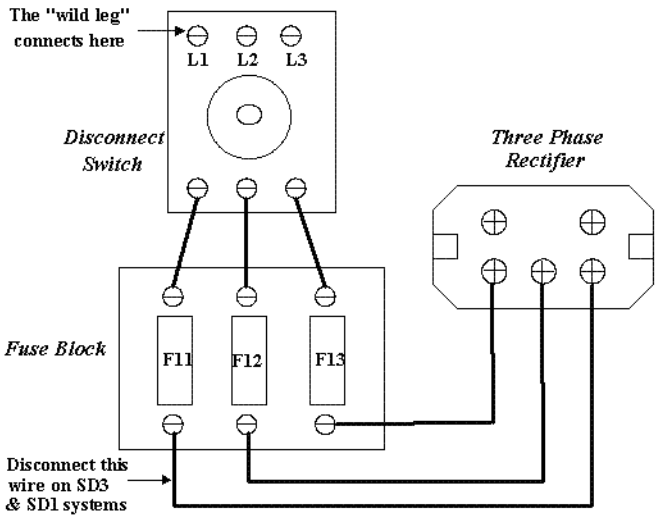
TB049 (Rev1) - Using Phase Converters

Overview

When considering the use of a phase converter to supply three-phase power for control operation, the following guidelines must be followed to prevent control system damage and unwanted problems from occurring. Damage caused by failing to comply with these guidelines is not covered under warranty.

Guidelines

1. The phase converter must be of sufficient capacity to handle the motor HP load as stated on the control identification tag. In most cases, the control identification tag can be found on the outside door of the main control cabinet, often referred to as the Magnetics enclosure.
2. A qualified electrician must install the phase converter according to local electrical codes.
3. The synthesized leg, sometimes referred to as the generated leg or "the wild leg" must be connected to L1 on the main service disconnect switch. Refer to the illustration below. The control system uses L1 for powering three phase motors, such as the spindle motor or flood coolant motor, and for powering Centroid?s SD3 and SD1 drives. The phases connected to L2 and L3 are used to provide power for the rest of the control system, including the computer and motor drive (amplifier) circuitry, which is why the wild leg cannot be connected to them without damage or malfunctioning of the control system.
4. For systems with SD3?s or SD1's: Remove the wire that runs from the three-phase rectifier to the wild leg. This will allow the drive to run off of single phase and keep the voltage at the correct level.



Document History

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