

Process Measurement and Control

One-Day Seminar & Workshop



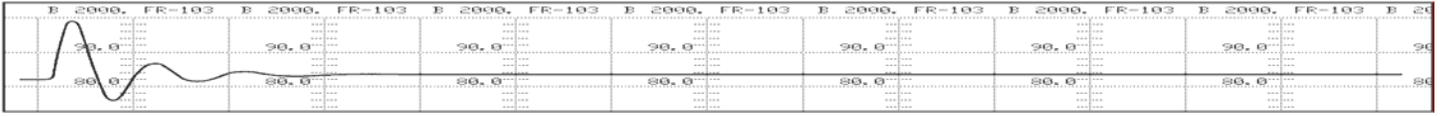
OBJECTIVES

- Understand common measurement types and their effect on the control loop
- Examine final control devices: considerations for successful control
- Understand the application of PID terms in the control loop

WHO SHOULD ATTEND

- **Maintenance personnel** requiring a basic understanding of measurement techniques and control tuning
- **Process engineers** looking for a refresher or new perspective
- **Anyone** desiring a non-mathematical approach to control loop characteristics

*Approved for continuing education for
New York State professional engineers.
6 PHD credits.*



CONTENT

This six-hour seminar is presented in three parts. Emphasis is placed on simple explanations with little technical detail. A complete measurement and control loop is built for illustration.

Part I: Process Measurement

Discusses the types of measurement available, some common problems, and leads the participants toward a basic understanding of the effects of the measurement on the control loop.

Measurement types include:

- Temperature (thermocouple, capillary, RTD)
- Pressure, temperature and flow
- Analytical (pH, conductivity, gas analysis)

Part II: Final Control Devices

Discusses considerations on types and styles of control devices from solenoids to motor driven valves, and requirements for successful control of the process.

Part III: Control

Discusses each term of a P, I, D controller and how each is applied in a process control loop. Ratio, cascade and feedforward control are also discussed. Emphasis is placed on simple explanations with minimal technical detail. A typical measurement and control loop is built for illustration, and various types of equipment are used to reinforce tuning techniques. Failsafe considerations and use of available features to solve difficult problems are reviewed.

AGENDA

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|---------------|--------------|
| 8:00 am | Registration |
| 8:30 am | Class begins |
| 12:00–1:00 pm | Lunch |
| 4:00 pm | Class ends |

Provides six (6) contact hours.

FEES & CANCELLATION POLICY

Seminar fee: \$250.00 per student
 Minimum class size - 6 students. Seminar may be cancelled or rescheduled up to 1 week prior to scheduled date if minimum class size is not met.

Refunds – cancellations made at least 24 hours in advance will receive a full refund or credit towards a future course. Student substitutions are permitted at any time prior to start of class. No refunds for registered participants who fail to attend without prior cancellation notification.

INSTRUCTOR

Richard A. Wolf. Mr. Wolf is a Senior Applications Specialist at ABB Instrumentation, with over 40 years' experience in the application of measurement and control techniques in industrial processes.

LOCATION

MicroMod Automation, Inc.
 75 Town Centre Drive
 Rochester, NY 14623

May be presented at your facility for larger groups

REGISTER TODAY!

To reserve your space in the seminar, call our Training Registrar at (585) 321-9261 or 1-800-480-1975

Check the schedule on our website at

www.micromodautomation.com

