



Quad Plus®

Infrared Scanning and Power Studies



Infrared Electrical Inspections Prevent Catastrophic Failure

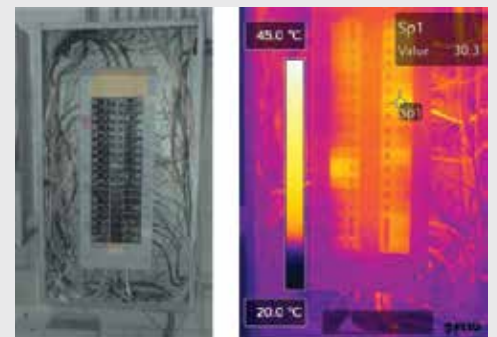
IR inspections detect the heat generated by the electrical resistance that occurs from troubles such as loose connections, overloaded or imbalanced circuits, damaged switches, or faulty breakers and fuses. This excess heat breaks down the insulation on wiring and cables leading to dangerous situations. Your final report details the results of your tested equipment and highlights areas of concern. Don't wait until your components fail before discovering a problem. Schedule an inspection with our infrared certified technicians and correct problems now.

But, my machines are all running perfectly...

The right time to discover problems is while your equipment is still operating. That way, you are in control of when the shutdown happens. A sudden halt to production isn't good for the machinery, your crews, your customers, or your bottom line.

When electrical components begin to fail, they heat up. Once this happens, failure is only a matter of time. Don't get caught by surprise. Instead, enjoy the luxury of time to create the ideal solution for your unique situation.

Best of all, infrared inspections are completed by a certified technician and require no downtime.



Don't Get Caught By Surprise

Preventive maintenance schedules that include IR inspections help keep you in control of the repair timetable. Fix and replace worn and damaged components when it makes sense for your production schedule and without the added stress of emergency service.

Detect hot spots caused by faulty components.

When an electrical component starts to fail, it heats up. Infrared thermology is a technology used to locate excess heat generated by faulty parts, loose connections, overloaded circuits, and more. That way, solutions can be found and repairs made before a catastrophic failure occurs.

Power Studies



Arc Flash Risk Assessment

To increase site safety, we provide a turnkey approach for arc flash hazard risk assessment that includes data collection, analysis, reports and recommendations, applying settings, and providing custom arc flash labels. Mitigating the threat from arc flash is critical, and our systems engineers will calculate the incident energy and arc flash boundary for each location in a power system. We also provide training for your personnel including defining safe working distances and suggested personal protection equipment (PPE) recommendations.

Our goals are to design safer power systems while adhering to all major standards including NFPA 70E, NEC, OSHA, NFPA, IEEE, and NESC. Avoid potential fines, lost productivity, and increased insurance and litigation costs with expert arc flash hazard risk assessment from Quad Plus.



Harmonics and Flicker Analysis

A harmonics analysis determines whether harmonic currents and voltages exceed recommended limits as defined by IEEE 519 and whether remedial actions are necessary. The study typically includes on-site harmonic distortion measurements, data collection, power system modeling, engineering analysis, and a report with results and recommendations. Examples of these solutions include the installation of tuned harmonic filter banks, phase shifting, and zig-zag transformers.



Power Factor Correction Study

When it becomes necessary to increase the capacity or efficiency of your system or improve voltage profiles, a power factor correction study will evaluate the ability of your power system to supply the connected load for operating conditions. The study will determine the real (kW) and reactive (kVAR) power flow and power factor through each branch of your power system.



Coordination Study

Minimizing hazards to your crew and your equipment and reducing disruptions and outages to the power system is always a priority. A coordination study can achieve this by verifying the clearing characteristics of protective devices such as fuses, industrial circuit breakers, and relays. We can also determine settings for protective relays, breaker size, and fuse ratings to ensure a safe environment.



Short Circuit Studies

Unusually high currents that occur during a short circuit event can exceed the capability of protective devices and lead to extremely dangerous situations--even explosions. A short-circuit study will analyze your electrical system to determine the magnitude of currents that can flow during an electrical fault and compare those values to the ratings of your equipment. Corrective action is recommended when necessary.



Load Flow Study

A load flow study determines the voltage, current, active power, reactive power, and power factor in each line or branch of your power system. During the design phase of a new project or when evaluating changes and additions to your current system, a load flow study is necessary to ensure system voltages and current remain within safe limits and whether additional equipment or services will be required.



Transient Motor Starting Analysis

When motors are started, current five to nine times higher than normal operating current flows through the system. This inrush of current can cause a drop in voltage that may prevent the motor from starting and may cause other motors to slow or stall. To avoid unnecessary wear on your motors and extend their working life, a transient motor starting analysis will determine whether your system can start the motor successfully or whether compensation is needed during startups to avoid slowing, stalls, and wear to your motors.



Connect with us



www.quadplus.com

(815) 724-2323