Fault Zone – **Power Circuit**

The power circuit refers to all of the conductors and connections that exist from the point at which the testing starts through to the connections at the motor. It can include circuit breakers, fuses, contactors, overloads, disconnects, and lug connections. Research on industrial power distribution systems has shown that connectors and conductors are the source of 46% of the faults reducing motor efficiency.

The MCE\textsuperscript{MAX} powered by MCE\textsuperscript{Gold} provides a unique advantage to test the power circuit and all the associated components. Many times a motor, although initially in perfect health, is installed into a faulty power circuit. This causes problems like voltage imbalances, current imbalances, sequence currents, etc. As these problems become more severe, the horsepower rating of the motor drops, causing temperatures to increase and insulation damage to occur. It is important to evaluate the resistance and inductance of a motor circuit once a motor is installed for service. High imbalances of voltage, current, resistance, or inductance could indicate problems with the motor or power circuit. Identifying minor imbalances early will eliminate catastrophic failures and headaches later.

All three phases of current are calculated and displayed. You are immediately alerted to any over current or imbalance condition.

The MCEMAX powered by MCE\textsuperscript{Gold} provides a Fault Zone Report, which is a one-page summary of the test results relevant to the six fault zones. The Fault Zone Report may be reached directly through the Fault Zones icon on the toolbar.