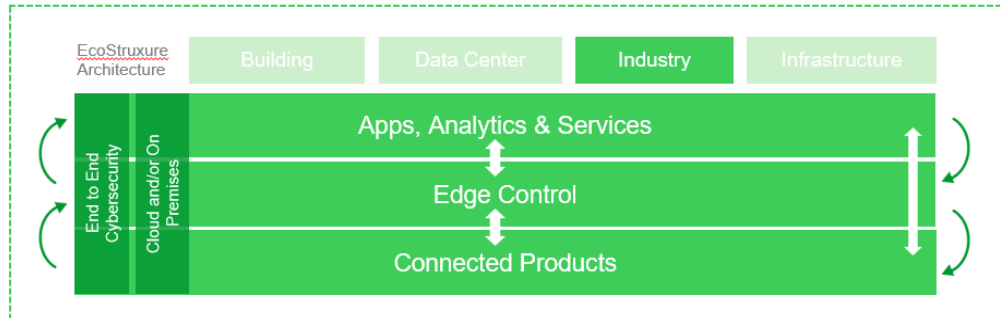




India Training Center

Training Offer Catalog - 2021

INDUSTRIAL AUTOMATION



EcoStruxure™ Building EcoStruxure™ Power EcoStruxure™ IT EcoStruxure™ Machine EcoStruxure™ Plant EcoStruxure™ Grid

About The Training Offer

The Schneider Electric TSC Training Team design and deploy training courses on the following offers:

• Digital Plant Training Courses



- Edge Control & Connected products including HMI, PLC's, and Software (Concept, Unity Pro, Vijeo Citect, VJD...)

• Machine Solutions Courses



- Controllers
- Sensors
- Software (SoMachine, SoMachine Basic)

• Drive Technology & Systems



- Variable Speed Drives (ATV) & Starters (ATS)
- Applications (Pumping, HVAC, ...)

EcoStruxure™ Architecture



Cybersecurity	Cloud/Local	Apps, Analytics & Services
		Edge Control
		Connected Products



Apps, Analytics & Services

IIoT Solutions

Software integration

EcoStruxure Industrial Software
Engineering Planning & Operations Asset Performance Control and Information

Edge Control

HMI

Operator Panels

iPCs

Software

Modicon PAC / PES

PAC architectures

Software

UnityPro, OFS, Automation Expert

Hybrid DCS (ex-PES)

Connected Products

Modicon M580 ePAC

Discover the new M580 ePAC, the core components & characteristics of the offer. Implement Remote I/O (RIO) and Distributed I/O (DIO). Understand the new important features of Unity Pro. Integrate Serial devices within a Remote I/O architecture



PACM580



In Class/Remote



6-8 Trainees



2 days



60% Theory



40% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE internal



Training Content

- Identify the components that comprise the M580 PAC offer
- Integrate Local, Remote and Distributed I/O with the M580
- Implement a Simple Daisy Chain Architecture under Unity Pro
- The M580 Hot Standby offer
- M580 / X80 HART offer
- The M580 Weighing offer
- Identify the benefits of deploying system Time Stamping
- Prove legacy migration by implementing Premium I/O within an M580 architecture
- Identify the importance of Cyber Security

EcoStruxure Control Expert

This course is designed to introduce the student to the fundamentals of EcoStruxure Control Expert formally known as Unity programming package through a combination of lessons and hands-on exercises. Upon completion of this course students will be ready to start creating PLC applications using the Unity Pro Programming package.



PACECE



In Class/Remote



6-8 Trainees



2 days



50% Theory



50% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE internal



* Formerly Known as Unity Pro

Training Content

- Software Overview, User creation and Security
- PLC Configuration (Offline), Variables & Datatypes
- Unity Program Structure (Sections and Execution)
- Function Library Management,
- Ladder Diagram (LD)
- Structured Text (ST)
- Instruction List (IL)
- Sequential Function Chart Programming (SFC)
- Function Block Diagrams (FBD)
- Simulation & Animation
- Derived Function Blocks (DFB), Derived Data Types
- Operator Screens
- Trending Tool
- LL984 Editor
- DTM Technology
- Diagnostics & Troubleshooting
- Hardware specific System words
- Licensing

Modicon M340 PAC & X80 IOs

Modicon M340 RTU (Remote Terminal Unit) module is an in rack module with built-in RTU protocols (IEC 101/104,DNP3) for the M340 PLC platform. The module offers a cost effective modular RTU solution to allow the movement of data to a SCADA Master Station. This course is designed for engineers who wish to configure and maintain an M340 RTU module integrated in a Remote Solution.



