POSITIVE QUADRANT TECHNOLOGIES
SERVING INFORMATION WORLDWIDE

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Programmable Logic Control

PLC PROGRAMMING

Programming & development

Course Curriculum

Basic – 30 Hours

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PLC PROGRAMMING

Module 1 : Introduction to PLCs(Programmable Logic Controller)

Definition and purpose of PLCs

Basic components and architecture of PLCs

Module 2 : Installing PLC Software

Environmental Setup

Module 3 : Digital Logic Fundamentals

Number systems: Binary, hexadecimal

Logic gates: AND, OR, NOT

Boolean algebra basics

Module 4 : Basics of Ladder Logic

Introduction to ladder logic diagrams (LLD)

Symbolic representation of relay logic

Basic ladder logic programming principles

Module 5 : Input and Output Devices

Types of input devices

Types of output devices

Connection and wiring of I/O devices

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Module 6 : Counters

Up and Down Counters

Module 7 : Simple Programs

Simple programming

Wiring and connecting simple circuits

Module 8 : Advanced Ladder Logic

Branching and parallel circuits

Subroutines and function blocks

Module 9 : Advanced Timer and Counter

Retentive timers

Cascade and dual counters

Using timers and counters in real-world applications

Module 10 : Analog Input and Output

Introduction to analog signals

Configuring analog input and output modules

Module 11: Communication Protocols

Networking PLCs

Introduction to Industrial communication protocols