

Instrumentation Fundamentals Training

Introductory course for electricians and millwrights



Duration

This is a one-day (8-hour)
course hosted at an
Endress+Hauser PTU facility

Prerequisites

Basic computer knowledge



A hands-on fundamental course to understand proper installation, wiring, setup and troubleshooting of common instruments used to measure flow, level, pressure and temperature.

This introductory course (8 hours) to instrumentation starts by providing electricians and millwrights with a basic understanding of wiring, signals, instrumentation technologies and installations. Fundamental operation of the common instruments found in today's process industries is examined from a view applicable to virtually any manufacturer's equipment. Hands-on training provided in our state-of-the-art Process Training Unit (PTU) with a wide range of Endress+Hauser instrumentation installed and fully functional. Typical troubleshooting procedures for instrumentation are covered and practiced.



Contact Us
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Objectives

At the conclusion of the course, attendees should be able to:

- Recognize the various types of process instrumentation found in processes of all types
- Understand how instruments are installed and wired
- Demonstrate how to connect to devices, their typical settings and commissioning steps for process instruments
- Complete basic troubleshooting steps

Who should attend

Electricians and millwrights who will be working with Endress+Hauser instruments

Content

The course specifically covers:

- What is instrumentation
- Device wiring and instrumentation signal basics
- Fundamental overview of different measurement types and technologies (including flow, pressure, level and temperature)
- Proper installation and process influences on the measurements
- Basics of device commissioning
- Possible sources of error and troubleshooting

Agenda

Activity	Duration
Welcome and instrumentation basics	1 hr.
PTU overview tour	1 hr.
Break	15 min.
Overview of typical measurements and measuring technologies	1.5 hr.
Lunch	1 hr.
PTU walk-through – device installation	15 min.
PTU hands-on – device wiring and basic commissioning	1.5 hr.
Break	15 min.
Possible error sources and troubleshooting	30 min.
PTU hands-on – device checks, simulation and troubleshooting	30 min.
Wrap-up	15 min.

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