

Installation Tips

An SRE Bulletin on Making Your Installations Easier!

Application Note #9: Using the SE325/175 With a Line Contactor

Why Use A Line Contactor?

A line contactor will protect the parts of the system wired beyond it from a reversed battery connection (the line contactor will not close if the battery terminals are reversed).¹

When the battery is plugged into the controller, after the controller has been sitting disconnected for a while, a spark will appear. This spark occurs from the battery charging an internal bank of capacitors in the controller. While this is normal behaviour some people are unnerved by it or wish to avoid any pitting damage to the battery plug caused by the sparking. A line contactor eliminates this spark by moving it to the line contactor.

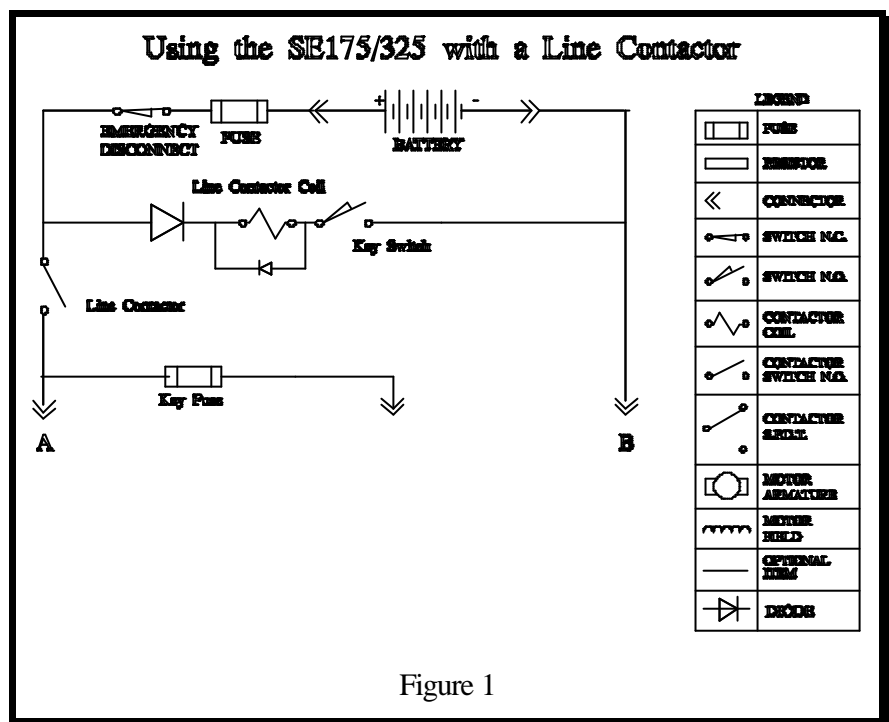
Finally a line contactor can be used as an active emergency disconnect. In this case the line contactor must have a large rating for breaking

current. You should also have a separate switch for the key and emergency disconnect.

Hooking up the Line Contactor

The line contactor is connected as shown in figure 1. The power wiring is connected to points A & B as they normally would be to the battery. With the line contactor open this isolates the battery from the controller(s) in the truck.

Note the two diodes in the diagram (next to the



line contactor coil). The diode in series with the coil prevents the contactor from closing if the battery polarity is reversed. A standard MR851 diode works fine in this application.

The diode in parallel with the coil is used as a suppressor. Any standard suppressor may be used (or an MR851 diode), but the contactor MUST be suppressed.

Revision History:

96-01-20 RTA -- Original Version.

¹ Note: If the connection is reversed AFTER the line contactor there is NO protection.