



POWER
CONTROL
ENGINEERS

Low Voltage & Control System Design

Our low voltage and control system design services are at the heart of PCE's expertise. We focus on delivering safe, reliable, and cost-effective design solutions that range from extra-low voltage to 415V switchboards. Our approach is client-centric, ensuring that each design is customised to meet the specific requirements of your project. Our team's proficiency in contemporary design practices, combined with a deep understanding of industry standards, makes us a preferred choice for clients in Newcastle, Melbourne, and across Australia.

Count on us





Low Voltage & Control System Design

Initial Concept & Consultation

Here at PCE, we strive to provide our clients with quality low voltage system designs that are customised to meet their requirements. It is therefore critical to work with our clients and fully understand their expectations at an early stage. We achieve this through:

- Concept designs.
- Feasibility studies and cost estimates.
- Site visits for project scoping and to build client relationships.

Detailed Design

Our team of engineers have extensive knowledge and experience in the detailed design of Low Voltage (LV) systems. We provide detailed design packages in accordance with relevant Australian Standards and Client Specifications.

- Low Voltage Installations / System design including:
 - Power System Modelling and reporting.
 - Load flow, short circuit and arc flash studies.
 - Protection studies.
 - Detailed design and specification of main switchboards, motor control centres, distribution boards, control panels and local control stations.

- Detailed electrical and instrumentation design including:
 - Equipment specification and Bill of Materials.
 - Electrical load list management.
 - Cable sizing and routing proposals.
 - PLC I/O allocations.

We also complete design reviews and design risk assessments, both internally to PCE for quality purposes, and externally, with clients and other stakeholders.

Drafting of Electrical & instrumentation drawing packages

- Single line diagrams.
- Schematics.
- Terminations.
- Network diagrams.
- P&IDs and loop diagrams.
- Equipment general arrangements.
- Site general arrangements.

Functional Safety systems

Our team of experienced TUV Rheinland Certified Engineers assist with providing Certified designs to meet our clients' requirements. These include:

- Detailed design concepts.
- Design and testing documentation.
- Facilitate and attend LOPA meetings (Layers of Protection Analysis).
- Testing and Commissioning support.

Functional specification and system programming

Our Control System Engineers provide a wide range of documentation and control system packages that are critical to the everyday operation of the electrical equipment.

- Functional specification documentation for process and control systems.
- Implementation of control systems to meet our clients' requirements including programming and testing of:
 - PLC.
 - HMI.
 - Network switches.
 - Drive systems including VSD's and Soft Starters.

All from a wide range of vendors including Allen Bradley, Schneider, Omron, Siemens etc.

Project management and commissioning support

Project Management is a critical component to ensure each project remains on track to meet key milestones and delivery dates. This includes planning, coordination and execution of resources to achieve the project goals and objectives.

- Coordination, planning and management of resources and key deliverables associated with each LV system design.
- Development of quality testing and commissioning documentation.
- Factory and site acceptance testing assistance.
- Site commissioning support.

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.