

Data Bulletin

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Altistart® Soft Start Application Power Factor Correction Capacitors

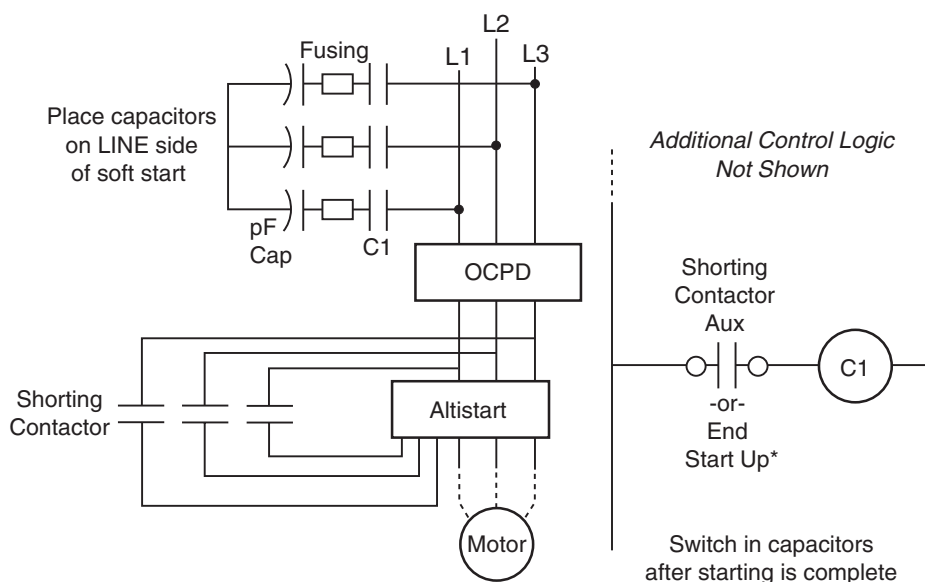
POWER FACTOR CORRECTION CAPACITORS

A capacitor placed on the output of a soft start will act like a short circuit across the silicon controlled rectifier (SCR) stacks upon startup, which may damage the SCRs. If power factor correction capacitors (PFCCs) are required, the capacitors must be located on the line side of the Altistart soft start, as shown below.

Be aware that solid-state, reduced-voltage starters create harmonics during acceleration or deceleration. The impedance of capacitors to these harmonics is very low, allowing excessive harmonic currents to flow between the capacitors and soft start. These current peaks can damage both the capacitors and the soft start. The capacitors, therefore, should only be in the circuit while the motor is operating at a steady speed. The operation of the capacitor-switching contactor can be coordinated with an auxiliary contact from a shorting contactor. When installing PFCCs on the line side of a soft start, switch the capacitors out of the circuit while the motor is idle. This prevents overcompensation.

Use the product selector guide in the Schneider Electric *Digest* for proper sizing and selection of fused PFCCs. A NEMA style contactor sized for capacitor switching duty should be used to switch the PFCCs in and out of the circuit.

NOTE: To ensure that the soft start can maintain synchronization with the line voltage, the maximum correction for power factor should not exceed 95%.



*On Altistart control wiring terminal.

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