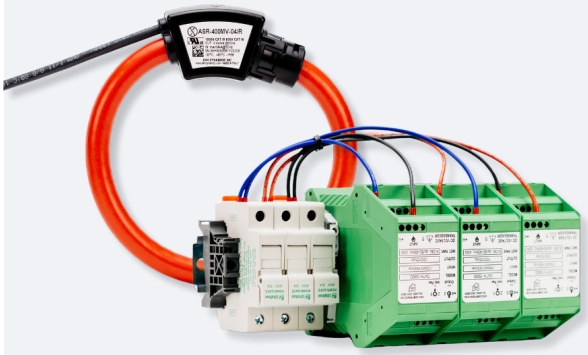
Continuous, Always Monitoring.

Motor Current Signature Analysis (MCSA) and Electrical Signature Analysis (ESA) are Here.



The addition of Motor Current Signature Analysis (MCSA) and Electrical Signature Analysis (ESA) to KCF's comprehensive machine health platform combines MCSA/ESA's robust motor-electrical diagnostic capabilities with the high-fidelity continuous monitoring, ease of installation, and focus on root cause eradication that are central to KCF's solutions. Pairing this technology with vibration monitoring results in a comprehensive asset health solution crafted for your most critical electric motors.

KCF offers a suite of products to achieve advanced condition monitoring using MCSA. These Include:

The IoT HUB: Transmits full-spectrum data to KCF's machine health platform, SMARTdiagnostics.
Analog Adapters: Connects each of the transducer types to the IoT HUB.
Current Transducers (CTs): Identifies motor faults.
***Motor Current Triggering:** Enables synchronized sampling on motor startup, enabling the detection of inrush current.
***Tachometer:** Provides precise reading of motor (rotor) turning speed—important for MCSA/ESA Analytics Model.
***Voltage Transducers (VTs):** Enables electrical signature analysis (ESA) to identify power supply issues.

***Optional Hardware**

When to Use MCSA/ESA:

Costs of Downtime Are High: When failure costs a significant sum due to lost production.
Failure Prevention is Essential: When motor replacement cost is significant, or failure results in collateral damage such as product needing to be discarded, or adjacent equipment being damaged.
Regulatory & Fines Risk Reduction: When catastrophic failure results in fines levied against the customer.
Energy Consumption: When energy costs matter and a customer needs to reduce its carbon footprint.

Additional Operating Data Uses Unlocked by MCSA/ESA in KCF's Machine Health Platform:

- Stator Shorts
- Rotor Bar Failures
- Power Consumption
- Power Factor
- Duty Cycle
- Inrush Duration + Magnitude
- Phase Imbalance

Advantages of KCF's MCSA/ESA Solution:

24/7 Monitoring: Provides continuous online monitoring with 24/7 access to critical data, effectively covering all blind spots that exist between readings in periodic route-based monitoring.
Triggering: Allows motor behavior during start up to be trended over time, enabling early detection of damaging conditions and motor issues.
Improved Safety: Route-based analysts or maintenance staff members no longer need to enter dangerous environments to take readings.
Root Cause Analysis: The inclusion of voltage transducers facilitates power supply monitoring. This enables the identification of chronic power supply issues, eliminating the cause of motor faults and suboptimal performance.