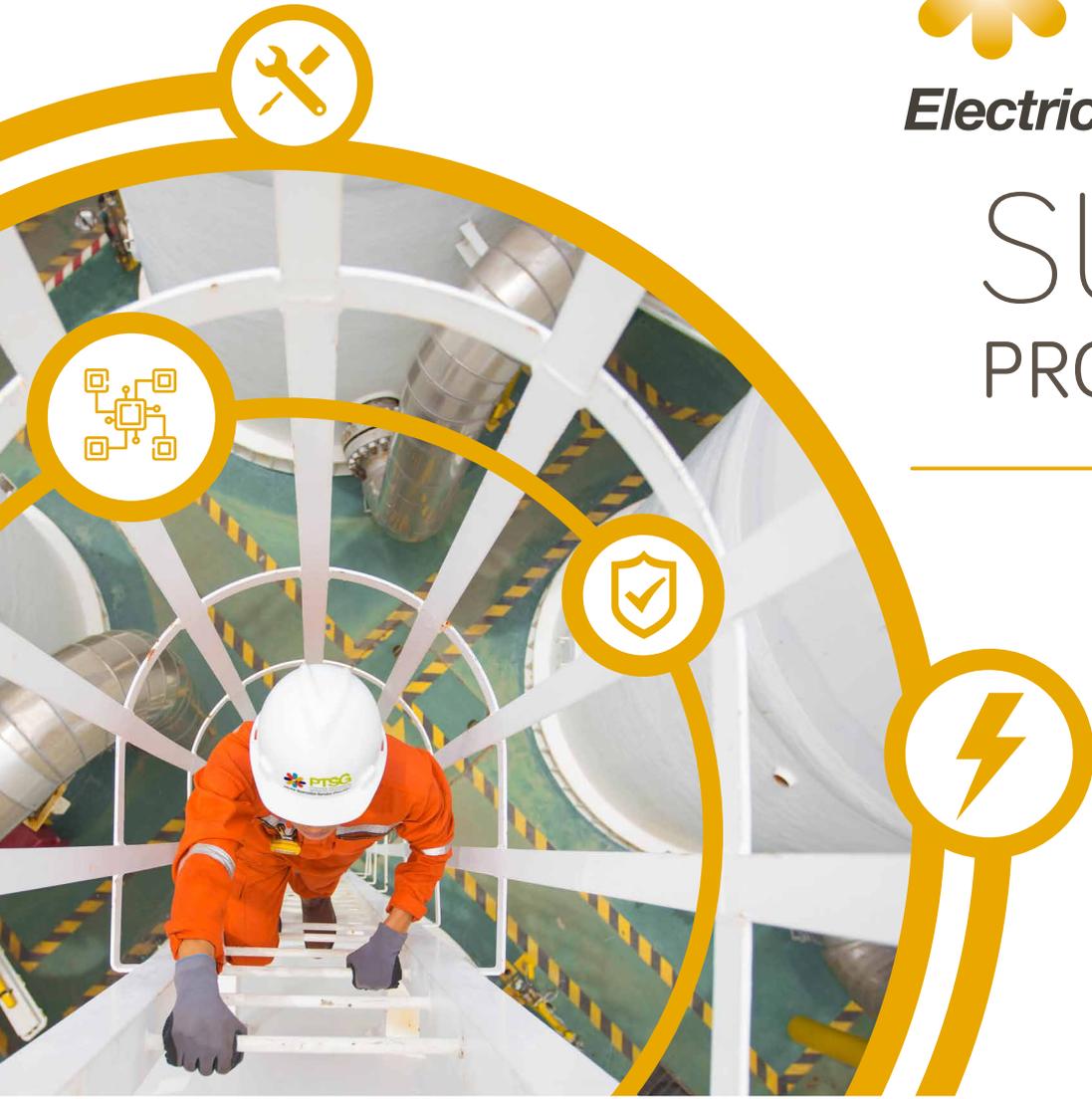




***Electrical Services Ltd***

# SURGE PROTECTION

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SIMPLE AND COST-EFFECTIVE, PROTECTING  
PEOPLE AND ELECTRONIC DEVICES



