

## ELECTRICAL CONTROLS PANEL DESIGNING

“Design Safe, Efficient, and Compliant Electrical Control Panels for Industrial Applications.”

### Schedule

| Venue (In-house)              | Fees                  |
|-------------------------------|-----------------------|
| At Your Organization Premises | Ask For The Quotation |

### Introduction

Electrical control panels are the heart of industrial automation, power distribution, and process control systems. Proper design ensures operational safety, efficiency, and compliance with industry standards.

The Electrical Controls Panel Designing course equips engineers, designers, and technicians with the knowledge and practical skills to design, assemble, and troubleshoot control panels. Participants will learn about electrical schematics, component selection, wiring practices, protection devices, and compliance standards to build reliable and safe control systems.

### Objectives

By the end of this course, participants will be able to:

- Understand the principles and components of electrical control panels.
- Design control panel layouts and wiring schematics for industrial applications.
- Select appropriate components such as relays, contactors, breakers, and PLCs.
- Apply safety standards, codes, and regulatory requirements in panel design.
- Implement effective grounding, cable management, and protection strategies.
- Troubleshoot and test control panels for operational reliability.
- Optimize panel design for space, cost, and maintenance efficiency.
- Integrate control panels with automation and monitoring systems.

## Why Attend

This course is essential for electrical engineers, technicians, and automation professionals involved in designing, assembling, or maintaining control panels. Participants will gain practical skills to design safe, efficient, and compliant panels, reducing errors, downtime, and operational risks.

## Target Audience

This course is suitable for:

- Electrical Engineers and Technicians
- Automation and Control Engineers
- Maintenance Supervisors and Technicians
- Panel Designers and Fabricators
- Industrial Engineers and Plant Engineers
- Graduate Students in Electrical, Electronics, or Instrumentation Engineering

## Individual Benefits

- Develop practical skills in control panel design and assembly.
- Gain confidence in reading and creating electrical schematics.
- Improve problem-solving and troubleshooting capabilities.
- Enhance professional expertise and career opportunities.
- Learn to apply safety standards and best practices in panel design.
- Optimize panel designs for efficiency, cost, and maintenance.

## Organizational Benefits

- Ensure safe and reliable operation of electrical control systems.
- Reduce downtime and maintenance costs due to design errors.
- Improve compliance with industry codes and safety regulations.
- Enhance internal capabilities for control panel design and fabrication.
- Support consistent quality and efficiency in electrical systems.
- Enable integration with automation and monitoring systems for better control.

## Instructional Methodology

The training employs a practical, hands-on approach through:

- Interactive lectures and panel design demonstrations
- Real-world case studies of industrial control panels
- Step-by-step exercises on wiring, component selection, and layout design
- Group workshops and collaborative problem-solving sessions
- Assignments focused on panel design, testing, and troubleshooting
- Continuous feedback and Q&A sessions to reinforce learning

## Course Outline

- Module 1: Introduction to Electrical Control Panels – Components and Applications
- Module 2: Electrical Schematics, Wiring Diagrams, and Design Principles
- Module 3: Component Selection – Relays, Contactors, Breakers, and PLCs
- Module 4: Panel Layout, Space Optimization, and Cable Management
- Module 5: Safety, Grounding, and Protection Strategies
- Module 6: Wiring Practices and Assembly Techniques
- Module 7: Testing and Troubleshooting Control Panels
- Module 8: Integration with Automation and Monitoring Systems
- Module 9: Compliance with Industry Standards and Codes
- Module 10: Capstone Project – Design and Assemble a Complete Electrical Control Panel

## Certification

Upon successful completion, participants will receive a Certificate in Electrical Controls Panel Designing, validating their expertise in designing, assembling, and troubleshooting industrial electrical control panels.

## Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

### In-House / Customized Training

Interested in running this course for your team?

Please contact us:

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