

3.2 Description of the LBR iiwa

Overview

The LBR iiwa is classified as a lightweight robot and is a jointed-arm robot with 7 axes. All motor units and current-carrying cables are protected beneath cover plates.

Each axis is protected by means of axis range sensors and can be adjusted by means of internal sensors.

Each joint is equipped with a position sensor on the input side, torque sensors on the output side and temperature sensors. The robot can thus be operated with position and impedance control. The temperature sensors prevent thermal overloading of the robot.

The robot is equipped redundantly and consists of the following principal components:

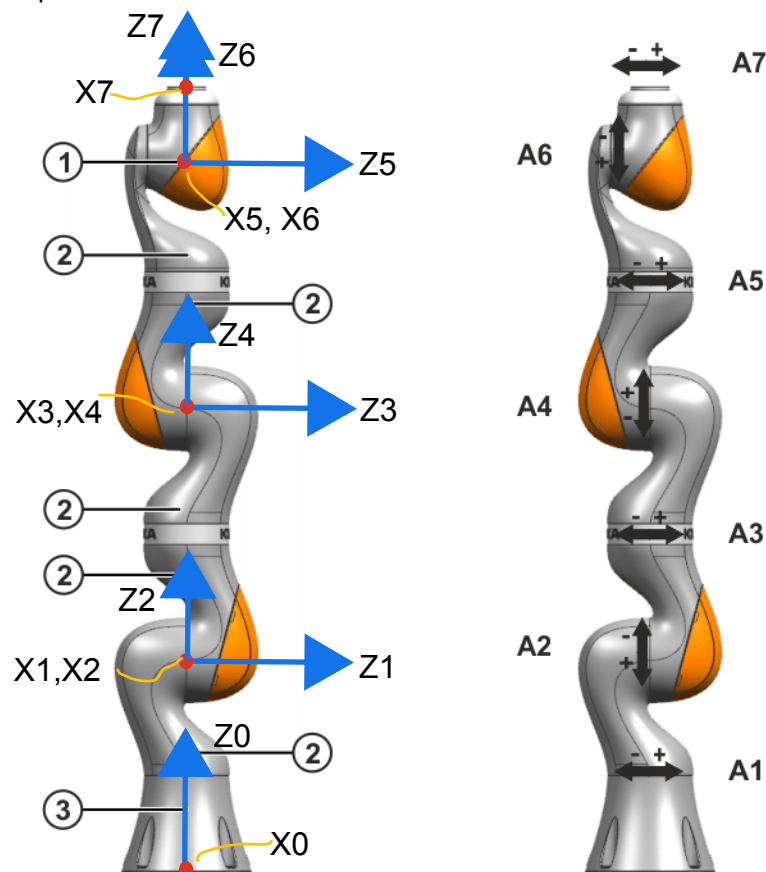


Fig. 3-2: Main assemblies and robot axes

- 1 In-line wrist
- 2 Joint module
- 3 Base frame

In-line wrist

The robot is fitted with a 2-axis in-line wrist. The motors are located in axes A6 and A7.

Joint module

The joint modules consist of an aluminum structure. The drive units are situated inside these modules. In this way, the drive units are linked to one another via the aluminum structures.

Base frame

The base frame is the base of the robot. Interface A1 is located at the rear of the base frame. It constitutes the interface for the connecting cables between the robot, the controller and the energy supply system.