PACM340



In Class/Remote



6-8 Trainees



2 days



60% Theory



40% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE internal



Training Content

- M340 Product Overview and features
- X80 IO modules
- Product Characteristic
- Identify the purpose of DNP3 & IEC 60870 protocols.
- Identify the correct usage of the M340 module.
- Configure the M340 module, using Unity Pro and related software.
- Optimize the performance of the M340 RTU module.
- Configure the M340 RTU modules Embedded Advanced Services.
- Diagnostic and Troubleshooting

Modicon Quantum Ethernet IO

Learn how to plan & configure Quantum Ethernet I/O Architectures, understand the components of the offer, and be able to implement QEIO in a real scenario.



PACQEIO



In Class/Remote



6-8 Trainees



2 days



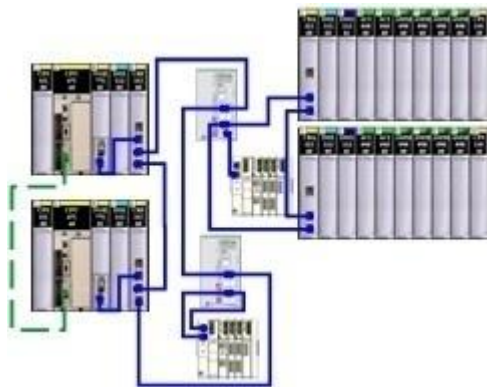
70% Theory



30% Hands-On

Target Audience

- System Integrator, OEM,
- End User
- SE internal



Training Content

- Configure a Simple Ethernet I/O Architecture with 140 CRP 31200 and 140 CRA 31200 under Unity Pro
- Implement X80 Remote I/O Drops.
- Understand the principle of a high capacity architecture with Dual Ring Switches (DRS) & integrate Sub-Rings
- Work with the new 140 NOC 78000 and 140 NOC 78100
- Make Distributed I/O participate in the Remote I/O Network without losing performances
- Monitor the network status with Connexium Network Manager
- Understand the determinism and calculate application response time
- Compare the performances with S908 Remote I/O
- Implement a Hot Standby Architecture

Modicon Quantum S908

Learn how to plan & configure Quantum S908 Architectures, understand the components of the offer, and be able to implement S908 in a real scenario



PACRIO



In Class/Remote



6-8 Trainees



1 day



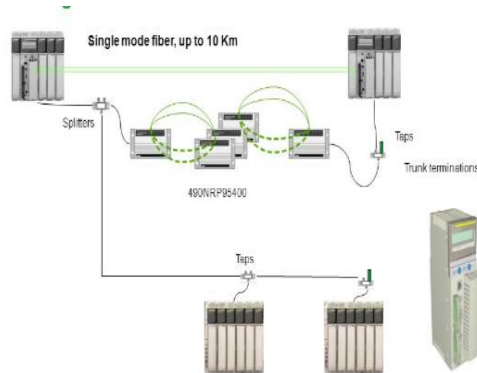
70% Theory



30% Hands-On

Target Audience

- System Integrator, OEM,
- End User
- SE internal



Training Content

- Configure a Simple S908 project under Unity Pro
- RIO cabling & installation
- Implement S908 Remote I/O Drops.
- Understand the principle of a high capacity architecture with Dual RIO bus.
- Make Remote I/O Network without losing performances
- Monitor & Diagnose the RIO network status
- Implement a Hot Standby Architecture

Modicon Premium HSBY

Learn how to plan & configure Premium HSBY Architectures, understand the components of the offer, and get an overview of the capabilities of the Premium Hot Standby



