

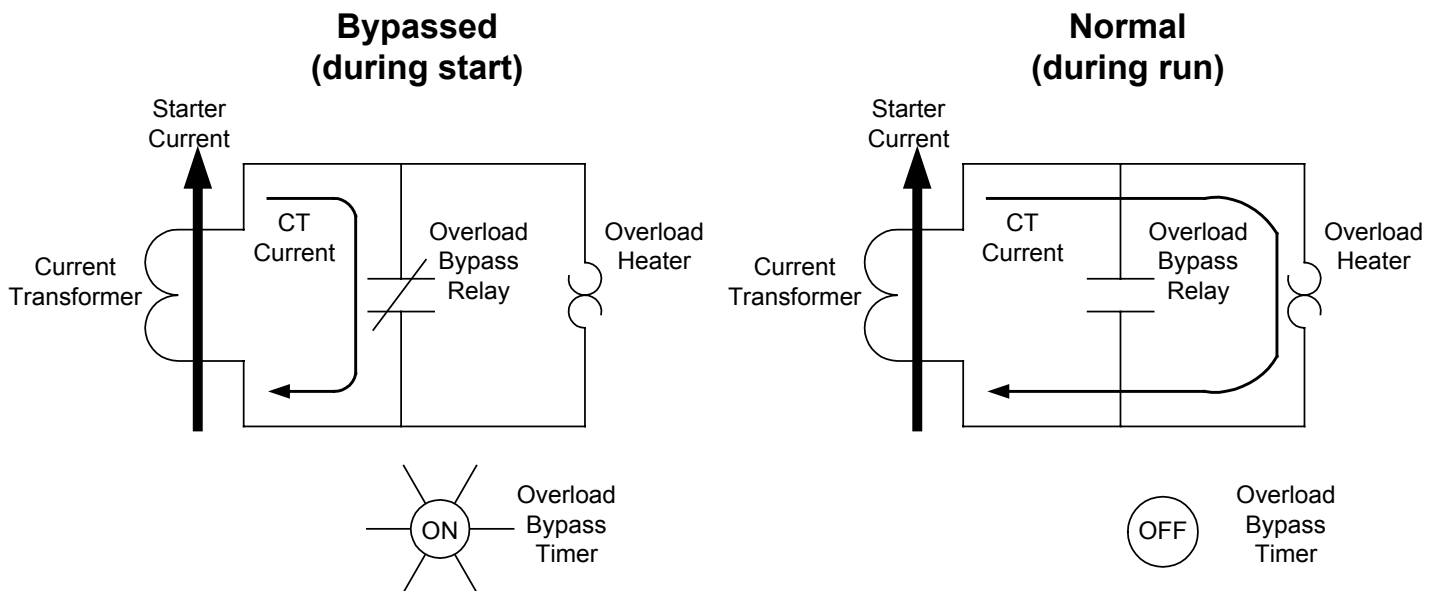
Using Overload By-Pass for High Inertia Loads

Frequently, when starting a high inertia load, we experience what are referred to as nuisance trips of the overload. These trips are caused, not by a true overload condition but, by the extended time necessary to accelerate the load to full speed.

These nuisance trips can be avoided by bypassing the overload circuit for part of the acceleration time. To accomplish this we close a relay and short out the overload current transformers using an interval timer that is activated each time the motor is started. During the timed interval, the current from the current transformer flows through the relay contact instead of the overload heater. Once the timer releases, the relay opens allowing the current transformer and overload heater to resume their normal function.

In the past, the common solution to this problem was to either turn up the overload setting or install the next size heaters. This solved the problem but sacrificed running overload protection of the motor. This "Overload Bypass" method eliminates nuisance trips and still maintains the closest possible overload protection of the motor.

If your application is a high inertia load (some examples include centrifugal blowers, chippers, centrifuges, hammer mills, and large fans) you may want to consider the overload bypass modification. The cost is extremely reasonable, and insures a trouble free startup.



Operation of Overload Bypass Circuit