

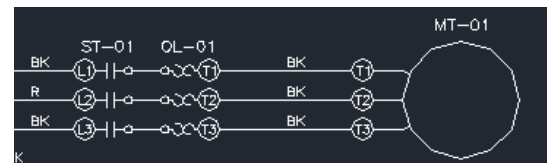
Motor Contactors, Starters, and Interlocks

Motor Contactor

A contactor is an electrically controlled switch, or relay. A relay is termed a contactor when it is used for high current and power applications. Contactors are most often used to control the flow of power to motors and lighting systems. In these roles contactors are typically found in the normally open state so that power loss to the contactor also results in the motor or lighting system losing power. Note that contactors do not provide overload protection. In three phase applications, or when overload protection is otherwise required, a motor starter should be used.

Motor Starter

A motor starter is the pairing of a contactor with an overload relay. An overload relay consists of overload contactors and overload heaters. Overload heaters are thin strips of metal that heat up as current passes through them. In the presence of excess current the overload heaters bend and energize a set of overload contactors, breaking power to the motor circuit. In Figure 1 the motor contactors are labeled ST-01, while the overload contacts are labeled OL-01. The overload heaters are shown as three sets of back to back semi-circle shaped components.



The overload heaters are shown as three sets of back to back semi-circle shaped components. Motor starters are carefully selected to match each motor's FLA and voltage requirements.

Interlock

An interlock option includes a set of terminal blocks that allow a device to be "interlocked" or inserted into an existing system. One common example is the use of an exhaust fan interlock to allow a fan to work in concert with a heating unit. One example of this would be to interlock an exhaust fan after the airflow proving switch on a heating unit (schematic shown in figure 2). This interlock would cause an exhaust fan to energize after the heater proves airflow and turn off when the heater is not running (or airflow is not proven). Rupp indicates interlock connections on drawings but the customer is responsible for supplying the physical component.

