



Applying Line/Load Reactors

Input to Inverter/Drive:

On the input of an electronic motor speed controller, line reactors protect sensitive electronic equipment from electrical noise created by the drive or inverter (notching, pulsed distortion, harmonics). They also protect the controller from surges or spikes on the incoming power lines, as well as reduce harmonic distortion. They help to meet the requirements of IEEE 519.

Output of Inverter/Drive:

In long motor lead applications use reactors (IGBT protected) between the inverter and motor to reduce dv/dt and motor terminal peak voltage. The use of a load (output) reactor also protects the controller from a surge current caused by a rapid change in the load, and even from a short circuit at the load.

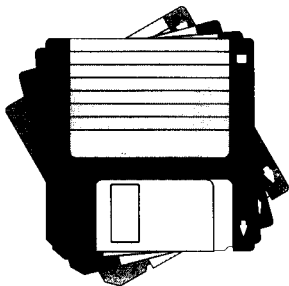
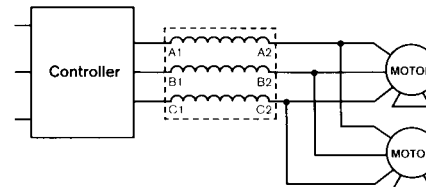
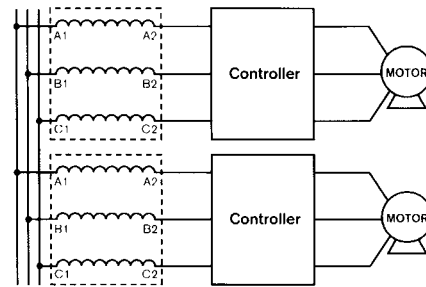
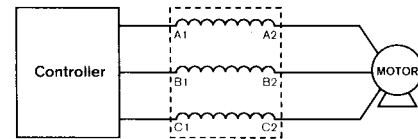
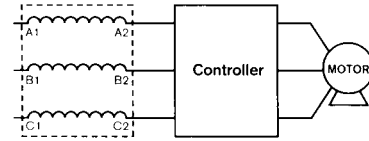
Our reactors also reduce operating temperature and audible noise in motor loads. Harmonic compensation and IGBT protection of all Guard-AC reactors allows standard units to be used here with confidence. They improve the waveform integrity, thus enhancing motor performance and system efficiency.

Multiple Controllers:

Multiple drives or inverters on a common power line require one reactor per controller. Individual reactors provide filtering between each controller (reduce crosstalk) and also provide optimum surge protection for each unit. A single reactor serving several controllers does not provide adequate protection, filtering or harmonic reduction when the system is partially loaded.

Multiple Motors:

When more than one motor is controlled by a single drive, a single reactor can typically be used between the controller and the motors, as illustrated. The reactor should be sized based on the total motor/load horsepower.



REACTOR MASTER SOFTWARE

Description	Catalog No.
3 1/2" Floppy Disk	RMS-3
5 1/4" Floppy Disk	RMS-5

This easy-to-use software computes reactor specifications for virtually any adjustable speed drive application. It is capable of making computations for any operating frequency, for both input and output applications, and for any desired impedance.

Reactor Master Software is compatible with any DOS system and is a color program but runs on monochrome monitors as well. It is available on either 3 1/2 inch or 5 1/4 inch floppy disks.