

## TEMPERATURE SWITCHES AND SENSORS IN HOME HEATING APPLICATIONS

### Background

Whether heating a home or a commercial building, safety and efficiency of the system is a key concern. There are a wide range of heating systems available, from Electric Heat Pumps to Geothermal systems. No matter the system, the one constant is the need to sense temperature to ensure optimal efficiency or to detect and react to potentially unsafe conditions.

Dependent on the type of system there are motors which drive air moving fans or hot water circulation pumps that require protection from overheating. Conditions that could cause an unsafe condition include, blocked ventilation ducts, dirty air filters, and flame out of the main combustion chamber.

In addition to safety temperature sensing can be useful to monitor inefficiencies in the system such as a malfunction of exhaust flue that may cause sub-optimal performance.

### Solution

Electromechanical thermostats, for years have been the most economical, reliable and dependable choice for the control of temperature. Thermostats with global agency approvals and a long track record of service in critical heating applications, aid major OEMs in the development of new systems and protect their name brands while their systems are in the field.

Electromechanical thermostats can be used to switch critical loads on and off directly or in pilot circuits where an on off signal is given to a system level controller.

Many applications require a physical opening of a circuit to meet agency regulations, thus electromechanical thermostats will continue to play this critical role in numerous systems in the future.

In addition to safety, efficiency in the effort to reduce green house gas emissions is another driving force in the HVAC industry. Advance systems may employ temperature sensors to optimize performance of their systems. RTD and NTC based temperature sensors are ideal and economical for this purpose.

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Heating Systems



Boiler Room

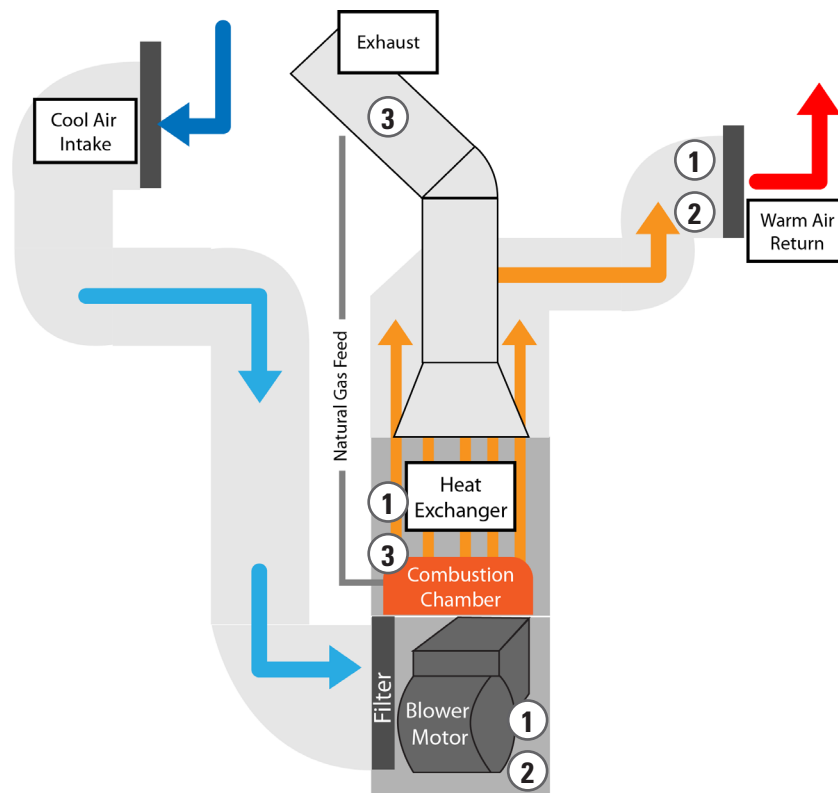


## RELATED PRODUCTS

Reference on Diagram	Product	Features	Function	Brand
1	 1NT	<ul style="list-style-type: none"> <li>Wide range of standard configurations</li> <li>Global agency approvals</li> <li>Internal design for long life</li> </ul>	Temperature limit switch	Sensata Technologies
2	 3000	<ul style="list-style-type: none"> <li>Highly sealed, IP65</li> <li>Quick temperature response</li> <li>Vibration resistant</li> </ul>	NTC Based temperature sensor	Sensata Technologies
3	 Darts	<ul style="list-style-type: none"> <li>Platinum RTD sense element</li> <li>Glass seal and laser welded construction</li> <li>Operation up to 850 °C</li> </ul>	Platinum RTD based temperature sensor	Sensata Technologies



## GAS/ELECTRIC HEATING APPLICATIONS



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