Dayton bench grinder 1/3 HP
model 4Z361

The Klixon 3CR relay is normally open with its coil connected in series with the main winding of the motor and its starting circuit in series with the start winding. When voltage is applied to the motor, the high current through the main winding and relay coil creates a magnetic field which lifts or "picks up" the relay armature and closes the start contacts.

Increasing motor speed and related decreasing current through the main winding and relay coil reduce the magnetic force and the armature "drops out" to open the start contacts and disconnect the start winding.