

e3 Door Lock Relay Transorb Installation Instructions

What's a Transorb?

A transient voltage suppression diode (commonly known as a "transorb") is an electronic component used to protect sensitive electronics from voltage spikes induced by another source. A transorb will shunt excessive current when the voltage across the transorb exceeds a certain level. Transorbs do not require "resetting" and will return to an open state when the transient voltage spike is over.

Why Transorbs for the e3 System?

Linear's e3 Access Control platform products are typically connected to electromechanical or magnetic door strikes that control building access to users. These types of door locks create a magnetic field when energized to perform the physical locking or unlocking of the door. When the lock is de-energized, a strong voltage spike may result when the lock's magnetic field collapses. Installing transorbs across the e3 relay terminals protects the system from these unwanted and potentially damaging transient voltage spikes.

Transorb Installation

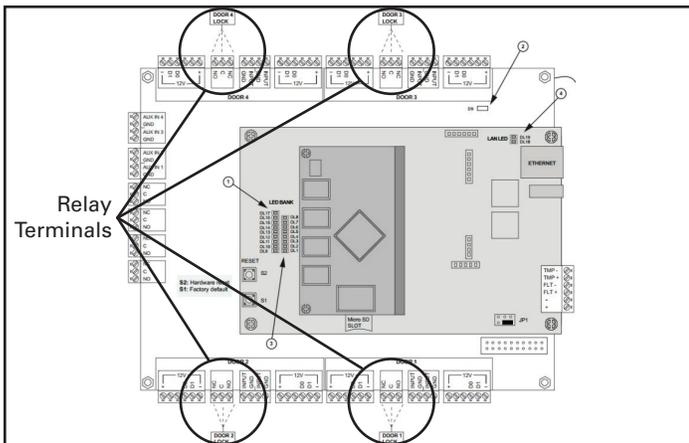
Transorbs should be installed across **all** e3 door lock relay contacts, in parallel with the lock wiring. **This applies to both AC and DC locks.**

Four (4) transorbs are included with each e3 system. **DO NOT discard these important devices.**

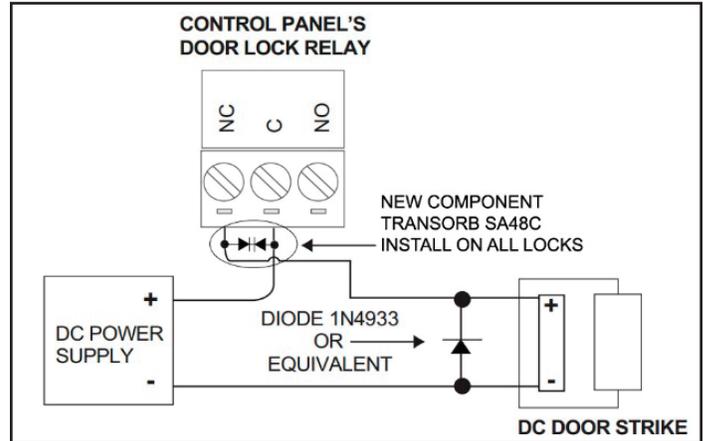
Install a transorb to the door lock relay connector in the same terminal positions as the lock wiring. The Type SA48C transorbs supplied are bi-directional (no polarity) and can be installed across the relay terminals wired in either direction.

Even with a transorb installed across the relay terminals at the panel, still be sure to install the appropriate protection device (a diode or MOV) on the other end of the cable at the location of the door lock.

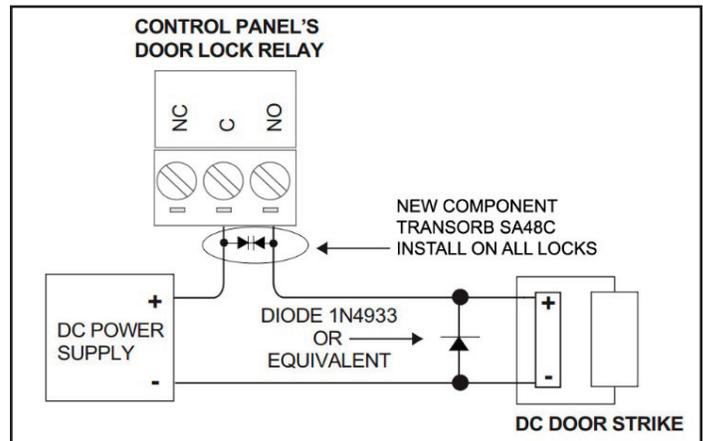
See the installation examples for wiring details. They show both the transorb across the e3 relay terminals and the diode or MOV across the door lock.



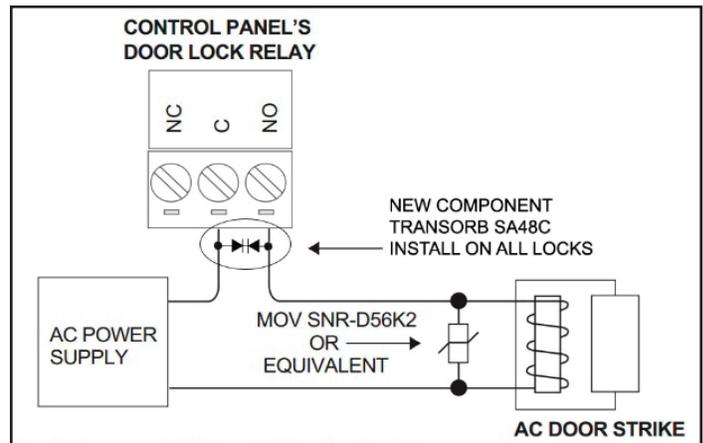
e3 Circuit Board Door Relay Terminal Locations



Fail Safe DC Door Strike (without power, door strike is unlocked)



Fail Secure DC Door Strike (without power, door strike is locked)



Fail Secure AC Door Strike (without power, door strike is locked)