

# Configuring and Testing Smart Field Devices Course

## Venue Information

---

**Venue:** London UK

**Place:**

**Start Date:** 2026-11-10

**End Date:** 2026-11-14

## Course Details

---

**Net Fee:** £4750.00

**Duration:** 1 Week

**Category ID:** EAPET

**Course Code:** EAPET-6

## Syllabus

---

### Course Description

This five days course offers a broad perspective of smart field devices, including transmitters and valve-positioners. The emphasis is on more reliable information gathering, decreased maintenance time, ease-of-use, and multi-tasking capabilities. You will cover use in conventional systems, and enhancements/improvements when combined with digital control networks.

### Course Objectives

Participant will be able to:

- Differentiate between analog and digital instruments
- Understand how digital signal sampling works in digital instruments
- Identify the strengths and weaknesses of digital instruments
- Explain the basics of serial digital communications

- Recognize the capabilities of HART™ communication
- Understand digital multivariable transmitter

## **Course Outlines**

### **Analog vs. Digital Instruments:**

- Analog Limitations
- Calibration of Analog vs. Digital Instruments
- Flexibility of Digital Instruments

### **Digital Signal Sampling:**

- Sampled Signal Characteristics
- Output of A/D Converter
- Slow Sampling

### **Strength and Weaknesses of Digital Instruments:**

- Effect on Performance
- Multiple Measurement
- Programming for Field Level Control
- Future Development

### **Intelligent Control Valves:**

- Digital Positioners
- Diagnostic Tools
- Adding PID Controllers to Control Valves

### **Serial Digital Communications:**

- Parallel to Serial Converter
- Modem

### **HART Communication:**

- Features
- Master/Slave Communications
- Point-to-Point
- Capabilities of HART

#### **SP50 Fieldbus:**

- What It Is
- How Instruments Operate

#### **Intelligent Multivariable Transmitters:**

- How they work
- How they can transmit multiple variables