

# Course Prospectus 2017

## Train with Endress+Hauser




# Our Training Centre in Manchester

As the number one supplier of process instrumentation in the UK, Endress+Hauser recognises the need to provide high quality skills training in order to help you optimise the effectiveness of your instruments over a long working life.

Whether it's helping your staff understand the measurement principles or teaching advanced diagnostics and long-term asset management, we have the facilities and the expertise to work with you to meet all your training requirements.

In today's competitive marketplace, it's vital to have a well trained and motivated workforce. Investing in employees ensures the continued success of the company. Endress+Hauser has developed a suite of courses and content designed to help at all levels to ensure your staff are knowledgeable and competent to work on the valuable asset represented by your instruments and control equipment.

Our training team can come to you and deliver bespoke courses or you can visit us in our state-of-the-art training centre in Manchester.

 [Click here to find out more about our facilities >>>](#)

**Our facilities in Manchester include:**

- A 12-seater classroom fitted with state-of-the-art audiovisual (AV) equipment.
- A purpose-built workshop allows you to get hands on with the equipment.
- A central training and process area.

The main training area is designed to simulate a real process environment and comprises:

- A gas flow rig equipped with all common flowmeters, Rockwell Automation PLC and HMI, supporting PROFIBUS PA/Ethernet IP communication protocol.
- A pressure rig for PID loop tuning using PROFIBUS PA protocol.
- A batch control rig for liquid dosing, with traditional loop-powered/HART protocol.
- A large process rig with various measuring techniques, drives, valves and process control.
- Commonly used networks including PROFIBUS, Ethernet IP, 4-20mA HART and wirelessHART.
- Central control room featuring Rockwell Automation HMI and PLC with process control and plant asset management facilities for all instruments in the training centre.




## Introduction to Process Measurement & Control




**31 July-3 August** **£1000**

Learn the basics of process measurement and control. Aimed at apprentices and new starters, this four-day course is designed to provide new engineers with a basic knowledge of process measurement and control. The course has a high degree of practical content and includes assessment at key points.

 [Click here to find out more about this course >>>](#)

*“We have a growing number of trainers who will apply their personal expertise across a wide range of topics to ensure we meet all of your instrument and process automation training requirements.”*

David Stokes, Training Manager,  
Endress+Hauser Ltd

 Call 0161 286 5193 or email [sophie.cotton@uk.endress.com](mailto:sophie.cotton@uk.endress.com) for more details or to book your place

## Basic PID Loop Tuning



**10-11 April/4-5 December** **£790**

This two-day course covers basic principles, structure and terminology of controllers and control elements. Simple tuning is also covered. Those attending will be able to understand, operate and adjust a range of PID controllers to achieve acceptable performance.

 [Click here to find out more about this course >>>](#)

## Advanced PID Loop Tuning



**12-13 April/6-7 December** **£790**

The two-day advanced controller tuning course will teach you how to optimise the performance of three-term controllers in a range of applications. The course also explores common control problems that are not related to controller tuning but which affect performance and stability.

 [Click here to find out more about this course >>>](#)

## Certified PROFIBUS courses

Do you want to ensure a reliable and maintainable PROFIBUS system? Then make sure that your team is fully qualified and in-the-know by attending the PROFIBUS courses we have on offer.



### Meet the trainer

**Peter Thomas C.Eng Eur.Ing MInstMC  
Control Specialists Ltd**

As a Process Control Engineer working for Control Specialists Ltd, Peter has more than 30 years of practical experience in several areas of process automation and optimisation gained in a wide range of industries including chemical, oil & gas, life science, pulp & paper, water & wastewater and food & beverage.

His practical experience includes programmable control system software design, GAMP validation, PID loop optimisation, control system support and PROFIBUS/PROFINET support. He regularly gives process control loop optimisation training courses around the world and also delivers PROFIBUS and PROFINET training courses in the UK covering installation and fault-finding techniques.

#### Get yourself PROFIBUS proficient!

The courses have become the accepted basic standard for many industries. For example most water and wastewater treatment companies in the UK now insist that anyone involved with PROFIBUS at a technical level is trained to at least the Certified PROFIBUS Installer level.



**i** A 10% discount is available for companies who are members of the UK PROFIBUS Group.

### Certified PROFIBUS Installer



**13 March/18 September**

**£490**

An internationally accredited introductory course for PROFIBUS installers and all those involved at a technical level. The one-day course teaches the layout, installation and testing of complete PROFIBUS networks and provides a hands-on approach to fieldbus network layout and installation. Examples and case study materials are used throughout to highlight the many common but, potentially very costly, pitfalls and mistakes.

