

CRITICAL POWER SUPPORT

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Emergency Response

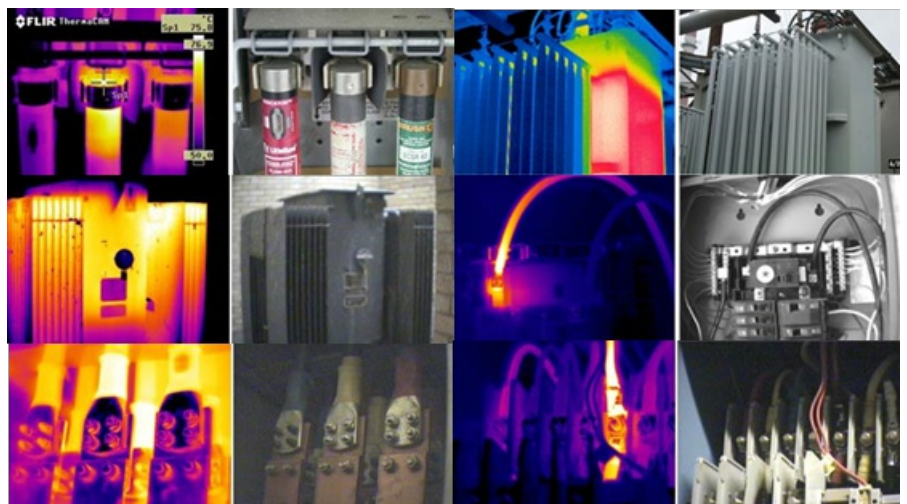
Our team of experts are on standby for our contract customers every day of the year, and are able to respond to critical onsite emergencies within guaranteed timescales of as little as 4 hours.

Being part of VINCI Energies, we are able to leverage our significant in-house manufacturing capability and supply chain to quickly solve and rectify problems.

Our aim is minimise any power downtime to your business and reduce the future risk by the use of onsite crash kits, critical spares.

Thermal Imaging

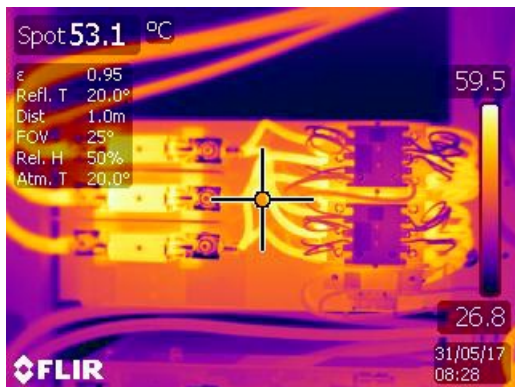
As electrical connections become loose, the change in resistance causes increased temperature which can lead to component failure and unplanned outages / injuries. If left unchecked, heat can rise to a point that connections may melt and break the circuit; as a result, fires may occur. Thermography can quickly locate hot spots, determine the severity of the problem and help to establish the time frame in which the equipment should be repaired. If not rectified this could lead to a single point of failure and subsequent loss of supply.



With the increasing demands on building service supplies, the need for security of these supplies is absolutely critical.

Loss of supply can have the following consequences:

- ✓ Loss of life
- ✓ Major financial loss
- ✓ Loss of critical data



Regular, planned thermographic surveys by Twyver provide clients with fully detailed visual, written and electronic reports on the condition and performance of their equipment, together with appropriate recommendations and advice.

In many industries, mechanical systems serve as the backbone of operations. Typically when mechanical components become worn and less efficient, the heat emitted will increase. Consequently the temperature of faulty components or systems will increase rapidly before failure. Typical mechanical systems monitored in a predictive maintenance infrared programme include bearings, motors, pumps, compressors and conveyors.

Non-Invasive Service

Regular monitoring and verification checks will identify signs of degradation, which could result in future faults.

A typical **Non-invasive Service** visit follows our strict Safe Working Procedures and may include the following:

- ✓ Full visual inspection (where safely accessible)
- ✓ Thermographic survey
- ✓ Check function of meters and record values
- ✓ Check function and status of electronic surge protection
- ✓ Check operation of lamps and indicators
- ✓ Check operation of fans and thermostats
- ✓ Verify control circuit fuse continuity
- ✓ Record LV transformer values where applicable
- ✓ Clean of safely accessible surfaces / compartments
- ✓ AHF / STS servicing where applicable (in bypass)

Fully Isolated Service

A planned **Fully Isolated Service** should be completed every 3 to 5 years. We are expert in planning and delivering an Isolated Service to **minimise the impact on your business**. These are usually completed out of hours.