# OVERVIEW

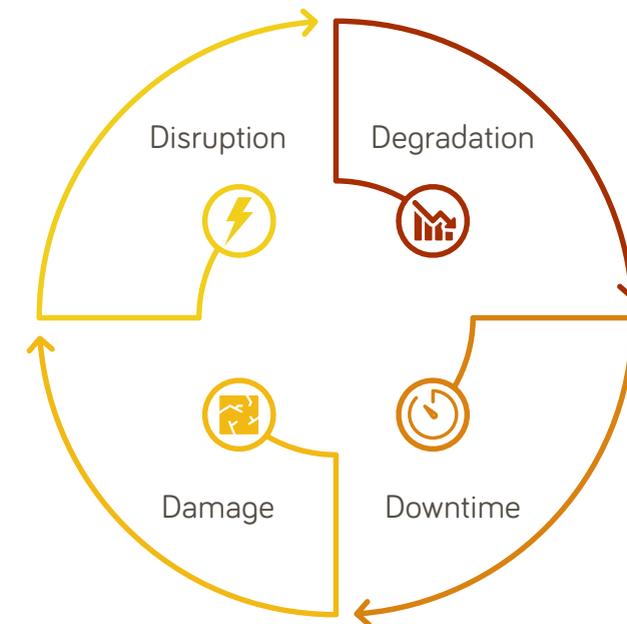
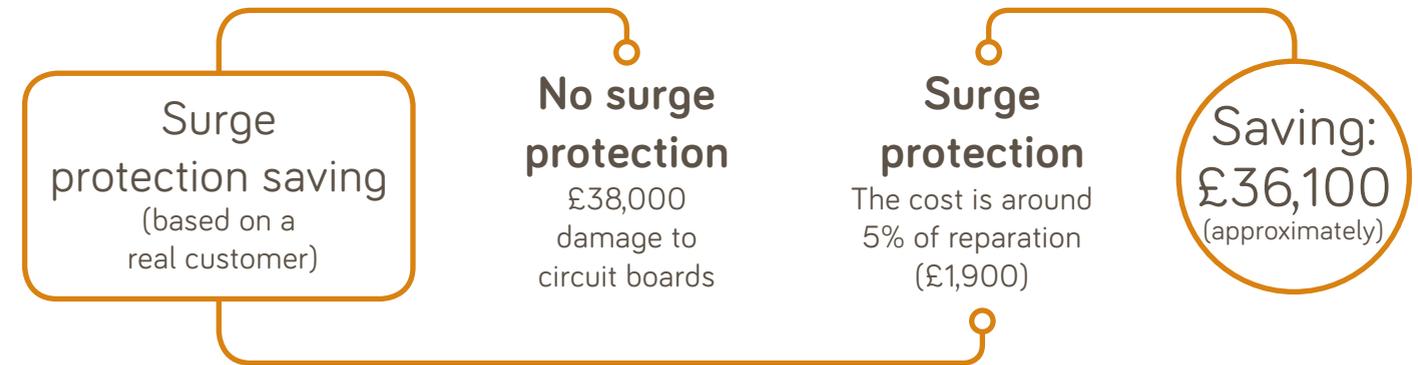
A surge, also known as a transient overvoltage, occurs when there is a spike in voltage on power or signal lines. They are large, sudden and can overload electronic components, leading to failure as well as the potential to cause injury or even death.

Lightning strikes cause the largest surges, with spikes of up to 6,000V within an electronic installation. Buildings often withstand the strike itself, but suffer huge damage to electrical equipment from the surge afterwards – which can cost tens of thousands of pounds.

A more common cause source of surges, which is lower in amplitude, is the electrical switching of transformers, motors and drives, or other inductive loads. They will create a spike that may also affect other devices connected to the same electrical network.



**Surge protection – an investment that can save your business from massive damage and cost**  
A surge protection device is an essential part of every lightning protection risk assessment, as detailed within British Standard BSEN 62305. It's a relatively small investment that can offer invaluable protection for companies of all sizes. For small to medium enterprises, for whom the cost of installing a full lightning protection system may be too high, surge protection can be an ideal alternative.



