any position.

Theory of Operation:

Single stage ACCUTHERM Sensors: ACCUTHERM sensors are precision temp. switches in which platinum wires, embedded in the glass column, pass through a capillary containing a temp. sensitive liquid.

The platinum wires are the Common and the Activating Contact. The Common wire is located near the base of the sensor and the Activating Contact is located above the Common. As the temp. increases, the liquid rises past the Common contact then reaches the Activating Contact establishing an electrical path. These sensors are used to turn heating or cooling circuits ON or OFF.

Adjustable ACCUTHERM Sensors:

The adjustable sensors have a knob which is used to adjust the setpoint from 40°F to 90°F. Turning the knob changes the displacement of the temp. sensitive liquid, causing the sensor's setpoint temp. to change. *U.S. Patent #: 4,376,928



Preset sensors provide tamper-proof temp. control. Standard temp. setpoints are:

35°, 37°, 39°, 40°, 45°, 50°, 55°, 60°, 62°, 64°, 65°, 66°, 68°, 70°, 72°, 74°, 75°, 76°, 78°, 80°, 82°, 84°, 86°, 88° F.

Other temp. settings are available on special order.

Adjustable Sensor "AS-90"

Range: +40° to 90°F
Ambient Range: -20° to +110° F.
Accuracy: +/-2.0° F.
Temp. Drift: < 0.25°F per year
Load: 100 milliamps max. res.
Simply turning the knob changes the setpoint.

Built-in Differential:

As installed in ACCUSTAT® thermostats, the ACCUTHERM sensor is designed to yield a room differential of between 1.5 and 3°F.

Specifications:

Singlestage Sensors:

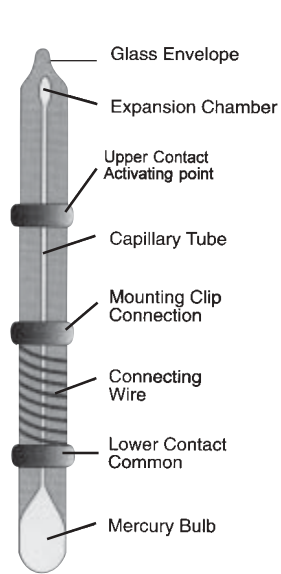
Preset Sensors "S"- series

Accuracy: .5°F
Temp. Drift: < 0.1°F per year
Ambient Range: -20° to +110° F.
Load: 100 milliamps max. res.

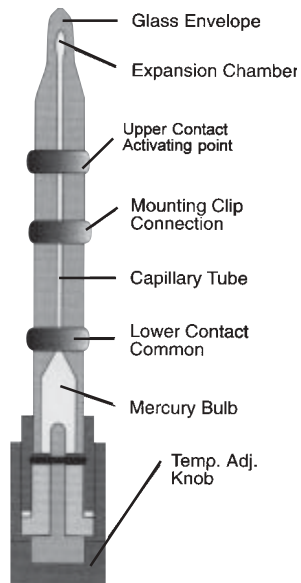
 **PSG** Controls, Inc.
Setting New Standards in Temperature Controls

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Physical Layout:



Preset Sensor
"S"-series



Adjustable Sensor
AS-90

How to Order:

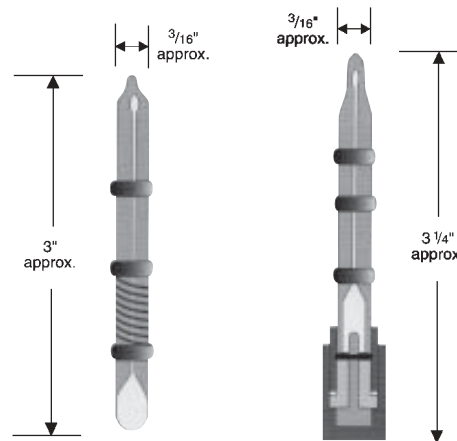
Singlestage Sensors

Standard preset sensors:
Order Cat. No.: "S"- + (temp. setting)
Ex: S-72=72°F temp. sensor.

Adjustable mercury sensor:
Order Cat. No. AS-90

Lower Differential preset sensors:
Order Cat. No: "SS"- +(temp. setting)
Ex: SS-72=72°F temp. sensor.

Dimensions:



Sensors are individually boxed. 12 pc. master cartons of same model are available.

Sample Specifications:

Sensors shall be hermetically sealed, preset or adjustable type, actuated by a mercury column contacting internal platinum electrodes. Temperature drift shall be no more than 0.1 degree F/year for preset types, and not more than .25 degrees/year for adjustable types. Sensor shall be equipped with contact rings, providing both electrical connections, and a means for holding sensors in place.