[Click here to find out more about this course >>>](#)

### PROFIBUS Commissioning & Maintenance



**19 September**

**£450**

A one-day course designed as an add-on to the Certified PROFIBUS Installer course covering the practical techniques of fault-finding on 'operational' PROFIBUS networks. Techniques taught on the course include the use of ProfiTrace Ultra to diagnose network faults, device faults and I/O problems. Students also learn how to use the built-in digital storage oscilloscope to diagnose and locate a wide range of cable, connection and device faults.

[Click here to find out more about this course >>>](#)

### Certified PROFIBUS Engineer



**20-22 September**

**£1750**

This 2½-day course is designed for engineers with a thorough basic knowledge of PROFIBUS or other fieldbus systems. It covers the detailed theory of PROFIBUS DP and PA network operation. You will learn how to design, install, commission and troubleshoot PROFIBUS networks and how to use modern diagnostic tools, detect faults and identify their causes.

[Click here to find out more about this course >>>](#)

### PROFIBUS System Design



**14-16 March/24-26 October**

**£990**

This two-day course is aimed at anyone involved with the design, specification or procurement of modern automation or control systems at the engineering level. Covering the optimal design of PROFIBUS automation and control systems, it is a prerequisite to have qualified as a Certified PROFIBUS Installer.

[Click here to find out more about this course >>>](#)

## Certified PROFINET courses

PROFINET has become the leading industrial Ethernet standard in the market with a wide range of solutions for factory automation, high speed robotics and process control.



### Meet the trainer

**Peter Thomas C.Eng Eur.Ing MInstMC  
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His practical experience includes programmable control system software design, GAMP validation, PID loop optimisation, control system support and PROFIBUS/PROFINET support. He regularly gives process control loop optimisation training courses around the world and also delivers PROFIBUS and PROFINET training courses in the UK covering installation and fault-finding techniques.

#### Become a PROFINET pro!

PROFINET is the world's most advanced Industrial Ethernet solution for the networking of production assets (sensors, actuators, sub-systems and production units) and equipment such as PLCs, DCS and enterprise-wide IT systems. Our courses will help you hone your skills and get the most out of this system.



**i** A 10% discount is available for companies who are members of the UK PROFIBUS Group.

### Certified PROFINET Installer



6 November

£490

An internationally accredited introductory course for PROFINET installers and all those involved at a technical level. The one-day course teaches the layout, installation and testing of complete PROFINET networks and provides a hands-on approach to fieldbus network layout and installation. Examples and case study materials are used throughout to highlight the many common but potentially, very costly, pitfalls and mistakes.

[Click here to find out more about this course >>>](#)

### PROFINET Commissioning & Maintenance



7 November

£450

This one-day add on to the Certified PROFINET Installer course covers the techniques and tools used for configuration, health checking and fault-finding on PROFINET systems. The course is very practical in nature, with attendees having their own devices and laptop computer for practical exercises. Attendees will understand how to set up, verify and locate errors in networks.

[Click here to find out more about this course >>>](#)

### Certified PROFINET Engineer



8-10 November

£1645

This 2-day course is aimed at engineers working at a technical level in automation or control systems. Although the course is focused on PROFINET, the content is relevant to other industrial Ethernet technologies. The technical details of PROFINET start-up and operation are covered in detail. Due to the content, it is a pre-requisite to have qualified as a Certified PROFINET Installer.

[Click here to find out more about this course >>>](#)

*“PROFINET is the standard for industrial networking in automation. It connects devices, systems and cells, facilitating faster, safer, less costly and higher quality manufacturing. It easily integrates existing systems and equipment while bringing the richness of Ethernet down to the factory floor.”*

**i** Call 0161 286 5193 or email [sophie.cotton@uk.endress.com](mailto:sophie.cotton@uk.endress.com) for more details or to book your place

## CompEx courses

With over 60 years' experience in the design and manufacture of field instrumentation, Endress+Hauser is a process safety expert. We have more than 250 certified product lines, complete with a SIL instrument and intrinsically safe device portfolio for safety critical applications and hazardous areas. We know that process safety depends on having the right measurement technology applied to the right application and used in the right way.

### Benefits

- CompEx training from the process safety experts.
- The CompEx scheme is accredited by JT Limited (JTL).
- Eight dedicated training bays for practical training and assessment.