PACPUNIT



In Class/Remote



6-8 Trainees



2 days



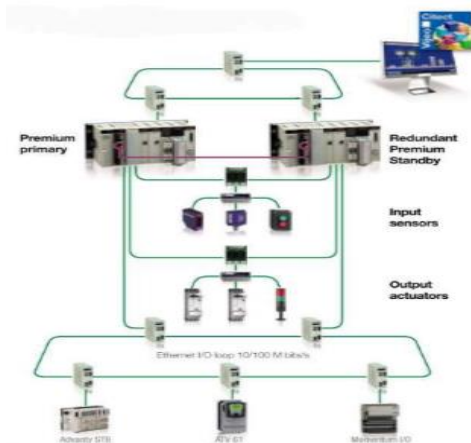
70% Theory



30% Hands-On

Target Audience

- System Integrator, OEM,
- End User
- SE internal



Training Content

- System Usage & Behavior
- Unique Value Proposition & Advantages
- Hot Standby Technical Description
- HSBY Software Setup & Configuration
- HSBY Operation & Switchover
- Maintaining & Troubleshooting the System

Unity Pro Industrial Communications

Get to know the principles of the main communication fieldbuses and networks in the industrial market: Modbus, Profibus, CANopen, DeviceNet, Ethernet Modbus TCP/IP, EtherNet IP, and how to implement the communication modules in Unity



PACUCOMM



In Class/Remote



6-8 Trainees



2 days



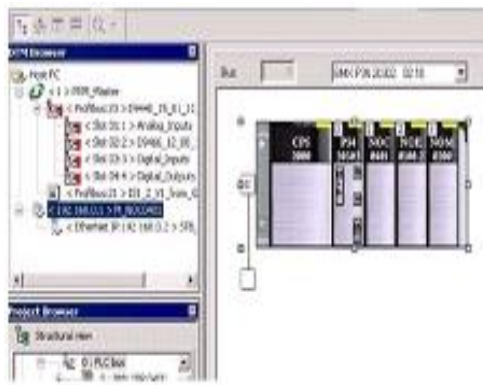
60% Theory



40% Hands-On

Target Audience

- System Integrator, OEM,
- End User
- SE internal



Training Content

- Fieldbus main features: Medium, Size, OSI Model..
- Communication Principle (Master / Slave, Publisher / Consumer, ...)
- Physical connections to devices (SubD9, RJ45) inside Schneider offer
- Profiles description & implementation (Mapping, EDS, GSD files, ...)
- Access to data (Read_Var, Parameter Telegram, PDO & SDO, IO Scanning...)
- Configuration workshops for each fieldbus or network using communication modules on the PLC
- Implementation through FDT / DTM technology

Vijeo Citect

Gain insight into Vijeo Citect / CitectSCADA project design and become familiar with configuration techniques. Learn how to design a project from start to finish and configure various features, including the new time scheduler and equipment hierarchy. This interactive course includes practice with plant control, data collection, trending and reporting.



PACVJC



In Class/Remote



6-8 Trainees



3 days



50% Theory



50% Hands-On

Target Audience

- System Integrator, OEM,
- End User
- SE internal

Note:-

Training will be delivered up to Vijeo Citect version v 7.5



Citect
SCADA

Training Content

- Introduction to the various components of Vijeo Citect / CitectSCADA, project design, communication, equipment and graphics
- Implementation various areas of the Vijeo Citect / CitectSCADA project design, including controls and alarms
- Project design elements of Vijeo Citect / CitectSCADA
The Cicode Editor
- Equipments
- Trend
- Genie/Super Genie
- Page Pop-up
- Formulating Cicode programming solutions
- Vijeo Citect / CitectSCADA architectures .
- Online changes
- OPC DA server
- Vijeo Citect / CitectSCADA redundancy
- Overview on Web client
- System security
- Basic Troubleshooting

EcoStruxure Machine SCADA Expert

This course instructs the student on the installation, configuration and operation of the ESx Machine SCADA Expert software. ESx Machine SCADA Expert is designed to develop application for Harmony & Magelis Open Box & iPC.



