



POWER
CONTROL
ENGINEERS

Earthing & Lightning Protection Design

PCE's earthing and lightning protection design services are crucial for ensuring the safety and integrity of industrial plants. Utilising advanced modelling software, our team provides practical, customised solutions that effectively mitigate risks associated with electrical systems. Our designs adhere to stringent safety standards, ensuring the wellbeing of personnel and the protection of equipment. This service underscores our commitment to delivering solutions that are not only efficient but also safeguard against unpredictable environmental factors.

Count on us





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Design and consultancy

Our engineers are equipped with the latest modelling technology and knowledge to provide you with a tailored design solution for your earthing and lightning protection needs. We work closely with you to understand your specific requirements and develop a design that meets international and Australian standards so increasing site safety and mitigating risk.

Our design and consulting services include:

Earthing

- High voltage earthing system modelling, design, and specification.
- Design and specification of earthing systems for low voltage electrical installations.
- Design and specification of earthing systems for telecommunications installations.
- Assessment of pipeline electrical hazards and mitigation measure design.
- Audits and review of existing installations.
- Mitigation strategies for management of complex earthing installations with high SLG fault levels.
- Compliance with relevant standards and regulations.
- Incident investigation.

Lightning Protection

- Detailed risk assessment and specification of required lightning protection control measures as per the guidance of AS 1768:2021.
- Lightning protection system design for all structure types, including detailed design of:
 - Direct strike protection.
 - Transient voltage surge protection.
 - Equipotential bonding.
 - Lightning protection earthing / grounding systems.
 - Insulation coordination studies.
- Compliance with relevant standards and regulations.
- Incident investigation.
- Development of lightning risk management plans and site policies to reduce risk to personnel.

Testing and inspection

Our comprehensive testing and inspection services ensure that your earthing system and/or lightning protection system is performing as it should.

Our testing capabilities include:

- Soil resistivity testing using the Wenner Method.
- Low current off-frequency injection testing.
- Fall of potential testing.
- Current distribution in cable screens and overhead earth wires.
- Earth continuity testing.

Maintenance and upgrades

Regular maintenance and baseline earthing testing are essential to maintain original intended design risk levels throughout the lifecycle of installed earthing and lightning protection systems. Our team have proven capability in establishing practical and effective maintenance regimes for your sites earthing and lightning protection infrastructure.

We have a proven track record of successfully delivering projects on time and within budget, and we pride ourselves on our attention to detail and commitment to safety. We provide our clients with the highest level of service and support throughout the entire project lifecycle.