

# IEC 60870-5 telecontrol training course

KEMA Academy



## Course summary

The IEC 60870-5 series communication protocols are very popular all over the world for telecontrol and protection purposes. KEMA Academy invites you to attend our two-day training course. This course has been developed to offer telecommunications professionals the opportunity to obtain up-to-date information on the companion standard series (101, 103 and 104) and hands-on experience of protocol performance analysis using the KEMA communication test tools. Attending this course with our leading experts will give you the knowledge you need regarding the capabilities and benefits of IEC 60870-5 communication, and regarding recent developments in this field.

## Target group

This course is meant for developers, consultants and telecom engineers at manufacturing companies and end-user utilities, who need up-to-date knowledge of the IEC 60870-5 companion standards.

## Course information

The course focuses on the functionality and features of the IEC 60870-5 series communication protocols. The 870-5 series is divided into 4 companion standards; participants will acquire detailed knowledge of the IEC 60870-5 companion standard series (101, 103 and 104) and its relationship to the IEC 60870-5 protocol series (parts 1-5). New developments, practical experiences from IEC 60870-5 implementations, installations, pitfalls and guidelines for implementing and using IEC 60870-5 are also discussed. We will set up 101, 103 and 104 links and introduce participants to a protocol analyzer, providing hands-on experience. Exercises will enable you to immediately put what you have learned into practice. Participants will look at the message flow on a link and will learn how to detect and solve communication problems.

## Course outline

### Day 1 Overview

- > Introduction
- > IEC 870-5 protocol series
- > IEC 870-5 companion standard series
- > IEC 870-5-101 details
- > IEC 870-5-104 details
- > Demonstration
- > Hands-on: view log files with exercises

### Day 2 Details

- > Hands-on: setting up link with exercises
- > IEC 870-5-103 details
- > Security
- > Common problems
- > Conformance testing
- > Evaluation and comparison with other protocols
- > Discussion

## Location

The course will be held at an external training location in Arnhem, The Netherlands.

## About KEMA

KEMA is the leading company in independent testing, certification and consultancy for standard communication protocols used in the utility industry. KEMA has already given numerous training courses to both vendors and utilities. We are actively involved in the IEC working groups that maintain IEC 60870-5. As a result, KEMA has acquired detailed knowledge of and expertise with the IEC 60870-5 protocol series that we use in our simulators and analyzers, giving the participants of this course a unique hands-on experience.

## In-company and customized training courses

At the client's request KEMA can also provide in-company and customized training courses. The course can then, for example, deal with actual cases from your business operations, or future scenarios sketched out by you. We are flexible in this.

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