HMIMSE



In Class/Remote



4-8 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



* Formerly known as Vijeo XL

Training Content

- General Concepts & overview on compatible hardware
- Installation & Licensing
- Overview of the EcoStruxure Machine SCADA Expert
- Communication with External Devices
- Screens & Graphics
- Scripting
- Alarms & Events
- Data Logging and Display
- Recipes and Reports
- Project Security
- Remote Clients
- Using Databases

Machine Solution Courses



1

Sensors selection & Implementation

2

EcoStruxure Machine Expert Configuration

3

EcoStruxure Machine Expert Basic Configuration

4

EcoStruxure Machine Expert HVAC Configuration

5

Vijeo Designer Configuration

6

EcoStruxure Operator terminal Expert Configuration

7

Motion Basics

8

Lexium 32 Configuration

9

Lexium 26 & 28 Configuration

Sensors selection & Implementation

To understand the operating principles of all types of switches and sensors, how each of the sensor types may be applied and be able to assist a customer to define the type of equipment that meets their requirements using the catalogue offer.



SENCONFIG



In Class/Remote



6-8 Trainees



2 days



90% Theory



10% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal

Detection

- Component of the Automation Chain that provides the information needed for the system to run
- If the Automation System is considered to be the brain, Detection (sensors) act as the senses



Training Content

- Introduction to Detection
- Detection at a Glance
- Limit Switches (XC)
- Pressure Sensors (XM)
- Ultrasonic Sensors (XX)
- Radio Frequency Identification - RFID
- Inductive Sensors (XS)
- Capacitive Sensors (XT)
- Photoelectric/Photocell Sensors (XU)
- Rotary Encoders (XC)
- Machine Cabling Accessories (XZ)

EcoStruxure Machine Expert Configuration

This course instructs the students on the configuration, programming and operation of controller offer such as LMC058, LMC078 , M241, M251,M262 using EcoStruxure Machine Expert & SoMachine v4.x configuration software . Course includes new features of EcoStruxure Machine Expert compare to Earlier version SoMachine V4.x This is a hands-on technical training with many supporting exercises.



MSTESME



In Class/Remote



4-6 Trainees



3 days



20% Theory



80% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



* Formerly known as SoMachine

Training Content

- Introduction to EcoStruxure Machine Expert programming software
- Controller offer overview – LMC058, LMC078 , M241, M251,M262
- Firmware update : Controller Assistant & SD card
- Introduction to EcoStruxure Machine Expert :
 - Connecting to controller
 - Configuring Gateway
 - Download / Restore achieved project
- New Project Creation
- Variables Debugging & State Machines
- Visualization
- File System management
- FDT & DTM
- Customs Libraries
- Hardware & Software catalog (New Feature)
- Online Modes (New Feature)
- Web -Visualization (New Feature)
- Vijeo Designer & exercise

EcoStruxure Machine Expert Basic Configuration

This course instructs the student on the configuration, programming and operation of the M100,M200 & M221 controllers. The EcoStruxure Machine Expert Basic software package is used for program development. This is a hands-on technical training with many supporting exercises.



MSTEMEB



In Class/Remote



4-6 Trainees



2 days



20% Theory



80% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

- M100,M200 & M221 controller Hardware overview
- EcoStruxure Machine Expert Basic– programming software overview
- Workshops :
 - Firmware Update of M100,M200 & M221 controller
 - Create a basic application
 - Assigning symbols
 - Export & Import of Symbols
 - Create a program structure
 - Create a start control program
 - Create a stop control program
 - Fault Handling
 - Comparing with set points
 - Linking the program parts

EcoStruxure Machine Expert HVAC

This course instructs the student on the configuration, programming and operation of the M100,M200 & M221 controllers. The SoMachine Basic software package is used for program development. This is a hands-on technical training with many supporting exercises.



MSTEMEHVAC



In Class/Remote



4-6 Trainees



2 days



20% Theory



80% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

- M171 & M172 controller Hardware overview
- EcoStruxure Machine Expert HVAC– programming software overview
- Workshops :
 - Bios Update of M171 & M172 controller
 - Create a basic application
 - Adding Libraries
 - Programming of embedded HMI
 - Web Page Creation
 - Upload/Download of application via USB
 - BACnet supervision through YABE tool
 - Troubleshooting & Diagnostic

HMI & Vijeo Designer

This course instructs the student on the installation, configuration and operation of the Vijeo Designer software package and Magelis XBTGTO HMI hardware. The successful student will be able to create custom applications as well as demonstrate the software's operation to others upon completion of this course. All aspects of the Vijeo Designer Configuration software are covered with a focus on project creation.