### What is CompEx?

CompEx is a training, validation, assessment and certification scheme for managers, engineers and technical operatives working in potentially hazardous or explosive atmospheres. Companies have a responsibility to their staff to ensure their safety – and the safety of the public – and to encourage health and safety best practice in the workplace.

### Potentially explosive atmospheres

Potentially explosive atmospheres are not only found in petrochemical plants and refining plants, they are also found in a wide range of industries including chemical, life sciences and food & beverage. Failure to ensure safe working practices in these environments could result in the ignition of explosive gases or dust clouds leading to injury or fatalities. As a result, CompEx is fast becoming a mandatory requirement for technicians and engineers on many plants, both onshore and offshore.



### The CompEx scheme

Jointly developed by the Engineering Equipment and Materials Users' Association (EEMUA) and the training provider JTL, the scheme is nationally recognised as the industry standard and supported by the Health and Safety Executive (HSE). The CompEx scheme is now recognised as a global solution for validating core competency of employees and contract staff working on equipment for use in potentially hazardous environments.

## ExF: Foundation



Please enquire for dates

£295

This two-day course covers basic principles, structure and terminology of controllers and control elements. Simple tuning is also covered. Those attending will be able to understand, operate and adjust a range of PID controllers to achieve acceptable performance.

 Call 0161 286 5011 for more information

## Ex14: Responsible Persons



24-27 April/3-6 July/  
25-28 September/6-9 November

£1495

Supported by the HSE, this 4-day course aims to assist Responsible Persons to meet their legal obligations with regard to maintaining an asset register and implementing a practical approach to the inspection and maintenance of equipment in explosive atmospheres utilising IEC 60079 Parts 14 and 17 and offering the basis of best practice.

 [Click here to find out more about this course >>>](#)

## Ex01-Ex04: Gas & Vapour




13-17 March/3-7 April/15-19 May/  
10-14 July/11-15 September/  
2-6 October/6-10 November

£850

The underpinning knowledge and practical assessment programme is provided for electrical personnel who undertake the physical installation and assembly of new Ex equipment and who perform preventive maintenance and inspections on previously installed equipment. This 5-day course focuses on CompEx modules Ex01 to Ex04.

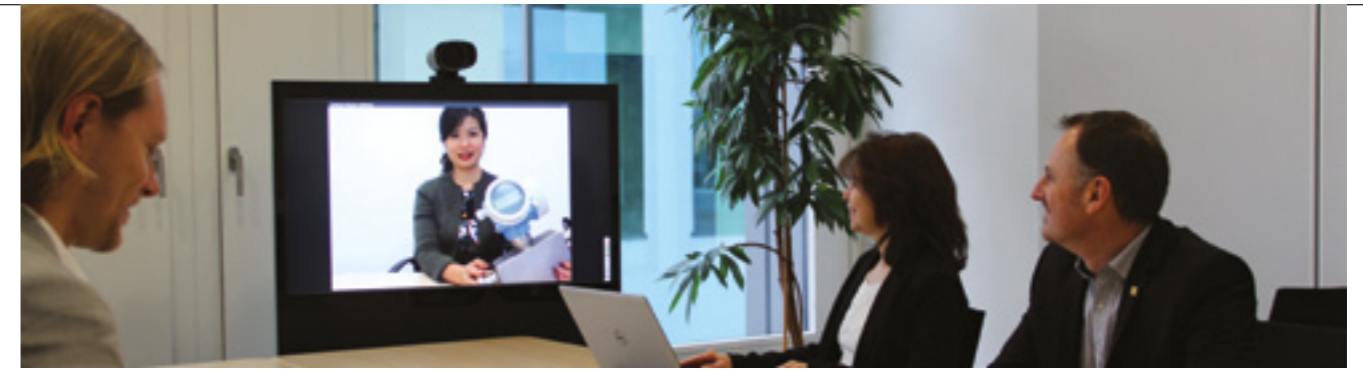
 [Click here to find out more about this course >>>](#)

*“The CompEx scheme is now recognised as a global solution for validating core competency of employees and contract staff working on equipment for use in potentially hazardous environments.”*

 Call 0161 286 5011 or email [tracey.stennett@uk.endress.com](mailto:tracey.stennett@uk.endress.com) for more details or to book your place


# Free webinars: ask questions, get answers!

Join us for our free webinars covering a range of process automation topics. It's your chance to find out more and chat directly with our experts!




