

COURSE OVERVIEW IE0928
Honeywell TPS Awareness & Familiarization Training

Course Title

Honeywell TPS Awareness & Familiarization Training

Course Date/Venue

Session 1: February 16-20, 2025/ Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
 Session 2: August 18-22, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

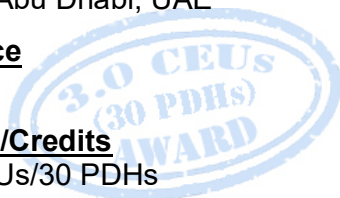


Course Reference

IE0928

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.



This course is designed to provide participants with a detailed and up-to-date overview of Honeywell Safety Manager PLC. It covers Recognize the role of the major Honeywell Safety Manager PLC hardware and software components and identify the physical construction, chassis as well as discuss the I/O and communication modules and field termination modules; the attributes of Honeywell Safety Manager PLC, hardware basic components, selectable I/O modules, field termination panels and selectable communication modules; and the chassis backplane, chassis addressing, I/O-expansion with expansion chassis and apply simplified RXM wiring and power module termination wiring.



Further, the course will also discuss the alarm behavior-main chassis and explain main processor module, logical and physical slots, digital input and output modules; and communication modules, I/O bus and identify field termination panels; Honeywell Safety Manager PLC functional description and quadruple modular redundant system; and diagnostics transparent to user and offline control application program emulation, direct communication to distributed control system (DCS), open communication with external human machine interfaces (HMI).

During this interactive course, participants will learn the tristation 1131 standard programming, tristation 1131 developer, diagnostic monitor, structures text (ST), function block diagrams (FBD) and ladder diagram; the IEC 61131-3 was developed and enumerate the features of IEC 61131-3 PLC software standards including the feature of IEC 61131-3; the languages and text languages such as IL (Instruction List), ST (Structure Text) including graphical languages such as LD (Ladder Diagram), (FBD (Function Block Diagram) and SFC (Sequence Flow Charts); and the troubleshoot typical errors in configuration

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain a good working knowledge on Honeywell Safety Manager PLC
- Recognize the role of the major Honeywell Safety Manager PLC hardware and software components and identify the physical construction, chassis as well as discuss the I/O and communication modules and field termination modules
- Enumerate the attributes of Honeywell Safety Manager PLC, hardware basic components, selectable I/O modules, field termination panels and selectable communication modules
- Discuss the chassis backplane, chassis addressing, I/O-expansion with expansion chassis and apply simplified RXM wiring and power module termination wiring
- Distinguish alarm behavior-main chassis and explain main processor module, logical and physical slots, digital input and output modules
- Discuss communication modules, I/O bus and identify field termination panels
- Explain Honeywell Safety Manager PLC functional description and quadruple modular redundant system
- Demonstrate diagnostics transparent to user and offline control application program emulation, direct communication to distributed control system (DCS), open communication with external human machine interfaces (HMI)
- Discuss the tristation 1131 standard programming, tristation 1131 developer, diagnostic monitor, structures text (ST), function block diagrams (FBD) and ladder diagram
- Identify why the IEC 61131-3 was developed and enumerate the features of IEC 61131-3 PLC software standards including the feature of IEC 61131-3
- Discuss the languages and text languages such as IL (Instruction List), ST (Structure Text) including graphical languages such as LD (Ladder Diagram), (FBD (Function Block Diagram) and SFC (Sequence Flow Charts)
- Troubleshoot typical errors in configuration

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.

Who Should Attend


This course is intended for engineers and other technical staff requiring specialist knowledge and/or familiarization with Honeywell Safety Manager PLC, mainly in the areas of operation and maintenance.

Course Certificate(s)


Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- 

British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.
- 

The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Dr. Alaa Abdel Kerim, PhD, MSc, BSc, is a Senior Electrical, Instrumentation & Control Engineer with 45 years of extensive experience in the Power, Petrochemical, Refinery, Oil and Gas industries. He specializes in Plant Control System, Instrumented Control System, Process Control & Instrumentation, DCS, PLC, SCADA Systems, HMI, Programmable Logic Controller (PLC) Operations, Maintenance & Troubleshooting (Siemens Simatic S7-300/400), Allen Bradley, Modern PLC/SCADA for ATS, Generator Parallel Operation, Electricity Distribution Networks, Electrical Transmission & Tie Lines, HMI Wire, Wireless & Communication Network, Modern Instrumentations/Automatic Control Principals for Water & Wastewater Lifting Plants and Water & Wastewater Treatment Plants, Substation Automation Systems & Its Applications, Siemens SIMATIC S7 Maintenance & Configuration, Modern Automation Control Systems, Hydrocarbon, Measurement Instrumentation, Pressure Measurement, Level & Flow Measurement, Temperature & Vibration Measurement, Analytical Instrumentation, Calibration & Testing Safety Procedures, Find Control Elements, Control Loop Operation, Industrial System Equipment & Building Installation, Artificial Intelligence (AI), Data Acquisition & Transmission, Electronics Technology, Power Systems Control, Modern Electric Power Systems, Power Systems Security, Series Reactors in Power System, Power Transmissions, Power Generation, Electrical Troubleshooting Techniques, Electrical Substations and MV/LV Electrical System.