HMIVJD



In Class/Remote



4-8 Trainees



2 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

- Hardware platform overview –Vijeo Designer features
- Magelis physical overview – ports, connection locations ..
- Dip switch configuration
- Configuration of Modbus TCP/IP, Modbus
- Project transfer options, Target initialization, Project creation
- Panel development, panel navigation, Variable creation
- Importing variables from a Unity Pro project
- Animations and clipart, Popup panels, Meters and motion, Trending options
- Alarm operation, configuration and management, Scripting
- Security options and operation, Recipes configuration and operation
- Data sharing operation and configuration
- Web Gate configuration and operation
- Multimedia options, Multimedia configuration and operation

Ecostruxure Operator Terminal Expert

This course helps students to learn about the latest EcoStruxure Operator Terminal expert software.

EcoStruxure Operator terminal expert is designed to develop application for Harmony & Magelis HMI & iPC series and also it act as database for IOT applications like EcoStruxure Augmented Operator Advisor.



HMIEOTE



In Class/Remote



4-8 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM's
- End User's
- SE Internal



* Formerly known as Vijeo XD

Training Content

- Overview of the Ecostruxure Operator Terminal Expert tool
- How to create a new project in Ecostruxure Operator Terminal Expert
- Navigation screen types and its hands-on
- Global , local script in Ecostruxure Operator Terminal Expert
- Recipe , datalogging in Ecostruxure Operator Terminal Expert
- Configuration of Modbus TCP/IP, Modbus
- Project transfer options, Target initialization, Project creation
- Using converters and other additional tools in Ecostruxure Operator Terminal Expert
- Integration with EcoStruxure Augmented Operator Advisor.
- Diagnostic & Troubleshooting

Motion Basics

Discover the basic elements of Motion

Overview of products and typical applications



MOTBAS



In Class/Remote



6-8 Trainees



1 day



100% Theory

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

- Motion control, definition and terms
- Product overview
- Application overview
- Basic terms of Motor Control

Lexium 32 Configuration

- To discover the offer and the technical features of the Lexium 32 product range
- Technical knowledge about Lexium 32
- Ability to set-up and maintain the servo offer
- Configuration using SoMove Lite



MOTLXM32



In Class/Remote



4-6 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- Product overview, Motor technology
- Accessories, General device technology
- Electrical installation, Safety engineering
- HMI (Human Interface Machine), State machine
- Tuning (Control loop), Diagnostics and troubleshooting
- Operating modes

Safety Functionality:

- Enhanced Safety Module

Lexium 26 & 28 Configuration

- To know the offer and the technical features of the Lexium 26 & 28 range
- Technical knowledge about Lexium 26 & 28 servo drive & BCH2 motors
- Ability to set-up and maintain the servo offer
- Configuration using SoMove Lite



MOTLXM2628



In Class/Remote



4-6 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- Product overview, Motor technology
- Electrical installation
- Initial parameter wizard
- HMI (Human Interface Machine)
- Operating modes
- Tuning, jog, preset position, speed and torque
- CANopen field bus Interface

Drives Technology & System Courses



1	Drive Technology Basics
2	ATS22-ATS48 Softstarters
3	Compact Drives ATV12-ATV312
4	ATV320 Configuration
5	ATV340 Configuration
6	ATV61 Configuration
7	ATV71 Drives Configuration
8	ATV6xx Process Drives Configuration
9	ATV9xx Process Drives Configuration

Drive Technology Basics

- To get the technical basics on variable speed drives and soft-starters



VSDBAS



In Class/Remote



4-8 Trainees



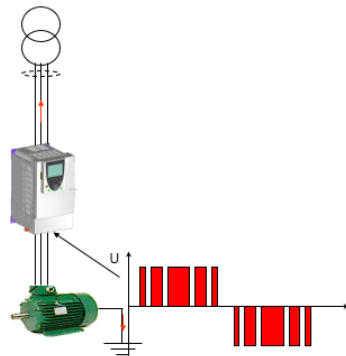
2 days



100% Theory

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

- Electronic power control generalities
- Electrical motor basics
- The 4 quadrants, the machine torque
- The VSD and Soft starter principle
- The U/F control , The vector control
- Braking methods
- EMC and Harmonics link to VSD
- Overview of application functions

ATS22 – ATS48 Softstarters

- Review starters and motor basics
- To know ATS offer in detail and to be able to choose, set up and commission ATS