## 9 February: Streamline your logistics processes

From simple monitoring and visualisation of tanks and silos right through to complex internet-based supply chain systems on a global scale, our inventory monitoring solution guarantees full transparency to help you maintain your competitive edge.

 [Click here for more information >>>](#)


## 16 March: Changes to IEC 61508 safety standard

Having reviewed part 1, Risknowlogy, experts in risk, reliability and safety, has identified 200 changes in edition 2. Whilst the majority of changes are minor – simply clarifying, expanding or simplifying the clauses of the standard – some changes will affect your day-to-day work.

 [Click here for more information >>>](#)


## 12 September: Heartbeat Technology - focus on flow

Is Heartbeat verification a proof test? What is safer, a Proline 200 flowmeter or a VA meter? What does SFF and FIT mean? These questions and more will be answered during this webinar.

 [Click here for more information >>>](#)


## 20 September: Avoid water hammer in steam lines

In this webinar you'll learn about proven robustness, resistance to vibration, temperature shocks and water hammer as well as wet steam detection and industry-compliant Prowirl two-wire technology. It's a must for those with steam lines in your plant!

 [Click here for more information >>>](#)


## 19 April: Promass Q high accuracy Coriolis meter

The compact transmitter offers high flexibility in terms of operation and system integration with a remote display and improved connectivity options. The integrated Heartbeat Technology ensures compliance and process safety.

 [Click here for more information >>>](#)


## 4 May: The benefits of replacing old technology

Traditional mechanical flow and level transmitters have been superseded by modern transmitters with no moving parts for the majority of applications. If you're thinking about upgrading your plant, we'll show you how we can save you time and money!

 [Click here for more information >>>](#)


## 4 October: Handy online tools for your daily tasks

Our handy online tools have been created to help you with a variety of engineering and maintenance tasks. From product selection help, configuration and pricing right through to sourcing 2D/3D drawings and spare part finding, our tools will help you with your day-to-day tasks.

 [Click here for more information >>>](#)


## 25 October: Instrument verification in a Heartbeat

Learn about our range of instruments with integrated Heartbeat Technology that offer the advantages of advanced diagnostics, inline verification and condition monitoring – all helping to achieve documented proof testing and confirmation of measurement accuracy.

 [Click here for more information >>>](#)


## 8 June: Next generation tank gauging technology

To monitor bulk liquids in tank farms and terminals, we offer the full range of tank gauging solutions for custody transfer applications. The latest generation of tank gauging devices and the web-based inventory monitoring system give you access to your tank farm anywhere, anytime, even from your smartphone.

 [Click here for more information >>>](#)


## 13 June: Take radar measurement to the next level

For reliable radar level measurement, it's essential to choose the right frequency for your application – our webinar will help you choose the right one for your task. Save time and money by harnessing the power of Heartbeat Technology to achieve documented proof testing and on-demand measurement verification.

 [Click here for more information >>>](#)


## 28 November: Our cost-effective product range

Join our webinar for more information on our range of cost-effective instrumentation designed specifically for the food & beverage industry. Despite the lower price tag, these devices still meet the strict hygienic requirements and applications demands.

 [Click here for more information >>>](#)


## 4 December: Calibration to ensure product quality

In regulated industries consistent quality and compliance are of the utmost importance. We can ensure all your measurement instruments stay on track and offer the best accuracy and product yield with our traceable and accredited calibration services.

 [Click here for more information >>>](#)


## 14 June: Increase efficiency, improve product quality

Inline Quality Monitoring reduces the risk of product loss with faster response to process changes and increases plant availability with less hold time waiting for lab analysis. It also ensures a secure audit trail by automatic collection of quality parameters.

 [Click here for more information >>>](#)


## 20 July: Flow technology for the future

Our Proline 300/500 flowmeter range allows universal flowmetering in the process industry: from quantity measurement and process monitoring right through to custody transfer applications. Proline also provides a view into the process, ensuring that plant operators receive important diagnostic and process data.

 [Click here for more information >>>](#)

## December: Metering skids, on-time and on-budget!

Just plug and play a metering skid? With our standardized metering skid, it's possible! Better still, it's proven-in-use for all terminal depot applications. Need a customized metering skid? We can help with this too! Find out more in our free webinar...

 [Click here for more information >>>](#)

## Benefits

- Live and interactive – our experts are on hand to answer your questions.
- Our free webinars can be easily accessed at your convenience.
- With a wide range of topics, you're sure to find a subject to suit!

**UK**

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