



THERMO-MAGNETIC ACTUATOR HEATER CONTROL VALVE SEQUENCE OF OPERATIONS

Input Voltage (1) supplied to Electro-Thermal Actuator (2) and Electro-Magnet (3).

ETA (2) outstrokes causing Rack (4) to move forward, acting upon Target (5) and rotating Pinion (6), while compressing Return Spring (7). Rotating Pinion (6) causes Heater Control Valve (9) butterfly to open/close controlling flow.

As Target (5) is pushed across face of Electro-Magnet (3) it is magnetically pulled toward Switch (8) so as to shut-off current to ETA(2) at the end of its outstroke, while maintaining current to Electro-Magnet (3).

As long as unit is in magnet latch mode, power consumption is reduced to 3-4 Watts and ETA heat/pressure is dissipating.

Upon termination of Input Voltage (1), Electro-Magnet (3) releases Target (5) and Return Spring (7) pushes Rack (4) and Pinion (6) back to home position.