A typical Fully Isolated Service may include the following:

- ✓ Prior to shutdown, live visual inspection of lamps and meters with readings noted
- ✓ Verify torque tightness of all power connections
- ✓ Check tightness and mechanical operation of all switching devices
- ✓ Check tightness and condition of pan assembly connections

- ✓ Check tightness and condition of outgoing terminals
- ✓ Check operation of lamps, indicators, fans, thermostats, control circuit fuse continuity
- ✓ Check operation of doors and interlocks
- ✓ Clean of panels inside and out where safely accessible, removal of debris / particulates / residue and photograph for inclusion within the report
- ✓ Full torque testing and cleaning of HV transformer and enclosure
- ✓ Insulation and continuity testing of LV transformer
- ✓ ACB / MCCB tested and serviced
- ✓ Active Harmonic Filter (AHF) servicing
- ✓ Static Transfer Switch (STS) servicing
- ✓ Power Factor Correction (PFC) servicing

Customer Training

We offer training packages either on-site or at our own facilities. All sessions are delivered by our Expert Engineers.

Typically a classroom session, for up to 8 people, is held for the first half of the day followed by hands-on operational experience within the installation.



We offer the following training:

- ✓ LV switchgear – Basics
- ✓ LV switchgear – Intermediate
- ✓ LV switchgear – Advanced
- ✓ Busway Tapoff Installation
- ✓ Power Management System /Energy Management System Training

Extended Warranties

The Twyver Warranty is 12 months from commissioning. Should you wish to extend this we can provide Warranties for up to 5 years.

Customers who sign up for Extended Warranties benefit from the following:

- ✓ 24 hour target response time
- ✓ All parts, consumables and labour included
- ✓ Technical support during normal working hours

Please note all Warranties exclude damage resulting from misuse, negligence, vandalism or Acts of God (fire, flood, etc).

Critical Spares Kit

Help avoid costly Switchgear failure with a Critical Spares Pack from Twyver.

Our experience in bespoke Switchgear design allows us to identify the components that are critical to supporting your

load and create a dedicated Critical Spares Pack for you to hold on site. This ensures critical parts are on hand to Engineers responding to emergency call-outs, reducing downtime, disruption and cost of any outage.

24 Hr Technical Support

Our dedicated team of Expert Engineers are always on standby 24/7 for our Contract Customers.

This service provides technical support over the phone, assisting in timely identification of system faults and their resolution. Where required the call is escalated to Emergency Response to provide a speedy on-site solution.



Power Quality Surveys

Poor power quality can increase energy costs and lead to early equipment failure.

Our Experts will use data logging equipment to produce a Power Quality Survey report with specific recommended improvement actions to benefit your business.

A typical Power Quality Survey will cover:

- ✓ Supply efficiency
- ✓ Imbalanced phase voltages
- ✓ Harmonic distortion

Power Management Systems & Energy Management Systems Servicing

Our EMS/PMS service contracts include scheduled site visits to provide:



- ✓ Communications network checks
- ✓ Meter operation checks
- ✓ Thermal sensor operation checks
- ✓ Review of alarms and setting adjustments as required
- ✓ Database backup and management
- ✓ Install of critical service packs or hot fixes
- ✓ Minor system adjustments as required
- ✓ Advice on use of system and potential upgrades

Switchboard Survey

Gain a complete understanding of any existing power system with the Switchboard Survey services of Twyver. Ideal for Customers moving into new buildings or to review the suitability of older Switchboards for refurbishment or upgrade.

All Surveys are carried out in accordance with BS7671 and BS6423:1983 and typically include:

- ✓ Segregation & IP rating
- ✓ Earthing
- ✓ Insulation levels

- ✓ Cabling terminations and sizing
 - ✓ Busbar details
 - ✓ Production of general arrangement / electrical schematic drawings
 - ✓ Survey all metering arrangements
 - ✓ Test and detail all protective devices to enable full discrimination study
 - ✓ Recommendations and budgeted remedial costs
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Retrofits and Modifications

Retrofit and onsite modifications are designed to:

- ✓ Comply with safety regulations
- ✓ Reduce your operating costs
- ✓ Improve operational performance
- ✓ Extend the life of your equipment

Our Expert Engineers are familiar with all brands of Switchboards.