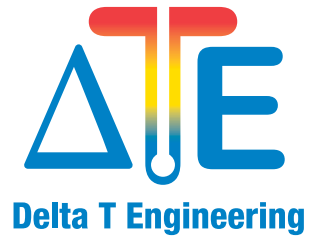
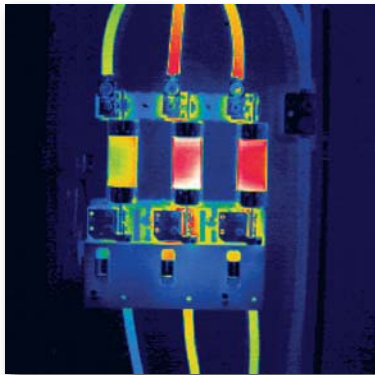




Helping you prevent the unexpected.



WIRELESS TEMPERATURE MONITORING OF ELECTRICAL ENCLOSURES

AVOID EQUIPMENT DOWN TIME OR CATASTROPHIC FAILURE

Avoid a major electrical failure—and potentially significant financial loss—with the “Delta T Alert”. This patented device, developed by Delta T Engineering, LLC, magnetically attaches to your electrical equipment covers, monitoring the Delta T (temperature differential) between the interior of an electrical enclosure and the ambient temperature of the room in which the enclosure is located.

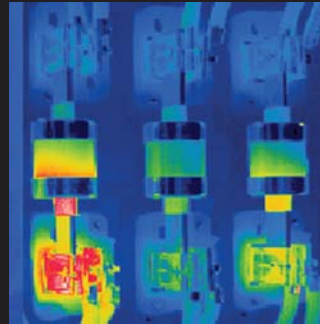
Delta T will be configured to collect data on a daily basis, at specific time intervals. This data will then be transmitted wirelessly to an onsite computer for analysis. Whether your panels are in a 100° switchgear room in Manhattan, a 20° warehouse in Alaska, or a 65° data center in Tuscaloosa, the Delta T Alert will warn you of excessive temperature rise within your electrical enclosures—well before more serious problems may arise.



Monitor



Report



Diagnose



Repair

A FINGER ON THE PULSE

The heartbeat of any commercial building is its electrical distribution system, which regulates water pressure, climate, communication, and lighting. Without this heartbeat, all services stop—along with your business.

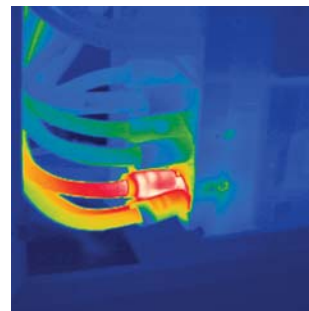
Facility downtime is not an option if you want to keep your tenants. According to Hartford Steam Boiler Inspection and Insurance Company (HSB), (www.hsb.com), electrical system malfunctions are the leading cause of commercial building fires. These fires have increased in frequency and severity over the past two decades, due primarily to increased demand on existing electrical systems. Even newer buildings are not immune to electrical failures, as businesses demand an ever-increasing stream of power, placing more and more pressure on overloaded systems. The number one cause of such failures is a lack of proper maintenance—or no maintenance at all. HSB reports that 75% of all electrical failures are due to human error or carelessness, deficient or delayed maintenance, unqualified personnel, and/or budget cuts.

Also, electrical distribution systems are often overlooked because most of the facility’s electrical enclosures are inaccessible. Since many electrical enclosures cannot and should not be opened in the “on” or “energized” position, maintenance personnel usually enter an electrical switchgear room or electrical closet limited to their senses—sound, sight and smell to detect signs of overheating. But once a worker smells something burning or hears something arcing, significant damage has already occurred, and the level of danger has increased substantially.

SO MANY POINTS – SO LITTLE TIME

In a typical one-million square foot high-rise commercial office building, there are literally hundreds of electrical power and distribution panels, along with just as many disconnects. This equipment may receive an infrared scan once per year, at most, or an occasional “clean and tighten,” which is conducted during off hours. The “clean and tighten” procedure requires both an electrical shutdown and significantly higher electricians’ wages (time and a half or double time). It is a major expense and inconvenience for both building owners and their tenants.

Meanwhile, some experts do not recommend routine tightening of electrical connections. In many cases, over-tightening can deform the bolts and/or the contact faces, decreasing the surface contact area and producing greater resistance. Greater resistance can cause heat buildup, potentially damaging insulation and components.



Breaker in Main Switchgear Room is Approaching Failure



Remains of Breaker After Catastrophic Failure

AN EASY WAY TO REDUCE RISK

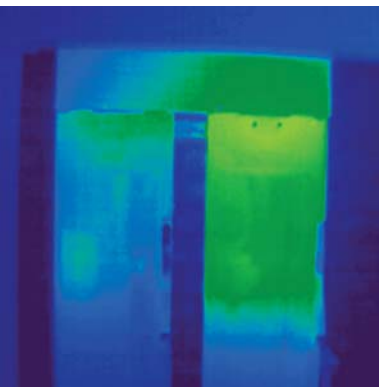
The Delta T Alert will effectively track your electrical system temperatures and send that data back to your computer hub for analysis and trending. If a critical issue arises, you'll know about it in time to take the appropriate corrective action, before costly damage occurs.

