

## Robot programming 2

### Software version: KSS V8.x (KR C4)

#### Target group:

Programmer, service technician

#### Seminar goal:

Goal of the seminar is to learn the first part of the KUKA programming language KRL and to use it in structured programs based on the reached basic acquirments.

#### Requirements:

- Seminar: Robot Programming 1

#### Seminar content:

- Successful programming with KRL (KUKA Robot Language) and WorkVisual
  - Workflow of a programming project for robot programs
  - Creating program flowcharts for robot programs
  - Structuring and streamlining robot programs with KRL
  - Programming with conditional statements and branches
  - Programming with loops and jumps
  - Linking robot programs with parameter transfer
- Working with variables
  - Correct use of various variable types
  - Declaring, initializing and manipulating simple data types
  - Declaring, initializing and manipulating arrays
  - Defining, declaring, initializing and manipulating enumeration data
  - Defining, declaring, initializing and manipulating composite data types (structures)
- Human-machine communication
  - Programming with important system variables
- Creating and modifying programmed motions in KRL
  - Calculating and manipulating robot positions
  - Programming relative motions
  - Programming geometric offsets for robot positions
- Programming logical functions in KRL
  - Programming wait functions
  - Programming simple switching functions
  - Programming path-related switching functions (e.g. for adhesive application, welding)
  - Path-related calling of subprograms in the program sequence
- Linking robot programs
  - Using global and local subprograms
  - Program links with parameter transfer
- Programming project: cycle time optimization using the example of a palletizing application

End of seminar:

- The course ends with an achievement test.
- A certificate is issued on successful completion of the course.

Seminar duration:

4 days

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