Programmable Logic Controller (PLC) System & Application
September 22 - 25, 2014 at The Amaroossa Hotel, Bandung

DESCRIPTION:
PLC is the main automation control system in all industry lines. Therefore understanding the A-Z of PLC is very important so that you can operate, maintain and troubleshoot this system better. In this course, you will learn several topics such as: PLC hardware, software, programming techniques and hardware troubleshoot.

The course is tutor driven and employs generic PLC simulation software which allows the principles of PLC systems to be understood without the complexity of the manufacturers’ interface software.

OBJECTIVE: YOU WILL BE ABLE TO
- An increased knowledge of PLC (hardware, software and programming techniques)
- Able to operate, maintain and troubleshoot PLC better

COURSE OUTLINE:
1. Overview of PLC System
2. PLC’s hardware: Rack, Power Supply and PLC Processor, Input Output Module(Analog and Descrete Module, Wiring system and Communication Module, Sensor (Input Devices) and Actuator(Output Devices)
3. PLC Configuration: Procedure for Running a PLC
4. PLC’s software: PLC’s features, feature function and use
5. PLC’s Memory: Memory Types, Partitions and Use
6. Numbering System: Miscellaneous and Use in PLC system
7. Addressing System: I/O Mapping system in PLC
9. Bit Instruction: Rung and Attributes, Contact and Coil Representation, Contact and Coil Programming
10. Timer Instruction: Fundamental Concept, Types and Function, Timer Programming in PLC
11. Counter Instruction: Fundamental Concept, Types and Function, Counter Programming in PLC
12. Comparison Instruction
13. Math Instruction
14. Data Handling Instruction
15. Programming Method: Programming PLC Using State Based Design
16. Program Flow Instruction
17. PID (Proportional Integral Derivative): Fundamental Concept, implementation and tuning
18. PLC Troubleshooting

Classroom/Demonstration/ Laboratory Exercise:
- Computer Facilities with Personal Computer Intel Pentium III and 4
- Practical work using PLC (Schneider)
- Simulation using MATLAB Software
- Application using Simulator Kit

TARGETTED PARTICIPANTS:
Instrument operator, Technician and those who want to understand PLC better

ABOUT THE COURSE LEADER
Dr. Ir. Endra Joelianto and Team

Dr. Ir. Endra Joelianto is an expert in control engineering. His outstanding research is: Hybrid Control Systems, Discrete Event Control Systems, Petri Nets Analysis and Application on PLC, Robust PID Controller, Advanced Process Control, Industrial Automation using PLC/DCS. He received first degree (Ir.) in Engineering Physics in 1990 from Department of Engineering Physics, ITB and Doctor of Philosophy (PhD.) in Control Engineering in 2001 from Department of Engineering, The Australian National University, Australia.

He is coordinator of Intelligent Control and Automation, and founder of PLC Research Group, Laboratorium Instrumentasi dan Kontrol (LINK), Departemen Teknik Fisika, Institut Teknologi Bandung. He was the founder and the director of Schneider-OMRON PLC Training Center, Maranatha Christian University, Bandung. The Schneider-OMRON PLC Training Center has cooperation with PT. Schneider Electric Indonesia, PT. OMRON Corporation Japan, Invensys WONDERWARE.

He was the project leader for TPSDP Retooling Program Batch II-DIKNAS for Training Program on “INDUSTRIAL AUTOMATION USING PLC” 2004 and Co-provider for the same retooling program Batch II on “INDUSTRIAL CONTROL AND AUTOMATION” by PT. Cahaya Sumirat, Bandung. In 2005, he leads the retooling project entitled PLC for Industrial Control and Automation at the Department of Engineering Physics, ITB.

He attended several professional trainings on PLC, DCS and Instruments Calibration, such as: Yokogawa DCS, Bandung (2000), Implementation of Indonesian National Standard (SNI) 19-17025 and Basic
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He serves as instructor either for public, universities or in-house training on instrumentation and process control to universities, petrochemical or oil and gas companies, such as: PT. NGL Arun, PT. NGL Bontang, PT. Pupuk Iskandar Muda, PT. Pupuk Kalimantan Timur, PT. Pupuk Kujang, PT. Semen Padang, PT. Semen Gresik, PT. Petrokimia Gresik, PT. Semen Cibinong, PT. Indocement, PT. Semen Tigaroda Perkasa, PT. Exspan Nusantara, PT. ALSTOM Indonesia, PERTAMINA, British Petroleum, Maxus, Amoseas, PT. Nusa Halmahera Mineral, PT. Indonesia Jaya Power, Indonesia Power-Paiton, PT. Riau Pulp and Paper, Indonesian Cement and Concrete Institute (ISBI), LIPI-Bandung, LAPI-ITB, POLMAN-Bandung, etc.

Notes: *
1. Venue to be advised
2. The course will be in Bahasa Indonesia
3. Text & Handouts English & Bahasa Indonesia

REGISTRATION

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Contact:Deden, Abdul Rohim, Data Gumilar and Eka Rheni

Terms & Conditions:  
1. A confirmation letter will be sent to you upon receiving your registration  
2. Any cancellation must be in writing and received by 7(seven) working days prior to the course date, otherwise full fee will be chargeable to your account