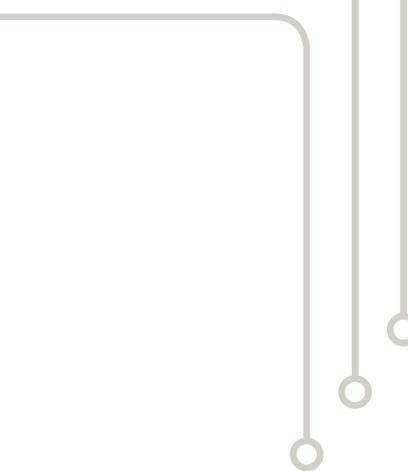
# OUR SERVICE

PTSG Electrical Services Ltd. is the UK's market leader in the design, installation and testing of lightning and earthing protection systems.

We have many years' experience in installing, servicing and maintaining surge protection systems for a wide range of organisations. Our work protects people and safeguards valuable equipment. We have office locations around the UK and can mobilise our engineers at a moment's notice for requirements of any kind or size.

Surge protection is governed by the IET Wiring Regulations (BS 7671:2018). These are continuously updated to reflect changes in the industry - including an important change to Chapter 44 of the 18th edition, in 2019. Electrical designers and installers must now include protection against transient overvoltages where there may be serious consequences.





## Sectors we routinely work in:



### Railway

PTSG Electrical Solutions Ltd. ensure public safety and provide electrical protection against electric shock in railway, tramway and metro networks.

Our voltage limiting devices (VLDs) protect personnel and passengers against dangerous touch voltages that arise in railway networks. They withstand repetitive short-circuit currents and help to effectively clear fault conditions. Surge protective devices (SPDs) provide uninterrupted protection of electronic equipment on rail networks against lightning and frequent power surges.



### Wireless Networks

Solutions for wireless operators include custom enclosures for indoor or outdoor applications, cable and cable accessories, lightning surge protection and connectivity solutions for remote radio head (RRH) network equipment located on towers, at rooftops and in shelters.



## Fixed Line Networks

PTSG Electrical Solutions Ltd. designs and supplies the critical equipment necessary to support telephone companies, long distance carriers, cellular companies, private and state-run networks.

Our products include fibre-optic and copper cable and accessories, business access solutions for fixed-line telecommunications networks, fibre-to-the-home (FTTH) solutions, broadband telecom cabinets and fittings, power supply solutions, point-to-multi point, mobile telephony base station products, and much more.



## Energy/Utilities

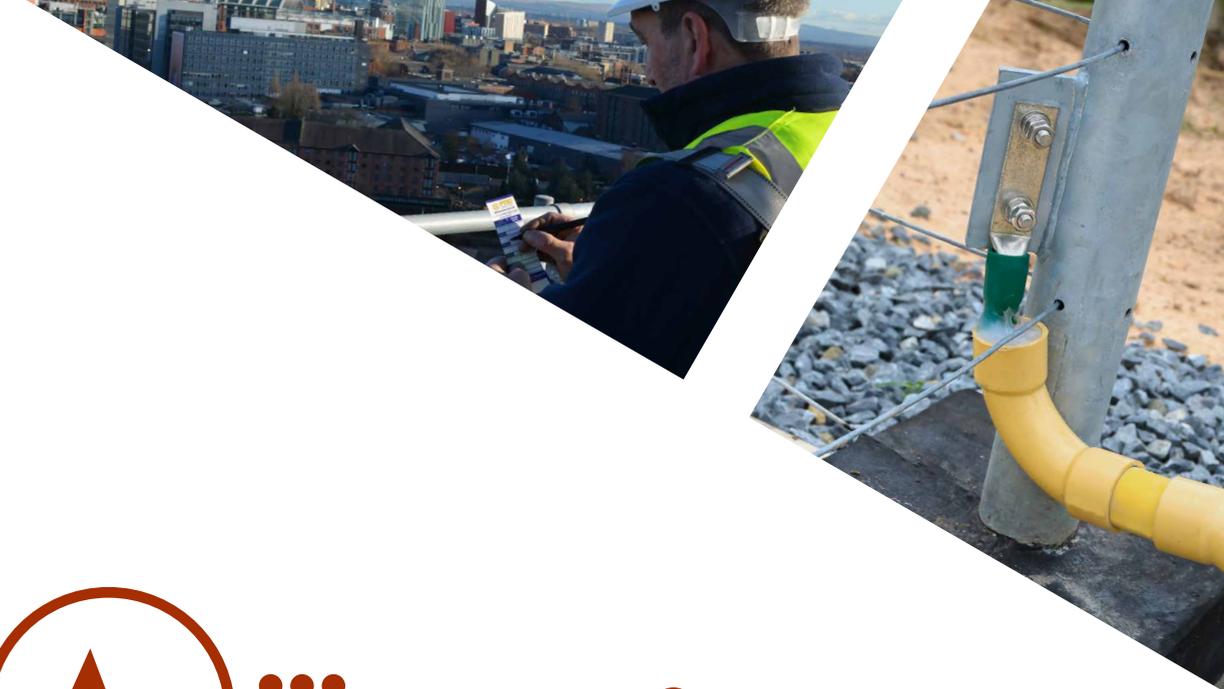
As an industry leader in the delivery of power generation, transmission and distribution products, PTSG helps power systems perform more reliably, efficiently and safely. Our solutions integrate the latest technology with high-quality products and services.

