

INFINITE SWITCHES

THIS IS HOW THE "INF" INFINITE CONTROL OPERATES

The model INF turns clockwise or counterclockwise. It is equipped with 3 indexing positions: "High-Off-Low". In the "High" position, the control is energized continuously. At other settings it delivers the selected level of input under the control of a bimetal timer. A double-line disconnect is provided when the control is in the "Off" position.

The permanent magnet provides snap action of contacts. Clean makes and breaks ensure long life of the fine silver contacts.

The Model INF control is ambient compensated. It is designed for operation where **ambient temperature does not exceed 180°F.**

The control contains a bimetal which regulates the running cycles. This bimetal has a resistance wire wrapped around it which is connected in parallel with the heating unit being controlled and cycles in unison with the heating element. When the dial is turned to "ON" position, the follower moves out and allows the contacts to close. This completes a circuit through a heating unit being controlled, and also to the resistance wire wrapped around the bimetal. At this time the steel armature is under the influence of the magnetic pull of magnet. As the resistance wire heats the bimetal, the bimetal flexes and forces are built up in it. When the force built up is equal to the magnetic pull of the magnet, the contacts open with a snap action and the steel armature will be pulled away from the magnetic field. This opens the contacts which will cut off the power of the heating unit being controlled and will also disconnect the power to the bimetal

resistance wire. As the bimetal cools, it will then flex in the opposite direction and the contacts will start moving closer together. At a certain point the magnetic pull will close with a snap action. This then will permit current to flow throughout the unit once again as the circuit is complete.

A second bimetal is employed as an ambient temperature compensator to neutralize the effect of the surrounding temperatures on the control bimetal. These controls are designed to operate in locations where the maximum ambient temperature does not exceed approximately 180°F.

The infinite can control any resistive load up to 15 amps. It is possible to obtain a range of inputs to the element and/or load from approximately 5% or 22-1/2% at low depending on model. 100% at high, and infinite settings in between.

Looking at the terminal connections at the rear of the control, L1 and L2 represent line connections at the incoming source. H1 and H2 equal load connections that are connected to the load. "P" is for pilot light attachment.

UL LISTING – COMMERCIAL AND DOMESTIC MODELS

This control is recognized under the component program of Underwriters Laboratories, Inc. as:

Temperature – Indicating and Regulating Equipment
UL FILE #E12103