Your building's maintenance personnel and/or electricians will have an enormous safety advantage if they are warned, prior to any type of routine maintenance or troubleshooting, of possible electrical anomalies prior to accessing electrical enclosures.

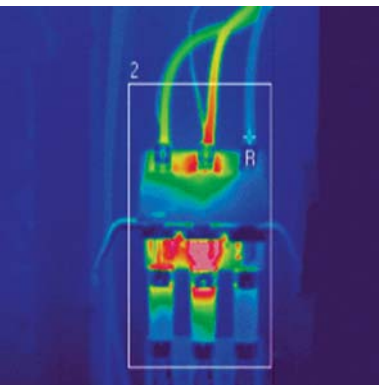
Keep your facility running safely. Install the Delta T Alert and take advantage of our 25 years' of electromechanical coupled with thermography experience, our expert support, and our commitment to electrical systems maintenance.



Two Elevator Fused Disconnects



Elevator #1 Cover is Cool, Elevator #2 Cover is Hot



Phase "B" on Elevator #2 is Approaching a Meltdown



Opening of a Defective Disconnect With Screwdriver



Most Serious Electrical Hazard - Arc Flash

SAFETY

Electrical safety has become a major concern in the North American power industry. Electrical accidents occur every day of the year. They can be extremely debilitating, or even fatal, depending on their particular voltage and amperage. As little as 80 milliamps of electricity can put the human heart into defibrillation or cardiac arrest.

Human error is the most common cause of electrical accidents, most of which occur during routine maintenance or troubleshooting. Whether it's a slip of the hand, the dropping of a tool, covers, or panel trims, the falling of an enclosure accessory, or the disturbance of conductive dust, it doesn't take much to bring about an electrical meltdown. A clear example of such a danger can be seen in the top photo, which was taken after a screwdriver was used to force open a defective disconnect cover. The tool accidentally contacted the 60 amp / 480-volt line side fuse holder—exploding the fuse. A simple accident like this can cause serious injury or even death.

The most serious electrical hazard is an arc flash, an explosive release of energy caused by an electrical arc. Typically, an arc flash results from either a phase-to-ground or phase-to-phase fault, which can arise from dropped tools, accidental contacts with exposed conductors, a buildup of conductive dust, corrosion, or improper work procedures.

Every year, thousands of workers are treated in hospitals and burn centers for electrical shock and/or severe arc flash injuries. The intense heat, light, and force emitted by an arc flash can cause injuries that may last months, years, or even a lifetime. Common injuries from arc flash include critical burns, collapsed lungs, blindness, hearing loss, puncture wounds—even death.

HOW IT WORKS

A Simple Device with Staggering Results

Delta T Alert is a self-contained temperature-monitoring sensor that attaches magnetically to electrical enclosure covers. This sensor is designed to work on NEMA 1 enclosures which are constructed for indoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment and to provide a degree of protection against falling dirt.

Delta T Alert is comprised of two temperature sensors - one to monitor the electrical enclosure's interior temperature and the second to monitor the room's ambient temperature where the enclosure is located. To monitor the enclosure's internal temperature, a 15/32" hole is drilled into the cover of the enclosure after the cover is removed. Delta T is then magnetically attached to the cover with the interior sensor protruding into the panel 7/8 of an inch. Both the size of the hole and the length of the interior sensor conform to protection classification NEMA IP20. This classification protects against access to hazardous parts with a finger.

Delta T is then configured to collect data on a daily basis, at specific time intervals. The information may then be transmitted wirelessly to an onsite computer for analysis and trending. Delta T Alert will warn you of temperature rise within your electrical enclosures--well before more serious problems may arise.

Our proprietary software will allow you to print reports, trending graphs as well as scheduled repair logs for maintenance.

Report Samples:



There's never been an easier, more effective way to prevent costly electrical damage and system downtime. You can monitor your electrical system every day!

ABOUT DELTA T ENGINEERING

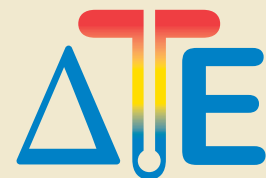
Delta T Engineering, LLC has been involved in the nondestructive testing and operation of electromechanical equipment in commercial buildings for over 25 years. The majority of our experience has been with commercial office buildings in New York City and the surrounding area.

After many years performing infrared scans of electrical enclosures and observing warm-to-hot enclosure covers, Delta T's certified technicians realized that electrical anomalies existed behind these covers.

With more than 25 years' experience managing electromechanical equipment in commercial buildings, Delta T Engineering and its authorized distributors/installers assure you that the Delta T Alert sensors will be installed only on applicable electrical enclosures. To ensure proper installation, which is paramount for safe, accurate operation, Delta T Engineering and its authorized distributors/installers have a minimum of two years' infrared testing experience. All distributors/installers also hold a minimum Level II certification from the Infrasppection Institute (www.infrasppection.com), the oldest independent infrared training and certification firm in the world.

Keep your facility running safely. Install the Delta T Alert today!

In the highly-competitive world of commercial building management, your success depends on high tenant occupancy, controllable expenses, and trouble-free operation. That means no unexpected shutdowns, no major equipment or service failures, and no expensive emergency repairs.



Delta T Engineering

Delta T Engineering, LLC

136 Main Street

Metuchen, NJ 08840

Toll Free: (877) 321.0576

Tel: (732) 321.0560

Fax: (732) 548.4342

www.deltatengineering.com