

# TIA – Seminars

## The road to an automated machine.

A guide for manufacturers and operators.

### Module 3: Expert level software training

#### Module description:

This is the next step on your journey to professional programming: Learn how to make your source code more dynamic and then polish it up to make it the best it can be in Module 3. You'll also be encouraged to develop your own software standards and add more vibrancy to your code.

#### Contents:

- Library and version control (PLC + HMI)
- Optimized and non-optimized data and function blocks
- AT declarations and slice accesses
- The Variant data type
- The Array\* data type
- Dynamic software concepts with Variant and Array\*
- Software units

#### Duration:

- 12 h

#### Required:

- Your own laptop for the session
- TIA V16 with PLCSim already installed
- Module 1: Commissioning
- Module 2: Training for beginners
- Recommendation:
  - Basic awareness of how hardware is used in a machine
  - Approx. 2 years of experience in TIA programming

#### Trainers:

- Frederick Keymer-Eickelkamp

#### Training location:

- At our Duisburg location
- At your location
- plus travel expenses
- Online

**Certificate of participation:**

- Digital for online training courses, paper for face-to-face training courses

**Training materials:**

- Digital

**Number of participants**

- Max. 4 people

**Price:**

- 940 € per participant (plus travel expenses)