During his career life, Dr. Alaa has been practically and academically involved in different **Power System** and **Instrumentation & Control** international companies and universities as the **Senior Professor & Consultant, Lecturer/Trainer, Instrumentation & Control Engineer/Trainer** and **Electrical Engineer/Trainer**. His recent practical applications experience includes the design, supply, installation, operation of full **DCS, SCADA, PLC, HMI Automation System** for **Sumid Line Petroleum, Siemens USA, AREVA USA** to name a few. His experience also includes electrical coordination, protection level adjustments and electrical testing.

Dr. Alaa has a **PhD** degree in **Electrical Engineering** from the **Technical University of Gdansk, Poland** and has **Master's** and **Bachelor's** degree in **Electrical Machine & Power Engineering**. Further, he is a **Certified Instructor/Trainer, a Certified Trainer/Assessor** by the **Institute of Leadership & Management (ILM)** and has further delivered numerous trainings and workshops worldwide.

Course Fee

US\$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Safety Standards for Process and Equipment Under Control (PUC, EUC)
0930 – 0945	Break
0945 – 1045	Safety Integrity Level (SIL)
1045 – 1145	Safety Layers of Protection
1145 – 1230	Equipment Under Control (EUC)
1230 – 1245	Break
1245 – 1330	Process Under Control (PUC)
1330 – 1420	Application Conform IEC 61131-3
1420 - 1430	Recap
1430	Lunch & End of Day One

Day 2

0730 – 0930	Honeywell Safety Manager PLC Controller Components Controller Chassis • Control Processor • Battery and Key Switch Module (BKM) • SM IO Components Field Interface
0930 – 0945	Break
0945 – 1045	Safety Manager Basic Architectures
1045 – 1145	Built on QMR Technology
1145 – 1215	Compliance to Safety Standards
1215 – 1230	Break
1230 – 1330	Process Availability
1330 – 1420	Operation and Maintenance Performance
1420 - 1430	Recap
1430	Lunch & End of Day Two

Day 3

0730 – 0830	System Reliability and Robustness
0830 – 0930	Integration into Experion PKS
0930 – 0945	Break
0945 – 1000	Serial Communication with Process Computer Systems
1000 – 1100	Fire and Gas Safety Applications
1100 – 1215	Honeywell Safety Manager PLC Functional Description Safety vs. Availability • Redundancy and Availability • IO Configurations • Multiple-Sensor and Transmitter Configurations • Fault Detection and Response • Principle of Fault Detection • Principle of Fault Response • Watchdog and Redundancy • Peer to Peer Connections • Human Machine Interfaces
1215 – 1230	Break
1230 – 1330	Safety Manager System Configurations
1330 – 1420	Network Architecture
1420 - 1430	Recap
1430	Lunch & End of Day Three

Day 4

0730 – 0830	Safety Builder
0830 – 0930	Application Design Rules Contents of a Safety Builder Project • Steps for Configuring a Safety Builder Project • Controller Status • Screen Layout • Work Area • Menu Bar • Outlook Bar • Toolbar • Explorer Bar • Status Bar • Functional Logic Diagrams (FLDs) • Safety Manager Diagnostics • Flash-Memory Operation • On-Line Modification • Hot-Swap of Safety Manager Controller Modules • Self Educating Safety Manager Controller Modules • Write Protection • IO Signal Forcing
0930 – 0945	Break
0945 – 1100	Serial Communication with Process Computer Systems
1100 – 1215	Safety Manager SafeNet
1215 – 1230	Break
1230 – 1330	Network Configurator Component Properties Explained
1330 – 1420	Safety Builder Configuration Tools
1420 - 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Four

Day 5

0730 – 0900	Controller Management Controller Management Menu • Component Bar • Connecting to a Controller • Diagnostic Messages and Databases • Diagnostic Tools • Load Controller
0900 – 0915	Break

0915 - 1015	FLD Symbols
1015 - 1115	Import and Export
1115 - 1215	Sequence of Events
1215 - 1230	Break
1230 - 1300	Diagnostic Information
1300 - 1345	Configuration Errors and Warnings
1345 - 1400	Course Conclusion
1400 - 1415	POST-TEST
1415 - 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises: -



Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org