Organisations rely on PTSG to provide field-proven solutions that keep their critical infrastructures running all the time and under any circumstances.



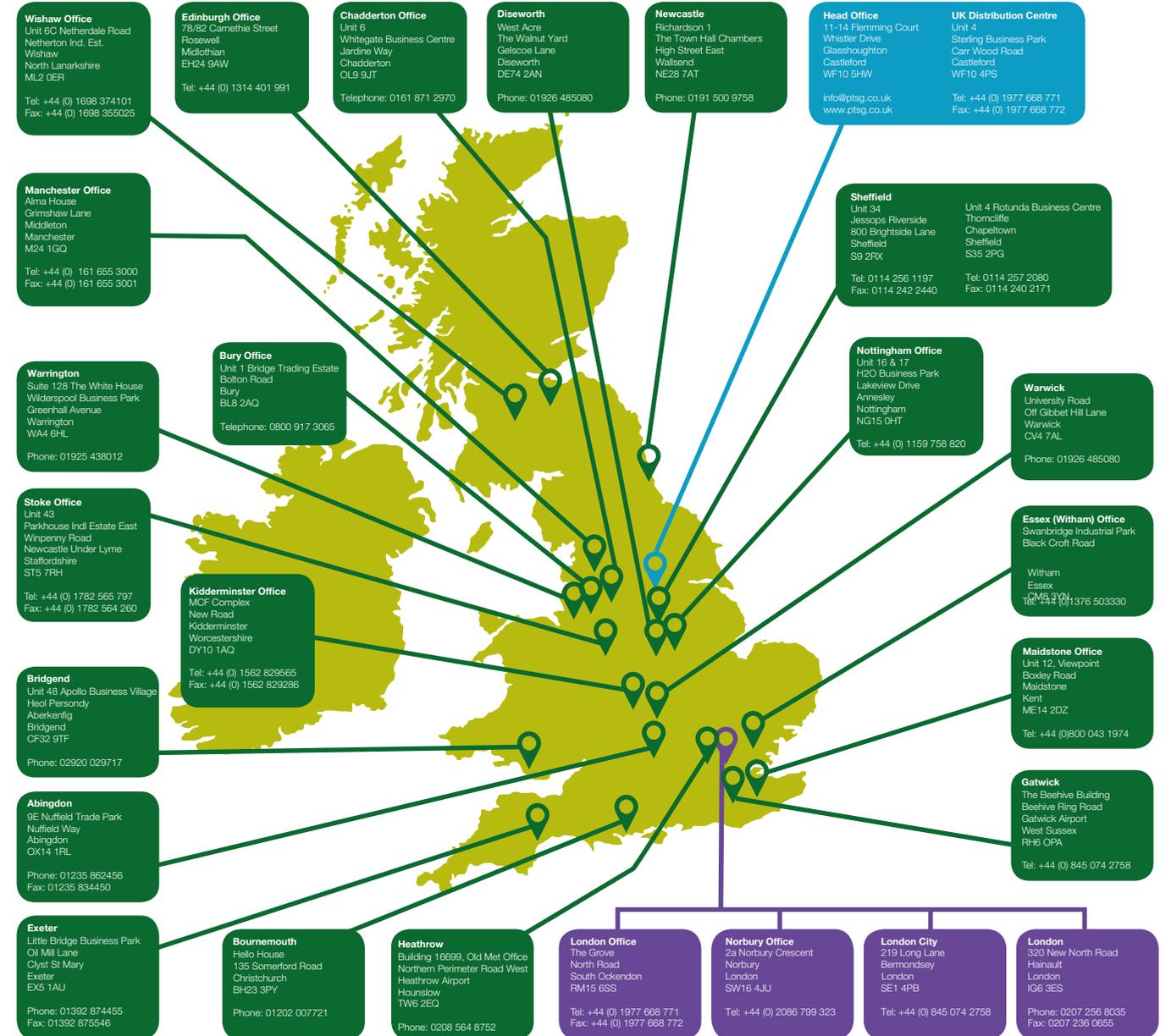
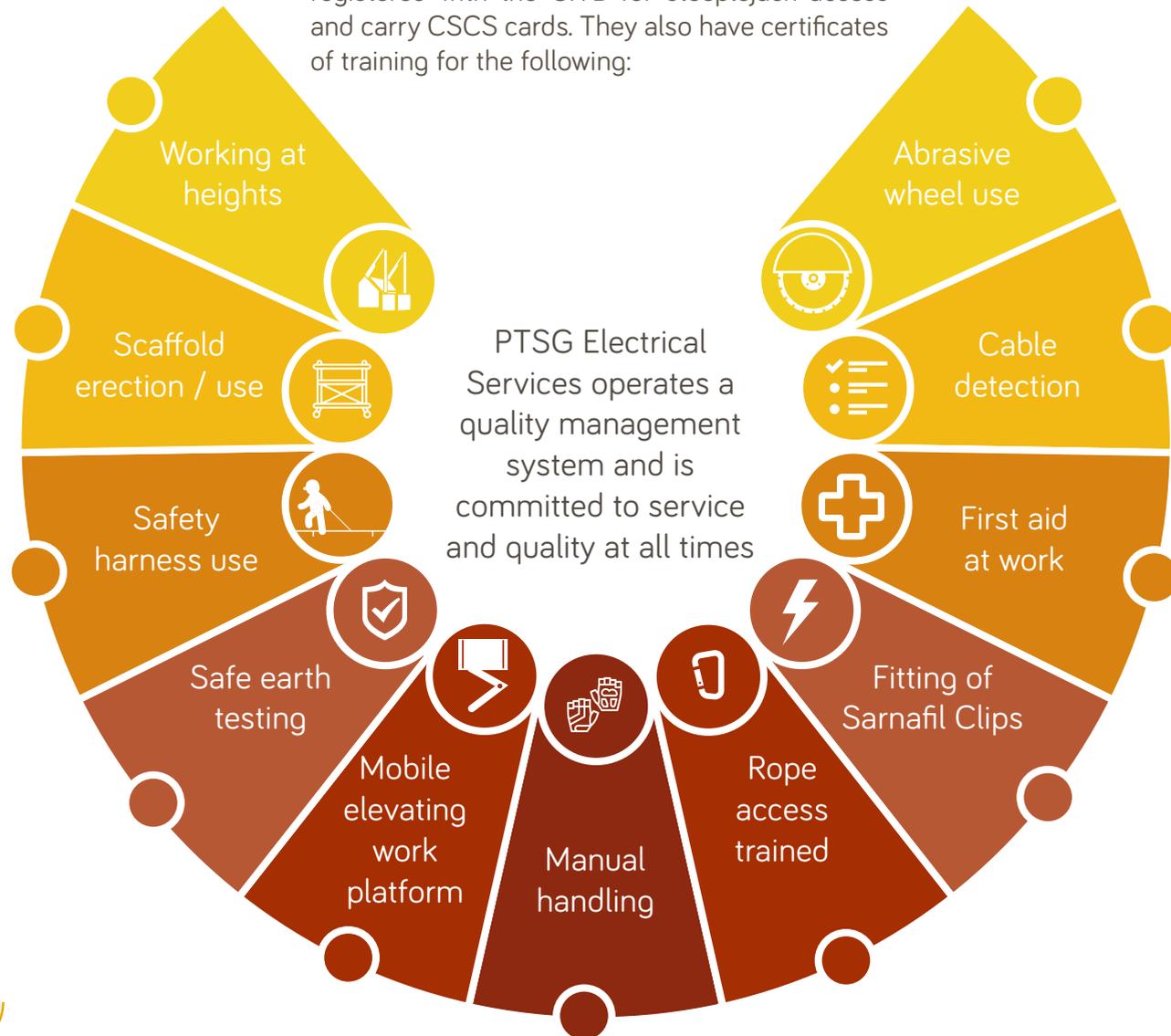
## Monitoring Devices