VSDATS



In Class/Remote



4-8 Trainees



2 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATS01-ATS22-ATS48 offer overview
- Soft starters principle
- ATS set-up and tools (SoMove Lite)
- ATS sizing
- Application functions set up

Compact Drives ATV12-ATV312

- Review speed drives and motor basics
- To know ATV compact drive offer in details
- To be able to size and select, set up and commission ATV compact drives



VSDCOMP



In Class/Remote



4-8 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATV12 - 312 offer overview
- Sizing and Selection
- Drives set-up and tools (SoMove)
- Motor control principal and selection
- Application functions set up with demo

ATV320 configuration

- To know ATV320 offer and targeted machines
- To be able to set up and commission ATV320 on basic applications
- To be able to use features (safety, ATV Logic...)
- To know communication features (field buses, Bluetooth, mobile...) and SoMove Software



VSDATV320



In Class/Remote



4-8 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATV320 offer overview, targeted machine
- Drives set-up and tools (SoMove Lite)
- Application functions & Safety functions
- ATV Logic (programming and set up of a simple application)
- Communication

ATV340 configuration

- To know ATV340 offer and targeted machines
- To be able to set up and commission ATV340 on basic applications
- To be able to use features (safety, Multi-Drive link...)
- To know communication features (field buses, Bluetooth, mobile...) and SoMove Software



VSDATV340



In Class/Remote



4-8 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATV340 offer overview, targeted machine
- Drives set-up and tools (SoMove Lite)
- Application functions & Safety functions
- Multi-Drive Link (programming and set up of a simple application)
- Communication

ATV61 configuration

- To know ATV61 in details
- To be able to set up and commission ATV61 on basic applications
- To know ATV61 communication main features



VSDATV61



In Class/Remote



4-8 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATV61 product overview
- Drives set-up and tools (SoMove Lite)
- Motor control principle and selection
- Application functions set up and programming
- Multi- pump card features
- Communication basics (CANopen, Modbus, I/O mode)

ATV71 configuration

- To know ATV71 in details
- To be able to set up and commission ATV71 on basic applications
- To know ATV71 communication main features



VSDATV71



In Class/Remote



4-8 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATV71 product overview
- Drives set-up and tools (SoMove Lite)
- Motor control principle and selection
- Application functions set up and programming
- Communication basics (CANopen, Modbus, I/O mode)

ATV6xx Process Drives Configuration

- To know ATV6xx process drives in details
- To be able to set up and commission ATV6xx drives on basic applications
- To know ATV6xx with its targeted applications



VSDATV6xx



In Class/Remote



5-10 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATV6xx product offer overview
- Drives set-up and tools (SoMove Lite)
- Motor control principle and selection
- Application functions set up and programming
- ATV6xx specific functions & protections for pump
- Communication basics (Modbus, Modbus TCP/IP, I/O mode)

ATV9xx Process Drives Configuration

- To know ATV9xx process drives in details
- To be able to set up and commission ATV9xx drives on basic applications
- To know ATV9xx with its targeted applications



VSDATV9xx



In Class/Remote



5-10 Trainees



3 days



40% Theory



60% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- ATV9xx product offer overview
- Drives set-up and tools (SoMove Lite)
- Motor control principle and selection
- Application functions set up and programming
- ATV9xx specific functions & protections for pump
- Communication basics (Modbus, Modbus TCP/IP, Ethernet IP, I/O mode)

TeSys Island

- To know TeSys Island design in details
- To be able to set up and commission TeSys Island with Machine Solution PLC's
- To know different TeSys Island Avatar



TESYSI



In Class/Remote



5-10 Trainees



2 days



60% Theory



40% Hands-On

Target Audience

- System Integrator, OEM
- End User
- SE Internal



Training Content

General Product Presentation:

- TeSys Island offer overview
- TeSys Island Avatars
- TeSys Island Configurator tool
- TeSys Island OMT and SoMove
- Different TeSys Island Protection
- Communication with M2XX controller
- TeSys Island function block in EcoStruxure Machine Expert



Contact us

r.laxmanrao@se.com

9th Floor, DLF Building No. 10, Tower C,
DLF Cyber City, Phase II
Gurgaon - 122002
Haryana, India

