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KUKA Roboter GmbH
Zugspitzstraße 140
D-86165 Augsburg
Germany

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Other functions not described in this documentation may be operable in the controller. The user has no claims to these functions, however, in the case of a replacement or service work.

We have checked the content of this documentation for conformity with the hardware and software described. Nevertheless, discrepancies cannot be precluded, for which reason we are not able to guarantee total conformity. The information in this documentation is checked on a regular basis, however, and necessary corrections will be incorporated in the subsequent edition.

Subject to technical alterations without an effect on the function.

Translation of the original documentation

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1 Introduction

1.1 Industrial robot documentation

The documentation of the industrial robot consists of documents created by KUKA Roboter GmbH and documentation from other manufacturers.

Documentation from KUKA Roboter GmbH:

- Documentation for the manipulator
- Documentation for the robot controller
- Operating and programming instructions for the System Software
- Instructions for options and accessories
- Parts catalog on storage medium

Documentation from other manufacturers:

- Documentation for the air-water heat exchanger



The component manufacturer documentation must be read by the system integrator and the user. The safety instructions they contain must be taken into consideration in a risk analysis and must be observed.

1.2 Representation of warnings and notes

Safety

These warnings are relevant to safety and **must** be observed.



DANGER These warnings mean that it is certain or highly probable that death or severe injuries **will** occur, if no precautions are taken.



WARNING These warnings mean that death or severe injuries **may** occur, if no precautions are taken.



CAUTION These warnings mean that minor injuries **may** occur, if no precautions are taken.



NOTICE These warnings mean that damage to property **may** occur, if no precautions are taken.



These warnings contain references to safety-relevant information or general safety measures.
These warnings do not refer to individual hazards or individual precautionary measures.

This warning draws attention to procedures which serve to prevent or remedy emergencies or malfunctions:



SAFETY INSTRUCTIONS Procedures marked with this warning **must** be followed exactly.

Notices

These notices serve to make your work easier or contain references to further information.



Tip to make your work easier or reference to further information.

1.3 Terms used

Term	Description
Biocides	Biocides are chemicals that combat living organisms.
Leakage monitoring	Leakage monitoring detects unintentional loss of water from the water circuit.
LWW	The German acronym for air/water heat exchanger (in German: Luft-Wasser-Wärmetauscher)
Recooling system	The recooling system cools the warmed cooling water and returns it to the water circuit.

2 Purpose

2.1 Target group

This documentation is aimed at users with the following knowledge and skills:

- Advanced knowledge of electrical and electronic systems
- Advanced knowledge of the robot controller
- Advanced knowledge of the Windows operating system



For optimal use of our products, we recommend that our customers take part in a course of training at KUKA College. Information about the training program can be found at www.kuka.com or can be obtained directly from our subsidiaries.

2.2 Intended use

Use

The air/water heat exchanger is used to cool the robot controller if, for system reasons, other cooling or air conditioner devices cannot be used. It protects temperature-sensitive components in the robot controller and prevents overheating. The housing of the robot controller with the air/water heat exchanger option has no ventilation slits, thus preventing dust and air layers in the environment from being stirred up.



This option cannot be retrofitted.

Misuse

Any use or application deviating from the intended use is deemed to be misuse and is not allowed. This includes e.g.:

- Use as a climbing aid
- Operation outside the permissible operating parameters
- Use in potentially explosive environments
- Use in underground mining

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