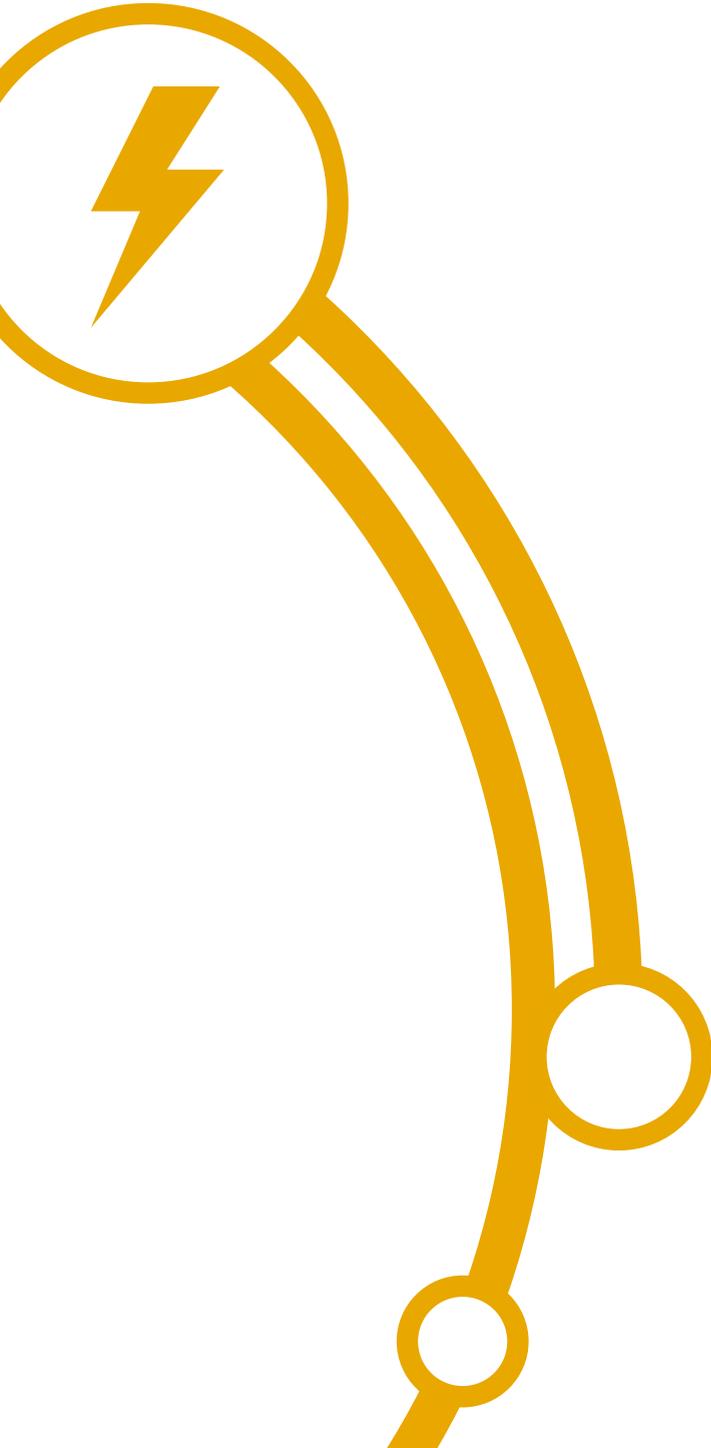
The wide variety of monitoring equipment solutions we offer, from sensing and recording to transmitting and alerting the occurrence of otherwise undetectable surge currents, enables operators of any type of network to take preventative measures and plan for appropriate maintenance. We will detect changes or problems in your equipment in real time.



# ACCREDITATIONS

All PTSG Electrical Services engineers are registered with the CITB for steeplejack access and carry CSCS cards. They also have certificates of training for the following:





[ptsg.co.uk](http://ptsg.co.uk)



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[@ptsgltd](https://twitter.com/ptsgltd)