

Micro Control Systems

APPLICATION NOTE

APP-002

Installation Of Snubber Capacitors

Revision History

Date	Author	Description
05/13/97	Brian Walterick	Created Application Note.
05/05/00	Mike Singer	Revised this Application Note.

This Application Note describes the installation of snubber capacitors on equipment using an MCS-8 micro-controller.

Theory

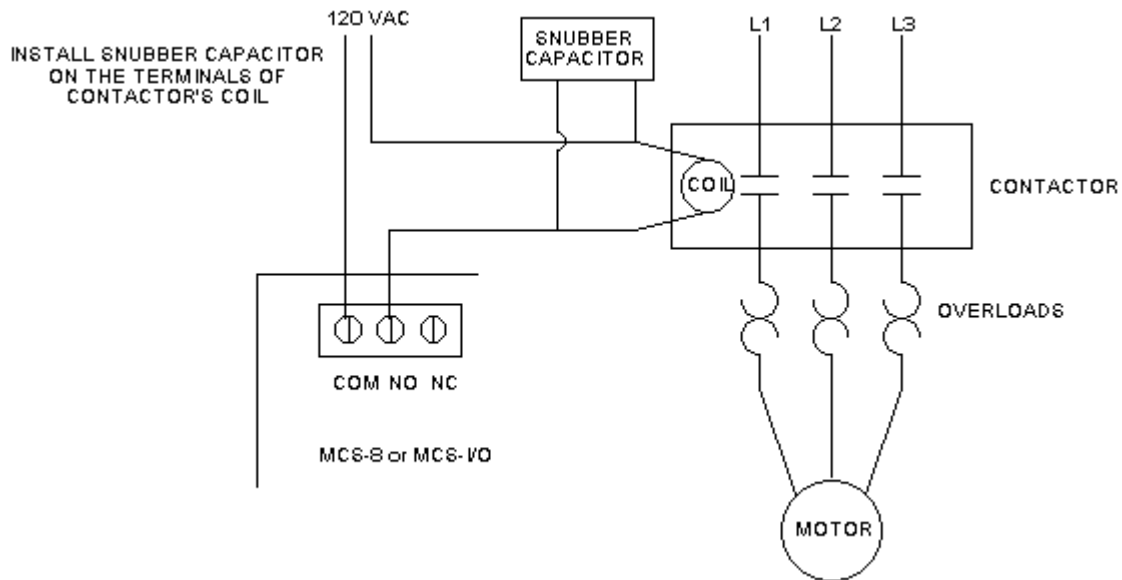
The MCS-8 and MCS-I/O switches heavy current loads onto and off of AC or DC power lines. When the load is switched off it can cause large transient spikes. These spikes are called “INDUCTIVE KICKS”. Because the contacts bounce, transients are generated whether the switch is being opened or closed, but they are worse when the switch is being opened.

These “inductive kicks” can cause digital circuit problems. Placing a snubber capacitor across the load will reduce these “inductive kicks”.

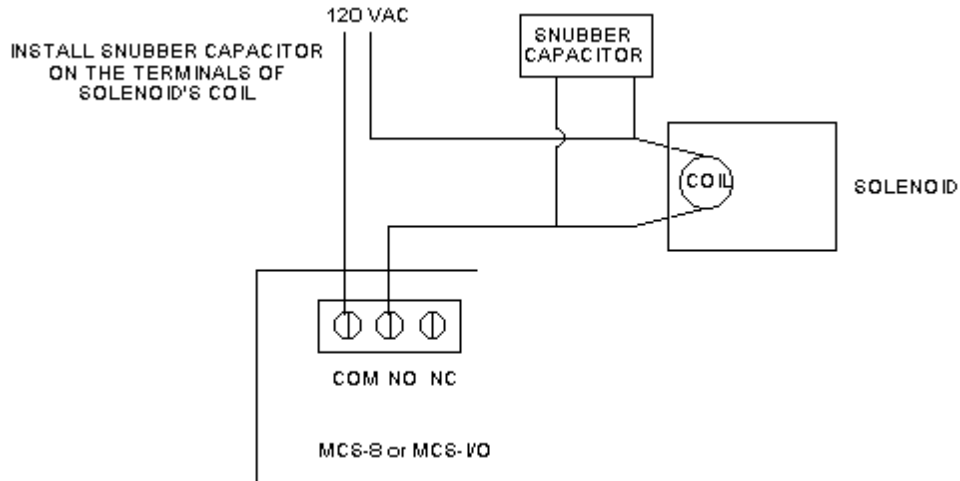
Snubber capacitors should be installed on all contactors and solenoids switched by the MCS-8 or MCS-I/O. They should also be installed across any inductive load that has an auxiliary switch in series with our relay outputs.

Examples

1. Installation of snubber capacitor on coil of motor's contactors. Install snubber right on the coil's terminals.



2. Installation of snubber capacitors on coils of solenoid valves. Install snubber right on the coil's terminals.



3. Install a Snubber capacitor across any coil that has an inline series switch or contact with our relay output.

