

Thermal Expansion

19.7 The two metals from which a bimetallic strip is constructed have different coefficients of thermal expansion. Consequently, a change in temperature will cause the strip to bend. For a thermostat that operates a furnace, as the temperature drops below a lower limit, the bimetallic strip bends so as to make an electrical contact, thus, turning on the furnace. With rising temperature, the strip bends in the opposite direction, breaking the contact (and turning the furnace off) when an upper-limit temperature is exceeded.